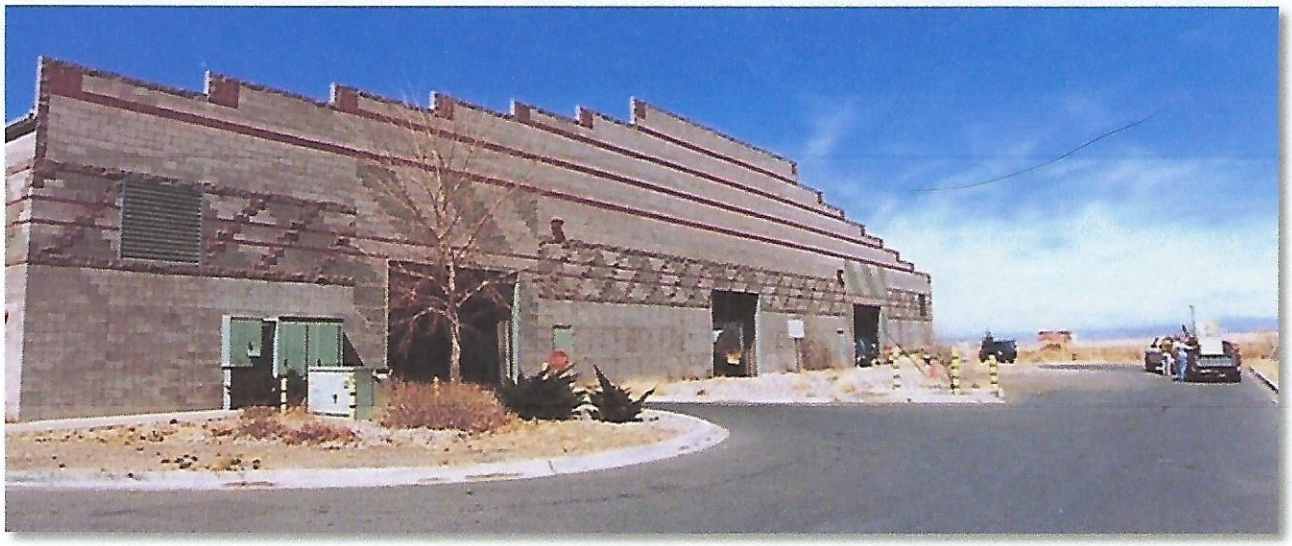
Expert Report:

Eagle Rock Convenience Center

April 2020



Prepared For:

The City of Albuquerque
City/County Building
One Civic Plaza, NW
Albuquerque, New Mexico 87102

Prepared By:

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I. KEITH GORDON NEW MEXICO 10984 04/29/2020 REGISTERED PROFESSIONAL ENGINEER

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New Mexico P.E. No. 10984

EXPERT REPORT - EAGLE ROCK CONVENIENCE CENTER

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ATTACHMENTS

1.0 Project Description

The City of Albuquerque (CABQ) owns and operates the Eagle Rock Convenience Center (Eagle Rock), which is managed by the City's Solid Waste Department (SWD). The facility accepts *solid waste* in accordance with its state *Solid Waste Facility Permit*, consisting primarily of *municipal solid waste* (MSW), *yard waste, recyclable materials* and *scrap tires*. The Facility has a list of prohibited items (e.g. hazardous or medical wastes, liquids, etc.) as detailed on its website *(www.cabq.gov/solidwaste)*.

The website, **Attachment 1**, identifies the network of *solid waste facilities* that serve the community. The Cerro Colorado Landfill is positioned as the hub; and the spokes comprise Eagle Rock plus the Montessa Park and Don Reservoir Convenience Centers. Eagle Rock is the only Convenience Center that allows self-unloading trailers, and is by far the most popular of the three:

Table 1.0

Tonnage Processed FY 2016 - FY 2019 CABQ Convenience Centers

Location	FY2016 Tonnage Processed	FY2017 Tonnage Processed	FY2018 Tonnage Processed	FY2019 Tonnage Processed	Average Tonnage	Percent of Convenience Center Waste Each Facility Processes
Eagle Rock Convenience Center	46,065	36,856	48,229	48,726	44,969	64%
Montessa Park Convenience Center	15,164	17,818	11,579	15,881	15,111	22%
Don Reservoir Convenience Center	8,835	9,320	9,504	11,459	9,780	14%

*Data from CABQ SWB

The Convenience Centers, and in particular Eagle Rock, provide an essential service by establishing accessible locations where residents can deliver their trash and recyclables at a reasonable fee (**Attachment 1**). This technology is highly efficient by consolidating the loads from typically 60-80 private vehicles into one specially designed, high capacity transfer trailer. Eagle Rock is the most efficient of the Convenience Centers, processing an average of 140 tons/day (tpd), seven days per week. Not only does it process nearly two-thirds of the solid waste that is transferred, but it is the most distant of the three from the hub (Cerro Colorado) at 25 miles.

Note: *Italics* indicate a "defined term" per the applicable regulatory standards.

This equates to seven vehicle roundtrips at 50 miles, versus > 500 private vehicles climbing nine-mile hill to the Landfill. Eagle Rock is nationally recognized as a model high-capacity Convenience Center in the Solid Waste Association of North America (SWANA) training materials, and NMED's Transfer Station Operators Certification Course.

2.0 Regulatory Standards

Eagle Rock is subject to an array of local, state, and federal regulations:

Table 2.0

Regulatory Standards

(a) New Mexico Solid Waste Act [§74-9-22 NMSA 1978]
(b) New Mexico Environment Department (NMED) Solid Waste Rules [20.9.1 - 20.9.10 NMAC]
(c) Occupational Safety and Health Administration (OSHA), specifically [Title 29.B Chapter XVII; Part 1910.D § 1910.29 "Fall Risk"] Additional OSHA design and operating Standards apply.
(d) CABQ Zoning - NON-RESIDENTIAL – SENSITIVE USE ZONE DISTRICT (NR-SU) 2- 5(E)(2)(i) Solid Waste Convenience Centers

The New Mexico Environment Department (NMED) is the primary regulatory authority governing solid waste facilities per the "Solid Waste Rules" (the Rules) administered by the Solid Waste Bureau (SWB). The Rules establish specific siting, design, and operating standards for "*permitted*" *transfer stations* and "*registered*" *convenience centers.*

All three of the City's Convenience Centers are defined as *transfer stations* by the Rules due solely to their operating capacity (i.e. > 240 cubic yards/day). All solid waste facilities are subject to regulatory approval, inspection, and reporting. Eagle Rock was originally permitted under the "Solid Waste Management Rules" (SWMR) in 1994; and the Permit was renewed in 2002 under SWMR-4. The facility is now in its 20-year "*Permit Renewal*" cycle, with an extensive Permit Application pending before NMED's Solid Waste Bureau, in accordance with the updated 2007 "Solid Waste Rules". **Attachment 2** is the "Public Notice of Filing of Application by CABQ for a Solid Waste Facility Transfer Station Permit Renewal" for Eagle Rock. Notice was published on December 18, 2019 in the Albuquerque Journal (**Attachment 3**).

The federal OSHA standards are administered by a Bureau of NMED, including inspections for operational health and safety. OSHA also provides specific standards for the design of industrial environments, some of which apply directly to Eagle Rock. One of these requirements governs the design of the "surge pit" to provide "*Fall Protection in General Industry*". **Attachment 4** is OSHA's "Quick Card" summarizing Fall Protection design standards, as detailed in Section 3.0.

3.0 Design Standards

Transfer Station experts must incorporate an array of safety measures into the design and operation of the facility. As Eagle Rock was designed specifically as a transfer station (i.e. not a retrofit), the experts were able to incorporate the fundamental safety attributes, a few of which are:

- Natural lighting, augmented by mechanical lighting
- "Clear span" floorplan, minimizing columns on the *tipping floor*
- Misting over the surge pit for dust suppression
- Developing a shallow "surge pit" to optimize safety and efficiency
- Wheel stops positioned at each unloading stall.

A much more extensive list of design standards may be accessed via USEPA's "**Waste Transfer Station: A Manual for Decision-Making**" [EPA530-R-02-002]

The design for a transfer station in New Mexico must provide "*facility plans and drawings of the existing or proposed facility, with corresponding elevations and contours, signed and sealed by a **Professional Engineer** registered in New Mexico*". [20.9.3.8 C.(4)(f) NMAC] The over-riding goal of the *Professional Engineer* (P.E.) is the protection of public health and safety; and the environment. When the PE sealed the *Permit Plans,* he or she was professionally certifying these protections were incorporated into the design. Furthermore, the design was reviewed and approved by NMED's Solid Waste Bureau, as well as by its assigned P.E. as recently as 2019.

