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ZANKER ROAD RESOURCE RECOVERY OPERATION AND LANDFILL (ZRRROL)

CORR PROTOCOL EVALUATION REPORT

September 6, 2013
Evaluation Body: RCI

Executive Summary

This report corresponds to the evaluation of the application for CORR Certification by Zanker Road Resource Management, Ltd. (ZRRML), owner and operator of the Zanker Road Resource Recovery Operation and Landfill (ZRRROL) located at 705 Los Esteros Road, San Jose, California, submitted to the Recycling Certification Institute (RCI or Institute). Due to a new application process (now online) and a restart of the Institute in California, this Evaluation was conducted by RCI's Executive Director. In addition to the evaluation itself, this effort served to test the new process and determine if any changes would be incorporated into an amended training supplement for existing Evaluation Bodies as well as training for future Evaluation Bodies as evaluations would typically be performed by RCI-trained Evaluation Bodies. This Evaluation represents an independent review of data and information provided to the Institute. Due diligence was followed to ensure Duty of Care and Duty of Loyalty to the Institute and to manage any Conflict of Interest.

RCI General Reporting Protocol 1.0.1 (GRP), RCI General Evaluation Protocol 1.0.1 (GEP), RCI Evaluation Manual 1.0.1 (EM), and RCI General CORR Protocol 1.8 (GCP) were used to guide the evaluation process as is standard practice for all Evaluations.

The evaluation found neither material or immaterial misstatements nor deviations from the described process train for the operations of each of the separate plants at the ZRRROL site. As with many certification programs, the Institute uses a 95% confidence level as its Minimum Quality standard when calculating recovery or recycling rates using the weights of materials recovered and recycled. The twelve months of recovery and recycling data submitted by ZRRROL was within the quantitative materiality threshold of 95% (less than 5% error) per EM Section 2.5.

Overview of ZRRROL Operations

The ZRRROL has operated as a resource recovery facility and disposal site since 1985 under various permits issues by the City of San José, State of California, San Francisco Regional Water Quality Control Board (RWQCB), and the Bay Area Air Quality Management District (BAAQMD).

As permitted under the current Solid Waste Facility Permit (SWFP), the ZRRROL is allowed to accept up to 2,600 tons per day (tpd) of materials. Although permitted as a Class III landfill, the ZRRROL is not allowed to accept putrescible garbage and solid waste (i.e., wet household garbage), liquid waste sludge, designated wastes, and hazardous wastes. The primary wastes received at the ZRRROL, therefore, include construction waste, demolition debris, wood waste, yard waste, and soil generated from throughout the San Francisco Bay area. This site is currently undergoing landfill closure and thus will not be landfilling any additional materials. All residuals from the recycling operations are transported to the Marina Landfill in Monterey California.

The ZRRROL is open to the public from 6:00 a.m. to 6:00 p.m. Monday through Friday and 8:00 a.m. to 4:00 p.m. on weekends. It is closed on major holidays. Since 1985, ZRRROL receives materials from most jurisdictions within the Bay Area. All materials entering the facility are weighed and recorded, including: material type, date, time, weight, yardage, fees, hauler, and jurisdictions of origin. With the proper tracking of incoming materials and all outbound and disposed tons, a monthly recycling percentage is established for each "plant."

Current resource recovery operations at the ZRRROL are divided into plants. Each plant serves a specific function in the overall operation. There are currently seven resource recovery plants permitted for operation at the ZRRROL, however, this Evaluation concentrates on the four (4) plants applying for RCI Certification, thus particular attention was given to determining the activities and accuracy of maintaining appropriate segregation of operations and requisite accuracy in reporting. These plants include; (1) concrete processing, (2) brush/wood waste processing, (3) Sheetrock processing, (4) Asphalt Shingle Processing. Other recycling plants include (5) yard waste transfer, (6) demolition debris/mixed debris transfer, and (7) soil processing.

The Four Plants

Concrete Processing

Concrete rubble is typically delivered to the ZRRROL by demolition/construction contractors and private individuals. Incoming loads composed primarily of concrete rubble are directed to the concrete stockpile area for unloading. Concrete rubble separated out at the other on-site recycling plants is also regularly transferred to the concrete stockpile. The concrete rubble stockpile is maintained in a stable configuration and with full perimeter access.

