

ANNUAL INSPECTION REPORT

October 2016

RCP&E (Formerly Genesee & Wyoming) Railroad Continuous Operation

GENERAL INFORMATION:

Facility Name:	RCP&E (Rapid City, Pierre, and Eastern) Railroad
Location:	Main Yard - 2230 Cambell Street Roundhouse - 500 Main Street Storage Yard - Maple Avenue Rail lines within the Control Zone
Date of Inspection:	October 18, 2016
Report By:	Michelle A. Tech

GENERAL COMMENTS:

The purpose of the annual inspection of the Rapid City, Pierre & Eastern (formerly Genesee & Wyoming) Railroad facilities is to identify the fugitive dust generating activities and assess whether the control measures identified in the Compliance Plan are in use and adequate to control fugitive dust emissions. The Compliance Plan is in effect until December 2019 once renewed by the Board at the next meeting.

STAFF REVIEW:

On October 18, 2016 staff met with John Sabo to inspect the RCP&E Railroad facilities. Staff discussed the dust from onsite gravel roads, transportation of materials in railcars, track out from the facilities, and ballast placement.

Cambell Street Facility

The Cambell Street facility is located at 2230 Cambell Street and has a paved entrance into the facility off of St. Patrick St. The facility contains a depot building with paved parking around the building. The paved road into the facility and the paved parking area were relatively clean aside from a small amount of muddy trackout from the edges of the pavement due to recent rains.

The gravel roads and storage area at the facility appeared to be in good condition. Mag water is applied quarterly. The speed limit in the yard is 25 miles per hour, but was previously posted at 15 mph. The area was in good condition.

A few small and vegetated piles of ballast, base course, and pea gravel are stored at the facility. Approximately 4,000 tons of material on the east end of the facility is to be used as fill and graded/seeded. Maintenance materials for track maintenance are also stored at the Cambell Street facility.

Fugitive dust from railcars is not a problem because only covered hopper cars are used for fugitive dust generating materials.

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Main Street Facility

The Main Street Facility runs parallel to E. Main Street starting at the intersection with Steele Avenue to the intersection with Maple Avenue. A small 5 CY pile of base course is on site. The gravel surface of the area and road are in fair condition. Mag water is applied if needed. The two entrances into the area from E. Main Street are paved. Paved entrances are swept as needed. No trackout was observed.

Maple Avenue (White Eagle) Facility

The Maple Avenue facility consists of a storage area for maintenance of way operations and a gravel road next to the railroad tracks. This area is surfaced with gravel. There is no longer a rock stockpile stored on the site. No track out was observed. The unposted speed limit in the area is 15 mph.

Ballast placement

Track maintenance was not observed at the time of inspection. The ballast is added as needed for track maintenance. Ballast is watered when it is loaded to be brought to the site.

Transportation of materials in railcars

Open top rail cars are not used to transport materials, as most of the railcars are covered hoppers or box cars. Typically there is not a problem with spills along the railroad tracks.

No track out from the RCP&E Railroad facilities was observed during the inspection. No fugitive dust was observed from vehicle travel on unpaved roads due to recent rain.

SUMMARY:

It is staff's opinion that the RCP&E Railroad is in conformity with the existing Compliance Plan Permit.

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J. Scull Construction Continuous Operations

GENERAL INFORMATION:

Facility Name: J Scull Construction
Location: 803 Industrial Avenue
Date of Inspection: October 25, 2016
Report By: Michelle A. Tech

GENERAL COMMENTS:

The purpose of the annual inspection of J Scull Construction is to identify the fugitive dust generating activities and assess whether the control measures identified in the Compliance Plan are in use and adequate to control fugitive dust emissions. The current Compliance Plan will be renewed after the December 2016 Air Quality Board meets.

STAFF REVIEW:

On October 25, 2016 staff inspected J.Scull Construction and discussed operations with Tim Henry.