The surge pit has been a long-standing and proven technology for high-capacity transfer station designs. This configuration separates the public unloading area from equipment operating

in the pit (i.e. *wheel loaders*). There are many advantages to the surge pit design, with depths that range from two feet (e.g. Eagle Rock) to sixteen feet (e.g. Las Cruces):

- It allows for maceration/densification of the waste in the pit prior to *loadout* in the transfer trailers.
- It provides for independence between the rate of waste receipts and loadout rate (i.e. to accommodate "surges")
- Shallow surge pits (i.e. < 4 feet deep) are preferred by customers over those with safety railings.
- Guardrail systems can interfere with the unloading of waste by the public and can result in other injuries.
- It allows for inspection of the waste in the pit to identify precluded materials.

The most specific regulating guidance for managing *fall risk* is provided by OSHA: ***OSHA Requirements for Guardrail and Safety Railing Compliance, (*Attachment 5*).*** For elevation differentials, such as the edge of the surge pit; railings are required *only if the level change is over 48"* (**Attachment 4**). IKG, LLC has prepared a graphic that incorporates the OSHA standards for "pits" that exceed the design depth of 48", as defined in *OSHA 1910.29(b)* (**Attachment 6**). The graphic was prepared for transfer station manager certification courses to emphasize "building safety into the design". The graphic clearly specifies that these guardrail specifications apply only to levels in excess of four vertical feet. The design engineer has the discretion to specify safety measures such as railings for lesser heights, but instead elected to deploy the shallow surge pit configuration without obstructions for Eagle Rock. In summary, the shallow surge pit design is a proven and conservative technology for high-capacity Convenience Centers; and is in compliance with federal, state, and local regulations, and was selected by the design engineer as the most appropriate configuration.

4.0 Methodology

IKG, LLC was retained by the City as an expert witness on 04/10/2020 to evaluate the conditions surrounding an incident when Mr. Randy Trujillo purportedly fell into the surge pit at Eagle Rock on 07/22/2017. Mr. Gordon, Principal of IKG, LLC has extensive experience with The

City of Albuquerque, having re-permitted Eagle Rock, Don Reservoir, and Cerro Colorado Landfill in 2002. More recently, he assisted with design updates to Eagle Rock related to traffic flow, pavement, and adjusting the height of the lighting and misting systems. Mr. Gordon is a nationally recognized expert in transfer station design and operations, with 43-years of solid waste engineering experience, and is a licensed Professional Engineer in 26 states. His Curriculum Vitae (CV) is provided as **Attachment 7**. IKG, LLC relied on the following documents in its evaluation, as well as the aforementioned regulations:

Table 3

Documents Relied Upon

1. Deposition of Randall Ray Trujillo, 03/25/2020 (76 pages)
2. Interrogatories to Plaintiff Randy Trujillo, 03/18/2019 (27 pages); photos provided as Exhibits A, B, and C
3. CABQ website (www.cabq.gov/solidwaste)
4. Photos compiled by IKG, LLC staff 04/23/2020, 04/24/2020, and 04/27/2020 of both Eagle Rock and Montessa Park (**Attachments 8 and 9**)

A key component of this evaluation was to confirm, physically, the depth of the surge pit at Eagle Rock. Although Mr. Gordon has visited the site many times over twenty years, he had not taken those measurements. IKG, LLC staff took photographs of both Eagle Rock and Montessa Park to collect measurements and observe operations (**Attachments 8 and 9**). Where the trailer deliveries are positioned, on the tipping floor north of the surge pit at Eagle Rock, the prevailing depth of the pit level is 25.5 inches below the tipping floor; and the maximum elevation differential (west end) is 26.5 inches (**Attachment 8**). At Montessa Park, the elevation differential is a uniform 24 inches (**Attachment 9**). Although Montessa Park has the safety railing system defined in OSHA, it is not required. In fact, the railings can present an obstacle to unloading (**Attachment 9**); and are likely a remnant of a deeper pit design before it was reconstructed.

5.0 Conclusions

The Eagle Rock Convenience Center is a model operation for a high-capacity residential waste transfer facility operating safely and efficiently since 1994. Eagle Rock meets or exceeds applicable federal, state, and local regulations. More specifically, the 25-inch depth of the surge pit does not approach the 48-inch depth that triggers the OSHA safety railing standards [1910.29(b)]. By transfer design standards, the engineering and safety measures applied for the

Eagle Rock facility exceed minimum criteria. In my professional opinion, the Eagle Rock Convenience Center is designed to protect the public health and safety; and the environment. The installation of a guardrail system, such as that deployed at Montessa Park, would not improve the safety objectives of the facility. Had I designed the Eagle Rock Convenience Center, I would not have specified the 42-inch-high guardrail system or other barriers that could obstruct unloading.

ATTACHMENT 1

CITY OF ALBUQUERQUE WEBSITE

(www.cabq.gov/solidwaste/trash-collection/facilities)

› Trash Collection & Drop-Off (https://www.cabq.gov/solidwaste/trash-collection)
› Trash Drop-Off
› Large Item Pick-Up (https://www.cabq.gov/solidwaste/trash-collection/large-item-pick-up)
› Commercial Services (https://www.cabq.gov/solidwaste/trash-collection/commercial)
› Cerro Colorado Landfill (https://www.cabq.gov/solidwaste/trash-collection/cerro-colorado-landfill)
› Request to Stop Service (https://www.cabq.gov/solidwaste/trash-collection/request-to-stop-service)
› Collection & Disposal Rates (https://www.cabq.gov/solidwaste/trash-collection/residential-collection-disposal-rates)
› Cart Issues (https://www.cabq.gov/solidwaste/trash-collection/cart-issues)
› Recycling (https://www.cabq.gov/solidwaste/recycling)
› Green Waste (https://www.cabq.gov/solidwaste/green-waste)
› Household Hazardous Waste (https://www.cabq.gov/solidwaste/household-hazardous-waste)
› Clean City Programs (https://www.cabq.gov/solidwaste/clean-city-programs)
› Keep Albuquerque Beautiful (https://www.cabq.gov/solidwaste/keep-albuquerque-beautiful)

Trash Drop Off

Information about the three public trash drop-off locations in Albuquerque.

Convenience Center Locations

The Solid Waste department provides three convenience centers in the City where residents and small commercial haulers can drop-off trash. Eagle Rock Convenience Center also functions as an additional drop-off site for recycling.

Convenience Center Locations & Hours

All convenience centers are closed Thanksgiving, Christmas and New Year's Day.

Eagle Rock Convenience Center - View map (/about/offsite.html) (https://maps.google.com/maps?q=6301+Eagle+Rock+Ave+NE,+Albuquerque,+Bernalillo,+New+Mexico+87113&hl=en&ie=UTF8&om=0&cd=1&geocode=FW_tGAIdDMyl-Q&sll=37.0625,-95.677068&sspn=23.875,57.630033&ll=35.187821,-106.57485&spn=0.009943,0.022745&z=16&g=6301+Eagle+Rock+Ave+NE,+Albuquerque,+Bernalillo,+New+Mexico+87113&iwloc=addr)
6301 Eagle Rock NE (North off I-25 & Alameda to Eagle Rock)
Phone: (505) 857-8318
Open 7 days a week 8 a.m. to 5 p.m.

Don Reservoir Convenience Center - View map (/about/offsite.html) (https://goo.gl/maps/PSco3hoj2p3yKTi19)
117 114th SW (West of 98th off West Central Ave.)
Phone: (505) 768-3920
Open 7 days a week 8 a.m. to 5 p.m. No Trailers. No tree limbs in excess of 8 ft. No recyclables accepted.

Montessa Park Convenience Center - View map (/about/offsite.html) (https://maps.google.com/maps?f=q&hl=en&time=&date=&ttype=&q=3512+Los+Picaros+Rd+SE,+Albuquerque,+Bernalillo,+New+Mexico+87105&sll=35.062706,-106.756768&sspn=0.018898,0.034676&ie=UTF8&om=0&cd=1&geocode=FRQhFgIdS9mk-Q&ll=35.005534,-106.636992&spn=0.019931,0.04

Guidelines

Prohibited Items

- Do not dispose of hazardous waste, medical waste, infectious waste, dead animals, ammunition or firearms.
- Do not dispose of hot waste, coal or ashes.
- Do not dispose of construction or demolition debris (this includes drywall).
- Do not dispose of roofing materials.
- Do not dispose of waste containing free liquids.

