

REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

AT

LINWOOD MINING & MINERALS CORPORATION

401 East Front Street
Davenport, Iowa 52804
(563) 324-1931

RCRA EPA ID Number: IAD984620310

ON

February 23, 2022

BY

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region 7

Enforcement and Compliance Assurance Division

1.0 INTRODUCTION

At the request of the Enforcement and Compliance Assurance Division/Chemical Branch/RCRA Section (ECAD/CB/RCRA) of the U.S. Environmental Protection Agency (EPA) Region 7, I conducted a compliance evaluation inspection (CEI) at the Linwood Mining & Minerals Corporation (LMMC) located in Davenport, Iowa, on February 23, 2022. The inspection was conducted under the authority of Section 3007 of the Resource Conservation and Recovery Act, as amended. During the CEI, I collected information and data necessary to determine compliance with the applicable regulatory and statutory requirements. This report and attachments present the results of the inspection. Based on information obtained prior to and during the inspection, I inspected the site as a Very Small Quantity Generator (VSQG) of Hazardous Waste, a Small Quantity Handler of Universal Waste, and a Generator of Used Oil. The facility has not been inspected by the Environmental Protection Agency (EPA) for RCRA in the past. However, the facility was sent an information request letter (IRL) on July 16, 2021. LMMC responded to the letter on August 19, 2021.

2.0 PARTICIPANTS

Linwood Mining & Minerals Corporation (LMMC):

Darin Osland, Environmental Manager

Mark Looman, VP of Lime & Carbonates

Iowa Department of Natural Resources (IDNR):

Kurt Levetzow, Environmental Engineer Senior

Mike Smith, Environmental Engineer Senior

Chad Stobbe, Environmental Specialist Senior

U.S. Environmental Protection Agency (EPA):
Trevor Urban, Environmental Scientist (913) 551-7133

3.0 INSPECTION PROCEDURES

Prior to the CEI, I conducted a drive-by inspection of the site at approximately 7:45 a.m. the morning of the inspection. I did not observe any potential areas of concern. I then met with Mr. Kurt Levetzow, Mr. Mike Smith and Mr. Chad Stobbe from the IDNR at a local fuel station in Buffalo, Iowa at 8:00 a.m. We discussed the inspection procedures and format that I would follow as well as any facility issues or concerns and regulatory history. We proceeded to the facility and arrived unannounced at approximately 9:15 a.m. We entered the facility office and I presented my credentials and explained both the purpose of the inspection and the procedures I would follow to the office personnel. I asked to speak with the environmental compliance personnel. The office personnel informed me that Mr. Darin Osland was the Environmental Manager, and that he was currently offsite at a meeting. They then stated they could contact Mr. Mark Looman who could assist me during the inspection and escorted us to a meeting room.

Mr. Looman arrived shortly thereafter and I began the entry briefing. I presented my credentials and explained the purpose of the inspection and the procedures I would follow during the inspection to Mr. Looman. I then presented a copy of RCRA Section 3007(a), which contains EPA's inspection authority. I explained my need to collect accurate information and presented him with a copy of Title 18 U.S. Code, Sections 1001 and 1002. I then presented Mr. Looman with a copy of the *Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by EPA in Connection with Inspections* and reviewed LMMC's confidentiality rights. I informed him I would provide a *Confidentiality Notice* at the end of this inspection.

The inspection consisted of a discussion of facility operations, waste generation and waste management practices, a review of waste management records, and a visual inspection of the waste generation and management areas. Mr. Looman stated he was the Vice President of Lime and Carbonates at the facility and has worked at LMMC for approximately eleven years and had worked in the lime industry since 1982. Mr. Looman contacted Mr. Osland who stated he would leave his meeting and return to the facility for the inspection. Mr. Osland stated he could be back at the facility at approximately 10:30 a.m. I informed Mr. Osland that I would proceed with the inspection and gather facility operational information from Mr. Looman until he arrives. Mr. Looman stated he operates the lime production side of the facility and explained how lime and other products are produced from the limestone mined at the facility. Mr. Looman also provided us with site specific hazard awareness training and Mine Safety and Health Administration training that allowed us access to the mine and to visually inspect the facility.

