EXHIBIT B

Martis Valley Plant Fugitive Dust Suppression Plan

1. INTRODUCTION AND PURPOSE

This Fugitive Dust Suppression Plan (Plan) has been prepared for the Teichert Aggregates (Teichert) Martis Valley Plant (Martis Facility) per updated condition #20 of the Martis Valley Quarry 5-Year Review application approved June 20, 2017. This Plan discusses the current operations at the Martis Facility, air quality regulatory requirements and permit conditions applicable to plant operations, regional and plant sources of dust, and measures that Teichert has implemented to minimize dust emissions.

2. MARTIS FACILITY OPERATIONS

2.1 Location

The Martis Facility is located at 13879 Joerger Road between the Truckee-Tahoe Sanitation Agency's sewage treatment plant and Martis Creek. (Figure 1, Appendix A). Aggregate mining and processing by Teichert began at the site in 1984, and has continued through the present. The current permitted area is approximately 360 acres. At the site, sand and gravel are mined, and processed through an aggregate plant to produce several specialty products. There is also a hot-mix asphalt batch plant on the site that produces hot mix asphalt, primarily for paving projects.

2.2 Products

The Martis Facility produces the following primary categories of processed aggregate:

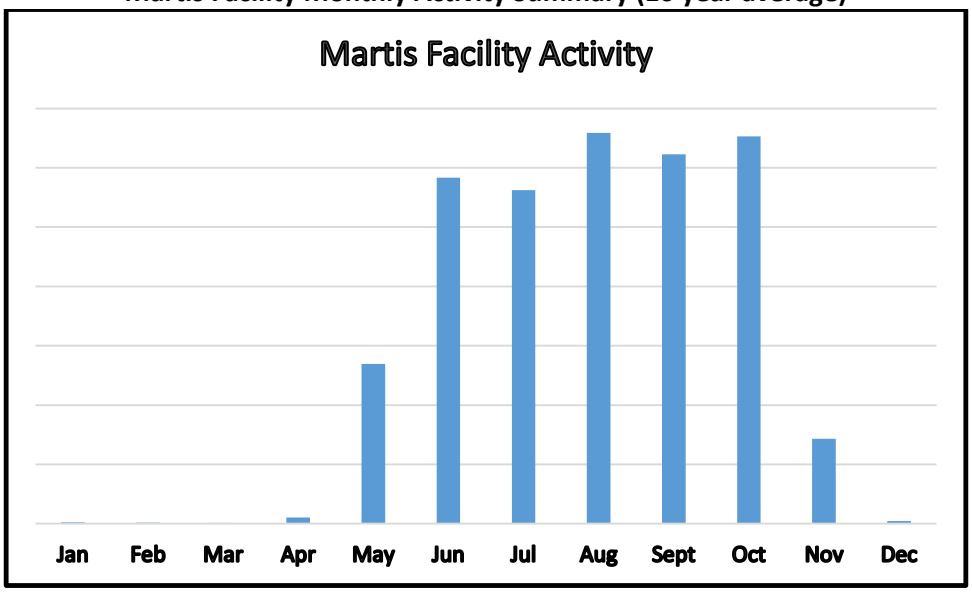
- Aggregate Base (road base) - used as a base for a variety of construction related purposes such as road construction, building construction, sewer and other pipelines
- Crushed Rock - produced in several sizes and is used as a back-fill and the primary component of hot-mix asphalt
- Concrete Aggregate - washed product used to make Portland Cement Concrete (PCC)
- Decorative Rock – landscaping
- Rip-Rap - erosion control on shorelines and river banks, retaining walls, etc.
- Sand - back-fill, mortar sand and winter treatment of paved roads.

The Martis Facility is the only source for high-quality construction aggregates and PCC grade aggregate in the Truckee-Tahoe area. It is the only Tahoe Regional Planning Agency (TRPA) approved source for rip-rap for the Tahoe Basin and weed free approved material for the Tahoe Forest.