Trailers

- Vehicles plus trailers that are 40 feet combined length are accepted at Eagle Rock (ERCC).
- No trailers accepted at Montessa Park (MPCC) or Don Reservoir (DRCC).

Item Limits

- Appliances – 2 allowed with refrigerant intact at ERCC and MPCC. One is allowed at DRCC. Please remove all food from refrigerators and freezers prior to disposal.
- Up to 10 mattresses per residential or small commercial customer are allow at ERCC and MPCC.
- Up to 3 mattresses are allowed at DRCC.
- Up to 10 pallets per customer are allowed at ERCC and MPCC.
- Up to 5 pallets are allowed at DRCC.
- Only 9 cubic feet (2 wheel barrow loads) of concrete, dirt, rock, gravel or brick is allowed at ERCC, MPCC and, DRCC.
- Soil or gravel must not be contaminated with oil, gas, or hazardous substance.

- Clean and Green Retail Ordinance (https://www.cabq.gov/solidwaste/clean-and-green-retail-ordinance)
- Frequently Asked Questions (https://www.cabq.gov/solidwaste/frequently-asked-questions)
- Our Department (https://www.cabq.gov/solidwaste/our-department)

Latest from Twitter (https://twitter.com/@ABQBeautiful)

Contact Information (https://www.cabq.gov/solidwaste/contact)

Mila Romero

Solid Waste Management Department

(505) 761-8100

milaromero@cabq.gov (mailto:milaromero@cabq.gov)

Department Contact Information (https://www.cabq.gov/solidwaste/our-department/solid-waste-department-contact-information)

Full contact information (https://www.cabq.gov/solidwaste/contact)

549&z=15&iwloc=addr)
3512 Los Picaros SE (Rio Bravo West to Broadway, South to Bobby Foster Road.)
Phone: (505) 768-3930
Open 7 days a week 8 a.m. to 5 p.m. No recyclables accepted.

Disposal Fees and Load Sizes

- For $5.25 per load (including tax) you may take your excess trash, yard waste, and large items to any convenience center location (residents and small commercial customers only).
- Tarp and secure your vehicle's load to avoid a clean-up fee of $5.82 (including tax).
- We accept Cash, Check, Mastercard, Visa and American Express

Truck Bed Loads

- 1 Load = 4x8x2
- 2 Loads = 4x16x2

Trailer Loads

- 1 Load = 4x8x2
- 2 Loads = 4x16x2
- 4 Loads = 8x16x2

The City reserves the right to refuse any load or items that might cause injury to personnel or damage to equipment.

Eagle Rock - Permit Renewal

Download the English Version (https://www.cabq.gov/solidwaste/documents/eagle-rock-english.pdf)

Download the Spanish Version (https://www.cabq.gov/solidwaste/documents/eagle-rock-spanish.pdf)

- Up to 5 tires (auto/small truck) per customer at all locations.
- If quantities of mattresses, tires, and pallets exceed the above limits they must be taken to Cerro Colorado Landfill for disposal.
- Don Reservoir does not accept tree limbs over 8 feet.
- Customers must bag all insulation prior to disposal.
- Auto batteries will be accepted, as long as they are not leaking.

ATTACHMENT 2

NMED PUBLIC NOTICE - EAGLE PERMIT RENEWAL

PUBLIC NOTICE OF FILING OF APPLICATION BY THE CITY OF ALBUQUERQUE FOR A SOLID WASTE FACILITY TRANSFER STATION PERMIT RENEWAL FOR THE EAGLE ROCK CONVENIENCE CENTER, ALBUQUERQUE, BERNALILLO COUNTY, NM

Pursuant to Section 22 of the New Mexico (NM) Solid Waste Act (Section 74-9-22 NMSA 1978) and 20.9.3.8.G and 20.9.3.24 NMAC (NM Solid Waste Rules), notice is hereby given to the public and other affected individuals and entities that the City of Albuquerque (the City), owner of the Eagle Rock Convenience Center (ERCC), has filed an Application, with the Solid Waste Bureau (SWB) of the New Mexico Environment Department (NMED) to renew the solid waste facility transfer station permit for ERCC. The Application may be reviewed at the City as listed in Section 1, and the NMED address listed in Section 5 of this Notice. Pertinent information required by the Act and the Rules are as follows.

1. Name, Address, and Phone Number of the Applicant and Contact Person:

Applicant/Owner of the ERCC:
City of Albuquerque
Solid Waste Department
4600 Edith Blvd., NE
Albuquerque, NM 87107

Contact Person: Diane Wikler
Marketing Manager
Phone: 505-761-8134

2. Anticipated Start-Up Date and Planned Hours of Operation:

ERCC is an existing facility publicly owned and operated by the City. The Transfer Station has been in operation since 1994. It is operating pursuant to its current NMED Solid Waste Facility Permit SWM-010225, issued by NMED on December 2, 2002. Current operating hours for the ERCC are Monday through Sunday 8:00 a.m. to 5:00 p.m. The ERCC is closed on Thanksgiving Day, Christmas Day, and New Year's Day. The ERCC may operate outside of scheduled operating hours to accommodate site preparation, inclement weather conditions, special projects, infrastructure construction, internal operation/projects, maintenance, monitoring and other special circumstances.

3. Description of the Facility:

a. General Process. The Eagle Rock Convenience Center is an existing facility that receives and processes solid waste received from the public. Solid waste is placed in transfer trailers within the transfer station building and transported to the Cerro Colorado Landfill for disposal. Recyclables are transported to an off-site facility for processing.

b. Location. The ERCC is located at 6301 Eagle Rock Avenue NE, Albuquerque, New Mexico.

c. Size. The ERCC "solid waste facility" (20.9.2.7.S(11) NMAC) footprint encompasses approximately 7± acres.

d. Quantities and Rate of Solid Waste. The Transfer Station currently receives an average of approximately 140 tons of solid waste per day (approximately 49,000 tons/year) and may receive more or less solid waste depending upon market conditions.

e. Types of Solid Waste. Municipal solid waste, yard waste, recyclable materials, and scrap tires.

4. Anticipated Origin of Waste: The wastes received originate primarily from the Albuquerque Metropolitan area, Bernalillo County, and surrounding Pueblos and counties.

5. Comments: Questions or comments regarding the Application should be directed to Diane Wikler, Marketing Manager, at the address provided in Section 1 of this Notice and to NMED at the following address:

Mr. George Schuman
Manager, Permit Section
NMED - Solid Waste Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469
Phone: 505-827-2328 or 505-827-0197

Copy of Application at this NMED location:
NMED – Harold Runnels Building
1190 St. Francis Dr.
Santa Fe, NM 87505
Phone: 505-827-0197

The Permit Application may also be reviewed at the City of Albuquerque Solid Waste Management Department, located at 4600 Edith Boulevard NE, Albuquerque, NM between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. The Act, the Rules, and the NMED Permit Procedures (20.1.4 NMAC) are available at the NMED Solid Waste Bureau's web page at: www.env.nm.gov/solid-waste/rules-and-statutes/

ATTACHMENT 3

PUBLIC NOTICE - AS PUBLISHED IN ALBUQUERQUE JOURNAL (12/18/2019)