Mr. Osland arrived at the facility at approximately 10:35 a.m. and I again provided him with the entry briefing procedures, protocols and documents as described above. Mr. Osland stated he was the Environmental Manager and had worked at LMMC for approximately eight years. Mr.

Osland acted as the official facility representative during the inspection. Mr. Osland stated that he manages the day to day environmental and hazardous waste management activities at the facility which included operating the mine and lime production operations. Mr. Osland and Mr. Looman both provided facility operational information. However, Mr. Looman left the inspection when Mr. Osland arrived at the facility, after I completed the entry briefing for Mr. Osland. Mr. Osland accompanied me during the entire inspection. I continued to gather facility operational information and then performed a visual inspection of the entire facility. Messrs. Levetzow, Smith, and Stobbe from the IDNR accompanied Mr. Osland and me during the entire visual inspection of the facility above ground. Messrs. Levetzow, Smith, and Stobbe left the facility at the end of the above ground visual inspection prior to Mr. Osland and me performing the visual inspection of the underground mine.

I completed my inspection and summarized the findings and recommendations with Mr. Osland on the afternoon of February 23, 2022. At the conclusion of the inspection, during the exit briefing, I provided Mr. Osland with a *Confidentiality Notice* and *Receipt for Documents and Samples* which he signed as acknowledgement of receipt (attachments 1 and 2 respectively). No confidentiality claims were made by LMMC. I also presented Mr. Osland with a *Notice of Preliminary Findings (NOPF)* which he signed as acknowledgement of receipt (attachment 3). Ten photographs were taken during the inspection. See attachment 4 for the digital photograph chain of custody, photo log, and photos 1 - 10. See attachment 5 for a facility layout/diagram with photo locations and building layout. Information collected during the inspection is documented on the EPA Inspection Checklist. I followed the inspection procedures discussed in the RCRA CEI Standard Operating Procedure (No. 2321.01D), unless noted differently.

The following inspection documents and compliance assistance handouts were left with LMMC:

RCRA Section 3007(a)

Title 18 U.S. Code, Sections 1001 and 1002

*Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by
EPA in Connection with Inspections*

Confidentiality Notice (Facility copy)

Receipt of Documents and Samples (Facility copy)

NOPF (Facility copy)

Instructions for Responding to a NOPF

Security Awareness

Commercial Motor Vehicle Transportation

Security Planning

EPA E-Manifest Fact Sheet U.S.

EPA Small Business Resources

U.S. EPA Publication, Managing Your Hazardous Waste

U.S. EPA Publication, Managing Used Oil-Advice for Small Businesses

PowerPoint Presentation, 2013 Solvent Wipes Final Rule

Pollution Engineering Article, 10 Common Questions for Waste Generators

Iowa Department of Natural Resources (IDNR) Waste Exchange Folder and P2 Brochures

4.0 FACILITY DESCRIPTION

4.1 Facility Information and Operations

LMMC is located at 401 East Front Street in Davenport, Iowa directly north of and along the Mississippi River. LMMC has been in operation at its current location since 1919. The facility consists of multiple metal buildings and steel conex shipping containers located on the north and south sides of Highway (Hwy) 22. Hwy 22 separates the lime production operation (located on the south side) and the mining operation (located on the north side). Mr. Looman stated that LMMC owns approximately 1,600 acres and the total footprint of the facility is approximately 2200 – 2700 acres of mineral rights. Mr. Looman stated a solid waste landfill is located at the north end of the property and that LMMC leased out the acreage where the landfill is currently located (attachment 5). LMMC employs approximately 105 full-time personnel. The facility operates 24 hours per day, seven days per week utilizing four groups of 12-hour shifts and two additional groups of 10-hour shifts. LMMC's primary North American Industrial Classification System (NAICS) code is 212399 - All Other Nonmetallic Mineral Mining.

