



**STATE OF NEW JERSEY
OFFICE OF THE STATE COMPTROLLER**

INVESTIGATIVE REPORT

**MILEAGE CHARGES ASSOCIATED WITH
THE HAULING OF
SUPERSTORM SANDY DEBRIS**

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TABLE OF CONTENTS



I.	Introduction and Executive Summary	1
II.	Background	1
III.	Methodology	7
IV.	Investigative Findings.....	9
	A. Is it Reasonable to Include Mileage Traveled Inside the Ocean County Landfill in Debris Transport Mileage Calculations?	9
	B. Is it Reasonable to Round-Up Debris Transport Mileage Calculations?	13
	C. Did the Debris Monitors Utilize Appropriate Haul Transport Mileage Calculation Methods?	14
	1. Louis Berger and Witt O’Brien’s	14
	2. Arcadis.....	16
V.	Conclusions.....	18
VI.	Recommendations.....	19

I. Introduction and Executive Summary

The Office of the State Comptroller (OSC) initiated this investigation after receiving a referral from the Governor's Office of Recovery and Rebuilding (GORR) and the New Jersey Department of Environmental Protection (DEP). The referrals were based on media reports indicating that municipalities in Ocean County, New Jersey were being overcharged for Superstorm Sandy (Sandy) debris removal services. AshBritt, Inc. (AshBritt) was the debris hauler responsible for removing and disposing of that Sandy-related debris, while three debris-removal monitors, Arcadis U.S., Inc., the Louis Berger Group, Inc. and Witt O'Brien's, LLC, were responsible for monitoring the services provided by AshBritt to these Ocean County municipalities.

As explained in detail in this report, OSC's investigation found no persuasive evidence of intentional overbilling for the debris removal services, but did reveal a series of miscalculations and other erroneous and questionable debris-removal charges that had been submitted and paid. In total, the miscalculations and similar overcharges amounted to more than \$300,000. OSC's investigation further revealed that vague language in the debris-removal contract, the lack of specific standards setting forth a payment calculation methodology and logistical factors unique to Ocean County all contributed to initial indications of intentional overbilling as well as to some of the questionable charges. At the conclusion of this report, OSC makes recommendations to address the deficiencies we identified.

II. Background

Beginning on October 28, 2012 and continuing through October 30, 2012, Sandy struck New Jersey, causing severe damage and destroying entire communities. Shortly thereafter, the

State determined that there was an emergent need to remove the resulting debris from roads and other property. The Federal Emergency Management Agency (FEMA) defines debris as “[i]tems and materials broken, destroyed, or displaced by a natural or man-made Federally declared disaster,” including items such as “trees, construction and demolition material, and personal property.”

On October 31, 2012, the State entered into an emergency contract with AshBritt for the removal and disposal of such debris (AshBritt contract). The AshBritt contract incorporated the terms of a 2008 contract between AshBritt and the State of Connecticut (Connecticut contract), including its pricing schedule and scope of work. That pricing schedule had been developed by Connecticut’s Department of Energy and Environmental Protection in consultation with FEMA. Prices were based on the type and quantity of debris to be removed, as well as on the mileage the debris was to be hauled for disposal.

Pursuant to the scope of work provision in the AshBritt contract, AshBritt was to collect debris from public roads and public property and haul it either to temporary debris sites or to final disposal facilities. Debris that could not immediately be segregated and sorted for final disposal purposes was hauled to the temporary debris sites for storage and sorting. Such temporary debris sites frequently are established during a state-of-emergency after it is determined that events have overwhelmed a community’s ability to absorb the amount of debris resulting from a disaster. AshBritt was responsible for sorting the debris and transporting it from the temporary debris site to the appropriate final recycling or disposal facility. Initial reports of overbilling by AshBritt involved the hauling of construction and demolition (C&D) debris from various temporary debris sites to the final disposal facility, and this report focuses specifically on those charges.