AlbuquerqueJournal

Published in the Albuquerque Journal on Wednesday December 18, 2019

PUBLIC NOTICE OF FILING OF APPLICATION BY THE CITY OF ALBUQUERQUE FOR A SOLID WASTE FACILITY TRANSFER STATION PERMIT RENEWAL FOR THE EAGLE ROCK CONVENIENCE CENTER, ALBUQUERQUE, BERNALILLO COUNTY, NM Pursuant to Section 22 of the New Mexico (NM) Solid Waste Act (Section 74-9-22 NMSA 1978) and 20.9.3.8.G and 20.9.3.24 NMAC (NM Solid Waste Rules), notice is hereby given to the public and other affected individuals and entities that the City of Albuquerque (the City), owner of the Eagle Rock Convenience Center (ERCC), has filed an Application, with the Solid Waste Bureau (SWB) of the New Mexico Environment Department (NMED) to renew the solid waste facility transfer station permit for ERCC. The Application may be reviewed at the City as listed in Section 1, and the NMED address listed in Section 5 of this Notice. Pertinent information required by the Act and the Rules are as follows. 1. Name, Address, and Phone Number of the Applicant and Contact Person: Applicant/Owner of the ERCC: City of Albuquerque Solid Waste Department Contact Person: Diane Wikler 4600 Edith Blvd., NE Marketing Manager Albuquerque, NM 87107 Phone: 505-761-8134 2. Anticipated Start-Up Date and Planned Hours of Operation: ERCC is an existing facility publicly owned and operated by the City. The Transfer Station has been in operation since 1994. It is operating pursuant to its current NMED Solid Waste Facility Permit SWM-010225, issued by NMED on December 2, 2002. Current operating hours for the ERCC are Monday through Sunday 8:00 a.m. to 5:00 p.m. The ERCC is closed on Thanksgiving Day, Christmas Day, and New Year's Day. The ERCC may operate outside of scheduled operating hours to accommodate site preparation, inclement weather conditions, special projects, infrastructure construction, internal operation/projects, maintenance, monitoring and other special circumstances. 3. Description of the Facility: a. General Process. The Eagle Rock Convenience Center is an existing facility that receives and processes solid waste received from the public. Solid waste is placed in transfer trailers within the transfer station building and transported to the Cerro Colorado Landfill for disposal. Recyclables are transported to an off-site facility for processing. b. Location. The ERCC is located at 6301 Eagle Rock Avenue NE, Albuquerque, New Mexico. c. Size. The ERCC "solid waste facility" (20.9.2.7.S(11) NMAC) footprint encompasses approximately 7 acres. d. Quantities and Rate of Solid Waste. The Transfer Station currently receives an average of approximately 140 tons of solid waste per day (approximately 49,000 tons/year) and may receive more or less solid waste depending upon market conditions. e. Types of Solid Waste. Municipal solid waste, yard waste, recyclable materials, and scrap tires. 4. Anticipated Origin of Waste: The wastes received originate primarily from the Albuquerque Metropolitan area, Bernalillo County, and surrounding Pueblos and counties. 5. Comments: Questions or comments regarding the Application should be directed to Diane Wikler, Marketing Manager, at the address provided in Section 1 of this Notice and to NMED at the following address: Mr. George Schuman Copy of Application at this NMED location: Manager, Permit Section NMED Harold Runnels Building NMED - Solid Waste Bureau 1190 St. Francis Dr. P.O. Box 5469 Santa Fe, NM 87505 Santa Fe, NM 87502-5469 Phone: 505-827-0197 Phone: 505-827-2328 or 505-827-0197 The Permit Application may also be reviewed at the City of Albuquerque Solid Waste Management Department, located at 4600 Edith Boulevard NE, Albuquerque, NM between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. The Act, the Rules, and the NMED Permit Procedures (20.1.4 NMAC) are available at the NMED Solid Waste Bureau's web page at: https://www.env.nm.gov/solid-waste/rules-and-statutes/ Journal: December 18, 2019

ATTACHMENT 4

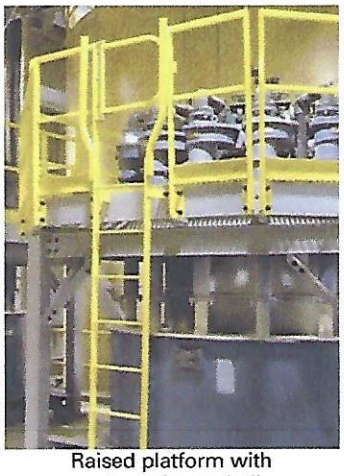
OSHA'S QUICK CARD - FALL PROTECTION

IN GENERAL INDUSTRY

OSHA® QUICK CARD™

Fall Protection in General Industry

Falls are among the most common causes of serious work-related injuries and deaths. Employers must take measures in their workplaces to prevent employees from falling off overhead platforms, elevated work stations or into holes in the floor and walls.



Raised platform with protected guardrail.

To prevent employees from being injured from falls, employers must:

- Guard every floor hole into which a worker can accidentally walk by use of a railing and toeboard or a floor hole cover.
- Provide a guardrail and toeboard around every open-sided platform, floor or runway that is 4 feet or higher off the ground or next level.
- Regardless of height, if a worker can fall into or onto dangerous machines or equipment (such as a vat of acid or a conveyor belt), employers must provide guardrails and toeboards to prevent workers from falling and getting injured.
- Other means of fall protection that may be required on certain jobs include safety harness and line, safety nets, stair railings and handrails.

OSHA requires employers to:

- Provide working conditions that are free of known dangers.
- Keep floors in work areas in a clean and sanitary condition.
- Select and provide required personal protective equipment at no cost to workers.
- Train workers about job hazards in a language that they can understand.

You have a right to a safe workplace.
If you have questions about workplace safety and health, call OSHA at 1-800-321-6742.
It's confidential.
We can help!

For more complete information:

OSHA® Occupational Safety and Health Administration

U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

OSHA 3257-12-10R

ATTACHMENT 5

OSHA REQUIREMENTS FOR GUARDRAIL AND SAFETY RAILING COMPLIANCE

Tech Talk Blog

OSHA Requirements for Guardrail and Safety Railing Compliance

Post Category: OSHA (https://www.fallprotect.com/techtalk/category/osha/)

(https://www.fallprotect.com/wp-content/uploads/osha-logo.jpg)One of the more popular fall protection questions we receive relates to OSHA requirements for safety railing and guardrail systems. Determined inquiring minds can consult OSHA's revised Walking Working Surfaces ruling for general industry, but this can be a laborious process. In the interest of time, here is OSHA's official stance on guardrail for general industry applications....

OSHA 1910.29(b) contains system requirements that employers must follow to ensure guardrail systems will protect workers from falling to lower levels:

1910.29(b)(1) The top edge height of top rails, or equivalent guardrail system members, are 42 inches (107 cm), plus or minus 3 inches (8 cm), above the walking working surface. The top edge height may exceed 45 inches (114 cm), provided the guardrail system meets all other criteria of paragraph (b) of this section (see Figure D-11 below).

Categories

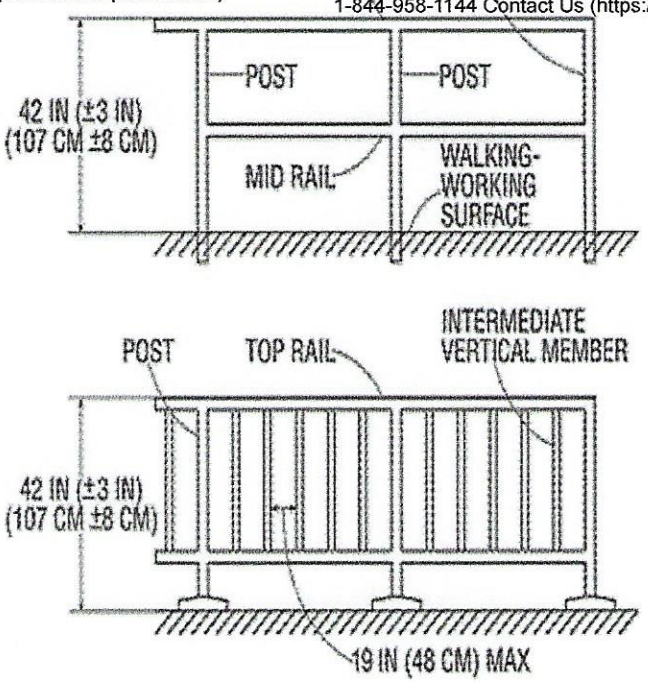


Figure D-11 – Guard Rail Systems

(https://www.fallprotect.com/wp-content/uploads/osha-example-compliant-guardrail.jpg)**1910.29(b)(2)** Midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent intermediate members are installed between the walking-working surface and the top edge of the guardrail system as follows when there is not a wall or parapet that is at least 21 inches (53 cm) high:

1910.29(b)(2)(i) Midrails are installed at a height midway between the top edge of the guardrail system and the walkingworking surface;

1910.29(b)(2)(ii) Screens and mesh extend from the walking-working surface to the top rail and along the entire opening between top rail supports;

1910.29(b)(2)(iii) Intermediate vertical members (such as balusters) are installed no more than 19 inches (48 cm) apart; and

1910.29(b)(2)(iv) Other equivalent intermediate members (such as additional midrails and architectural panels) are installed so that the openings are not more than 19 inches (48 cm) wide.