Material Storage Area (west of office)

At the time of inspection, 600 CY of asphalt millings and 800 CY of rubble were stockpiled on site, as well as parts and some service trucks. Most of the equipment is stored across the street at 704 Industrial Ave.

The condition of the unpaved yard surfacing was fair. Mr. Henry reports that millings are to be applied to the surface to reduce the amount of dust generated from the yard.

Valley Sweeping is hired to sweep as needed and estimated that the paved area and road are swept approximately 3 times a month.

Equipment Storage Area (704 Industrial)

The unpaved lot across the street at 704 Industrial is used for parking trucks, trailers, semis, and dump trucks. The gravel surface was in fair condition, except for the entrance where gravel had washed away and was tracked out into the alley.

SUMMARY:

At time of inspection, the facility appeared to not be in compliance with the existing Compliance Plan due to the gravel that has washed out from the equipment storage area into the alley. Staff conducted a follow up inspection to verify that the gravel in the alley had been swept. With the corrective action that was taken, it is staff's opinion that J. Scull Construction is in conformity with the existing Compliance Plan.

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Zandstra South Yard Continuous Operations

GENERAL INFORMATION:

Facility Name:	Zandstra South Yard
Location:	Old Folsom Road (entrance at intersection of Creek Dr. and Marlin Dr.)
Date of Inspection:	October 26, 2016
Report By:	Michelle A. Tech

GENERAL COMMENTS:

The purpose of the annual inspection of the Zandstra South Yard is to identify the fugitive dust generating activities and assess whether the control measures identified in the Compliance Plan are in use and adequate to control fugitive dust emissions. The current Compliance Plan will be renewed after the Air Quality Board approves the application in December 2016.

STAFF REVIEW:

Staff inspected the site on October 26, 2016. The site is used as a storage yard for equipment and raw material.

Material Storage Area

The material storage area is located along Old Folsom Road and has stockpiles of raw asphalt, milled asphalt, and topsoil. An estimated 1,800 CY of raw asphalt was milled and remains on site, along with approximately 1,700 tons of raw asphalt that has not yet been milled. There are three stockpiles of topsoil onsite totaling approximately 2,300 cubic yards. Those stockpiles are stabilized with weeds. Mr. Zandstra said previously that to prevent fugitive dust on days when they haul materials, haul routes are soaked with water in the mornings to create a crust.

Equipment Storage Area

The equipment storage area is surfaced with gravel and appears to be in good condition.

No mud tracking was observed at or around the site at the time of inspection.

SUMMARY:

It is staff's opinion that the Zandstra South Yard facility is in conformity with the Compliance Plan.

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City of Rapid City Continuous Operations at the Utility Maintenance Division

GENERAL INFORMATION:

Facility Name:	City Utility Maintenance Division
Location:	225 E Main St N
Date of Inspection:	November 1, 2016
Report By:	Michelle A. Tech

GENERAL COMMENTS:

The purpose of the annual inspection of the City Utility Maintenance Division operations and facilities is to identify the fugitive dust generating activities and assess whether the control measures identified in the City's Compliance Plan are in use and adequate to control fugitive dust emissions. The current Compliance Plan is awaiting renewal approval by the Air Quality Board at the December 2016 meeting.

STAFF REVIEW:

On November 1, 2016, staff met with Lany Reber of the Water Division. The following potential sources of fugitive dust emissions were reviewed:

- material storage area;
- dewatering pit;
- truck fleet operations; and
- unpaved parking, storage and equipment parking area.

The Utility Maintenance Division moved to 225 E. Main St. N. in the fall of 2015. The site is 4.5 acres and nearly completely paved.

Material Storage Area

The material storage area is located mainly west of the Utility Maintenance Building. Stockpiles of excavated dirt, backfill dirt, base material, and 1" clean rock are stored on site in three-sided concrete bins sheltered from the predominant northwesterly winds. This helps to reduce fugitive emissions from the stockpiles. The excavated dirt pile consists of material from water line break repairs so the material is saturated. Staff reiterated that the stockpile and surface of this area are to be watered if necessary to keep the dust suppressed. Concrete rubble, riprap, and sugar rock are stored on the east side of the building on the gravel-surfaced storage yard.

