



**Environmental
Protection Agency**

John R. Kasich, Governor

Mary Taylor, Lt. Governor

Scott J. Nally, Director



October 25, 2011

RE: CUYAHOGA COUNTY
CITY OF CLEVELAND
I-90 INNERBELT PROJECT
CONSTRUCTION STORM WATER

NOTICE OF VIOLATION

Kirk Gegick, Project Engineer
ODOT District 12
2301 Scranton Road
Cleveland, OH 44113

Dear Mr. Gegick:

On October 11, 2011, I performed a compliance inspection at the above referenced site. I was accompanied by Tom Hyland, Ornette Gibson and Robert Skufca of ODOT District 12, Randall Morris, consultant for ODOT District 12, Guido Bevilacqua of Walsh, John Eckerle of HDR and Jack Rimac of KCI, subcontractor responsible for weekly and rain event sediment and erosion control inspections. Our records indicate that storm water from this construction activity is authorized for discharge under the Ohio EPA General National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Associated with Construction Activities #3GC04733*AG.

My inspection documented the following. My inspection findings include some general comments that apply to all areas of the project and comments specific to certain areas. References to specific BMPs match the name in the corresponding Storm Water Pollution Prevention Plan (SWP3). Areas of activity west of the Cuyahoga River are Fairfield Avenue (West Side Fill Activity), the Cold Storage Building Demolition Area and the Staging Area, while areas of activity east of the Cuyahoga River are West 3rd Street, East 9th Street Extension, Orange Avenue and Broadway Avenue:

General Comments

- **Temporary Stabilization Needed Prior to Winter.** We are quickly approaching the end of the growing season. It is critical that all disturbed portions of the project be reviewed to determine which areas are likely to remain idle over winter so that they can be stabilized prior to the onset of winter weather. Stabilization should be initiated no later than October 31, 2011.

- **More Emphasis on Street Sweeping Required.** Implementation of good housekeeping practices such as street sweeping must be increased. There are significant amounts of sediment on roadways within and adjacent to project areas. These surfaces must be swept to remove sediment which is tracked onto them by construction vehicles. This also applies to paved aprons being used to access areas of construction.
- **Failure to Establish Rock Construction Entrances.** Much of the off-site tracking is occurring because the contractor is not installing rock construction entrances at access points to construction areas. As construction vehicles drive off the site, they are dragging sediment out with them. In several instances, access points are installed in locations where they serve as conduits for sediment-laden flow out onto roadways. A properly constructed rock construction entrance with associated diversion can prevent much of this from occurring.
- **SWP3 Not Updated.** Part III.D of the NPDES permit requires the SWP3 to be updated whenever there is a change in design, construction, operation or maintenance that has an effect on sediment and erosion controls. There are a number of such situations on this project including the installation of new or temporary BMPs, soil stockpiles in locations not shown on the original SWP3, and accessing areas of construction from locations other than the rock construction entrances designated on the plans. The SWP3 has not been updated to reflect these changes. Please ensure that the SWP3 is kept up-to-date as required by the NPDES permit and that even "temporary BMPs" are designed per requirements of the NPDES permit.
- **Disposal of Clean Hard Fill.** A significant amount of clean hard fill is being used on this project. Please contact Annie Snyder of the City of Cleveland Department of Public Health at (216) 664-2324 to determine if you must submit a Notice of Intent to Fill to dispose of clean hard fill associated with this project.
- **Post-Construction Water Quality Practices.** Ohio EPA has not been provided with a post-construction BMP plan for this project. Please ensure that you are complying with Part III.G.2.e of the NPDES permit and providing appropriate post-construction BMPs for this project. Construction is well under way and I did not observe any evidence on site that post-construction BMPs are being installed. Please identify all outfalls for this project and an indication of the post-construction BMP that will be installed to treat runoff from that outfall. Ohio EPA understands that this is a design-build project and that the post-construction BMP may not yet be known or designed for all sections of the project. Where the information is not yet known, please provide an indication as such.