2.3 Plant Operations

The Martis Facility conducts normal production operations from 7:00am to 7:00pm, Monday through Friday. The aggregate plant operates up to 250 days/year, but generally not in the winter months as shown in Figure 1.

Figure 1
Martis Facility Monthly Activity Summary (10 year average)



Mining at the Martis Facility occurs at the north and south ends of the property (North Pit and South Hill). Mining is accomplished using rubber-tired loaders which place the aggregate in a hopper that feeds the jaw crusher. The output from the jaw crusher is transport to the aggregate processing plant using a series of long electric conveyor assemblies. The use of the long conveyors to transport the material to the aggregate processing plant minimizes loader travel, the need for haul trucks, and associated dust emissions.

Aggregate processing at the Martis Facility occur near the center of the property. The aggregate processing plant consists of a series of bins, crushers, screens and conveyors, which are designed to efficiently break up and/or sort mined material into specific grades and sizes of construction quality aggregate. Final aggregate products are stockpiled near the aggregate plant. Final products may be loaded from these stockpiles for off-site transport or transferred internally to other stockpile areas where they can more efficiently be managed or used. One such example are stockpiles that serve the hot-mix asphalt plant.

Teichert also accepts clean fill from other contractors or sources off site. This is delivered by truck and stockpiled in previously mined areas. This material is either processed into a recycled aggregate base (AB) or used as clean fill for the purpose of raising the final floor of the mined pit area and augmenting soils used in the mine reclamation process.

Hot-mix asphalt is manufactured at the Martis Facility near the entrance to the property. To manufacture hot-mix asphalt at the Martis Facility, stockpiled aggregate is conveyed to the natural gas-fired drum dryer. From the dryer, the hot aggregate passes through a series of screens and is stored in "hot" bins. The aggregate is then transferred to a mixer where it is mixed with hot liquid asphalt. The

hot mix asphalt is then dropped directly into waiting trucks or placed into silos for loading as trucks are available.

3. AIR POLLUTION REGULATIONS AND PERMIT CONDITIONS - PARTICULATES

Particulate matter (PM) has long been recognized as a harmful pollutant to the environment and human health, and as such, is regulated by a series of federal, state, and local regulations and policies to reduce the amount of PM in the environment, including the Truckee Valley. The basic elements of PM regulation related to the Martis Plant operations are summarized below.

3.1 U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) regulates air quality nationally through implementation of the Clean Air Act, as well as other various federal regulations, policies and guidelines adopted by the federal government. As it relates to particulate matter regulation, EPA establishes National Ambient Air Quality Standards (NAAQS) for particles less than 10 microns in diameter (PM10), as well as particles less than 2.5 microns in diameter (PM2.5), to which states must adopt regulation and policy to meet with defined time frames. In addition, EPA has established PM emissions standards for engines related to mobile equipment (cars, trucks, off-road equipment, trains and aircraft).

3.2 California Air Resources Control Board

The California Air Resources Control Board (ARB) regulates air quality within California under authority delegated by the EPA. ARB delegates to thirty five individual air Districts within the State to handle air quality issues and regulations that are unique and pertinent at a local level. In turn, ARB focuses much of its efforts on statewide policy and regulation. One area of particular relevance at the Martis Plant is ARB's regulations pertaining to the use of diesel powered equipment. Diesel emissions have been reduced at the Martis Facility and will continue to be reduced as diesel regulations require the retirement of older equipment and replacement with new equipment equipped with state of the art diesel emission reduction technologies.