LMMC has two major operations, the mining of limestone operation and the lime production operation. The mining operation consists of limestone mining from the underground mine, crushing and sizing the limestone and stockpiling the sized limestone prior to being sold and distributed to customers. The limestone is shipped offsite via trucks, rail and barges. The lime production process consists of calcining the properly sized limestone inside a rotary kiln using pet coke and natural gas to heat the limestone between 1,600°F – 2,200°F depending on the limestone size and chemical composition to the point that the final product is lime that goes into storage bins/tanks. Lime kiln dust (LKD) is also generated from the calcining process, and it is either captured and stored in storage bins/tanks or exhausted back into a sealed portion of the underground mine via piping. Mr. Osland stated the sealed portion of the mine utilized for the LKD dust is approximately 22 acres in size and has one outlet/smoke-hole to the surface called “Big Willy”. The lime collected and stored in the storage bins/tanks is shipped offsite via trucks and rail.

4.2 RCRA Status and Facility History

LMMC originally notified as a Small Quantity Generator (SQG)(greater than 100 kilograms(kg)/month but less than 1,000 kg/month) of D001, D008, D018 and D039 characteristic RCRA hazardous wastes in January of 1993. A flood screening inspection was performed at LMMC by the EPA in February of 1994 and the facility was determined to be a Very Small Quantity Generator (VSQG)(less than 100 kilograms(kg)/month) of RCRA hazardous waste. A review of facility operations and statements made by Messrs. Osland and

Looman indicated that LMMC has been and is currently a VSQG of D001 and D009 characteristic RCRA hazardous waste, a small quantity handler of universal waste, and a generator of used oil.

As stated above, EPA sent the facility an IRL on July 16, 2021. LMMC responded to the IRL on August 19, 2021 (attachments 6 and 7). The facility provided process flow diagrams of the limestone quarry operations that outlined how the facility produces multiple limestone products. LMMC stated the limestone crushing operations were considered to be a beneficiation process and were excluded from the definition of a solid waste via the Mining Waste Exclusion (Bevill) Rule. LMMC also produces lime from the mined limestone as described above. Mr. Osland stated the lime production operation does not generate a hazardous waste and included several Toxicity Characteristic Leaching Procedure (TCLP) reports for the LKD and Terra-Loc by-products that are captured in either storage bins or in the closed off portion of the mine. The heavier particles (Terra-Loc) are captured in the storage bins as they leave the rotary kilns and the lighter particles of LKD continue on with the rotary kiln exhaust to the closed off section of the limestone mine where the exhaust/gas stream velocity is slowed and the LKD drops out of suspension, cools, and fills the mine void areas. Mr. Osland stated that all the TCLP testing of the LKD and Terra-Loc by-products were determined to be non-hazardous.

5.0 FINDINGS AND OBSERVATIONS

5.1 Facility Wastes and Inspection Observations

LMMC produces lime and its by-products listed below. LMMC also generates the additional hazardous and non-hazardous wastes listed below. This information was obtained based on observations and statements made during the inspection.

Waste Paint and Lubricants from Aerosol Can Puncturing – Mr. Osland stated that the maintenance employees utilize aerosol paint and lubricants throughout the facility when performing repairs and maintenance on equipment. Empty or unwanted aerosol cans are punctured to drain residual paint and lubricants at three maintenance shop locations throughout the facility. Each location utilizes an aerosol can puncturing unit on top of a container that the facility manages as a satellite accumulation container (SAC), even though a VSQG is not subject to the SAC requirements. The residual paint and lubricants are considered a D001 characteristic waste.

I observed one of the three SACs for the waste paint and lubricants in the blue maintenance steel conex shipping container directly south of the steel maintenance building near the facility office on the south side of Hwy 22 (attachment 4 photos 4 and 5). The white plastic 55-gallon SAC was approximately ¼ full, labeled as “Aerosol Evacuation” and closed. The second 55-gallon SAC container was observed in the oil/lubrication building on the north/Quarry side of the facility, north of Hwy 22 (attachment 4 photo 7). The black 55-gallon steel container was less than ¼ full, labeled as “Aerosol Evacuation” and closed. The third SAC container was observed in the mobile equipment maintenance shop located underground in the mine. The 33-gallon steel

container was approximately ½ full, labeled as “Aerosol Evacuation” and closed. Mr. Osland stated the waste paint and lubricants are disposed by Green For Life (GFL) Environmental when the containers become full. Mr. Osland stated that punctured aerosol cans are managed as scrap metal and recycled.

