Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

March 12, 2012

RE: PORTAGE COUNTY
CITY OF KENT
CONSTRUCTION STORM WATER
THE PROVINCE DEVELOPMENT

Mr. Michael Montell
Project Superintendent
Edwards Communities Construction Company
495 S. High Street, Ste. 150
Columbus, OH 43215

Mr. Montell:

On Tuesday, February 28, 2012, this writer along with Dan Bogoevski of this office and Jennifer Barone of the city of Kent conducted a stormwater inspection of The Province Development. The site is located on Lincoln Street in the City of Kent. The intent of the inspection was to monitor for compliance with the Storm Water Pollution Prevention Plan (SWP3) for the construction site. Mike Mantel, project superintendent for Edwards Communities Construction Properties, accompanies us on our inspection. Our records indicate that storm water discharges from the site are authorized under the Ohio EPA's General Storm Water National Pollution Discharge System (NPDES) Permit for Construction Activities #3GC05536*AG.

Following are observations made during the inspection:

1. Two sedimentation ponds are identified for the site. The ponds are referred to as the East and West ponds. The SWP3 for the construction site calls for skimmers to be placed on the primary outlet structures from each pond. The stormwater from the east pond is to discharge through a 2-inch orifice. Stormwater from the west pond is to discharge through a 1-inch orifice.

   As we discussed during the inspection, neither skimmer was in place. The outlet stub for the west pond was fitted with a 4-inch PVC pipe with duct tape over the opening. The outlet stub for the east pond was concealed with stone. An additional window was cut into the side of the catch basin for the east pond. It was explained that the window was necessary to limit the discharge rate during precipitation events as required by the city of Kent. However, as discussed, the window should not have been cut onto the catch basin until after the stormwater pond is converted to a post-construction pond.

   To address concerns regarding the outlet structures for the two ponds, the following actions must be taken by Edwards Communities Construction Company

   a) Install the skimmers and proper orifices for each pond. You had committed to having the skimmers and orifices in place no later than the end of March 2, 2012.

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b) Check the elevation of the primary outlet structure for the east pond. According to the SWP3, the primary outlet structure should be approximately four feet below the top of the catch basin. The outlet structure must be located at the elevation specified in the SWP3. In the event the current location for the skimmer is incorrect, the side of the catch basin must be cored at the proper location and the current outlet hole must be properly grouted.

2. No later than March 14, 2012, the window cut into the side of the catch basin for the east sediment pond must be temporarily covered and sealed to prevent the discharge of storm water until the pond is converted to post-construction status.

3. The banks of the east pond must be stabilized in accordance with the SWP3. This should be completed no later than March 24, 2012.

4. From a review of the approved SWP3, it appeared that the sediment storage volume of the west pond was sufficiently sized for a disturbed area of approximately 2.5 acres. However, an inspection of the western section of the construction site appeared to include a disturbed area greater than 2.5 acres. If the disturbed area is greater than 2.5 acres, you will need to contact the design engineer for the SWP3 and have the pond resized with a sediment storage volume sufficient for the actual area of disturbance.

5. The post-construction design of the East and West Basins does not appear to meet the requirements of the NPDES permit. Page 23 of the General Construction Permit requires dry ponds like the ponds constructed at The Province Development include forebays. The forebays must be sized at 10% of the water quality volume (WQv). Therefore, the SWP3 must be modified to show the forebay design.

   Another option is to redesign the pond as a wet extended detention basin vs. a dry extended detention basin. Wet extended detention basins do not require forebays and micropools because they have a permanent wet pool across the length of the pond. The minimum volume for the wet pool is 75% of the WQv plus an additional 20% of WQv to store accumulated sediments. Extended detention above the wet pool is provided for at least 75% of the WQv, i.e., storage between normal water level (NWL) and the next higher orifice has to be at least 75% of the WQv and an orifice at the NWL must be provided to drain the WQv over a minimum of 24 hours with no more than 37.5% of the WQv draining in no faster than eight hrs.

   A third alternative is to convert the existing basins into constructed wetlands to meet the post construction requirements. The wetland design must include wet shallow storage across an undulating bottom of the pond (no more than 12" depth) in order to develop a marsh bottom. Extended detention of the full WQv is then provided above that pool. The minimum drain time is 24 hours with no more than 50% of the WQv draining no faster than eight hrs.