1910.29(b)(3) Guardrail systems are capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied in a downward or outward direction within 2 inches (5 cm) of the top edge, at any point along the top rail.

1910.29(b)(4) When the 200-pound (890-N) test load is applied in a downward direction, the top rail of the guardrail system must not deflect to a height of less than 39 inches (99 cm) above the walking-working surface.

1910.29(b)(5) Midrails, screens, mesh, intermediate vertical members, solid panels, and other equivalent intermediate members are capable of withstanding, without failure, a force of at least 150 pounds (667 N) applied in any downward or outward direction at any point along the intermediate member.

boom-fall-arrest-systems/)
- Blog (https://www.fallprotect.com/techtalk/cat
- Company News (https://www.fallprotect.com/techtalk/cat news/)
- Confined Space (https://www.fallprotect.com/techtalk/cat space/)
- Fall Protection (https://www.fallprotect.com/techtalk/cat protection/)
- Fall Protection Specification (https://www.fallprotect.com/techtalk/cat protection-specification/)
- Fall Protection Systems (https://www.fallprotect.com/techtalk/cat protection-systems/)
- Fixed Ladders (https://www.fallprotect.com/techtalk/cat ladders/)
- Guardrail (https://www.fallprotect.com/techtalk/cat 2/)
- Guardrail Safety Gates (https://www.fallprotect.com/techtalk/cat safety-gates/)
- Health & Wellness (https://www.fallprotect.com/techtalk/cat wellness/)
- Horizontal Lifeline (https://www.fallprotect.com/techtalk/cat lifeline/)
- Inspection and recertification (https://www.fallprotect.com/techtalk/cat and-recertification/)
- Ladders (https://www.fallprotect.com/techtalk/cat
- Loading Dock Fall Protection (https://www.fallprotect.com/techtalk/cat dock-fall-protection/)
- Loading Ramps (https://www.fallprotect.com/techtalk/cat ramps/)
- Medical Safety Systems (https://www.fallprotect.com/techtalk/cat safety-systems/)
- OSHA (https://www.fallprotect.com/techtalk/cat
- OSHA Compliant Roof Top Fall Protection Systems (https://www.fallprotect.com/techtalk/cat compliant-roof-top-

1910.29(b)(6) Guardrail systems are smooth-surfaced to protect employees from injury, such as punctures or lacerations, and to prevent catching or snagging of clothing.

1910.29(b)(7) The ends of top rails and midrails do not overhang the terminal posts, except where the overhang does not pose a projection hazard for employees.

1910.29(b)(8) Steel banding and plastic banding are not used for top rails or midrails.

1910.29(b)(9) Top rails and midrails are at least 0.25-inches (0.6 cm) in diameter or in thickness.

1910.29(b)(10) When guardrail systems are used at hoist areas, a removable guardrail section, consisting of a top rail and midrail, are placed across the access opening between guardrail sections when employees are not performing hoisting operations. The employer may use chains or gates instead of a removable guardrail section at hoist areas if the employer demonstrates the chains or gates provide a level of safety equivalent to guardrails.

1910.29(b)(11) When guardrail systems are used around holes, they are installed on all unprotected sides or edges of the hole.

1910.29(b)(12) For guardrail systems used around holes through which materials may be passed:

1910.29(b)(12)(i) When materials are being passed through the hole, not more than two sides of the guardrail system are removed; and

1910.29(b)(12)(ii) When materials are not being passed through the hole, the hole must be guarded by a guardrail system along all unprotected sides or edges or closed over with a cover.

1910.29(b)(13) When guardrail systems are used around holes that serve as points of access (such as ladderways), the guardrail system opening:

1910.29(b)(13)(i) Has a self-closing gate that slides or swings away from the hole, and is equipped with a top rail and midrail or equivalent intermediate member that meets the requirements in paragraph (b) of this section; or

1910.29(b)(13)(ii) Is offset to prevent an employee from walking or falling into the hole;

1910.29(b)(14) Guardrail systems on ramps and runways are installed along each unprotected side or edge.

1910.29(b)(15) Manila or synthetic rope used for top rails or midrails are inspected as necessary to ensure that the rope continues to meet the strength requirements in paragraphs (b)(3) and (5) of this section.

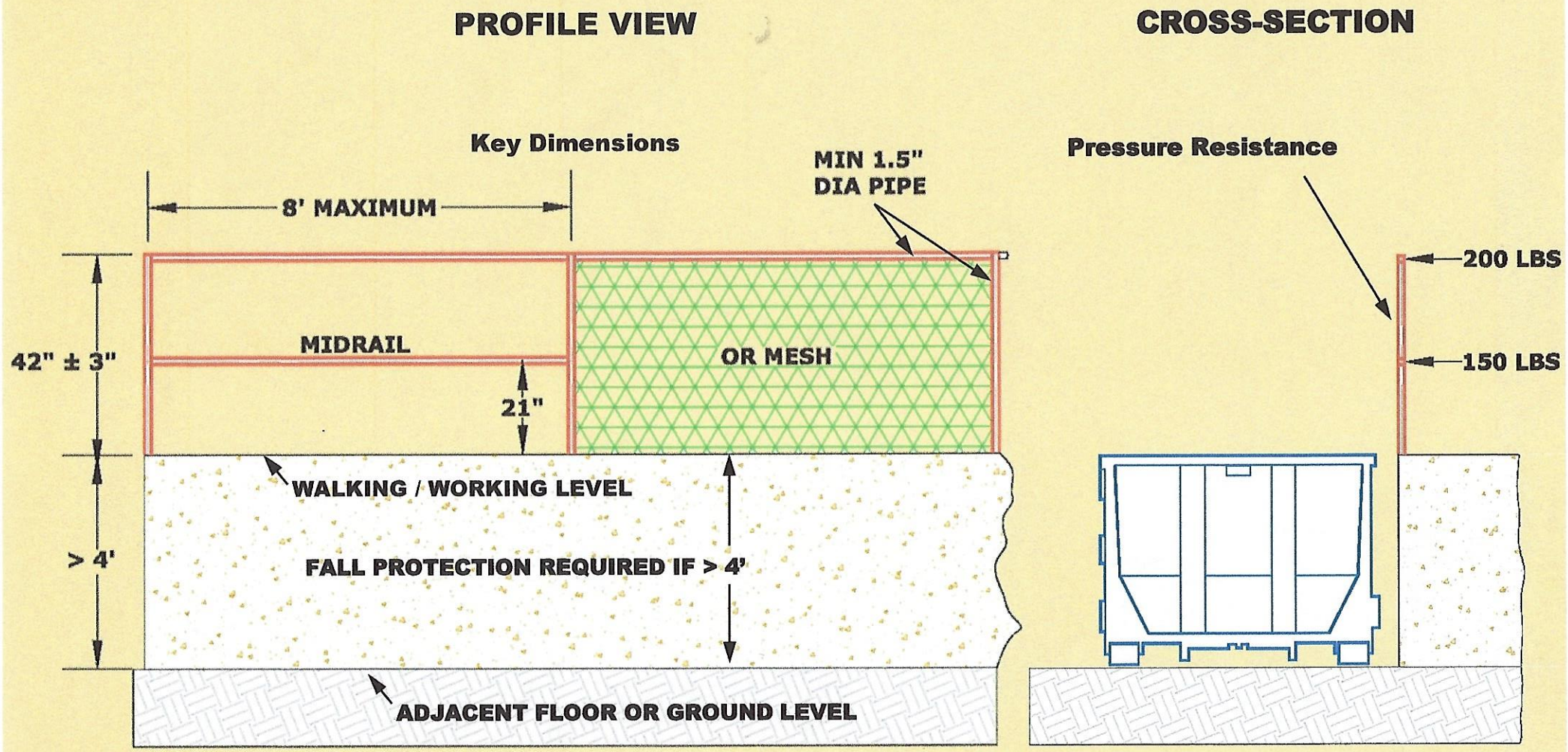
Note to paragraph (b) of this section: The criteria and practices requirements for guardrail systems on scaffolds are contained in 29 CFR part 1926, subpart L.