Fairfield Avenue

- **Integrity of Sediment Basin Embankment is Questionable.** A sediment basin has been added to control runoff from the eastern half of the construction activities occurring on the south side of Fairfield Avenue, however the embankment of this basin was constructed of stone, soil and granular fill and sits on top of pavement. Please ensure the embankment berm is structurally stable and is capable of ponding runoff within the basin.
- **Diversion Needed to Sediment Basin.** Runoff is not adequately diverted to the aforementioned basin and some is bypassing it and running down Fairfield Avenue. Please construct a diversion such that runoff flows into and through the sediment basin before being discharged. Failure to construct diversions to intercept runoff and convey it to an appropriate sediment control is a violation of Part III.G.2.d.iii of the NPDES permit.
- **Additional Sediment Ponds Needed.** Sediment ponds must be installed to control runoff from areas where the design capacity of silt fence or storm drain inlet protection has been exceeded. Failure to implement sediment ponds is a violation of Part III.G.2.ii of the NPDES permit. This violation pertains to runoff from two areas of construction along Fairfield Avenue: (a) the west end of the construction area south of Fairfield Avenue and (b) the north side of Fairfield Avenue. The limits of silt fence usage can be found in Part III.G.2.d.iii of the NPDES permit. Rock check dams are a runoff control practice, not a sediment control practice. Rock check dams cannot substitute for sediment ponds. Please amend the SWP3 to provide sediment ponds capable of controlling runoff from these two areas of concern.
- **Rock Construction Entrance Needed.** Construction vehicles are accessing the area north of Fairfield Avenue from Fairfield Avenue, yet a stabilized rock construction entrance has not been provided. This results in off-site tracking of sediment onto Fairfield Avenue. Failure to control off-site tracking is a violation of Part III.G.2.g.ii of the NPDES permit.
- **SB-1 Not Installed.** Failure to install sediment pond SB-1 within 7 days of first grubbing and prior to grading the area it is intended to control. This is a violation of Part III.G.2.d.i of the NPDES permit. The contractor indicates that the grade required to install SB-1 does not yet exist, so this is the reason it has not yet been installed. I indicated that this is a common problem with SWP3s for ODOT projects. They do not anticipate interim grades and do not provide the controls needed before final grade is reached. If SB-1 cannot be installed at this time, please amend the SWP3 to provide sediment controls which can be implemented at this time for the drainage area intended to be controlled by SB-1.

- **Controls Needed for Stockpiles.** There are stockpiles of sand and other fill materials placed along the top of the slope along the Norfolk Southern Railroad tracks and W. 15th St. Silt fence, compost filter sock or other perimeter sediment control is required around stockpiles of erodible material. Due to the placement of some of these piles, a tarp may be the only viable solution since there is limited to no room for perimeter controls or where silt fence cannot be staked into the ground and backfilled. A tarp cover will prevent contact with storm water and subsequent mobilization in runoff.
- **Storm Drain Inlet Protection Requires Maintenance.** Storm drain inlet protection I-27, I-52 and I-53 require maintenance. Although Dandy Curb Bags have been installed on these inlets, either the curb filter is not placed against the curb or holes have been cut into the bags. In either case, this would allow sediment-laden runoff to enter catch basins without ponding. In addition, sediment that accumulates on the Dandy Curb Bags must be removed from time to time to ensure continued function. Failure to maintain storm drain inlet protection so that it performs its intended function is a violation of Part III.G.2.h of the NPDES permit. Please clean, repair or replace storm drain inlet protection as needed.
- **Good Housekeeping Needed Around Soil Stabilizer Tank.** Kiln dust from the soil stabilizer tank is spilled onto the ground during material transfer operations. Kiln dust that spills should be swept up as soon as possible to prevent mobilization by wind or storm water runoff. Failure to implement other controls to minimize the discharge of kiln dust and other non-sediment pollutants is a violation of Part III.g.2.g of the NPDES permit.
- **SWP3 Requires Revision to Address Runoff Near Ramp W3.** Storm drain inlet protection I-54 has not been installed. However, this catch basin is located on an active off-ramp (Ramp W3). As such, installing storm drain inlet protection will cause water to pond on the ramp and create a potential safety hazard. One potential alternative solution would be install a diversion along the ramp that would collect runoff and convey it to a sediment basin located near I-54. The discharge of the basin could be directed to I-54. Please determine the control measures you will implement in lieu of I-54 and amend the SWP3 accordingly.

Cold Storage Building Demolition Area

- **Storm Drain Inlet Protection Not Installed.** Storm drain inlet protection along Abbey Avenue (I-30 and I-34) has not been installed. Failure to install sediment controls within 7 days of the start of grubbing and prior to grading is a violation of Part III.G.2.d.i of the NPDES permit. Please install storm drain inlet protection on all active storm drainage systems.

- **Unauthorized Construction Entrance off Abbey Avenue.** The contractor is accessing the site from a non-designated construction entrance off Abbey Avenue. Either discontinue use of the entrance or amend the SWP3 to include this location as a designated construction entrance.
- **Conveyance of Discharge from Sump Pit.** A sump pit has been added on the south side of University Road. The discharge from the sump pit is directed to the north side of University Road and into Temporary SB-2. Please be aware that Temporary SB-2 is not sized to accept this runoff. The discharge from the sump pit should be routed around Temporary SB-2, but ensure that the discharge does not flow over disturbed portions of the site so as to mobilize sediment.
- **Integrity of Sediment Basin Embankment is Questionable.** Temporary SB-2 has been added to control runoff from University Road and portion of the area north of the road. However, the embankment was not constructed from compactible fill and runoff was observed seeping through the embankment. Please reconstruct the embankment using compactible soil such that it ponds runoff within the sediment basin and allows for discharge only from the riser pipe or emergency spillway. Please amend the SWP3 to show the location and sizing of Temporary SB-2.
- **Diversion Across University Road Not Installed.** A diversion has not been installed across University Road to collect runoff and direct it to Temporary SB-2 as intended. As a result, runoff flows west off-project down University Road. Please install the required diversion.
- **Drainage Area to Silt Fence along Cuyahoga River Exceeds Allowable Capacity.** The only sediment control downslope of Temporary SB-2 is silt fence placed along the Cuyahoga River. The drainage area to the silt fence exceeds the allowable capacities stipulated in Part III.G.2.d.iii of the NPDES permit. The contractor is concerned that installation of SB-2 and SB-3 as shown on the SWP3 will destabilize the slope above the Cuyahoga River. We discussed several options of how the drainage area to the silt fence could be reduced to meet allowable capacities and where additional sediment controls could be installed. Please amend the SWP3 to provide adequate sediment control for disturbed areas downslope of Temporary SB-2.