The State designated the AshBritt contract as a cooperative contract, which granted local governments access to AshBritt's debris hauling services. On November 15, 2012, Ocean County utilized the cooperative contract and entered into an agreement with AshBritt. The county also entered into shared services agreements that permitted a series of Ocean County municipalities to utilize the services of AshBritt and that designated Ocean County as the contract administrator for those municipalities.

Pursuant to the terms of the Connecticut contract that were incorporated, payment for the debris-hauling services was determined by the distance that debris was transported from temporary debris sites to the final disposal facility. Each of the temporary debris sites reviewed by OSC as part of this investigation was selected as a temporary site by local government officials and was approved by the DEP. AshBritt and the debris monitors were not involved with those selections.

Pursuant to a designation made by Ocean County, the final disposal facility in the county was the Ocean County Landfill (OCL), which is located in Manchester, New Jersey. Thus, unless the debris was to be transported out-of-state, AshBritt was required by Ocean County's Solid and Hazardous Waste Management Plan, which was reviewed and approved by DEP, to use the OCL. Ocean County officials told OSC that to transport such debris out-of-state would have been cost-prohibitive and thus was not a viable alternative to the OCL.

The specific price for the hauling services varied based on the actual distance that debris was transported from the various municipalities' temporary debris sites to the OCL. For example, the price for C&D debris transported between 0 and 15 miles from a temporary debris site to the OCL is set by the AshBritt contract at \$31.25 per ton (referred to in this report as the "Tier 1 rate"). The price increased to \$40.63 per ton for debris transported between 16 and 30

miles (referred to in this report as the “Tier 2 rate”). The complete pricing schedule in the AshBritt contract for non-asbestos-containing C&D, the most common form of Sandy debris transported to the OCL, is set forth below (temporary debris sites are also known as Temporary Debris Storage and Reduction Sites, which is abbreviated below as TDSRS and highlighted accordingly):

III. D-2.1	Operations: <i>Non-asbestos Containing C&D</i>	Both CY and Tons per mileage intervals	From R.O.W.	0-15 miles	\$21.25 /cy	\$106.25 /tons
				16-30 miles	\$30.00 /cy	\$150.00 /tons
				31-60 miles	\$45.00 /cy	\$225.00 /tons
				61-120 miles	\$55.00 /cy	\$275.00 /tons
				121-220 miles	\$75.00 /cy	\$375.00 /tons
				221-320 miles	\$90.00 /cy	\$450.00 /tons
				321-420 miles	\$110.00 /cy	\$550.00 /tons
				> than 421 miles	\$130.00 /cy	\$650.00 /tons
			From TDSRS	0-15 miles	\$6.25 /cy	\$31.25 /tons
				16-30 miles	\$8.13 /cy	\$40.63 /tons
				31-60 miles	\$10.63 /cy	\$53.13 /tons
				61-120 miles	\$16.88 /cy	\$84.38 /tons
				121-220 miles	\$23.13 /cy	\$115.63 /tons
				221-320 miles	\$30.00 /cy	\$150.00 /tons
				321-420 miles	\$35.00 /cy	\$175.00 /tons
	> than 421 miles	\$55.00 /cy	\$275.00 /tons			

This pricing schedule was in effect for all of the billings that are the subject of this investigation.

In June 2013, FEMA announced its intention to reimburse New Jersey governmental entities for up to 90 percent of their debris removal costs attributable to Sandy, provided that certain eligibility requirements are satisfied. To facilitate such reimbursement, FEMA previously has issued guidance documents. For example, FEMA has created a sample bid sheet

to serve as a guide for soliciting debris removal services. Below is an excerpt of that sample bid sheet (temporary debris sites are also known as Debris Management Sites, which is abbreviated below as DMS):