3.3 Northern Sierra Air Quality Management District

The Northern Sierra Air Quality Management District (NSAQMD) is charged with maintaining air quality in Nevada, Plumas and Sierra Counties pursuant to regulations and policies of EPA, ARB and the local governments. NSAQMD is tasked with establishing local regulation and policy that will allow the region to meet NAAQS emission standards and timelines. One way in which NSAQMD achieves this is the requirement that facilities with potential to emit air contaminants apply for, and obtain, an Authority to Construct Permit before commencing construction. Once constructed, the facility is required to have a valid Permit to Operate before being placed into service. There are two general classes of operating permits, based on the amount of air contaminants that the facility has the potential to emit. The thresholds vary with each pollutant; however, facilities with lower potential annual emissions (minor source) can obtain a Permit to Operate. Facilities with larger potential annual emissions (major source) must obtain a Title V Federal Permit to Operate. The Title V Federal Permit to Operate application also goes to EPA for evaluation. In addition, in reference to PM emissions, NSAQMD has established rules

governing residential wood burning and the application of sand to control ice on regional roads in the winter as well as other restrictions and controls for additional sources.

A review of the definitions in NSAQMD Rule 102 is useful to understand the limitations of this Fugitive Dust Suppression Plan:

> **Air Contaminant or Pollutant**
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> Any discharge, release, or other propagation into the atmosphere directly, or indirectly, caused by man and includes, but is not limited to, smoke, dust, charred paper, soot, grime, carbon, noxious acids, fumes, gases, odors, or particulate matter, or any combination thereof.
>
> **Particulate Matter**
>
> Is any material except uncombined water, which can exist in a finely divided form as a liquid or solid at standard conditions.
>
> **Dust**
>
> Minute solid particles released into the air by natural forces or by mechanical processes such as crushing, grinding, milling, drilling, demolishing, shoveling, conveying, covering, bagging, sweeping, or other similar processes.

The Martis Facility operates under NSAQMD minor source Air Quality Operating Permit #88-36-01 (Permit). The Permit includes all applicable state and federal requirements for the Martis Facility. These regulations have a general limit on the opacity of emissions from any equipment on the site to a maximum of 20 percent[1]. Some equipment is further restricted to as little as 10 percent opacity.

There are three general categories or emission sources at the Martis Facility; Stationary Sources, Mobile Sources, and Fugitive Sources. The Permit contains requirements that address each of the three types of sources. Stationary sources include the bulk of the equipment in the aggregate and asphalt plants. The Permit places limitations on material throughput rates, hours of operation and opacity of emissions. Mobile Sources refers to the heavy equipment combustion emissions. These emissions include fine and ultra-fine particulates and oxides of nitrogen (NOx), which can be a smog precursor. The Permit addresses these emissions through equipment maintenance schedules. The third category is fugitive emissions which are addressed in the Permit by opacity limitations and dust suppression requirements.

3.3.1 Stationary Sources

In the Permit, both the aggregate and asphalt plants are subject to hourly and annual throughput limits, as well as limits on operating hours. The asphalt plant is required to maintain a fabric filter system (baghouse) to control particulate emissions. In aggregate plants, most of the emissions occur when material is transferred from one piece of equipment to another (a transfer point). The aggregate plant has emission controls on most of the material transfer points and each control is defined by NSAQMD in the Permit. While limiting the vertical drop at transfer points will help minimize emissions the Martis Facility transfer points also have at least one of three standard controls:

a. Water sprays which help keep the fine particles clumped or adhered to larger particles and less likely to become air borne. There is a limitation on the amount of water that can be used. Too much water

causes caking of mud on the screens and other equipment in the plant, leading to high maintenance costs and down-time.

[1] 0pacity is the amount of light which is blocked by a medium, like smoke or a tinted window. Opacity is a measurement and is usually stated as percentage. An Opacity of zero percent means that all light passes through and an opacity of 100 percent means no light can pass through.

b. Enclosing the transfer point as much as possible, which limits exposure of fugitive dust to wind and turbulence and allows the fine particles to settle.

c. Wet Processes. There is a system within the aggregate plant that produces clean washed aggregate and sand. This material is completely saturated and has most of the fine material removed. Emissions from the washed aggregate system are minimal.