- fall-protection-systems/)
- Portable Access Stair Systems (https://www.fallprotect.com/techtalk/cat access-stair-systems/)
- portable davit base (https://www.fallprotect.com/techtalk/cat davit-base/)
- Portable Fall Arrest Systems (https://www.fallprotect.com/techtalk/cat fall-arrest-systems/)
- Portable Guardrail (https://www.fallprotect.com/techtalk/cat guardrail/)
- PPE (https://www.fallprotect.com/techtalk/cat
- Product Recalls (https://www.fallprotect.com/techtalk/cat recalls/)
- Recalls (https://www.fallprotect.com/techtalk/cat
- Recerts (https://www.fallprotect.com/techtalk/cat
- Rescue (https://www.fallprotect.com/techtalk/cat
- Rigid Rail Fall Arrest Systems (https://www.fallprotect.com/techtalk/cat rail-fall-arrest-systems/)
- Rigid Track Fall protection Systems (https://www.fallprotect.com/techtalk/cat track-fall-protection-systems/)
- ROI of Safety (https://www.fallprotect.com/techtalk/cat of-safety/)
- Rooftop Fall Protection (https://www.fallprotect.com/techtalk/cat fall-protection/)
- Safety (https://www.fallprotect.com/techtalk/cat
- Single Point Anchors (https://www.fallprotect.com/techtalk/cat point-anchors/)
- Specifications (https://www.fallprotect.com/techtalk/cat 2/)
- Transportable – Mobile Fall Protection Systems (https://www.fallprotect.com/techtalk/cat mobile-fall-protection-systems/)
- Uncategorized (https://www.fallprotect.com/techtalk/cat
- Vertical Lifelines (https://www.fallprotect.com/techtalk/cat lifelines-2/)

ATTACHMENT 6

SAFETY RAILING DETAIL GRAPHIC

Safety Railing Detail



ATTACHMENT 7

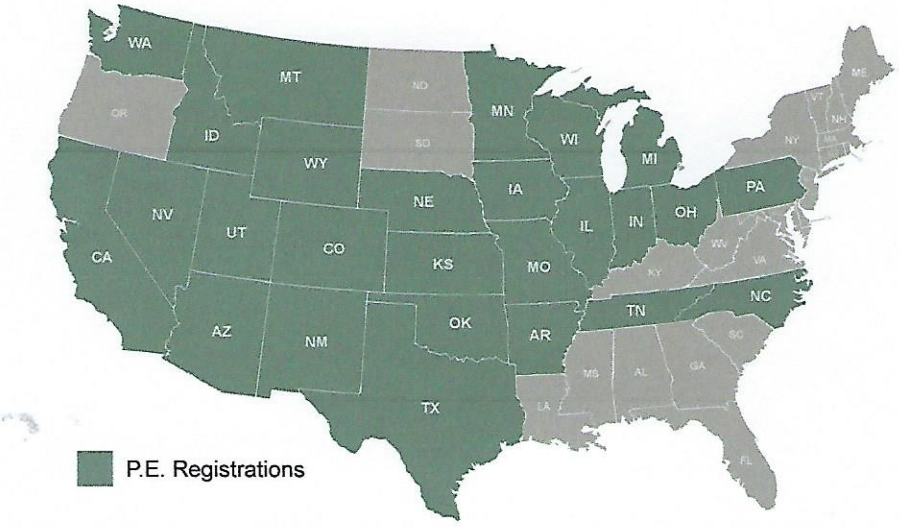
CURRICULUM VITAE (CV)

I. Keith Gordon P.E.

Principal

1.0 CREDENTIALS

Mr. Gordon is a nationally recognized expert in the fields of environmental and geotechnical engineering. More specifically, he is a leader in designing sustainable waste processing, transfer and disposal facilities; often involving his core expertise in **geosynthetics**. He has over forty-two years of dedicated consulting experience, after earning his B.S. in Civil Engineering/geotechnical specialty from **Northwestern University** in 1977.



Mr. Gordon has managed complex environmental engineering projects in each of the above referenced states, as well as internationally. He typically serves as senior designer/project manager for waste processing and containment facilities; including permitting and construction oversight:

- ***Municipal Solid Waste (MSW) Landfills***
- ***MSW Transfer Stations***
- ***Materials Recovery Facilities (MRF's)***
- ***Oilfield Residuals Management***
- ***Radioactive Materials***
- ***Hazardous Waste***
- ***Superfund (CERCLA) Remediation***

Professional Affiliations: Solid Waste Association of North America (SWANA), American Society of Civil Engineers - Master (ASCE), National Society of Professional Engineers (NSRE), NM Society of Professional Engineers, National Waste & Recycling Association (NW&RA), NICET Geosynthetics, National Council of Engineering Examiners (NCEES).

I. Keith Gordon P.E.

Principal

2.0 REGULATORY & INDUSTRY LEADERSHIP

Mr. Gordon is a nationally recognized expert in the fields of environmental and geotechnical engineering. More specifically, he is a leader in designing sustainable waste processing, transfer and disposal facilities; often involving his core expertise in geosynthetics. Mr. Gordon has over forty-two years of dedicated consulting experience, after earning his B.S. in Civil Engineering/geotechnical specialty from Northwestern University in 1977.

- Appointed Chairman of the *Solid Waste Facilities Committee* commissioned by the *New Mexico Environment Department* to develop the updated NM's *"Solid Waste Plan"*. Mr. Gordon authored the "Facilities" section of the Plan, and participated by providing input and coordination with the other six Committees. (e.g., environmental justice, "EJ")
- Served as the Board of Governor's Representative (later Chapter Chair) for the NM Chapter of the "*National Waste & Recycling Association*" (NW&RA), which represents over 700 private sector companies nationally, with 450,000 professionals managing 18,000 facilities. He has contributed to national engineering training and regulatory initiatives for NW&RA, and played a key role in promoting NM State Legislation that restores *parity in permitting* for both public and private facilities (including testimony on the Senate Floor).
- Staunchly supporter of the *Solid Waste Association of America (SWANA)* since 1978, and has provided leadership in many capacities for its 10,000 professionals. For SWANA, his team prepared the first three and a half day *"Waste Transfer Station Managers"* Training and Certification Course offered internationally. Mr. Gordon presented the first course in 1995; prepared the 2002 update and later conducted the course as senior instructor over 20 times.

At the request of the **USEPA**, Mr. Gordon was retained to work with an elite group of diverse professionals to provide technical guidance to the *"National Environmental Justice Advisory Committee" (NEJAC)* in WDC. Solid Waste Transfer Stations (WTS) had become a national issue due to some prominent facilities (e.g., NYC; WDC) having been poorly sited. Testimony before Legislative Committees, and technical guidance endorsed the concept that national standards (similar to RCRA Subtitle D) should not be administered nationwide, Mr. Gordon provided a condensed version of the SWANA Course to USEPA in conjunction with tours of WDC transfer stations. The Committee concluded that a combination of local control, public education and community involvement is preferred vs. federal mandate. The Committee commissioned the development of several documents to promote this objective, and Mr. Gordon was Chief Editor for *"Waste Transfer Stations: A Decision-Maker's Guide"* (https://www.epa.gov).

I. Keith Gordon P.E.
Principal

2.0 REGULATORY & INDUSTRY LEADERSHIP

Also, at the international level he has served on the *"SWANA Certification Board"*, Vice Chairman, and various training committees and safety initiatives. At the state level, Mr. Gordon has conducted transfer station certification training sponsored by NMED, as well as MOLO, over thirty times. At the state regulatory level:

- He has written updates and successfully testified regarding liner system standards for the new *"Dairy Rule"* (NMED Groundwater Quality Bureau)
- Mr. Gordon authored updates to the *New Mexico Solid Waste Management Rules*; and testified to the NM Environmental Improvement Bureau; primarily regarding transfer stations.
- He provided major updates to the new *"Part 36"* Rules; for the first time requiring double liners with leak detection for oil and gas wastes.
- He collaborated with the *Oil Conservation Division (OCD)*; and testified at public hearings on new rules.
- He has assisted the USEPA and various state environmental agencies and tribes in regulatory guidance (e.g., Iowa DNR, IL EPA, WA DEQ, Seattle, NM, CA, DuPage County, IL, University of Chicago, etc.)