RECOVERY FACT SHEET DAP9580.201					
ATTACHMENT 2: DEBRIS OPERATIONS CONTRACT BID SHEET					
Final Disposal	0-15 Miles from DMS to Final Disposal <i>Transport processed debris from DMS to final disposal</i> <i>0-15 Miles</i>	CY	999999	999999	99,999,999.00
	16-30 Miles from DMS to Final Disposal <i>Transport processed debris from DMS to final disposal</i> <i>16-30 Miles</i>	CY	999999	999999	99,999,999.00
	31-60 Miles from DMS to Final Disposal <i>Transport processed debris from DMS to final disposal</i> <i>31-60 Miles</i>	CY	999999	999999	99,999,999.00
	60+ Miles from DMS to Final Disposal <i>Transport processed debris from DMS to final disposal</i> <i>60+ Miles</i>	CY	999999	999999	99,999,999.00
	Single Price from DMS to Final Disposal <i>A single price transport of processed debris from DMS</i> <i>to final disposal</i>	CY	999999	999999	99,999,999.00
	Tipping Fees (Vegetative) <i>Fee includes negotiated contract price or pass through</i> <i>amount for vegetative</i>	CY	999999	999999	99,999,999.00
	Tipping Fees (Mix) <i>Fee includes negotiated contract price or pass through</i> <i>amount for Mix</i>	CY	999999	999999	99,999,999.00
	Tipping Fees (C&D) <i>Fee includes negotiated contract price or pass through</i> <i>amount for C&D</i>	CY	999999	999999	99,999,999.00

Thus, like the pricing schedule in the AshBritt contract, the FEMA sample bid sheet calls for different pricing components for debris transportation depending on whether the distance is “0-15” or “16-30” miles. FEMA guidance materials do not set forth specific recommended rates to be charged, but simply require that all charged costs be “reasonable.” FEMA has described a reasonable cost as one that “in its nature and amount does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost.”

Additionally, government entities seeking reimbursement from FEMA are required by FEMA to monitor debris removal services to ensure that all applicable eligibility requirements are satisfied. This requirement typically is met through the use of debris monitoring companies. Such companies review the invoices submitted by vendors such as AshBritt. The debris monitors are responsible for calculating, among other things, the transport mileage supporting an invoice and must recommend payment in order for money to be paid to debris-hauling vendors by a local government entity. This process occurs before a reimbursement request is made to FEMA. As of the date of this report, this process is ongoing, with many of AshBritt's invoices having been recommended for payment by the debris monitors, paid by the local government entity and submitted to FEMA for reimbursement.

Shortly after Sandy struck New Jersey, the State entered into agreements that made these debris monitoring services available to local governments through the cooperative contracting process. Specifically, in November 2012, the State entered into a cooperative debris monitoring contract with Arcadis U.S., Inc. (Arcadis) and expanded existing State contracts with the Louis Berger Group, Inc. (Louis Berger) and Witt O'Brien's, LLC (Witt O'Brien's) (formerly known as O'Brien's, Inc.) to explicitly encompass debris monitoring services. Through Ocean County's shared services agreements, several Ocean County municipalities utilized the debris monitoring services of Louis Berger, with whom the county itself also entered into an agreement. A smaller number of Ocean County municipalities directly entered into agreements with Arcadis and one municipality entered into a contract with Witt O'Brien's.

III. Methodology

On May 2, 2013, OSC received a referral from GORR requesting an investigation of AshBritt's debris hauling practices in Ocean County based on media reports regarding potential overbilling. Specifically, it was requested that OSC review the "hauling and/or billing practices of AshBritt" and determine whether the debris monitors "failed to identify or report these alleged practices." OSC also subsequently received a similar referral from DEP. In view of these referrals, the impact on taxpayers stemming from these hauling charges and the evident public interest in resolution of these issues, OSC commenced an investigation.

On May 8, 2013, Ocean County's debris monitoring consultant, Louis Berger, issued a report entitled "Review of Debris Hauling Distances for Ocean County." The report, which was presented to the Ocean County Board of Chosen Freeholders at a public meeting, generally concluded that the AshBritt invoices for debris transport were accurate and appropriate. The issues addressed in that report were considered by OSC and are discussed herein.

Based upon our preliminary review of available information, we focused our investigation on the following issues to determine whether AshBritt's billing practices and the debris monitors' subsequent review were appropriate:

- Whether the distance from the OCL entrance gate to the location where debris could actually be disposed of inside the OCL should be included in debris transport mileage calculations.
- Whether hauling charges increased due to improper rounding-up of debris transport mileage calculations.
- How debris transport mileage was calculated by the debris monitors and whether there were any miscalculations.