West 3rd Street Area

- **Stated Dewatering Practices Not Being Implemented.** The contractor is discharging trench and groundwater onto the ground. In their response letter dated August 29, 2011, to my previous inspection, KCI indicated that the contractor was to be using dewatering bags. It is Ohio EPA's expectation that the contractor will use the specified practice. Failure to implement allowable dewatering practices is a violation of Part III.G.2.g.iv of the NPDES permit.

- **Spill Response.** I observed a spill of what appears to be automotive fluid from a construction vehicle near Pier 5 as well as fluid dripping from the spigot of a drum of curing compound at the drum storage area. There was no apparent attempt to clean up the spill or implement drip pans to prevent the mobilization of these pollutants by storm water runoff. Failure to implement non-sediment pollutant controls is a violation of Part III.G.2.g.i of the NPDES permit.
- **SB-1 Has Not Been Installed.** The SWP3 calls for the installation of a sediment basin SB-1. The basin has not been installed and it does not appear to be necessary if dewatering bags will be used to control discharges from dewatering activities. Please indicate if SB-1 is still necessary and, if it is, install it.
- **Soil Stockpiles on Ontario Stone Property.** I observed what appear to be spoils from construction activity stockpiled on adjacent property owned by Ontario Stone Company. Please indicate if these spoils are associated with the CUY-90-14.90 project. If they are associated with the project, please be aware that the SWP3 must indicate the location of off-site spoil and borrow areas as well as the sediment and erosion controls required for these areas. Amend the SWP3 accordingly.

East 9th Street Extension

- **SB-2 Has Been Removed.** The temporary version of sediment basin SB-2 has been removed and replaced with a line of silt fence along Commercial Road and a sediment basin further upslope. Please be aware the drainage area to the silt fence exceeds the allowable capacity contained in Part III.G.2.d.iii of the NPDES permit. Please install SB-2 as shown on the SWP3 or amend the SWP3 to provide equivalent controls.
- **Diversions K-3 and K-3A Not Installed.** Diversions K-3 and K-3A will be needed to directed runoff to SB-2. Please install in conjunction with SB-2. Failure to install diversions is a violation of Part III.G.2.d.iii of the NPDES permit.
- **Inlet Protection for New Storm Sewer System.** The contractor has begun to install the storm sewer system that will service the new E. 9th St. Extension. Measures must be taken to keep sediment from entering the storm sewer system. Currently, the contractor has only placed plywood boards and gravel across openings in the manhole castings, but this is not adequate to keep sediment out of the storm sewer.
- **Inlet Protection Not Installed.** Storm drain inlet protection I-65 has not been installed. I observed a flow of sediment to this storm drain, which was simply covered with a construction barrel at the time of inspection. Failure to protect storm drain inlets is a violation of Part III.G.2.d.iv of the NPDES permit.

- **Additional Silt Fence Needed.** Soil has been stockpiled in an area between the proposed East 9th Street Extension and the Norfolk Southern Railroad tracks. Silt fence is required around the stockpile to control runoff. Please amend the SWP3 to show the location of this stockpile and the silt fence.
- **Rock Construction Entrance Needed off Commercial Road.** Construction vehicles are accessing the site off Commercial Road in an area not shown on the SWP3. A rock construction entrance has not been installed in this location. Please install a rock construction entrance at the location shown in the SWP3 or amend the SWP3 to provide construction entrances at desired locations.
- **Improper Storage of Solid Waste.** Solid waste from the construction site was observed piled on the ground. Please provide a lidded or tarped dumpster for the disposal of solid waste. Failure to implement non-sediment pollutant controls is a violation of Part III.G.2.g.i of the NPDES permit.
- **Erosion Gully at Bridge 13.** An appreciable erosion gully was observed at the abutment of Bridge 13. The erosion gully must be repaired and the area draining toward the abutment may need to be regraded to prevent reoccurrence. In addition, silt fence F-13 must be installed to control sediment. Failure to install silt fence within 7 days of grubbing and prior to grading is a violation of Part III.G.2.d.i of the NPDES permit.

Broadway Avenue

- **SWP3 Requires Amendment.** Soil stockpiles were observed at approximately STA 23+00 RT. No sediment and erosion controls were evident. These soil stockpiles and associated BMPs are not depicted on the SWP3. Please amend the SWP3 to show these stockpiles and their associated sediment and erosion controls. Install the BMPs per the amended SWP3.
- **Additional Sediment Pond Needed.** Although a silt fence has been placed across the proposed S. Broadway Ave., the drainage area to the silt fence appears to exceed the allowable capacity contained in Part III.G.2.d.iii of the NPDES permit. Please review the drainage area and if it exceeds the capacity of silt fence, please install a sediment pond to address runoff from this area. The sediment pond would be located somewhere in the vicinity of C-4.
- **Stabilize Disturbed Areas around Bridge 13 Abutment.** The slopes and area around the Bridge 13 abutment appear to be idle or at final grade. As such, please stabilize the area around the bridge abutment.