The new federal regulatory standards for landfills, and the resultant closure of 8,000 facilities, motivated communities and regions to prepare "Solid Waste Plans". He worked on these plans for:

- The City of Seattle
- The Mescalero Indian Tribe (NM)
- Yakima Indian Nation (WA)
- Bluestem SWA (IA)
- Fifteen Counties & SWA's in IL
- Sandoval County, NM + 10 counties/regional Solid Waste Authorities (SWA's)

SWANA Medals for Solid Waste Facility Excellence

1986
Miller Road Landfill
Saginaw, MI
(First Landfill Gold Medal)

1997
Camino Real Landfill
El Paso, TX
(Landfill Gold Medal)

1998
SCSWA Transfer Station
Las Cruces, NM
(Transfer Station Excellence)

2000
Cerro Colorado Landfill
Albuquerque, NM
(Landfill Excellence)

2012
Integrated Solid Waste Management Systems
Sandoval County, NM
(Mr. Gordon's county of residence)

I. Keith Gordon P.E.

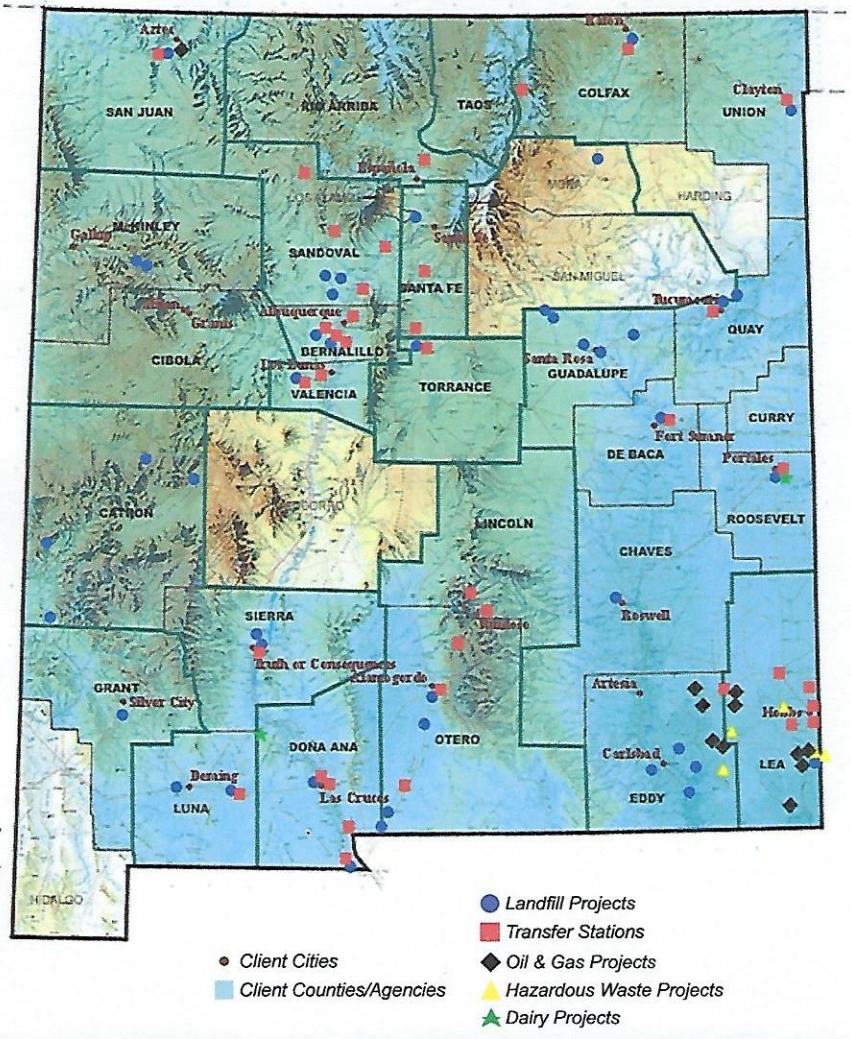
Principal

3.0 SOLID WASTE MANAGEMENT

The promulgation of USEPA *"Subtitle D"* regulations in 1991 changed the landscape for solid waste management, ultimately reducing the number of landfills by over 90%. Many smaller communities could not afford the multitude of upgrades required by the new regulations. This vastly increased the expense of solid waste management as the new and much more costly "Subtitle D" Landfills were often more than fifty miles from the populations generating the waste. In response, the Solid Waste Industry collaborated with affected communities to implement *"Integrated Solid Waste Management Systems"* on the national level that typically included transfer stations, convenience centers, MRF's, etc.

Mr. Gordon has an international reputation for solving regional solid waste challenges, and is the top landfill/transfer station engineer in New Mexico. He has been retained as *"Engineer of Record"* for sixteen of the twenty-two permitted Subtitle D Landfills in the state, and is responsible for the construction of over fifty geosynthetically-lined cells comprising more than 1000 acres. He has managed the permitting of Transfer Stations & local convenience centers; and closure of dozens of substandard "dumps".

The new integrated MSW systems typically involve regional strategies and partnerships between communities. The "hub and spoke" model has been effectively deployed throughout New Mexico and nationally, with disposal sites at the hub.



wbcsw@aol.com (505) 301-2026

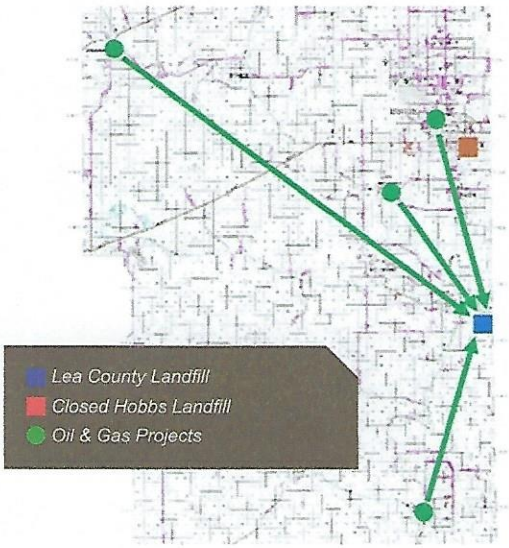
I. Keith Gordon P.E.
Principal

3.0 SOLID WASTE MANAGEMENT

Mr. Gordon has provided professional engineering services to twenty-eight of thirty-three counties, and nearly all the cities in New Mexico, as well as all eight Solid Waste Authorities.

Lea County Hub & Spoke

Lea County is a prime example of the successful transition to Subtitle D by establishing a JPA between the county and the five municipalities. The *Lea County*



Solid Waste Authority (LCSWA) retained Mr. Gordon and his team to find a new suitable "greenfield" site to replace the environmentally challenged landfill in Hobbs. He led the team that set the record for authorization-to-proceed to operations in eighteen months with a budget of $2.8 million. This included siting confirmation, engineering design, NMED permitting, Cell One construction management, approval of a "groundwater monitoring suspension request", installation of civil infrastructure.

Mr. Gordon has been continuously retained by both Lea County and LCSWA since 1998, performing CQA certification on the first five cells (>60 acres), re-permitting of the Landfill (2018), design and permitting of a new transfer station (Hobbs) and four convenience centers.

Sandoval is the fastest growing county in New Mexico, settled in 1540, and stretches 110 miles across urban to rural landscapes. Mr. Gordon has been the Engineer-of-Record for the county and the *Public Works Department* since 1998, having been selected 5 consecutive times based on qualifications. Mr. Gordon and his firm designed and permitted extensive infrastructure to help Sandoval PWD meet evolving challenges:

- Relocating power lines to facilitate expanding the existing regional Subtitle D Landfill.
- Permitting a new 500-acre greenfield site with 100+ years of capacity.
- Permitting of three convenience centers, one MRF, and onsite citizen's transfer and recycling facilities to complete the "hub & spoke" configuration.
- Design, permitting and CQA of the first "Containerized Composting" operation in the Southwest U.S., producing marketable mulch from organic residues.
- SWANA international award for *Integrated Solid Waste Management Systems* (2012)

I. Keith Gordon P.E.
Principal

ikg LLC Engineering Services

3.0 SOLID WASTE MANAGEMENT

The **City of Albuquerque** (COA) Solid Waste Department operates its own collection and transfer operations with the 2000 tons per day (TPD), Cerro Colorado Landfill as the hub in the integrated system. Mr. Gordon was Engineer-of Record for the 1999 re-permitting/updated design; and provided CQA and innovative engineering for six new 20-acre landfill cells. Cerro Colorado and Mr. Gordon's team were awarded the *Landfill Excellence Award* by SWANA; and he has been retained since 1998 for his environmental expertise and senior oversight.