Product/Method

In the recycling process at the ZRRROL the concrete rubble is converted into rock of various sizes that is suitable for various construction purposes, including base rock, engineered fill material, drain rock, pea gravel, and sand and erosion control material. The majority of the recycled rock generated at the ZRRROL is used as "base rock" (i.e., gravel) in various construction and landscaping projects.

To create the rock, concrete rubble is taken from the stockpile with a loader or excavator and placed directly into a jaw crusher. The jaw crusher is designed to reduce most large and odd-sized pieces of concrete rubble into smaller, more manageable sized chunks and pieces. The processed concrete from the jaw crusher is then transferred onto a conveyor belt and passed under a magnet that removes metals and past two sorting stations to manually remove nonmetallic items such as wood, paper and plastic. The cleaned jaw crushed concrete is then sent through a screening plant to separate out the oversized material. The oversized material separated at the screen is conveyed into a secondary crusher to be further reduced and then routed back through the screening process. All the smaller materials that pass through the screening

process are conveyed to a stockpile for temporary storage at the ZRRROL. The finished product rock stockpile will be maintained in a stable configuration and for easy access.

All of the existing concrete processing equipment is electrically powered. Because this equipment is electrically powered there are no adverse air emissions associated with the equipment operation. To control fugitive dust emissions during material handling and crushing operations the concrete stockpile is watered by hand before material is loaded into the crusher and the crusher and conveyor systems are outfitted with water jets to keep the material moist and prevent dust. Water is also applied to the on-site material stockpiles as necessary to minimize dust generation during material transfer and loading operations.

It should be noted that the basic concrete crushing process and equipment described above is used to process non-recyclable ceramics and bricks into a sand-like product for use in bathroom tile, 3/8" pea gravel, sand, ½" and ¾" drain rock for use in landscaping and construction products.

Wood Waste Processing & Wood Grinding

Landscape contractors, demolition/construction contractors, and private individuals deliver wood waste and brush to the ZRRROL. Incoming loads composed primarily of brush; tree trimmings and wood waste are directed to the wood waste stockpile area for unloading. Wood wastes separated out at the other on-site recycling plants (especially the Construction waste sorting line) are also regularly transferred to the incoming wood waste stockpile.

Product/Method

The wood waste is ultimately ground and then screened to create wood chips and wood fines. The wood chips (anything larger than 3/8-inch) are temporarily stockpiled on-site and then hauled off-site and used primarily as co-generation fuel and secondarily as mulch for various landscaping and agricultural purposes. The wood fines (anything smaller than 3/8-inch) are also temporarily stockpiled on-site and then hauled off-site and used in landscaping projects or as soil amendment.

The Wood Waste plant consists of an electric Peterson Pacific grinder, an electrically powered trommel screen and a series of electrically powered feed, transfer and stacking conveyors. To control fugitive dust emissions in the conveying and screening operations the wood waste stockpile is watered by hand before material is loaded into the screen. The nearby water tank is also equipped with a hose to make it available for immediate fire suppression if ever necessary. The plant is permitted though the BAAQMD.

Sheetrock Processing Area

Contractors and private individuals deliver Sheetrock to the ZRRROL with the loads typically being clean materials. Incoming loads composed primarily of sheetrock are directed to the sheetrock stockpile area for unloading. Sheetrock that is separated out at the other on-site recycling plants is also regularly transferred to the drywall stockpile.

Product/Method
In the recycling process, materials such as wood, metals, and trash are removed on-site leaving the sheetrock in smaller piles. These piles are consolidated in a stockpile where a Caterpillar dozer is used to crush the materials. These materials are loaded into transfer trucks and sent to a sheetrock recycling operation in Monterey.

Asphalt Shingle Processing
ZRRROL accepts and processes clean, separated loads of composite asphalt roofing shingles removed from residential buildings.

Product/Method
The company sorts and cleans the old shingles and transports them to Oakland where they are processed into dry, granular asphalt that is shipped to other East Bay manufacturers to make "hot mix asphalt" used to build or patch roads throughout the region.

The plant also accepts commercial tear off and tar and gravel roofing. These materials are stockpiled and made into alternative daily cover (ADC).