- **Silt Fence Not Installed Per Specification.** Silt fence F-15, F-16 and F-17 has not been installed properly. The silt fence has not been adequately backfilled and the joints between two pieces of silt fence have not been twisted together per specifications in *Rainwater and Land Development, Ohio's Standards for Stormwater Management, Land Development and Urban Stream Protection* (Ohio Dept. of Natural Resources, 2006). Please repair the silt fence as needed to meet specifications.
- **Inlet Protection Not Installed.** Storm drain inlet protection has not been provided on I-53, I-53B, I-70, I-71 or I-72. Please install to minimize discharges of sediment to the storm sewer system.
- **Construction Entrances Not Installed.** Off-site tracking of sediment onto Broadway Avenue and W.14th St. were evident because there are no stabilized construction entrances to access this construction area. Failure to control off-site tracking is a violation of Part III.G.2.g.ii of the NPDES permit. Please install rock construction entrances at appropriate locations.

Orange Avenue

- **Stabilize Disturbed Areas.** Construction along Orange Avenue is mostly complete. Please be sure to stabilize disturbed areas which remain.

Carter Road Staging Area

- **Riser Pipe Not Per Specification.** Sediment basin SB-1 has been installed, but the riser pipe has been slotted rather than designed per the schedule for number of holes and hole diameter contained in the SWP3. Please ensure that the riser provides a minimum 48-hour drawdown for the dewatering volume of the SB-1.
- **Additional Sediment Ponds Needed.** Upon review of the site, it appears that two additional sediment ponds are required. The SWP3 indicates that runoff from the SE portion of the site is to be diverted to SB-1. However, due to topography, this is not possible. As such, an additional sediment pond is required in the SE corner of the site. In addition, the 2.40-acre drainage area depicted in the SWP3 discharges primarily at one spot. Thus, the silt fence depicted in the SWP3 is not adequate. Please amend the SWP3 to provide a sediment trap for the 2.40-acre drainage area.
- **Construction Entrance Needs Maintenance.** The construction entrance off Carter Road needs to be redressed with stone. In addition, it appears that vehicles may also be accessing the site from the SW corner of the site. The SWP3 does not depict a construction entrance in this location. If this location is being used to access the site, please amend the SWP3 and install an additional construction entrance in the SW corner of the site.

Please provide me with a letter of response indicating the actions you will take to address the violations noted herein. Include any amendments to the SWP3 that may be required. Your response should be received no later than November 10, 2011. Failure to comply with the NPDES permit is a violation of Ohio Revised Code 6111.04 and 6111.07 and is punishable by fines of up to \$10,000 per day of violation. It is my hope that compliance can be achieved without the need to escalate enforcement.

If you have any questions, please contact me at (330) 963-1145.

Sincerely,



Dan Bogoevski
District Engineer
Division of Surface Water

Cc: Thomas Hyland, P.E., ODOT District 12
Randall Morris, P.E., ODOT QA QCP/Audit Engineer
Jonathan Bowerman, Independence Excavating, Inc.
Paul Bowyer, PSI
Jack Rimac, P.E., McCoy Associates, Inc.
Rachid Zoghaib, City of Cleveland, Dept. of Water Pollution Control
David Cooper, City of Cleveland, Dept. of Building & Housing
Todd Houser, Cuyahoga SWCD

Ecc: Ron Trivisanno, ODOT, CO
Mike Wawszkiewicz, ODOT, CO

South Side of Fairfield Road



Fig 1 (LEFT). A diversion has been placed across the eastern construction entrance, but it may not be effectively directing runoff to the sediment basin pictured in Fig 2.

Fig 2 (RIGHT). A sediment basin has been installed on Fairfield Road. The embankment consists of soil, stone and other granular materials.



Fig 3 (LEFT). Inlet protection I-27 requires maintenance. Remove accumulated sediments and ensure that the curb filter is resting against the curb.



Fig 4 (RIGHT). No sediment control has been provided for the western portion of this area. The contractor places a rock check dam across the construction entrance pictured here, and removes it each work day (note pile on right side of photo).

Photos Taken: October 11, 2011



Fig 5. A plume of sediment flows west down Fairfield Avenue and into a storm sewer on Scranton Road.

North Side of Fairfield Road



Fig 6 (LEFT). Filling has created a long, steep slope along the south side of Fairfield Avenue. The only sediment control is a silt fence. The allowable drainage area to silt fence has been exceeded. In addition, some of the runoff bypasses the silt fence.



Fig 7 (RIGHT). SB-1 is to be located within this area, but has not been installed. Runoff flows east toward the construction entrance shown in Fig 8.