The paved areas of the Utility Maintenance Division are swept by as needed, however at the time of inspection, trackout from the storage piles was due for sweeping, which was done the next day.

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City of Rapid City Continuous Operations at the Utility Maintenance Division

Dewatering Pit

A dewatering pit facilitates the handling of saturated dirt excavated from water line repairs. Water from the first dewatering pond when full is pumped to a second pond. When the pit is full of sediment, the material that is unsuitable for backfill is hauled either to the wastewater treatment plant or to the landfill. Some trackout occurs but is swept as needed.

Truck Fleet Operations

The Utility Maintenance Division has five dump trucks available. Three of the dump trucks are equipped with tarps. A truck equipped with the tarp is used when hauling material that has the potential to generate fugitive dust. When hauling dirt from a water main break site, the one dump truck without a tarp can be used because the material is saturated enough that fugitive emission potential is low.

Unpaved Parking, Storage and Equipment Parking Area

The storage and equipment parking area is surfaced with gravel. Fugitive emissions were not observed from the storage piles or the unpaved storage and parking area.

SUMMARY:

It is staff's opinion that the City Utility Maintenance Division is in general conformity with the City's Fugitive Dust Compliance Plan.

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City of Rapid City Continuous Operations at the City Landfill
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GENERAL INFORMATION:

Facility Name:	City Landfill
Location:	5555 S. Highway 79
Date of Inspection:	November 1, 2016
Report By:	Michelle A. Tech

GENERAL COMMENTS:

The purpose of the annual inspection of the City Landfill operations and facility is to identify the fugitive dust generating activities and assess whether the control measures identified in the Compliance Plan are in use and adequate to control fugitive dust emissions. The current Compliance Plan is awaiting approval by the Air Quality Board at the December 2016 meeting.

STAFF REVIEW:

On November 1, 2016 staff conducted the annual inspection of the Landfill. Operations were discussed with Jeff Barber and Karl Merbach, Solid Waste Operation. The following potential sources of fugitive dust emissions were discussed:

- trackout to paved roads;
- fugitive dust from improved roads, unimproved roads and other surfaces;
- yard waste activities;
- recycled asphalt operations;
- active soil borrow area;
- concrete pit;
- garbage disposal area; and
- MSW compost operation.

Trackout to Paved Surfaces

Most of the unpaved access roads at the Landfill have been surfaced with a layer of recycled asphalt material. The main access roads into and around the facility are swept and watered as needed.

If trackout occurs on South Highway 79 the City Street Department sweeps the area on an as-needed basis, which is at least 3-4 times a year. Mr. Barber indicated that they are looking for vac sweeper to use instead of relying on their skid steer's broom or for Streets to come out and sweep.

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City of Rapid City Continuous Operations at the City Landfill
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Fugitive Dust from Improved Roads, Unimproved Roads and Surfaces

All roads are sprayed down with water on an as-needed basis, including paved and unpaved, all the way up to the active fill site. This year has been especially rainy so moisture content on the roads has been good. The road into the tipping area is surfaced with recycled asphalt. The haul road adjacent to the borrow area and concrete pit is located at the top of a hill and is subject to wind erosion, but with excavation and fill of the active Cell 16, traffic is rerouted around Cells 13 and 14, which have been capped and seeded since last year. Cell 17 will be capped next spring. Traffic in this area typically travels at low speeds.

No fugitive dust from haul roads into the tipping area were observed at time of inspection.

Compost Activities

Yard waste and clean wood is deposited in the composting area where it is ground into compost material and transferred to windrows. Pine beetle kill contributes to the amount of material received. Some dust occurs from yard waste grinding operations, but the material can be wetted down and care is taken not to grind on windy days. After grinding, the material is stockpiled in the windrows to facilitate the composting process. During the composting process there is typically enough moisture in the product to control dust. Compost occasionally washes out onto the pavement and currently needs to be cleaned up. The windrows are turned and after the windrow process is complete the screening and stockpiling process begins. Stockpiles of 3/4 compost, 3/8 compost and wood chips are stored in the screening area and are available to the public.