3.3.2 Mobile Sources

Mobile Sources refer to mining equipment and dump trucks. Teichert does not operate its own delivery fleet; equipment hauling the aggregate and asphalt off-site, as well as equipment delivering clean fill, belong to other contractors, and are beyond Teichert's control. During the operating day, there are times when the majority of the heavy equipment operating at the Martis Facility are trucks from off-site. The Permit requires the Martis Facility to maintain all facility equipment using the manufacture's recommended maintenance programs in order to minimize air pollution.

3.3.3 Fugitive Sources

The major source of fugitive dust is vehicular traffic. On windy days, fugitive dust from stockpiles may also be substantial. The main controls currently in place include limiting vehicle speeds, graveling the main access routes, using dust palliatives, and watering.

Teichert operates a 3,800 gallon water truck at the Martis Facility. On the average, the vehicle delivers 40 loads (~152.000 gallons) and drives 60 to 70 miles per day. The truck is loaded from a standpipe on the southeast side of the property. Loading takes approximately 70 seconds. The water truck begins operations at 5:00 am and completes two hours of watering before the plant commences full operation.

The Permit requires that equipment operating areas, stockpile areas, and haul roads be watered six to eight times per day, or as necessary, to maintain the surface in a damp condition. The Permit also limits the on-site vehicular traffic speed to 15 miles per hour.

3.3.4 Compliance

The NSAQMD conducts unscheduled inspections and reviews records of all facilities to confirm that they are complying with the limits set forth in their permits. Teichert has never been found to be out of compliance with the requirements of their Permit. NSAQMD has only one confirmed complaint on file. That complaint, filed July I0, 2002, was lodged by an individual in the Olympic Heights area, 1.5 to 2 miles due-west of the Martis Facility. The complaint stated that it was very dusty that morning, with very little wind and that the dust was traveling toward him. He also stated that this was an on-going problem. Records demonstrate that the Martis Facility was not mining and the aggregate plant not

operating on the morning of July 10, 2002; therefore, the activities at the Martis Facility likely were not the source of the dust.

3.4 Town of Truckee

The Town of Truckee adopted its own Air Quality Management Plan (Truckee AQMP) in 1999 to achieve and maintain compliance with the EPA short-term ambient standard for PM10. Avoiding a nonattainment classification by the EPA is important because of the restrictions that would be placed on the town. Currently the NSAQMD is designated as nonattainment for the state PM10 and ozone standards. The state standards are considerably lower than the federal ones. The Truckee AQMP seeks to attain the state standards incrementally. In addition, and in concert with the Truckee AQMP and NSAQMD, the Town adopted Title 7 (Air Quality) of the City Municipal Code. Rules contained in Title 7 work to reduce local PM through phase out of non-certified solid fuel (wood) burning appliances.

3.5 Conditional Use Permit Conditions

The Conditional Use Permit (CUP) requires the submission of a Fugitive Dust Management Plan and that the facility maintains valid air permits with NSAQMD.

4. AIR QUALITY IN THE TRUCKEE VALLEY

4.1 Regional Weather

Weather elements play a critical role in the dispersal and control of fugitive dust at the Martis Facility. In the absence of active watering of the Martis Facility, seasonal rainfall influences surface soil moisture levels. Higher moisture levels help reduce the mobilization and entrainment of particulate matter. Ambient wind forces can mobilize and entrain fugitive dust from areas of exposed or unstabilized soils. Higher winds will incrementally increase the mobilization and entrainment of particulate matter. Elevated temperatures negatively exacerbate fugitive dust generation by reducing soil moisture levels thereby creating ambient conditions where less wind energy is required to mobilize and entrain particulate matter. Figures 2 and 3 show the 30 year average of relative rainfall, wind and temperature patterns at the Truckee airport which is approximately 1.5 miles southwest of the Martis Facility. Due to proximity and terrain, the Truckee airport data would be considered very similar to conditions encountered at the Martis Facility.