Development of Evaluation Plan

ZRRROL initiated the Certification process by first Registering each of the four single-material lines on RCI's Registration webpage: https://www.recyclingcertification.org/registration/. The new Registration process requires facilities to submit facility and contact information which provides RCI with a general understanding of the on-site operation(s) and what additional information may be needed in preparation for an Evaluation. A sample of information provided through the Registration process includes:

- Name of the facility
- Street address of the facility (P.O. Box not acceptable)
- Name of the city/state where the facility is located
- Facility type
- Scale(s) certified or not
- Permits – state/local Registration Number or state/local permit number
- Hours of facility operation
- Current tons of Inbound and Outbound materials
- Name of company contact person, their position/title, and contact information
- Website address

Upon ZRRROL's completion of the Registration process and in preparation for the Evaluation, RCI requested further documentation as expressed in the CORR guidance documents. RCI also provided an overview of the Evaluation process to aid in the

streamlining and completion of activities on the day of the site visit. On-site review would include:

- Review of recyclables sales records
- Sales contacts to verify facility sales and other off-site movement of materials
- Confirmation of permits
- Verification of use and accuracy of scales including calibration frequency
- Observation and verification of load/material sorting and accuracy
- Interviews with key personnel
- Review of employee training/safety manuals
- Calculation of variance in recovery and recycling rates
- Other materials/documentation that may aid in preparation of a Facility Evaluation Report and Evaluation Opinion.

RCI reviewed twelve prior months' data for each of the plants to determine accuracy of the mass-balance calculations for each plant. ZRRROL provided pivot tables that allowed random sampling and review of all aspects of data including customers, weight tags, days, dates, materials, tons, etc. RCI noted areas of potential risk to follow up on during the site visit.

SITE VISIT

On August 1, 2013, RCI performed an on-site evaluation of the four ZRRROL single line operations. Sustainability Director Michael Gross conducted the tour of the facility and served as ZRRROL's lead contact throughout the Evaluation process. Mr. Gross was responsible for submitting the initial applications and responding to subsequent inquiries as well. RCI did a full walk-through of the facility, examining where materials enter, are measured, deposited, processed/sorted, and eventually leave the facility.

The review included the follow-up questions from the initial review of data. Interviews were conducted of staff associated with the key areas of the operations, in particular, those staff who have access authority and responsibility for maintaining, reviewing, and overall integrity of ZRRROL's data. RCI also reviewed the training manuals to determine if adequate QC existed for those staff with the potential to directly affect the recycling and recovery rates reported by the facility and determined adequate and ongoing training exists in these key positions to maintain QC of processes and data.

Regulatory Compliance Test

ZRRROL possesses the necessary permits to operate.

The ZRRROL has operated as a resource recovery facility and disposal site since 1985 under various Planned Development Permits issued by the City of San José Planning Department, Solid Waste Facilities Permit (SWFP) issued by the City of San José Local Enforcement Agency (LEA) and the California Integrated Waste Management Board (CIWMB), Waste Discharge Requirements (WDRs) issued by the San Francisco

Regional Water Quality Control Board (RWQCB), and various Permits to Operate (PTO) issued by the Bay Area Air Quality Management District (BAAQMD). No irregularities were found involving management or employees who have a significant role in internal controls, or that could have a material effect on the reporting of ZRRROL's recycling rates.

Use of Scales

RCI concludes that the facility satisfies the requirements for use of scales.

Materials In

Scales are located at the entrance to the facility. Each hauling vehicle with a load of materials drives across the scales where it is weighed (charges are regularly determined by converting weight to volume using factors provided/required by the City of San José) and the driver proceeds to the appropriate location in the facility to empty the vehicle. A load checker confirms the materials as they are deposited in the tipping area. In the event the materials do not match the materials identified on the driver's tag, the load checker notifies the driver and radios the scale house to make the correction. Another operation vehicle moves the load to the appropriate tipping area. The driver returns to the scales and re-weighs before exiting. The data is automatically entered into ZRRROL's electronic data management system (EMS) connected to the main office also onsite. The scales are calibrated at least twice per year by *Santa Clara County Weights and Measures* including each instance of maintenance or other work associated with the scales.

Materials Out

Many of the vehicles arriving to pick up materials have been weighed previously and their empty tare weights are stored in the EMS. Trucks without stored tare weights drive across the scales for an initial weight. The vehicles are weighed again after loading out and the customer/scale information goes into the EMS as described above. RCI was able to review the weight tags in the scale house and in the main office to verify accuracy of the EMS as well as the process for any subsequent manual adjustments.