Photos Taken: October 11, 2011



Fig 8 (LEFT). Construction entrance on the north side of Fairfield Avenue. Note that it is not constructed per standard specifications for rock construction entrances and serves as a conduit for sediment-laden runoff to flow out onto Fairfield Avenue.

Fig 9 (RIGHT). Sediment flows west down Fairfield Avenue from the area of construction and continues down Scranton Rd. See photos below.

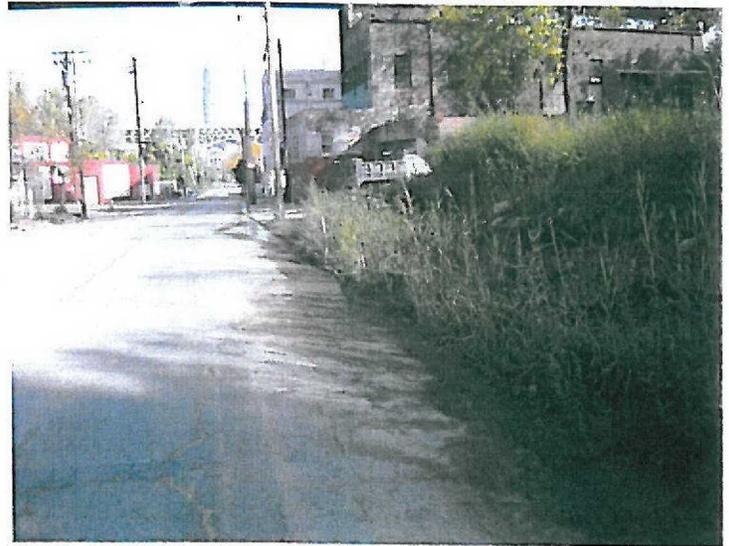


Fig 10 & 11. Sediment from the north side of Fairfield Avenue continues to flow north down Scranton Rd and into storm sewers located there.

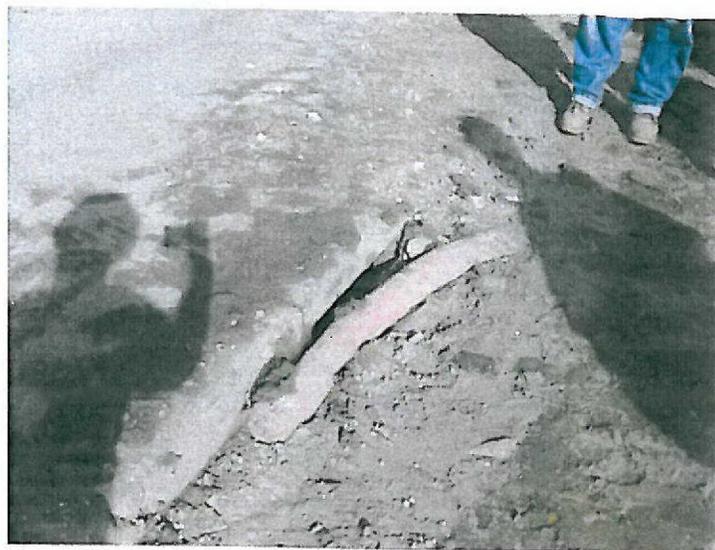


Fig 12 (LEFT). Stockpiles of erodible materials have been placed at the edge of the slope above the Norfolk Southern Railroad tracks. Either the stockpile can be pulled away from the edge so that silt fence can be installed, the pile can be stabilized with seed and mulch or it must be covered with a tarp to prevent off-site migration of sediment.

Fig 13 (RIGHT). I-52 has been installed, but requires maintenance. Accumulated sediments must be removed and the curb filter must rest against the curb.

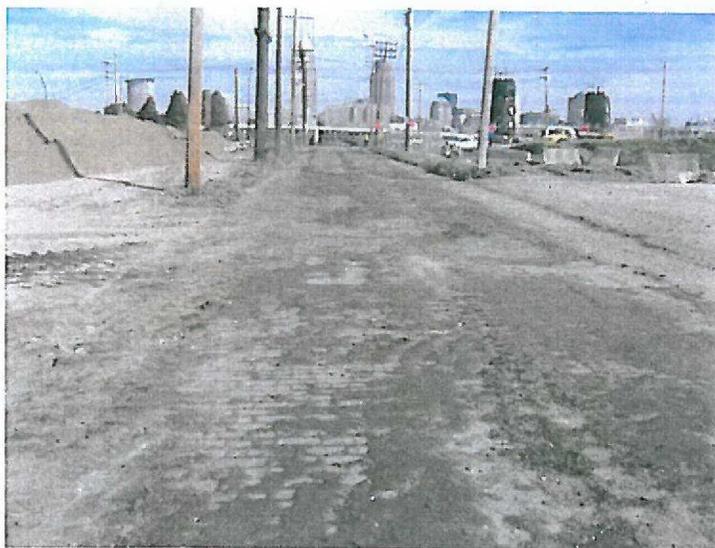


Fig 14 (LEFT). Sediments are tracked out onto W. 15th St. More frequent street sweeping is recommended.

Fig 15 (RIGHT). I-53 has been installed, but a hole has been poked through the geotextile. This Dandy Bag must be replaced.