Recycled Asphalt Operations

The recycled asphalt area is located below Cell 17. The surface of the asphalt storage area is recycled asphalt. Asphalt pieces are imported primarily during the summer months and stockpiled on the site, and the asphalt is milled by a contractor for use onsite.

Active Soil Borrow Area

The active borrow area is located on the western side of the Landfill west of Cell 15. A scraper removes soil and transports it to the active garbage disposal area. The upper portion of the borrow area is covered with wood chips which reduces the erosion potential. This site is the active cell (cell 16) that was completed in 2016.

Concrete Pit

There is an area of the Landfill adjacent to the asphalt area where trucks haul in concrete rubble and other inert materials for disposal and subsequent grinding for gravel use

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City of Rapid City Continuous Operations at the City Landfill
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onsite. This area is a large pit with steeply sloped sides. Traffic travels at slow speeds in this area which helps to minimize the dust.

Garbage Disposal Area (Active Cell 16)

The tipping area where public vehicles unload garbage to the active landfill is a fugitive dust source from commercial and residential vehicles. The garbage disposal area is shut down when wind speeds reach a sustained 30 mph. No visible fugitive emissions were observed at time of inspection. When visible fugitive emissions are observed, the area is watered down as needed.

Every day a spray similar to hydroseed is sprayed onto the active fill site to keep waste from blowing away. Six to eight inches of dirt is then added to the active site once a week.

MSW Compost Operation

The Landfill produces municipal solid waste compost. The primary process combines food waste and paper products with biosolids from the wastewater treatment plant. The compost is transferred to the secondary treatment building consisting of open bays with an air handling system which helps reduce odors. The compost remains in the open bays for one month. The next process is refining/screening which removes unwanted materials from the compost, such as bottle caps, plastics and glass. The refined compost is stored in windrows until lab testing results confirm the compost is suitable for distribution.

The windrows are stored to the east of the co-composting building. A turner is utilized to turn the piles in the windrows. Moisture in this process is controlled and too much moisture would cause problems in the composting process.

Customer Service Campus

Construction of the Customer Service Campus was complete and operational last year. It greatly reduces the amount of fugitive dust emissions resulting from small vehicles driving into unpaved areas of the landfill as residential customers are no longer be accessing the tipping area and will only be driving on paved areas. It also eliminates the need for the landfill to be closed to the public on days when wind gusts are over 30 mph.

SUMMARY:

It is staff's opinion that the City Landfill is in conformity with the City's Fugitive Dust Compliance Plan.

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November 2016

Pennington County Highway Department Continuous Operations

GENERAL INFORMATION:

Facility Name:	Pennington County Highway Department
Location:	3601 Cambell Street
Date of Inspection:	November 15, 2016
Report By:	Michelle A. Tech

GENERAL COMMENTS:

The purpose of the annual inspection of the Pennington County Highway Department facility is to identify the fugitive dust generating activities and assess whether the control measures identified in the Compliance Plan are in use and adequate to control fugitive dust emissions. The current Compliance Plan is in effect until December 10, 2018.

STAFF REVIEW:

On November 15, staff met with Mark Shock and inspected the Pennington County Highway Department yard located at 3601 Cambell Street. Staff discussed the street traction and deicing operations, street cleaning and sweeper operations, material storage piles, storage yard, unpaved roads and paved street maintenance with Mr. Shock.

Deicing and Traction Control

According to Mr. Shock, approximately 1.3 tons/mile of deicing and traction material is used during a snow/ice storm event for safer vehicle travel, and no more than 1.5 tons/mile. The least amount of material is used to control cost and to control fugitive emissions.