Figure 2. Weather data for Truckee Tahoe Airport utilizing continuous 30-year global data history.
Source: https://www.meteoblue.com/en/weather/forecast/modelclimate/truckee-tahoe-airport_united-states-of-america_5403683

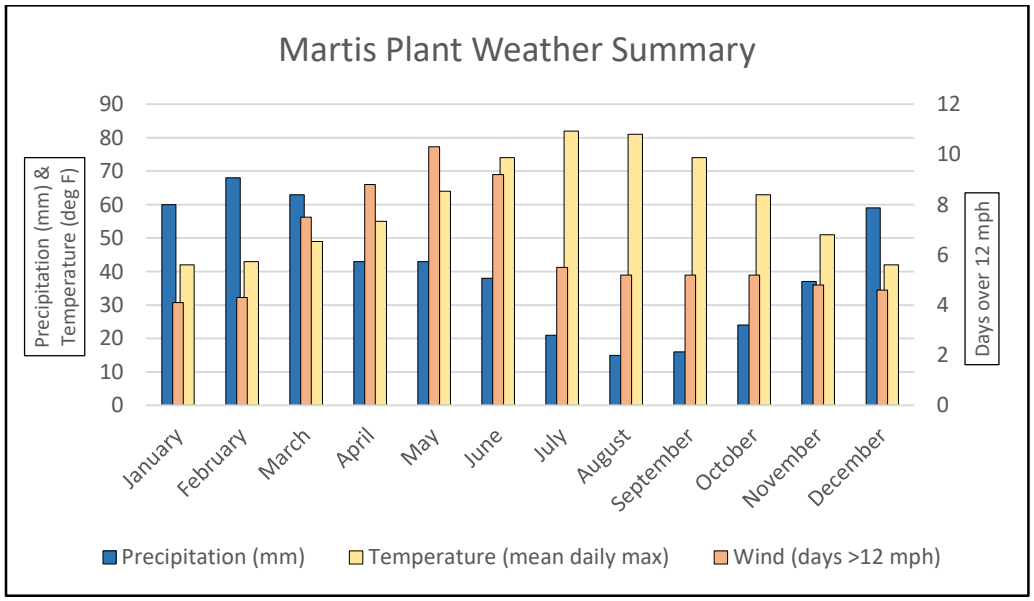
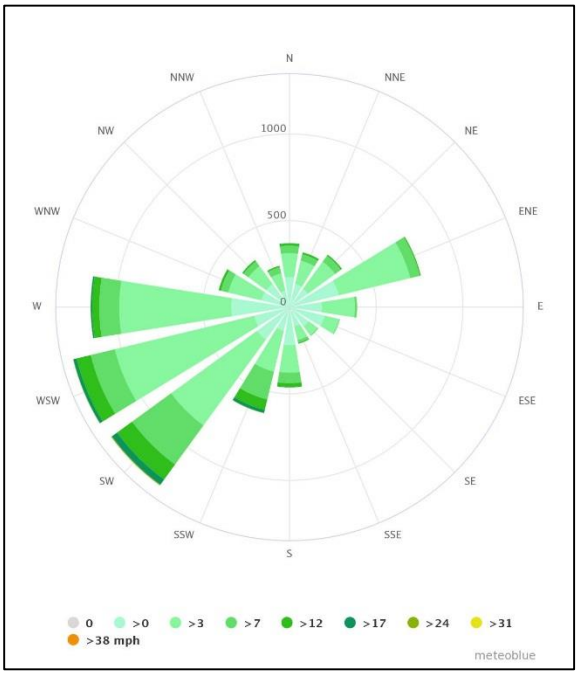


Figure 3. Wind rose for Truckee Tahoe Airport utilizing continuous 30-year global data history. Chart shows how many hours per year the wind blows from the indicated direction.
Source: https://www.meteoblue.com/en/weather/forecast/modelclimate/truckee-tahoe-airport_united-states-of-america_5403683



4.2 Temperature Inversions

The Truckee Valley and surrounding areas are also susceptible to temperature inversions which can play a role in the dispersal and/or concentration of PM as well as other airborne pollutants. A temperature inversion is created when a stable mass of warm air establishes over the top of a mass of colder air. Topographical elements such as mountains and/or ridges, such as those in the Truckee Valley, can exacerbate the effects of a temperature inversion by preventing lateral movement of warm and cold air inversions. Conditions supporting temperature inversions and the effects on airborne particulates are prevalent in the winter months in the Truckee Valley.