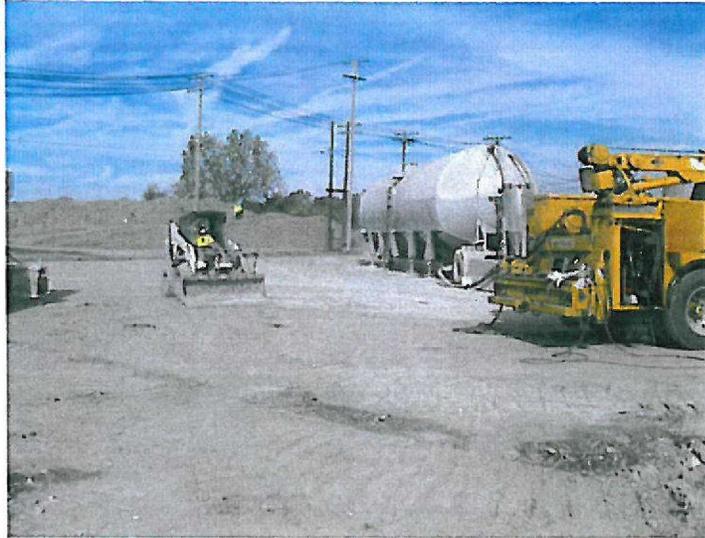


Fig 16. A dozer operator attempts to sweep up kiln dust spilled around the soil stabilizer tank. A street sweeper or push broom may do the job better.

Cold Storage Building Demolition Area



Fig 17 & 18. I-30 and I-34 have not been installed, allowing sediments to enter the storm sewer system on Abbey Ave.

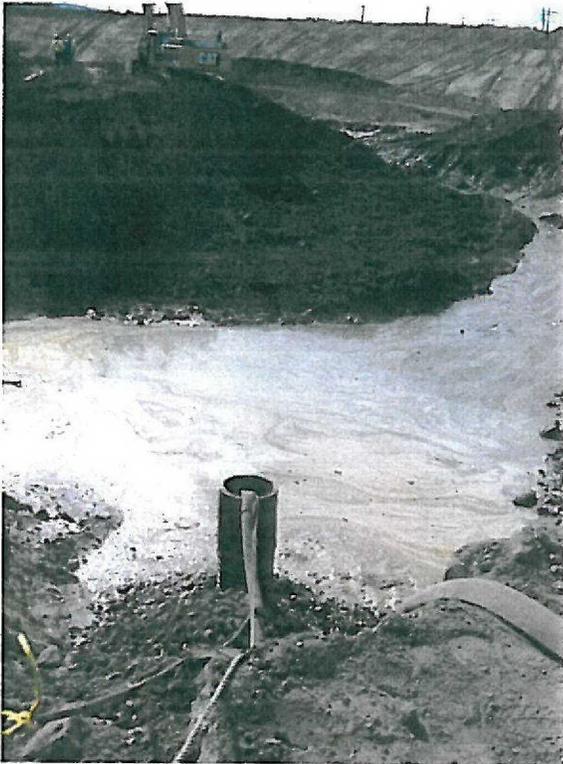


Fig 19 & 20. A sump pit has been established on the south side of University Rd, but its discharge is routed through Temporary SB-2. Temporary SB-2 has not been sized for this additional flow.

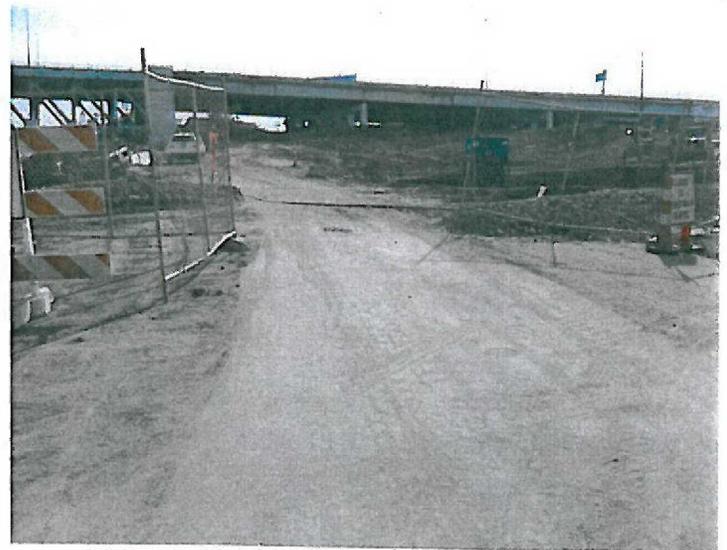


Fig 21 (LEFT). The embankment of Temporary SB-2 is leaking resulting in a sediment-laden flow toward the Cuyahoga River.

Fig 22 (RIGHT). A diversion has not been established across University Rd. As a result, sediment migrates and is tracked off site rather than being diverted to Temporary SB-2. The fence marks the project boundary. Areas in the foreground are outside the project limits.



Fig 23. Additional sediment control measures are needed downslope of Temporary SB-2. Note that the only measure in place is a silt fence and it does not stretch across all areas of disturbance. Further, the drainage area to the silt fence exceeds allowable limits.