Mr. Osland stated that it had been several years since a waste paint and lubricants SAC had become full and is shipped infrequently, due to the amount of time it takes to fill a SAC. He estimated that the last shipment of waste paint and lubricants occurred over two or three years ago and did not have any records.

LimeStone – Mr. Osland and Mr. Looman stated that the mining operation consists of limestone mining from the underground mine, crushing and sizing the limestone and stockpiling the sized limestone prior to being sold and distributed to customers. The limestone is shipped offsite via trucks, rail and barges. Mr. Osland stated that there are many different sizes of limestone that are accumulated onsite in as many as 18-20 different locations. Mr. Osland provided me with a list of numbered locations on a map (attachment 5). Mr. Osland and Mr. Looman stated the limestone that meets the correct size and chemistry is washed prior to being used for lime production. The limestone is washed utilizing a conveyor belt flooded with water over a tank and then the limestone is dried. The limestone that does not meet the correct size or chemistry is used onsite for road building, placed back into the mine to minimize mine subsidence, or stockpiled for future customers. Mr. Osland stated that pile 18 was where the majority of the limestone is collected that does not meet the correct size or chemistry currently required to produce lime. Mr. Osland provided me with a Safety Data Sheet (SDS) for the LimeStone mined at the facility (attachment 8). See attachment 7 for the LMMC response to the EPA IRL for additional limestone production information.

I observed all the limestone piles during the visual inspection. Pile 18 was a large pile located along the east side of the facility. I observed trees and construction debris not consistent with limestone. I asked Mr. Osland why there were trees and construction debris being allowed to be comingled in pile 18. Mr. Osland stated that sister companies are allowed to bring in excess rock from their construction sites as well as road building materials. Mr. Osland stated that sometimes the incorrect/noncompatible debris are added to pile 18 without his approval. Mr. Osland stated that the trees and construction debris are not hazardous wastes and that he was not aware of anything but non-hazardous wastes coming onsite from their sister facilities. I informed Mr. Osland that the bevill exemption is specific to the mining activities to include by-products or beneficiation processing materials. I stated to Mr. Osland that if non-bevill materials are allowed to be comingled within the pile 18 bevill mining materials, then each non-bevill waste would require a waste determination. I also informed Mr. Osland that by allowing non-bevill wastes to be comingled within pile 18, the entire pile may no longer meet the definition of an excluded bevill waste or qualify for the exemption status. I recommended to Mr. Osland that any non-bevill waste coming onto the facility property from sister companies be identified and a waste determination be performed. I also recommended that these wastes/materials be managed separately from any bevill wastes. Mr. Osland stated that he would address the issues and remove all non-bevill wastes and put in controls to prevent additional construction debris wastes

from being comingle in pile 18.

Lime – Mr. Looman described the lime production process after the entry briefing. As stated above, the lime production process consists of calcining the properly sized limestone with the correct chemical composition inside a rotary kiln using pet coke and natural gas to heat the limestone to the point that the final product is High Calcium Lime that is pneumatically conveyed into storage bins/tanks. Mr. Osland provided me with a SDS for the High Calcium Lime currently produced at the facility (attachment 9). The High Calcium Lime that is collected and stored in the storage bins/tanks is shipped offsite via trucks and rail. See attachment 7 for the LMMC response to the EPA IRL for additional lime production information.