For organizational purposes, this report is structured in this same manner.

As part of our investigation, OSC selected particular temporary debris sites in Ocean County municipalities for a more thorough review, based in part on the proximity of each municipality's temporary debris site(s) to the OCL. Below is a list of those selected municipalities, each of which utilized the services of AshBritt and a debris monitor as noted below:

1. Borough of Bay Head (Arcadis)
2. Township of Brick (Arcadis)
3. Borough of Point Pleasant Beach (Arcadis)
4. Berkeley Township (Louis Berger)
5. Borough of Mantoloking (Louis Berger)
6. Borough of Seaside Heights (Louis Berger)
7. Toms River Township (Louis Berger)
8. Borough of Lavallette (Witt O'Brien's)

In completing this investigation, OSC obtained and reviewed voluminous documents, emails and other information from DEP, Ocean County, various municipalities, AshBritt and each of the debris monitors. OSC also interviewed numerous State, county and municipal officials, employees and representatives of AshBritt and the debris monitors, and FEMA officials, among others.

This report does not focus on the State's procurement of debris hauling and monitoring services, but rather on debris transport mileage calculation issues. Those procurement-related issues are being separately audited by the United States Department of Homeland Security Inspector General. OSC may additionally review issues that are not specifically addressed in this report at a later date as warranted.

A draft of this report was provided to each of the entities mentioned in the report. The debris monitors and AshBritt generally concurred with the findings of the report and provided a series of recommended language revisions. OSC also received comments from a series of

government officials, including from FEMA, who generally agreed with the findings in the draft report. All comments we received were considered in the preparation of this final report and have been incorporated herein where appropriate.

IV. Investigative Findings

A. Is it Reasonable to Include Mileage Traveled Inside the Ocean County Landfill in Debris Transport Mileage Calculations?

Conclusion: Yes, but one debris monitor made miscalculations concerning this issue.

One area of reported concern has been whether Ocean County municipalities were overcharged for debris hauling because mileage traveled inside the OCL had been included for mileage computation purposes. This issue is of particular significance at the OCL because of the substantial distance at that facility from the facility gate to the area within the landfill where debris is actually unloaded, which is referred to as the landfill's "face." Of 12 other New Jersey landfills that OSC contacted, 9 reported that the distance between the entrance and the landfill face was 0.75 miles or less, and the 3 other landfills reported the distance to be no more than 1.4 miles. As will be discussed herein, the distance from the OCL gate to the face is significantly further than at these other landfills, and including that distance in mileage computations qualified AshBritt for Tier 2 pricing in multiple instances.

The AshBritt contract itself does not specifically address whether to include mileage driven within a landfill in hauling mileage calculations. The contract simply calls for the debris monitors to calculate the "appropriate haul distance based on transport mileage."

The debris monitors interpreted the contract such that mileage driven inside the OCL itself would be included when calculating final debris transport mileage. For example, Louis

Berger believed that based upon the common meaning of “haul distance,” it was reasonable to include in the calculations the distance from the OCL gate to the face. Louis Berger representatives pointed specifically to the definition of “haul distance” in the *Dictionary of Construction*:

The distance measured along the center line or most direct practical route between the center of mass of excavation and the center of mass finally placed. It is the average distance material is moved by a vehicle.

OSC noted that the *Dictionary of Architecture and Construction* similarly defines “haul distance” as follows:

1. The distance that an excavated material is moved from the cut to the fill.
2. The distance along the most practical route for trucks to carry excavated material from its center of mass to the center of mass of the fill.

Similarly, Arcadis officials told OSC that in their view the AshBritt contract called for compensation based upon the distance the haulers actually traveled. Accordingly, Arcadis officials concluded that AshBritt was entitled to compensation for mileage traveled from the temporary debris sites to the OCL face. (Witt O’Brien’s representatives, who provided monitoring services for the Borough of Lavallette, noted that they had not addressed this issue because debris transports from Lavallette were already in the 16 to 30 mile range (Tier 2 rate) even without taking into account distances inside the OCL).