West 3rd Street Area



Fig 24 & 25. Additional training appears necessary regarding spill prevention and clean-up practices. Stains from construction vehicle fluid and a leaking drum of curing compound were observed on site.

Photos Taken: October 11, 2011



Fig 26 & 27. Although some dewatering activity is being directed to a sediment basin or a dewatering bag (LEFT), some is just being pumped out onto the ground (RIGHT).



Fig 28 & 29. Although a concrete washout pit has been provided (RIGHT), truck drivers still need to be reminded to use it. Consider installing a sign to direct cement trucks to the pit.

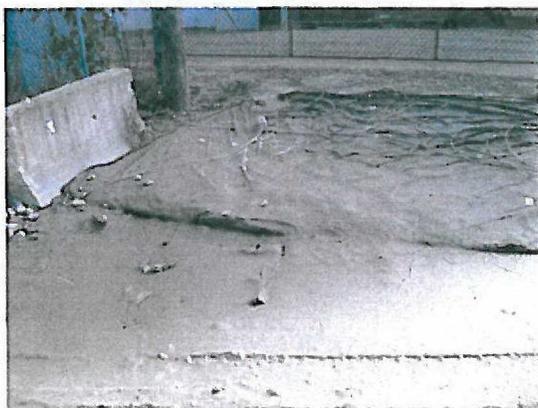


Fig 30. The combination of a dewatering bag and storm drain inlet protection appear to be effective at controlling sediment from dewatering activities. Please remove accumulated sediments from the inlet protection to allow maintain continued function.

East 9th Street Extension

Fig 31 & 32. SB-2 has been removed (LEFT) and replaced with a line of silt fence (RIGHT). Note that the drainage area far exceeds the allowable limits for silt fence. A sediment pond must be re-established. **NOTE:** The plastic covers a previously unknown underground storage tank. Measures have been taken to provide cover over the area of contamination, but you may also want to install a berm to divert run-on away from the area of contamination.



Fig 33 (LEFT). Soil has been placed on top of silt fence along Commercial Road. This compromises the function of silt fence.

Fig 34 (RIGHT). Storm drain inlet protection along Commercial Rd requires maintenance. Note that the curb filter does not rest against the curb allowing sediment to enter the storm drain.

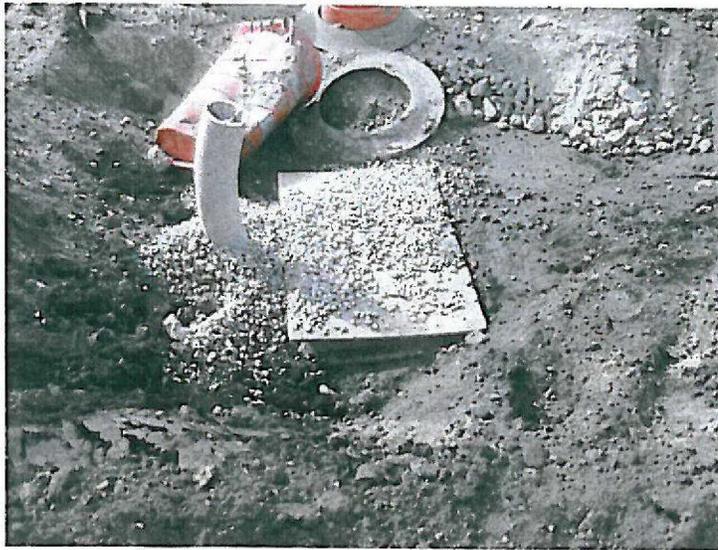


Fig 35 (LEFT). The storm sewer system for E. 9th St. Extension is currently being installed, however measures to keep sediment out of the sewer system is adequate. Here, a plywood board has been placed over a manhole.

Fig 36 (RIGHT). Silt fence must be installed around the back side of the soil stockpiles between Commercial Rd and the Norfolk Southern Railroad tracks. This area slopes down toward the railroad and then to the Cuyahoga River.

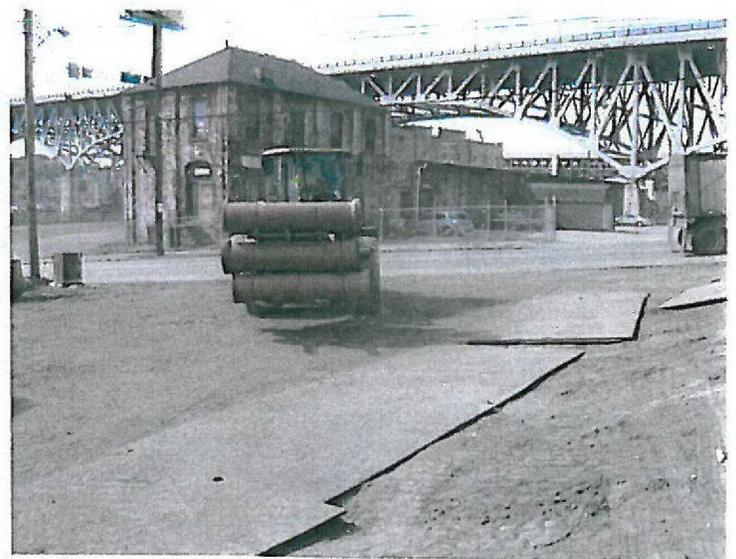


Fig 37 (LEFT). There has been an attempt to establish a sediment basin for at least a portion of the E. 9th St. Extension area, but this basin is not shown on the SWP3. Further, it appears to simply discharge out onto disturbed soils, defeating the purpose of the basin.