Lime Kiln Dust (LKD)/Terra-Loc - Mr. Osland and Mr. Looman stated that LKD and Terra-Loc are by-products generated from the calcining process. As stated above, the lime production operation does not generate a hazardous waste and the LKD and Terra-Loc by-products are captured in either storage bins or in the closed off portion of the mine. The heavier particles of LKD (Terra-Loc) are captured in the storage bins as they leave the rotary kilns and the lighter particles of LKD continue on with the rotary kiln exhaust to the closed off section of the limestone mine where the exhaust/gas stream velocity is slowed and the LKD drops out of suspension, cools, and fills the mine void areas. Mr. Osland provided me with a SDS for the Terra-Loc and LKD by-products that are produced at the facility (attachment 10). Mr. Osland also provided me with the most current TCLP report for a LKD grab sample collected June 25, 2021, and a blank copy of the TCLP analytical request form for SW-846 method (attachment 11). The TCLP results indicated the LKD was not hazardous for RCRA metals. Mr. Osland stated that the LKD and Terra-Loc are sampled at least annually and have always been determined as non-hazardous waste. See attachment 7 for the LMMC response to the EPA IRL for additional analytical results for grab samples of the LKD. The Terra-Loc/LKD collected and stored in the storage bins/tanks is shipped offsite via trucks and rail and utilized in road building and agriculture as a soil amendment and other construction activities.

Foundry Sand and Slag – Mr. Osland stated foundry sand and slag from local companies have been accepted at the facility in the past as beneficial use materials. Mr. Osland stated that the foundry sand and slag are utilized at the facility as road building and stabilization materials and have also been used in the mine to minimize mine subsidence. Mr. Osland stated the facility has not received any additional foundry sand or slag since 2020. Mr. Osland provided me with the most current TCLP report for the foundry sand with a sample date of October 11, 2018 (attachment 12). The TCLP results indicated the foundry sand was not hazardous for RCRA metals. Mr. Osland stated that they have used most of foundry sand and the remaining pile is minimal. There was no slag remaining onsite at the time of the inspection and I did not review any TCLP results for slag. Mr. Osland stated they are not planning on accepting any more foundry sand or slag in the future, but if they did, they foundry sand and slag would be sampled. I observed the remaining foundry sand pile located near the current underground mine injection well area along the east side of the facility (attachment 5). The pile was approximately 100 feet long x 60 feet wide x five feet tall. Mr. Osland estimated that the remaining foundry sand would be used by the end of the year.

Fly Ash – Mr. Osland stated the facility underground mine injection well that incorporates water into fly ash via a pug mill to fill mine voids. Mr. Osland stated the fly ash is received from surrounding power plants. Mr. Osland described the process and stated a pug mill is utilized above ground over the area of the mine that will be filled. A vertical hole is drilled down into the mine and the fly ash/water slurry gravity falls into the mine voids. The fly ash/water slurry fills the mine void and then a new vertical hole is drilled. The pug mill injection system is moved and the process is repeated. The injection system was not currently operating during the inspection. However, I observed the pug mill and conveyor system located along the east side of the facility (attachment 5). Mr. Osland stated the underground injection system is permitted and provided me with the most current annual report dated January 3, 2022 (attachment 13). I reviewed the report and it included a TCLP report for the fly ash with a sample date of January 22, 2021. The TCLP results indicated the fly ash was not hazardous for RCRA metals. Mr. Osland stated that any new sources of fly ash will be sampled and the current fly ash is sampled at least annually and have always been determined as non-hazardous waste.

Parts Washer - Mr. Osland stated that the facility has two parts washers that utilize a washing tray on top of a 33-gallon container. I observed a parts washer located in the steel maintenance building near the facility office/directly west of the tan steel conex container, and a second parts washer in the mobile equipment maintenance shop located underground in the mine (attachment 4 photos 6 and 8). Mr. Osland stated both parts washers contain LPA-142 Solvent and provided me with a copy of the SDS for LPA-142 Solvent (attachment 14). I reviewed the SDS and noted a flashpoint of greater than 142 degrees Fahrenheit and I did not identify any constituents that would add characteristic or listed hazardous waste codes. Mr. Osland stated the parts washers are used to clean grease, dirt and oil from tools and equipment and that when spent, the parts washer solvent is considered to be nonhazardous waste. Mr. Osland provided me with an e-mail that showed that RILCO Lubricants & Services provides the parts washer solvents and services the two parts washers on an 8-week schedule (attachment 15). Mr. Osland stated the spent parts washer solvent is transported back to RILCO Lubricants & Services for recycling. Mr. Osland could not locate any past work orders for review.