Street Cleaning and Sweeper Operations

The Pennington County Highway Department utilizes two sweepers and three brooms, and all are equipped with water delivery systems. (2003 Johnson Model 705 Vacuum Sweeper, 2001 Elgin Eagle Model SC8000 sweeper, 2007 Superior Model DT80CT Broom, 1993 MB Model 53NH Rotary Broom which is truck-mounted, and a 2015 Superior DT80K side delivery broom). In addition, there are two skid steer loader attached brooms.

The water delivery system on the 2007 Superior Model Broom is insufficient to control fugitive emissions. Mr. Shock indicated that it is used in conjunction with a water truck that wets the road surface ahead of the open sweeper. He stated that sweepings are typically stockpiled in the area that they are sweeping and hauled to the landfill to be used for cover.

Mr. Shock indicated that county roads are swept two to three times a year, depending on the road; at least once in the spring after sanding season is finished and again before striping operations begin. Curb and gutters are swept in the fall before winter.

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Pennington County Highway Department Continuous Operations

Material Storage Area

The material storage area is surfaced with gravel and is sprayed with water if activity in the yard is high. The yard was being watered at the time of inspection due to increased activity with sand/salt mixing and removal of a large pile of logs going to the landfill. MC-70 or mag water is applied to areas of the storage yard as a dust suppressant when it is available. MC-70 was applied recently. Rinse water from recent applications of magnesium chloride is sometimes applied to the main travel lanes in the stockpile area. The following estimated quantities in tons (unless otherwise specified) of materials were onsite at the time of inspection.

Recycled Asphalt	2000 ton
De-icing sand	4000
Class A rip rap	400
Class B rip rap	200
Fill dirt	500
Type 2A chips(2)	300/20
Cold mix asphalt	10

Fugitive dust controls for the stockpiled material with a potential to generate fugitive emissions consist of watering the stockpiles and also keep the height under 20 feet or less to guard against wind erosion. Stockpiles with a potential to generate fugitive dust are typically sprayed with water so that a crust will form to prevent fugitive dust from the stockpiles. Mr. Shock indicated that they typically do not have problems with fugitive dust. The piles aren't disturbed regularly and when they are, care is taken to disturb as little as possible. Chips for oil injection chip sealing projects are sprayed down as needed when the pile is used daily, typically August through September.

The material hauling trucks are equipped with tarps and the tarps are used when hauling material that has a potential to generate fugitive emissions.

Unpaved Roads

Mr. Shock stated that most of the unpaved roads in the Air Quality Control Zone have been covered with recycled asphalt and then chip sealed, and that few roads in the Control Zone are still gravel. He indicated that they typically do not receive complaints from dust on unpaved roads in the Air Quality Control Zone. The County Commission's Dust Abatement Policy allows the Pennington County Highway Department to apply a dust suppressant if the resident or landowner pays for the cost of the application. The county also shapes and waters the gravel road the day before the magnesium chloride is applied, which binds the chemicals tighter and keeps the road less dusty for a longer period of time. Typically a road that receives a magnesium chloride application won't need to be re-graded for two years. No paving of any current gravel roads is expected at this time. They hope to increase the overlay program in the future. A long-range transportation plan would make recommendations for paving.

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Pennington County Highway Department Continuous Operations

Paved Street Maintenance

Paved street maintenance is done by both the Pennington County Highway Department and contractors. The county does isolated roads, patching, and chip sealing, while contractors usually do crack sealing and some chip sealing. Mr. Shock indicated that the use of a fog seal retains up to 40% more rock and helps reduce fugitive dust generation from the surface.

SUMMARY:

It is staff's opinion that the Pennington County Highway Department is in conformity with the existing Compliance Plan Permit.

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City of Rapid City Continuous Operations at the City Street Division

GENERAL INFORMATION:

Facility Name: City Street Division
Location: 605 Steele Avenue
Date of Inspection: November 23, 2016
Report By: Michelle A. Tech

GENERAL COMMENTS:

The purpose of the annual inspection of the City Street Division operations and facilities is to identify the fugitive dust generating activities and assess whether the control measures identified in the City's Compliance Plan are in use and adequate to control fugitive dust emissions. The current Compliance Plan is awaiting renewal approval by the Air Quality Board at the December 2016 meeting..