FEMA officials similarly told OSC that including distance traveled inside a landfill in debris transport mileage calculations is reasonable. Those officials explained that mileage inside a landfill is considered part of the actual distance traveled and can be considered part of the hauler’s “cradle to grave” cost.

Accordingly, OSC has concluded that it was appropriate to interpret the AshBritt contract as allowing for the inclusion of distance traveled from the OCL gate to the face when calculating

debris transport mileage. The debris monitors did not act unreasonably in calculating payment based on such mileage.

In the course of our analysis concerning this issue, OSC noted that Arcadis' calculation of the distance inside the OCL was approximately one-half mile greater than that distance as calculated by others. Specifically, Arcadis had calculated the mileage inside the OCL to be 3.1 miles, while Louis Berger and AshBritt had calculated the mileage to be 2.5 and 2.4 miles, respectively.

As early as November 2012, the distance inside the OCL was being discussed by AshBritt and the debris monitors. For example, on November 19, 2012, an AshBritt representative sent an email discussing the distance inside the landfill to each of the debris monitors, including Arcadis. The email reflected that AshBritt representatives believed the distance inside the OCL to be approximately 2.4 miles.

On May 20, 2013, OSC investigators toured the OCL with a landfill representative to calculate the interior mileage in question. According to that OCL representative's vehicle odometer, the total distance from the landfill gate to the then-face was 2.4 miles. The landfill representative also identified for OSC the approximate location where haulers began unloading Sandy debris in November 2012. This location was different than the location of the landfill's face in May 2013 because the location of the face changes as more material is unloaded and disposed of there. Based upon that approximate location, it was estimated by the landfill representative that an additional maximum of 1,700 feet or 0.3 miles could have been traveled by haulers in November 2012. Accordingly, it is reasonable to estimate that Sandy debris haulers traveled a minimum of 2.4 miles to a maximum of 2.7 miles once inside the OCL in order to actually unload the Sandy debris.

OSC asked Arcadis officials why their company’s OCL mileage calculation was different from that of the other companies. Arcadis representatives were unable to specifically explain how that discrepancy had occurred. In any event, following OSC’s inquiries Arcadis reduced its originally calculated distance from 3.1 miles to the 2.4 miles referenced in the November 2012 AshBritt email.

In reviewing the distances between the OCL and each of the selected temporary disposal sites in Ocean County, the 0.7 mile revision ultimately was found to have impacted charges to two Ocean County municipalities. These erroneous charges are set forth in the table below.

Municipality	Haul Distance Based on Original Calculation of 3.1 Miles	Haul Distance Based on New Calculation of 2.4 Miles	Amount of Erroneous Charges
Bay Head	16 to 16.1 miles	15.3 to 15.4 miles	\$34,196.48
Brick Township	16.1 to 16.6 miles	15.4 to 15.9 miles	\$129,463.98

Additionally, although initially not part of OSC’s investigation, after the OCL interior mileage discrepancy was identified by OSC, Arcadis told OSC investigators that the Borough of Little Silver (a Monmouth County municipality) also utilized the OCL and had been overcharged based on the same discrepancy. That is, debris loads previously charged to Little Silver at the Tier 3 (31 to 60 mile) rate should have been charged at the Tier 2 (16 to 30 mile) rate. These overcharges amounted to \$30,960.75. Thus, in total, the overcharges to these three municipalities resulting from this issue were \$194,621.21. All of the pertinent invoices have been or are in the process of being adjusted downward.

B. Is it Reasonable to Round-Up Debris Transport Mileage Calculations?

Conclusion: Potentially yes, but AshBritt has agreed to deduct any such calculations that had been rounded up.