Universal Waste – Mr. Osland stated universal waste lamps are generated throughout the facility and are collected in the electrical/tan steel conex container located directly east of the steel maintenance building. Mr. Osland stated that the spent fluorescent lamps and high intensity discharge (HID) lamps (D009) are managed as universal waste per 40 CFR §273. Mr. Osland estimated the facility generates between 35 and 65 universal waste lamps per year. Mr. Osland stated that the underground mine had converted to LED lamps several years ago and that spent fluorescent lamps and HID lamps are no longer generated in the underground mine. Mr. Osland stated the conversion greatly reduced the generation rate of the universal waste lamps. Mr. Osland stated that he transports the universal waste lamps to the Scott County Hazardous Materials facility for recycling. The Waste Commission of Scott County has a recycling and electronics recovery center along with the hazardous materials facility as part of the Scott County Landfill located at the north end of the facility. Mr. Osland did not have any records or receipts for review. However, Mr. Osland provided me with the Scott County Waste Commission VSQG

Packet via e-mail after the inspection that described the services provided for VSQG waste (attachment 16).

I observed the universal waste accumulation area located in the electrical/tan steel conex container located directly east of the steel maintenance building. There were two closed 4-foot round fiberboard universal waste lamp accumulation containers. I had Mr. Osland open the containers and the round 4-foot fiberboard container on the left was storing approximately 60 spent 4-foot fluorescent & LED lamps. The round 4-foot fiberboard container on the right was storing 7 spent 4-foot fluorescent/LED lamps and 9 or 10 HID lamps. Several HID lamps are shown broken at the bottom of the container. Neither of the containers were dated or labeled as universal waste lamps (attachment 4 photos 1 - 3). I asked Mr. Osland how long the universal waste lamps had been in storage and he stated he did not know for sure. Mr. Osland stated that he could not remember how long it had been since he had transported the waste lamps to the Scott County landfill, but thought it been well over a year ago. I informed Mr. Osland that the containers must be labeled as universal waste and dated when the first lamp is added to the container or have a tracking system such as a log to track the length of time the universal waste lamps have been accumulating. I did not leave NOPF for this issue at the time of the inspection. However, it may be added upon further review. I also informed Mr. Osland that the universal waste lamps cannot be stored for longer than one year. Furthermore, I informed Mr. Osland that broken lamps are considered to be hazardous waste and must be managed as such to minimize a release to include being stored in an impermeable container such as a plastic or metal container and not in a fiberboard container.

NOPF 2 – Failure to immediately clean up the broken HID lamps and manage them to minimize a release of mercury is in violation of 40 CFR 273.13(d)(2).

NOPF 3 – Failure to manage the 4-foot universal waste lamps and HID lamps in a container that is labeled with the words “Used Lamps”, “Waste Lamps”, or “Universal Waste Lamps” is in violation of 40 CFR 273.14(e).

NOPF 4 – Storing the 4-foot universal waste lamps and HID lamps for greater than one year is in violation of 40 CFR 273.15(a).

Mr. Osland stated that the used nickel cadmium (Ni-Cd) batteries (D006), lithium batteries (nonhazardous), and alkaline batteries (nonhazardous) are managed as universal waste per 40 CFR §273. Mr. Osland stated that he collects any small batteries used at the facility in a 5-gallon bucket located in his office. Mr. Osland stated that batteries are taken to the Scott County Landfill for recycling along with the universal waste lamps. I observed the 5-gallon universal waste battery accumulation container holding universal waste batteries. The universal waste battery container was marked with the words "used batteries". Mr. Osland stated that he had taken the used batteries to the Scott County landfill approximately eight months ago and that he was sure no batteries have been accumulating for over one year. I asked Mr. Osland if the facility maintains any records for recycling of the universal waste batteries. Mr. Osland did not have any records or receipts for review. I recommended to Mr. Osland that he either date the 5-gallon

bucket or use a tracking log to ensure the batteries are not accumulated for greater than one year. I asked Mr. Osland if lead acid batteries are managed as universal waste and he said, “No”. Mr. Osland stated that lead acid batteries are managed per 40 CFR §266 Subpart G and swapped out when replaced with new batteries by the vendor/contractor performing the service to the equipment.