Supporting Data for Rate Estimates

RCI concludes ZRRROL maintains required supporting data as required by the GRP for recycling and recovery rate estimates.

ZRRROL uses an EMS system and retains hardcopy receipts for incoming and outgoing materials/ markets. ZRRROL provided twelve months of electronic reports with pivot tables (mass balance) for all four plants. The pivot tables included information on customers, weight tags, days, dates, materials, tons, etc. Random samples were selected to substantiate and crosscheck entries in the electronic reports with hard copies to ensure accuracy. Sales invoices and receipts for materials leaving each of the four plants were matched with the electronic reports. A sampling of customers and

purchasers were selected to further confirm the disposition of materials recorded as having left ZRRROL.

Data Transcription and Management

Sufficient QC exists for creation of reuse and recycling rate tables from EMS data.

RCI interviewed ZRRROL's Data Manager regarding the EMS and the generation of all reports as well as supporting mass balance spreadsheets. Material data is automatically entered into the system for accounting purposes. These reports are reviewed to verify accuracy as well as hand enter and/or correct any manual adjustments as determined through the normal course of business.

The spreadsheets are reviewed by the Sustainability Director for a final crosscheck before submittal (uploading) to RCI. Based on the critical need for accurate monthly spreadsheets for internal and customer accounting, observed competencies, as well as ongoing training of the individuals involved in the data entry, and final crosscheck by senior management, RCI concludes that sufficient QC exists for data transcription and management per the GRP.

Individuals Properly Trained for Functions They Perform

ZRRROL employees receive adequate in-house initial and recurring training.

RCI reviewed the training schedules and modules/materials as well as conducted interviews with key employees during the site visit. RCI observed these employees in the scale house and designated tipping areas of the four plants. Materials were properly categorized and directed and the load checker maintained contact with vehicle drivers and the scale house as appropriate. Employees were observed utilizing proper safety equipment and appropriate signage was posted in the four plants as required by Cal-OSHA. Based on the observations of staff, the work areas, and the initial and ongoing training of ZRRROL employees, RCI concludes that ZRRROL provides employees with the requisite training per the GRP.

Performance Standard Test

Reported reuse and recycling rates are within 5% allowed threshold.

RCI requested electronic copies of mass balance spreadsheets for each of the four plants before scheduling a site visit at ZRRROL. Due to the size of the electronic files, ZRRROL provided RCI with access to its Dropbox account. After receiving access to the files, RCI downloaded and began reviewing, noting areas requiring clarification. Several phone meetings with ZRRROL's Sustainability Director (Gross) were conducted to review RCI's questions related to the twelve-month mass-balance and monthly entries, as well as to discuss how ZRRROL would upload the information into RCI's web-based reporting system. Formulas were reviewed and their validity tested, pivot tables were inspected and select transactions were indentified for further review during the site visit. The recycling and recovery rates information submitted by ZRRROL for

each of the four plants fell within the 5 percent tolerance threshold defined per the GRP. RCI concludes that ZRRROL's reported reuse and recycling rates satisfy the Performance Standard Test required per the GRP.

Evaluation Statement Overview

Based on extensive review of data from ZRRROL's Concrete, Wood, Sheetrock, and Asphalt Shingle plants, the findings according to RCI protocols via the evaluation process, and the on-site visit and interviews with key staff, RCI finds that each of ZRRROL's four plants meet RCI's eligibility requirements, are in compliance with all measurement and record-keeping requirements, and have no existing material or significant immaterial non-conformances or misstatements in their reported data. RCI hereby certifies the Reuse and Recycling rates submitted by ZRRROL as Real Rates as outlined in the GRP per RCI CORR protocol.

The undersigned hereby certify that the information provided herein is true, complete, and accurate; they have read and understand the protocols developed by RCI, and are familiar with the requirements of RCI. Furthermore, they also certify that any signatories duly elected, qualified, and acting officers of their respective organizations and that their organizations agree to be bound to the protocols of RCI.

For Recycling Certification Institute:

By	By
Stephen M Bantillo	
Print Name	Print Name
Executive Director	
Title	Title
September 6, 2013	
Date	Date

For ZRRROL:

	Sustainability Director
By	Title
Michael J. Gross	September 6, 2013
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