As noted above, the price for debris transport was based upon tiered mileage categories, including 0 to 15 and 16 to 30 miles. The AshBritt contract does not, however, specifically address how to categorize distances from 15.1 to 15.9 miles, 30.1 to 30.9 miles and so forth. For example, the contract is unclear as to whether to charge debris that was hauled 15.8 miles at a Tier 1 rate because the distance was less than 16 miles, or to round-up and charge the Tier 2 rate. In the municipalities we reviewed, there was no uniform approach in this regard. For example, one of the monitors sometimes rounded up and sometimes rounded down the exact same distance.

In attempting to determine the appropriate interpretation of the governing contract, OSC contacted FEMA. As noted previously, the same mileage parameters used in the AshBritt contract appear in FEMA guidance materials. FEMA officials stated to us that they would be inclined to round-up to 16 miles if the haul distance was any farther than 15.0 miles and similarly would round any distances above 30.0 miles to the tier beginning at 31 miles. They also stated, however, that it would be reasonable to round-down in those same instances if the parties had agreed to such a calculation method. The FEMA officials told OSC that they normally do not review costs to this level of detail when reviewing requests for reimbursement.

OSC also contacted Connecticut officials to determine how this issue was addressed in the context of the Connecticut contract. We were told that in June 2013, Connecticut amended that contract to specifically address this issue, and that the contract now sets forth the mileage tiers more specifically as 0 to 15.99 miles, 16 to 30.99 miles and so forth. Connecticut officials told OSC that although they had not experienced any specific problems due to the original

mileage tiers in their contract, they had noted the potential for problems in close cases and decided to amend the contract.

Following inquiries by OSC concerning this issue, AshBritt officials informed OSC that in light of the lack of clarity here AshBritt would charge the Tier 1 rate for any debris load transported less than 16.0 miles. Accordingly, the pertinent invoices have been adjusted or are in the process of being adjusted downward by the appropriate amount as identified by OSC (and AshBritt). Those revisions will result in approximately \$47,000 in downward cost adjustments.

C. Did the Debris Monitors Utilize Appropriate Haul Transport Mileage Calculation Methods?

Conclusion: Generally yes, but calculation errors were made.

The AshBritt contract does not specify by what method the parties should calculate debris transport mileage. For example, the contract does not specify whether to use odometer readings, online mapping services such as Google Maps or an alternate method. Moreover, there has been no formal written FEMA guidance concerning this issue. FEMA officials told OSC that actual odometer readings and online mapping services are both reasonable methods to calculate transport mileage. They noted, however, that actual odometer readings frequently are more accurate than other methods for a variety of reasons. OSC's investigation determined that in Ocean County, different methods were used by different debris monitors.

1. Louis Berger and Witt O'Brien's

Louis Berger and Witt O'Brien's representatives calculated mileage by using Google Maps mileage calculations. OSC investigators drove from the temporary debris sites in the municipalities monitored by Louis Berger and Witt O'Brien's to the OCL to determine whether those Google Maps mileage calculations were accurate. For these trips, OSC drove the shortest drivable route as determined by a common in-vehicle Global Positioning System (GPS) device.

In general, OSC's trip odometer results reconciled with the Google Maps mileage calculations. There were, however, some discrepancies that had an impact on charged haul rates. The discrepancies resulted from the particular route that Google Maps selected as the basis for one of its mileage calculations. Specifically, Louis Berger used Google Maps to calculate the distance between Berkeley Township's temporary debris site and the OCL face as 16.1 miles. In contrast, OSC's calculation using a vehicle odometer while driving the GPS-derived shortest route was approximately 15.2 miles.

OSC provided the details of the 15.2 mile route to Louis Berger representatives. Those representatives speculated that the shorter route may not have been used because there is a school along that route and a road used in the route has certain vehicle restrictions. FEMA officials confirmed to OSC that it is reasonable not to utilize a particular route on the basis of such factors. However, Louis Berger officials did not document any decision to forgo that shorter route, making it difficult to definitively determine the basis for and reasonableness of Louis Berger's calculations.