Used Oil – Mr. Osland stated that used oil is generated from facility equipment maintenance and is managed as used oil per 40 CFR §279. Used oil is accumulated in the blue steel conex container located directly south of the steel maintenance building, in the oil/lubrication building on the north/Quarry side of the facility (north of Hwy 22) and also in the mobile equipment maintenance shop located underground in the mine. Mr. Osland stated that LMMC generates between 1,000 and 1,200 gallons of used oil annually and the used oil is picked up by Green For Life Environmental (GFL) located in Davenport, Iowa for recycling. Mr. Osland provided me with the used oil bill-of-lading for the service date of March 1, 2021, and an invoice for the service dated March 31, 2021 (attachment 17). The bill-of-lading and invoice indicated 881 gallons of used oil was picked up in March of 2021 for recycling.

I observed a 275-gallon and 330-gallon tote of used oil being accumulated in the blue steel conex container near the facility office/directly south of the maintenance building (attachment 4 photo 4). The 330-gallon tote was full and 275-gallon tote was $\frac{3}{4}$ full of used oil. Both totes were labeled as “Used Oil”. I observed a 1,000-gallon red steel tank accumulating used oil in the mobile equipment maintenance shop located underground in the mine (attachment 4 photo 9). The tank was less than half full and was labeled as used oil. Mr. Osland stated that large pans on wheels (shown in photo 9) are used to collect the used oil from large equipment during servicing and that they are immediately emptied into the red used oil storage tank. I also observed a black 55-gallon steel container of used oil being accumulated in the oil/lubrication building on the north/Quarry side of the facility (attachment 4 photo 7). The 55-gallon container was $\frac{1}{2}$ full of used oil and was not labeled. I informed Mr. Osland that the 55-gallon container accumulating used oil located in the oil/lubrication building on the north/Quarry side of the facility must be label as “Used Oil”.

NOPF 1 – Failure to label used oil accumulation containers as “Used Oil” is in violation of 40 CFR 279.22(c)(1).

Used Oil Filters - Used oil filters are generated during facility equipment maintenance and from performing service on the large equipment in the mobile equipment maintenance shop located underground in the mine. I observed a 2-cubic yard bin of punctured oil filters being accumulated directly to the right of the red used oil accumulation tank (attachment 4 photo 9). Mr. Osland stated that the used oil filters are punctured and hot drained into the large pans on wheels (shown in photo 9) and the used oil is emptied into the red used oil storage tank. The punctured used oil filters are then managed as scrap metal. Mr Osland stated the scrap metal is picked up Alter Scrap Metal located in Davenport, Iowa and recycled.

General Trash – Mr. Osland stated that the general trash is collected in approximately twelve,

5-cubic yard containers located throughout the facility that are picked up weekly by Republic Services. The facility also generates two 20-cubic yard containers of larger general trash that includes shipping waste from the maintenance department for parts such as pallets and cardboard that are picked up every two weeks by Enviromark Corporation. Mr. Osland stated the general trash is transported to the Scott County landfill for disposal.

5.2 Other Regulatory Requirements

LMMC has two permitted wastewater discharges from the facility. Mr. Osland stated that the facility recycles most of the water used to wash the limestone for preparation of lime production. However, some of the wastewater generated from the washing process is discharged to a nearby creek that flows into the Mississippi River. Mr. Osland stated that the wastewater discharge is permitted and that they are required to test for total suspended solids (TSS) and pH. Mr. Osland stated that a second permit was obtained several years ago to allow the facility to dewater the mine water from the flooded areas of the mine so that limestone mining operations could be performed. Mr. Osland stated that a vertical hole is drilled down to the flooded area and the mine water is pumped to a nearby creek that flows into the Mississippi River. The permit requires LMMC to test for TSS. I did not obtain a copy or review either of the waste water permits during the inspection.