Mr. Gordon's team has been providing specialized solid waste consulting expertise for over 25 years to SCSWA and Dona Anna County, and won the *SWANA Transfer Station Excellence Award* in 1998.

For the **South Central Solid Waste Authority** (SCSWA), Mr. Gordon was the Engineer-of-Record for implementing their integrated solid waste management system dating to 1993. The system includes a centralized 500 TPD transfer station, the new Subtitle D Landfill, recycling facilities, and satellite convenience centers.

The **Camino Real Landfill** (CRLF), serving southern New Mexico and El Paso, Texas has the highest commercial gate receipts in the state. Being situated contiguous with the Mexican Border, in a heavily minority community, CRLF is a poster-child for environmental justice (EJ). Mr. Gordon has been the engineer-of-Record for over ten contentious solid waste, air quality, and groundwater permits since 1989. He has directed the installation of over 100-acres of Subtitle D geosynthetic liners, and is currently serving as Senior Engineer in the 2020 design and permitting update. Mr. Gordon and the CRLF team were awarded *SWANA's Gold Metal in Landfill Excellence* in 1997.

I. Keith Gordon P.E.
Principal

4.0 TRANSFER STATIONS & MRFs

The promulgation of RCRA Subtitle D (Section 4) has resulted in the proliferation of solid waste transfer stations (WTS's) and Materials Recovery Facilities (MRF's). In many regions, 90% of the local "dumps" have had to close; and hauling distances can now exceed 100 miles to the nearest disposal site. His specialized expertise has been in demand throughout the US; having designed transfer stations/ convenience centers ranging in capacity from 1 to 5000 tons/day, in twenty states.

In over 40 years of managing transfer station projects, Mr. Gordon is best recognized for his contributions in building *safety* measures into the initial design. Many of these concepts are in common practice now, including:

- "Left-side" backing, eliminating blind zones
- Separation of commercial vs. public traffic, typically with adjustable receiving rates
- Establishment of *"safe zones"* on the transfer station floor, usually including the health and safety/fire management gear.
- "Drive-through" tunnels, eliminating dangerous backing maneuvers by large tractor-trailers
- One-way traffic flow - typically, counter-clockwise - with minimal crossings or conflicts.

Through his training efforts and regulatory initiatives, he has been instrumental in advancing these safety-oriented design imperatives into the industry engineering mainstream. Mr. Gordon also assisted the private sector, being commissioned to write internal *"Transfer Station Design Manuals"* for both Waste Management and Republic Waste. Each transfer station project has unique design and regulatory challenges:

- **Seattle Public Utilities (SPU) North Transfer Station**
- **North Central Solid Waste Authority (NCSWA) N.M. Transfer Station**
- **Teton County (Jackson Hole, WY) Transfer Station**
- **Sarpy County Transfer Station (Omaha, NE)**
- **City of Albuquerque**
- **Mountainview Eco-Station**
- **Sierra County/T or C**
- **Glendale, AZ, MRF**

ATTACHMENT 8

EAGLE ROCK CONVENIENCE CENTER PHOTOS

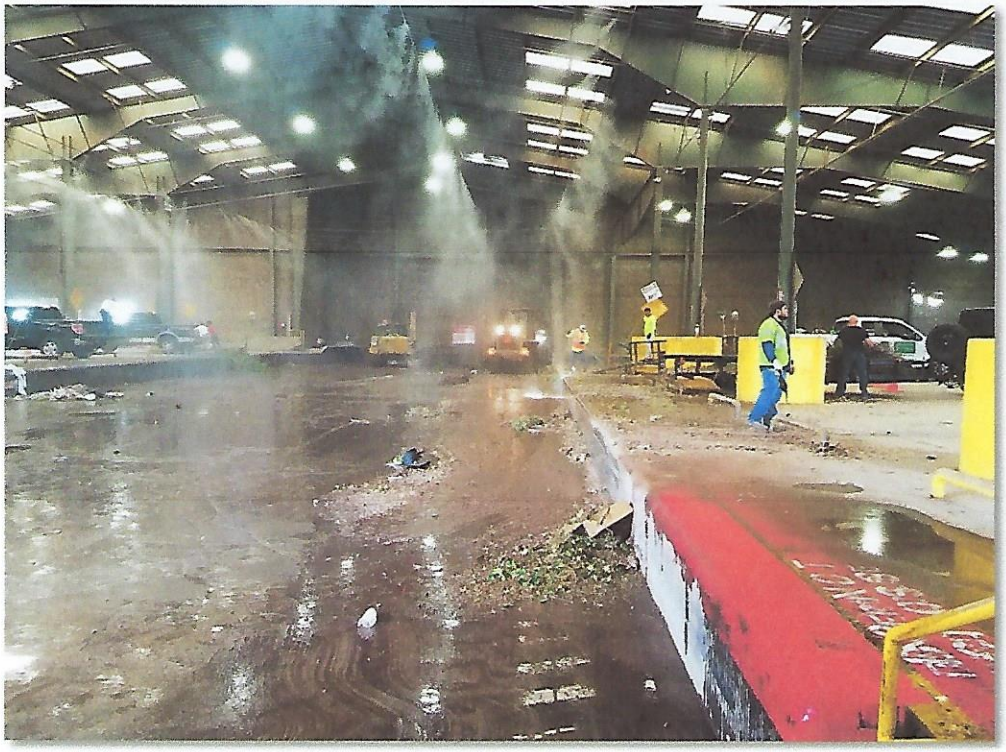
(04/23/2020 & 04/27/2020)

Eagle Rock Convenience Center

Eagle Rock Convenience Center

Eagle Rock Convenience Center

Eagle Rock Convenience Center

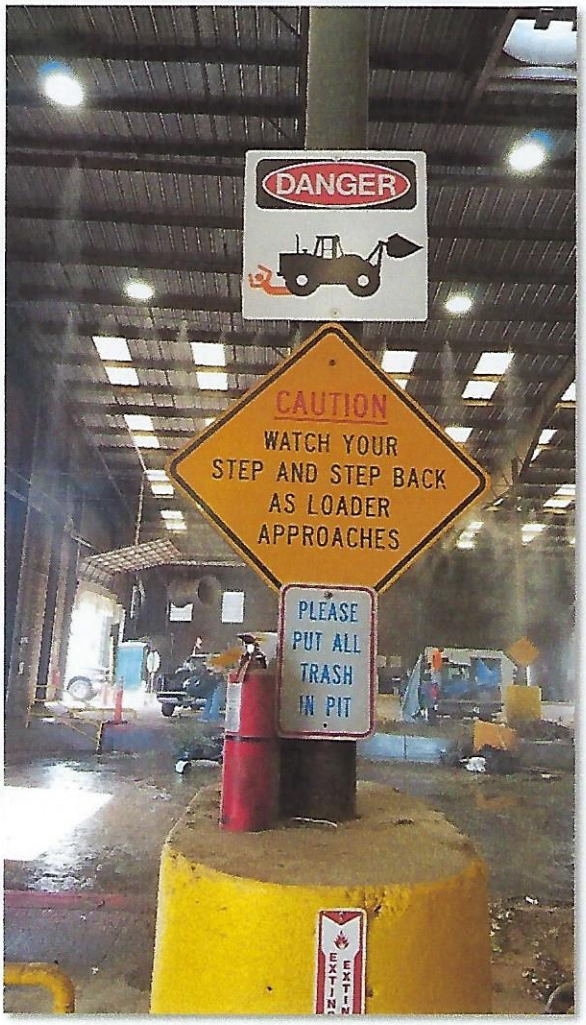



TURN VEHICLE OFF WHILE DUMPING
CAUTION WATCH YOUR STEP
NO SMOKING
FIRES ARE PROHIBITED
SALVAGING PROHIBITED
CHILDREN MUST REMAIN IN VEHICLES AT ALL TIMES


CAUTION
WATCH YOUR STEP AND STEP BACK AS LOADER APPROACHES


CAUTION
WATCH YOUR STEP


CAUTION
WATCH YOUR STEP AND STEP BACK AS LOADER APPROACHES
DANGER


DANGER
CAUTION
WATCH YOUR STEP AND STEP BACK AS LOADER APPROACHES
PLEASE PUT ALL TRASH IN PIT

ATTACHMENT 9

MONTESSA PARK CONVENIENCE CENTER PHOTOS

(04/24/2020)

Montessa Park Convenience Center

Montessa Park Convenience Center

Montessa Park Convenience Center