4.3 Regional Sources of Particulate Pollution

Like many other towns in mountainous regions, Truckee suffers from poor air quality in the winter months. Based on data presented in the Truckee AQMP, the high wintertime particulate content in the air is derived mainly from the use of wood burning stoves and sand applied to roads for traction control, combined with atmospheric thermal inversions that hold the pollutants in the valley. The Truckee AQMP contains a particulate matter emission inventory for 1998. The emissions are broken out by source category. The two sources previously mentioned account for 68.2 percent of the total emissions for the year. The category Industrial Process-Mineral accounts for only two percent of the total emissions, and the Martis Facility does not operate during the winter months. Based on the data presented by the Truckee AQMP, the Martis Facility is shown to be a minor contributor to overall local total particulate emissions.

Table 1. Particulate emission inventory by source for the Town of Truckee, 1998

Sources	Percent Total Emissions
Residential Wood Combustion	39.3
Paved Road Re-entrained Dust (Road Sand)	28.9
Misc. Process-Construction-Demolition	21.7
Automobiles/Trucks/Locomotives	5.7
Waste Burning/Solvent Use/Fugitive Windblown Dust	2.4
Industrial Process - Mineral	2.0

Even during the summer months, topography acts as a major contributor to the haze that develops in the Truckee River Canyon. Pollutants with low buoyancy, which are generated by sources in the town of Truckee are generally carried away from the town by breezes flowing down the canyon. When those pollutant-loaded breezes encounter the north-south ridge east of Martis Creek, they become concentrated against the ridge, which is coincident with location of the Martis Facility. As a result, a haze develops that is not entirely site specific.

4.4 Martis Facility Contribution to Particulates in the Truckee Valley

On-site sources include machinery, equipment, and processes that are permitted and are necessary to operate the Martis Facility.

4.4.1 Loader Travel

The loaders travel from their active mining site at the pit wall or various stockpiles to the crusher stations and back. The actual process of filling the bucket does not appear to cause significant emissions because even during the summer months, the material has enough natural moisture to limit dust emissions. The loaders, particularly at the North Pit Production Area, tend to load from several different locations. The mining process requires travel off the more frequently watered haul roads to access the active faces in the pit.

4.4.2 Aggregate Plant Operations

4.4.2.1 Rock Crushing

When the loaders deliver material to the crushing station, they dump onto a grizzly screen. This process creates only minor dust because the material is still naturally damp. Aggregate that are too large to pass through screens fall into the crusher which are then broken into smaller aggregate and then further screened to specific size specifications. The rocks are dry inside and when they are crushed they release particulates. This has the potential to put dust and course particles into the air, making it difficult to control the process with sprays.

4.4.2.2 Aggregate Screening

The facility has both wet and dry screens. The screens have multiple decks, are inclined at an angle, and vibrate to facilitate the movement of rock. Material is saturated on the wet screens and PM emissions are not present. Dry screens have water sprays to minimize the amount of dust. Where wet screens have sufficient water to keep clay material from building up on the screen cloth, dry screens must be

monitored to ensure that the correct amount of moisture is applied so that the screens do not build up clay on the screen cloth. The size of the openings in the cloth are also a factor in how easily this issue can become a problem. The finer openings are towards the bottom of the screen and are more enclosed. This also helps to control the fugitive dust.

4.4.2.3 Aggregate Conveying

There is an extensive conveyor system at the Martis plant. The material moving on the conveyor belt results in minimal PM emissions. Fugitive emission result at the transfer points and is controlled by water sprays and enclosing the transfer point when possible. The other source of fugitive emissions from the conveyors is the carry-back material. Sometimes when material is too wet the clays will stick to the belt and be carried back on the belt after the transfer point. This material can then dry out and become fugitive dust further away from the transfer point. This is controlled by the use of belt wipers.