In any event, an alternate shorter and clearly appropriate route was subsequently identified by a Louis Berger employee who had been charged with reviewing the GPS route provided by OSC. That route was determined to be 15.7 miles. Based on the identification of that shorter route, Louis Berger has agreed that there were invoices that it calculated at the Tier 2 rate that should have been charged at the lower Tier 1 rate. The financial impact of the change in tiers is approximately \$17,000. Those invoices have been adjusted downward by that amount.

OSC additionally identified a separate error by Louis Berger. Specifically, the Borough of Mantoloking, having no temporary debris site of its own, utilized the neighboring Bay Head debris site to store and sort some of its debris. According to the May 2013 Louis Berger report

completed at the behest of Ocean County, Google Maps calculated the distance from the Bay Head site to the OCL as 14.9 miles (including the 2.5 miles inside the OCL). Nevertheless, some of the loads transported for Mantoloking through the Bay Head site were calculated and paid for at the Tier 2 rate. In total, this accounted for approximately \$26,000 in additional charges. Upon OSC's inquiries, the pertinent invoices have been revised downward by the appropriate amounts.

2. Arcadis

In determining hauling distances, Arcadis did not use the same Google Maps service that Louis Berger and Witt O'Brien's used. Instead, Arcadis used a related Google mapping service known as Google Maps API (Google API) in conjunction with its own proprietary system, named HaulPass. The HaulPass system calculates the latitude and longitude coordinates of the exact location from which a debris hauler departs from a temporary debris site as well as the coordinates of the landfill. The two sets of coordinates are sent to the Google API system to ascertain the driving distance between the two points. Google API, which is designed for business use, provides travel distances in a manner similar to Google Maps, but does not set forth detailed route information.

In light of the contractual silence on the issue of method of mileage calculation, the method used by Arcadis was reasonable. However, we identified a discrepancy in reviewing Arcadis' calculations. Specifically, Arcadis' HaulPass system in conjunction with Google API calculated two different mileages for the distance to the OCL both from Bay Head and from Point Pleasant Beach before and after December 12, 2012. For example, in reviewing the mileage calculations for Point Pleasant Beach, OSC noted that mileages to the OCL before December 12, 2012 were calculated at 17.5 to 17.9 miles, but were 15.1 to 15.7 miles after that date.

Some mileage variation is expected with the HaulPass system because each debris load may have a slightly different departure point. That small expected variation does not, however, account for the significant mileage discrepancies identified in Point Pleasant Beach and Bay Head.

Arcadis representatives could not explain those discrepancies. They speculated that perhaps Google somehow altered the determined driving route after December 12, 2012. In an interview with OSC investigators, a Google representative said that that did not occur.

OSC investigators drove from both the Bay Head and Point Pleasant Beach temporary debris sites to the OCL utilizing a GPS-calculated shortest route. Our odometer readings were generally consistent with the calculations made by the Arcadis system after December 12, 2012. OSC's mileage calculations, as well as Arcadis' subsequent calculations, indicate that all debris loads originating from these temporary debris sites should have been charged at the lower Tier 1 rate because the transport distance was less than 16 miles.

The difference between what was charged before December 12, 2012 at the Tier 2 rate and the lower Tier 1 charges is approximately \$44,000, not including the more than \$34,000 in related charges for loads already identified in the section above discussing Arcadis' initial 3.1 mile OCL interior calculation. We also identified approximately \$1,600 of unrelated miscalculations relating to the Bay Head site. Following our inquiries, the pertinent invoices are in the process of being adjusted downward in an amount consistent with OSC's findings.

V. Conclusions

Our investigation did not reveal any persuasive evidence of intentional overbilling for debris removal services in the Ocean County municipalities we reviewed. It appears that a confluence of factors led to initial indications of such misconduct. Such factors included, for example, the particular distances between the OCL and the temporary debris sites, as a number of those distances were very close to the 16-mile threshold that qualified hauls for higher pricing rates. Those factors also included the large distances haulers traveled inside the OCL itself, which led to critical issues associated with whether it is appropriate to include in mileage computations distances traveled inside a landfill. Vagueness in the applicable contract language concerning how the parties should calculate distances and select debris transport routes contributed to these issues, as well as to varying practices among the debris monitors, which added further confusion concerning appropriate practices.