Fig 38 (RIGHT). Construction vehicle accesses the site off Commercial Road. No rock construction entrance has been established.

Photos Taken: October 11, 2011



Fig 39 (ABOVE). Trash and other solid waste must be stored in dumpster, not on the ground.

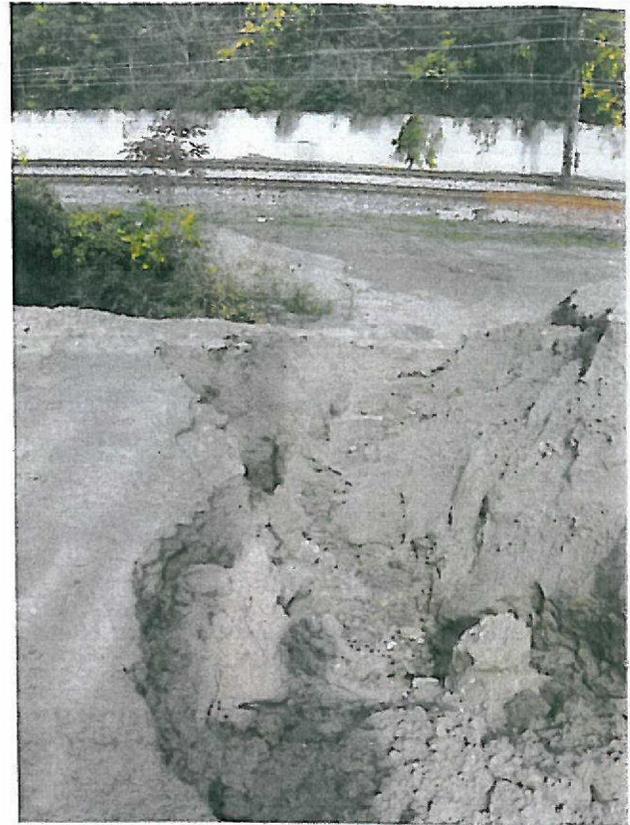


Fig 40 (RIGHT). An erosion gully has formed near the Bridge 13 abutment. Silt fence F-13 has not been installed at the base of the slope along the RTA tracks.



Fig 41 & 42. I-65 has not been installed. Rather, it has been covered by a traffic barrel. As a result, sediment has entered the storm drain system.

Broadway Avenue



Fig 43 (LEFT). A silt fence has been placed across the width of the future S. Broadway Ave., the drainage area directed to it exceeds the allowable capacity of silt fence. This area likely will require a sediment pond.

Fig 44 (RIGHT). There is no rock construction entrance to access the site off existing Broadway Ave.



Fig 45 & 46. Existing storm drain inlets along Broadway Avenue, E. 14th St and Orange Avenue are not protected, allowing sediment to enter the storm drain system.

Photos Taken: October 11, 2011

Carter Road Staging Area

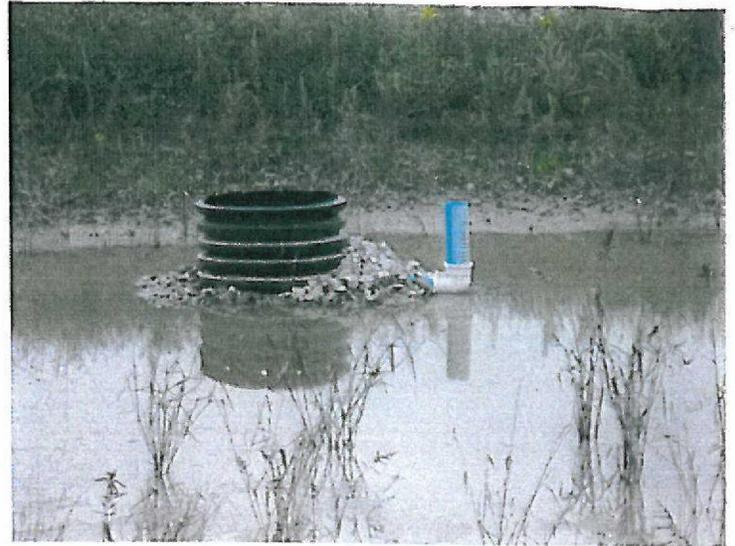


Fig 47 & 48. SB-1 has been installed and appears to be effective. However, the outlet structure installed does not match the design specified in the SWP3.



Fig 49 & 50. The SE corner of the staging area is shown as tributary to SB-1 on the SWP3, but it drains off to the SE corner of the site instead. An additional sediment basin is needed in the SE corner to address this.