4.4.2.4 Aggregate Plant Stockpiles

The Martis Plant has stockpiles for base rock, washed concrete aggregate of various sizes, washed sand, and mineral aggregate of various sizes for use in the asphalt plant. These stockpiles vary from saturated for the washed material, to 8 to 12% for the base rock, to 1 to 3% for the mineral aggregate.

4.4.2.5 Facility Start-Up

Considerable emissions can occur during plant start-up in the morning. The conveyor belts as well as the crushing/screening systems are dry. Diesel engines associated with the mobile equipment also emit more pollutants while cold than at other times. The start-up process can put fine particulates into the air that are slow to disperse on cold, calm mornings due to the lack of circulating air.

4.4.3 Asphalt Plant Operations

4.4.3.1 Asphalt Plant Stockpiles

In the asphalt plant, aggregate material in a variety of sizes is dried, heated, and mixed with oil to form asphaltic concrete. Since the aggregate must be dried before mixing with the oil, it is more efficient to use dry aggregate. The Permit requires a minimum moisture content of one percent for asphalt plant feed material, and this requirement is met by the Martis Facility.

4.4.3.2 Aggregate Conveying

The conveyors for the asphalt plant have enclosed transfer points that assist in controlling fugitive dust emissions.

4.4.4 On-Site Unpaved Haul Roads

Significant atmospheric dust arises from the mechanical disturbance of granular material exposed to the air. Dust generated from open sources is termed: "fugitive" because it is not discharged to the atmosphere in a confined flow stream. Common sources of fugitive dust include unpaved roads, agricultural tilling operations, aggregate storage piles, and heavy construction operation.

For the above sources of fugitive dust, the dust-generation process is caused by two basic physical phenomena:

1. Pulverization and abrasion of surface materials by application of mechanical force through implements (wheels, blades, etc.).
2. Entrainment of dust particles by the action of turbulent air currents such as wind erosion of an exposed surface by wind speeds over 19 kilometers per hour (km/hr) (12 \miles per hour [mph]).

4.4.5 Track-Out

Track-Out refers to the material that adheres to tires on construction sites and is then deposited on paved roads by vehicles exiting the site. The material dries quickly on the pavement and can be ground to very fine particles and lifted into the air by additional vehicle traffic. The Martis Facility receives considerable truck traffic, which passes onto Joerger Road. Although watering the exit from the plant provides a temporary solution, complete removal, typically by sweeper, occurs to provide better control.

5. DUST PLAN ACTION ITEMS

Both the aggregate and asphalt plants have controls in place and are regulated by NSAQMD. It seems likely that the best opportunity for feasible improvement in emissions control from the Martis Facility are in the category of fugitive emissions. One of the main goals of the suggestions below is to allow the water truck more time in the active mining areas to control fugitive emissions from loader and truck travel. We will investigate the items listed and continue to look for additional means of controlling fugitive emissions and evaluate them.

5.1 Surfactant/ Dust Suppressant Applications to Roads

A variety of environmentally-sound compounds or surfactants can be applied to unpaved roads to inhibit dust formation and entrainment. The effectiveness of the product depends on the soil, moisture and climate. Teichert has used and will continue to evaluating products for use at the Martis Facility. If a feasible product can be found, then the water truck would not need to water the treated roads as often.

5.2 Truck Wheel Washer

Automated truck wheel washers, located where vehicles exit the site, would significantly reduce Track-Out. They can be relatively efficient in terms of water usage and can be used on an as-needed basis. This would also represent a small time/water savings for the water truck.

5.3 Primary Crusher Additional Controls

As discussed above, the process of crushing rock tends to emit dust, even in the presence of water sprays. We are also looking at ways to control the sound from the crusher. Curtains placed around the crusher should also help to enclose and control the fugitive dust from this location.