OSC has concluded that:

- It was reasonable to include for computation purposes mileage traveled inside the OCL;
- The practice of rounding up mileage may be permissible in appropriate circumstances; and
- In general, each of the debris monitors used reasonable mileage calculation methods.

We identified, however, a series of miscalculations as well as other erroneous and questionable charges referred by the monitors for payment. In total, the amount of charges to be adjusted in the municipalities we reviewed is more than \$300,000, as summarized in the chart below.

Category of Additional Cost	Amount
Additional Costs Due to OCL Mileage Revision (Bay Head, Brick, Little Silver)	\$194,621.21
Additional Costs Due to Rounding (Bay Head, Mantoloking, Point Pleasant Beach)	\$47,473.49
Additional Costs Due to Other Miscalculations and Errors (Bay Head, Berkeley, Mantoloking, Point Pleasant Beach)	\$86,847.45
Total	\$328,942.15

In total, approximately 6 percent of the debris hauling charges that we reviewed have been or are in the process of being adjusted downward in accordance with the findings of this investigation.

VI. Recommendations

As noted in this report, the process of adjusting invoices in response to the findings of this investigation already is underway. OSC recommends that the parties ensure that all remaining invoices referenced in this report are adjusted as appropriate and that appropriate reimbursements or credits against outstanding invoices are made.

Going forward, OSC recommends that contracts for debris hauling services contain clear, explicit requirements for calculating debris transport mileage. For example, if the parties agree to base compensation on tiered mileage categories, the contract should set forth the specific parameters of those tiers to the tenth or hundredth of a mile, along the lines of the recent Connecticut contract amendment. Similarly, debris hauling contracts should make clear what distances may be included in transport calculations. For example, the contract should set forth whether distances driven within a landfill should be included in those calculations.

Debris hauling contracts also should specify the required method of calculating mileage traveled. There are advantages and disadvantages to each of the available options and ultimately this is a policy decision that should be made by the contracting parties in consultation with FEMA and other industry experts.

OSC recommends that consideration be given in this regard to calculating transport distance using straight-line mileage calculations, also known by the term “as the crow flies.” This method calculates the straight-line distance between two points without taking into consideration turn-by-turn routes. This method may address some of the problems noted in this report in that it eliminates the need for discretionary decisions about appropriate travel routes and it facilitates audit review and similar monitoring. OSC notes that a more recent State contract for debris hauling and removal services requires some transport distances to be calculated in such straight-line miles.

There are, however, disadvantages to this method as well. For instance, one of the parties responding to OSC’s draft report noted that use of this method may limit the number of vendors willing to bid for the contract because of a belief that straight-line mileage calculations are not always a fair or accurate measure of actual haul distance. As another responding party put it, “trucks do not fly.” As noted previously, the contracting parties should consult with industry experts and consider all options prior to selecting the mileage calculation method.

If straight-line mileage calculations are not used, OSC recommends that consideration be given to establishing specific standards to be included in contracts when online route-mapping services are permitted to serve as the basis for mileage computation. This is particularly important for situations when such methods produce mileage calculations that are within tenths of a mile of being categorized in a particular cost category. As noted previously, in the course of

this investigation OSC discovered instances where the travel routes used to validate invoices through online mapping services actually were not the shortest appropriate route, affecting the charged haul rate. Contracts may require, for example, that specific steps be taken to confirm such internet-based distances, such as by requiring confirmation through odometer readings and by verifying the appropriateness of particular routes with local government officials.

Lastly, OSC recommends that local government entities be vigilant in ensuring that debris monitors are reviewing invoices not only in the context of the logistics of federal reimbursement requirements, but also with the specific aim of achieving maximum value for taxpayers. Ensuring that FEMA paperwork and similar requirements are satisfied is important, but so is ensuring that the lowest possible cost is being charged, whether that payment is being made by taxpayers nationwide or locally. A greater focus by the debris monitors on those latter issues may have prevented some of the problems identified in this report.