STAFF REVIEW:

On November 1, 2016 staff met with Dale Pfeifle. The following potential sources of fugitive dust emissions were reviewed:

- street traction and deicing operations;
- sweeping operations;
- sandblasting operations;
- unpaved street and alley maintenance;
- paved street maintenance;
- truck fleet operations; and
- snow disposal site.

Street Traction and Deicing Operations

The primary method of street deicing on the west side of town is the use of enhanced corrosion inhibited magnesium chloride (mag water) and quarried sodium chloride (salt). Due to water quality concerns, the method used on the east side of town is a washed river sand and road salt mixed in a 6:1 ratio. The mixture ratio was changed from 5:1 to 6:1 due to water quality concerns. The salt and traction materials are stored in two domes and a storage building to eliminate exposure to the environment. Material is loaded into the buildings using loaders.

Street Cleaning and Sweeper Operations

The City has an ongoing year-round (temperature permitting) sweeping program to reduce the amount of particulate matter present on the streets that may become reentrained into the air from

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traffic or wind erosion. The Street Division currently has ten sweepers including one flusher truck. All of the sweepers are equipped with water.

The sweepers are cleaned out across the street from the Street Division at the Sweeper Dump Facility. The material is cleaned out of the sweepers on a daily basis and stored at this facility until it is hauled to the landfill for use as daily cover. All of the sweepers use water so the dumped material is moist and not subject to wind erosion while stored at the sweeper dump facility. The paved area at this facility is swept as needed, approximately once per week.

Sandblasting Operations

Equipment is sandblasted at the Street Division in an area between the salt domes to remove paint and rust, and then re-painted. Sandblasting material is swept immediately after sandblasting operations are complete. Sandblasting is not done on days with high winds when the fugitive dust is likely to be transported off site.

Storage and Equipment Parking Surface

The areas of the Street Division are paved with asphalt. This area is mainly used for equipment storage so there is very little traffic on the surface. Small stockpiles of gravel, ballast and cold mix asphalt are stored in the three bins located on the west side of the salt/sand storage building. These piles are protected from the wind so fugitive emissions are not typically generated. Small piles of fines for oil spill clean-up and pure sand for chip sealing operations are also stored on the northeast side of the northernmost salt dome and are stabilized with a crust and sediment socks. There is a stockpile of winter asphalt patch mix to the east of the salt domes behind the shops. The material is sticky and will not produce fugitive dust.

Paved areas are typically swept once per week during the spring and then on an as-needed basis. The paved areas around the facility were clean at the time of inspection.

Unpaved Street and Alley Maintenance

Public Works has taken measures to reduce the amount of dust generation potential from unpaved alleyways and streets by revising the Out of the Dust program funding. The Out of the Dust Program has an advertising authority of up to \$60,000 annually to pave alleyways and streets that have gravel surfaces. The program is funded 100% by the City. Priorities for paving are based on maintenance issues, drainage problems, complaints and requests received. A priority list for the paving of alleys has been established, and Paul Faiman who coordinates the program through the Public Works department says with this amount, two long or three short alleys can be paved per year. Citizens that wish to have an alley or road paved can also have the project assessed.

Paved Street Maintenance

Activities of paved street maintenance are handled through Engineering and administered through Public Works.

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City of Rapid City Continuous Operations at the City Street Division

Truck Fleet Operations

The City Street Division has tarps installed on all but one of the dump trucks to prevent fugitive emissions and are used for hauling all materials except for snow.

Snow Disposal Site

The snow disposal site consists of the property located on East Saint Charles Street behind Taco John's. It is an undeveloped piece of land with a horseshoe shaped gravel access road. The site is cleaned and bladed in the spring, and watered to develop a crust to prevent fugitive emissions.

SUMMARY:

It is staff's opinion that the City Street Division is in conformity with the City's Fugitive Dust Compliance Plan.