

Cost-Effective Implementation of a Fugitive Dust Control Program

Prepared for the DEQ

Dust and Asbestos

Mike Solar – Plant Manager

McCoig Materials

Warren Eastside Concrete

Workshop

McCoig Materials
Warren Eastside Concrete

*A Ready-Mix Concrete supplier for
the Detroit Metropolitan area.*

Fugitive Dust Plan

The owner or operator shall implement the following fugitive dust plan:

- a) The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve.
- b) On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing, or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within 6-inches of the top of any sideboard, side panel or tailgate. Otherwise, the truck shall be tarped.
- c) All of the following provisions apply for site roadways and the plant yard:
 - The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride, or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet an opacity limit of 5%.
 - All paved roadways and plant yards shall be swept as needed between applications.
 - Any material spillage on roads shall be cleaned up immediately.
 - A record of all applications of dust suppressants and roadway and plant yard sweepings shall be kept for the most recent 5-year period and be made available to the Michigan Department of Environmental Quality (MDEQ) upon request.
- d) All of the following provisions apply for storage piles:
 - Stockpiling of all nonmetallic minerals shall be performed to minimize drop distance and control potential dust problems.
 - Stockpiles shall be watered on an as needed basis in order to meet an opacity limit of 5%. Equipment to apply water or dust suppressant shall be available at the site or on call for use at the site within a given operating day.
 - A record of all watering shall be kept on file for the most recent 5-year period and be made available to the MDEQ upon request.
- e) The provisions and procedures of this fugitive dust plan are subject to adjustment by written notification from the MDEQ if, following an inspection, the MDEQ determines the fugitive dust requirements or permitted opacity limits are not being met.

Workshop

Improvement Plan

1. Employee dust and track-out training
2. Create controlled wash areas
3. Restrict traffic to specific areas
4. Reduce speed limit in the yard to 4 MPH
5. Change sweeping vendor
6. Change material delivery schedules on weather
7. Grade yard with 1x3 crushed concrete
8. Repair and improve water truck spray system
9. Extend concrete apron with rumble strips

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Management

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Traffic Flow

Red – Mixers, Blue – Cement Bulklers, Green – Gravel Trains



Water Truck



Modified spray bar and nozzles



Nozzles for track-out cleaning





Dust control spray nozzles



Rumble Strip Bull Float



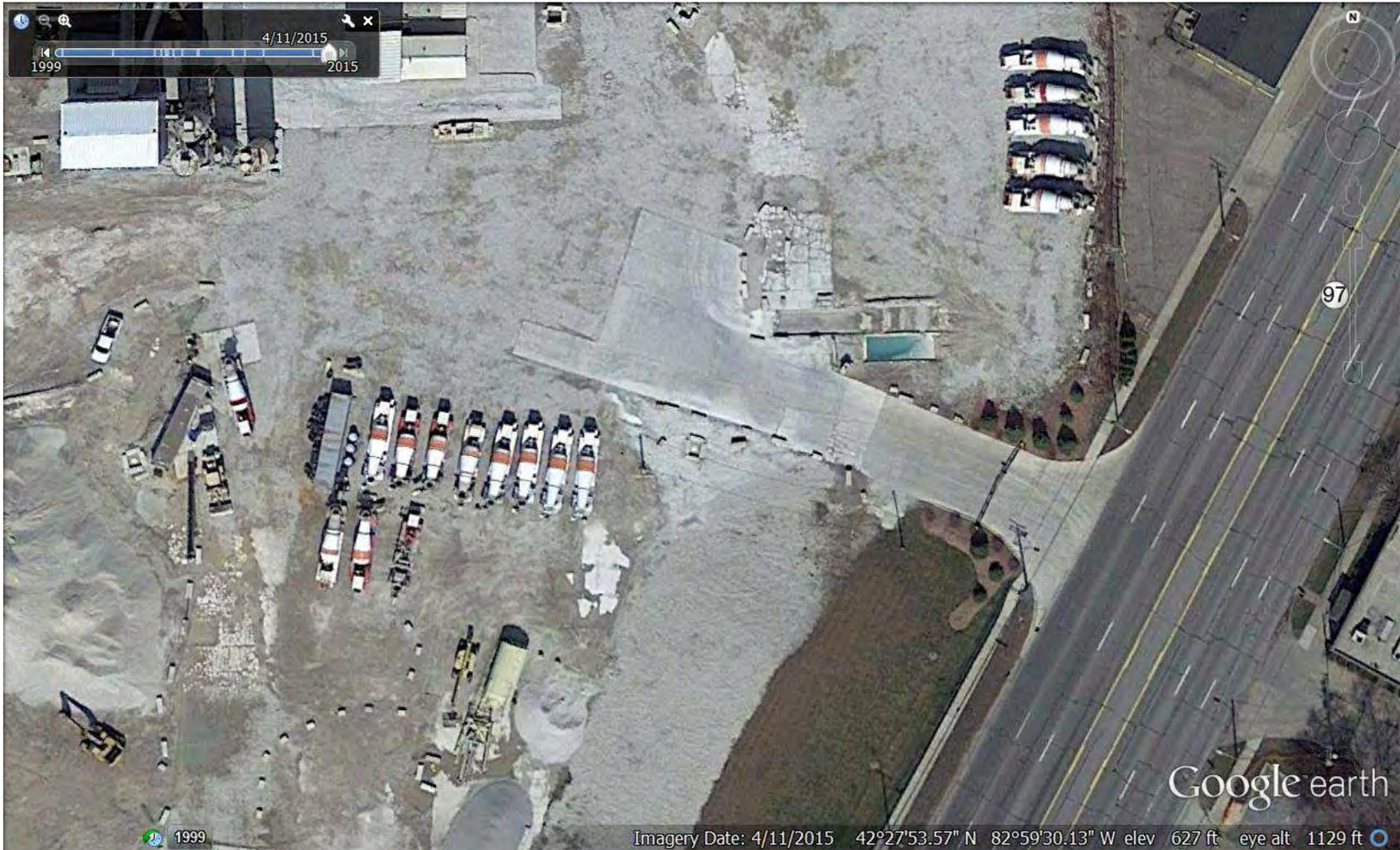
Finished Concrete











4/11/2015
1999 2015

97

Google earth

Imagery Date: 4/11/2015 42°27'53.57" N 82°59'30.13" W elev 627 ft eye alt 1129 ft

Before and After



Workshop

Costs and Savings In Dollars for 1 Year

Cost

- Bull Float- \$275.00
- Concrete - \$15,000.00
- Water truck mod - \$250.00
- Material Scheduling - 0
- Traffic flow restrictions – 0
- Awareness training –\$500

- Total - \$16,025.00

Saved

- 1 less chloride application
\$1400.00
- Eliminated sweeping cost
\$12,600.00

- Total - \$14,000.00

Additional Benefits

Social and Long Term

- A Cleaner Environment
- Being a Good Neighbor
- Improved Employee Morale and Health
- Increase Facility and Vehicle Longevity
- Reduced Maintenance Cost
- Compliance With Environmental Laws