There was no hazardous waste being stored at the facility (other than the universal waste) at the time of the inspection. I did not observe any unidentified waste during the visual inspection. I reviewed all other applicable EPA hazardous waste compliance requirements and no additional findings were noted. However, further EPA review may change or add to my findings.

6.0 Summary

I inspected the LMMC facility on February 23, 2022. A review of facility operations and statements made by Messrs. Osland and Looman indicated that LMMC has been and is currently a VSQG of D001 and D009 characteristic RCRA hazardous waste, a small quantity handler of universal waste, and a generator of used oil. Mr. Osland stated that it had been several years since a waste paint and lubricants SAC had become full and is shipped infrequently, due to the amount of time it takes to fill a SAC. He estimated that the last shipment of waste paint and lubricants occurred over two or three years ago and did not have any records. Mr. Osland also stated that the lime production operation does not generate a hazardous waste and included several TCLP reports for the LKD and Terra-Loc by-products that are captured in either storage bins or in the closed off portion of the mine. The heavier particles of the LKD (Terra-Loc) are captured in the storage bins as they leave the rotary kilns and the lighter particles of LKD continue on with the rotary kiln exhaust to the closed off section of the limestone mine where the exhaust/gas stream velocity is slowed and the LKD drops out of suspension, cools, and fills the mine void areas.

I issued the LMMC facility the following NOPFs during the inspection:

- NOPF 1 - Failure to label used oil accumulation containers as “Used Oil” is in violation of 40 CFR 279.22(c)(1).
- NOPF 2 – Failure to immediately clean up the broken HID lamps and manage them to minimize a release of mercury is in violation of 40 CFR 273.13(d)(2).
- NOPF 3 – Failure to manage the 4-foot universal waste lamps and HID lamps in a container that is labeled with the words “Used Lamps”, “Waste Lamps”, or “Universal Waste Lamps” is in violation of 40 CFR 273.14(e).
- NOPF 4 – Storing the 4-foot universal waste lamps and HID lamps for greater than one year is in violation of 40 CFR 273.15(a).

TREVOR
URBAN

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Date: 2022.04.28
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Trevor L. Urban
Environmental Scientist
ECAD/CB/RCRA
Date:

AMBER WHISNANT

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Amber Whisnant
Section Chief
ECAD/CB/RCRA, EPA Region 7
Date:

Attachments:

1. Confidentiality Notice (1 page)
2. Receipt for Documents and Samples (1 page)
3. Notice of Preliminary Findings (2 pages)
4. Digital Image Chain of Custody/Photo Log and Photos 1 – 10 (7 pages)
5. Facility Site Plan and Aerial Photo (2 pages)
6. Linwood Mining & Minerals Information Request letter (IRL) Dated July 16, 2021 (9 pages)
7. Linwood Mining & Minerals Facility Response to IRL Dated August 19, 2021 (32 pages)
8. SDS for LimeStone (14 pages)
9. SDS for High Calcium Lime (9 pages)
10. SDS for Terra-Loc, LKD (10 pages)
11. Analytical Report for Lime Kiln Dust (LKD) & Blank Request Form (SW-846) (4 pages)
12. Analytical Report for Foundry Sand (2 pages)
13. EPA UIC Annual Report for Ash Injection Dated January 3, 2022 (7 pages)
14. SDS for LPA -142 Solvent for Part Washers (8 pages)
15. RILCO Lubricants & Services for Parts Washers (2 Pages)
16. Scott County Waste Commission VSQG Waste Participant Letter (2 pages)
17. Used Oil Bill-of-Lading Dated March 1, 2021, and Invoice Dated March 31, 2021 (2 pages)