   These three alternatives for post construction design are recommended for consideration for modifying the existing sediment basins for post-construction storm water management. Any selected alternative must be consistent with Chapter 2 of

the Ohio Department of Natural Resources (ODNR) Rainwater and Land Development guidance document locate at the following web address:

http://www.dnr.state.oh.us/portals/12/water/rainwater/Rainwater2009-6-23/6-23-09RLDFiles/6-24-09RLDCh2.pdf

All selected alternatives must be approved by the City of Kent.

6. The southwest corner of the western construction area appears to drain away from the sediment basin. This area of concern is located south of the soil stockpile. As discussed, either a diversion ditch to redirect that area to the sediment basin, or a properly designed sediment trap, must be constructed to control the runoff of sediment from that area of the construction site. This will require a revision of the SWP3.

7. It was explained that NC Contracting is responsible for site development, and that Edwards Communities Construction Company maintains oversight of the day-to-day operations. Because Edwards Communities Construction Company maintains the daily operations, and has submitted an NOI, a Co-Permittee NOI is not required. However, a subcontractor certification form completed by a legal representative of NC Contracting is required. The certification form is necessary to demonstrate that the subcontractor reviewed and understands the requirements of the SWP3, and that they agree to follow the Best Management Practices (BMPs). An example of a subcontractor certification form can be found at the following web address:

   http://www.epa.gov/npdes/pubs/exampleswppp_residential_apph.pdf

   A subcontractor certification form must be immediately completed and signed, and the completed form must be maintained at the construction site office. Any new subcontractors who will be involved in implementation of the SWP3 must also complete the form prior to initiating work on the site

8. There was a significant amount of soil on Lincoln St. at the time of the inspection. You indicated that the street is swept twice per week. The frequency of street sweeping must immediately be increased to address the amount of soil tracked onto the road. If necessary, the frequency must be increased to several times per day. Fugitive dust must be controlled during street sweeping activities.

9. The stormwater inlet at the southern-most construction entrance off of Lincoln Avenue was covered with a filter fabric which appeared to be blinded by soil from the roadway. It did not appear that the stormwater inlet could collect a significant amount of stormwater runoff. Instead, it appears that runoff would bypass the inlet and flow onto Lincoln St. As discussed, since the inlet is connected to the eastern sedimentation basin, it is recommended that the fabric be removed from the inlet to increase its effectiveness at collecting stormwater. Any sediment that enters the stormwater sewer system will be removed in the eastern sediment basin.

10. Silt fence should be immediately extended adjacent and parallel to the sides of the both construction entrances off of Lincoln Avenue. This is true for any/all construction entrances. In addition, the construction entrances should be immediately redressed with gravel to prevent the runoff of sediment. A significant amount of soil was embedded in the gravel at both Lincoln St. entrances.

11. The perimeter silt fence was in need of maintenance or replacement at many location of the construction site. It appeared that some locations had been compromised for an unacceptable period of time. All storm water BMPs, including silt fencing, are to be inspected at least every seven days or within 24-hrs of a storm event of at least 0.5 inches. In general, the silt fences must be immediately inspected and repaired. Edwards Communities Construction Company must adhere to the required inspection frequency and inspect the perimeter fencing at a minimum of every seven days. Edwards Communities Construction Company was able to provide reports indicating the inspections were occurring at the required frequency; however, corrective action does not appear to be occurring within the required timeframes. Please note that the NPDES permit requires Edwards Communities Construction Company to complete most maintenance tasks within three days of inspection.

12. A fuel storage tank was located on the north end of the construction site. The tank was positioned adjacent to a stormwater catch basin. The plug for the secondary containment around the storage tank was not secured in the drain hole. The failure to properly plug the drain compromises the intent of secondary containment. The drain plug must be immediately replaced into the drain hole, and it must be maintained in place at all times.

13. Containment walls had been constructed at various locations throughout the construction site. As discussed, the sloped areas at the top of each wall should immediately be properly prepared with top soil, and the areas should be seeded and mulched in accordance with the SWP3.

14. It was understood that the Morris Road entrance has been permanently closed. You indicated the debris on the road way will be swept and silt fence will be established along the entrance to stop the runoff of sediment to Morris Road. The entrance should be barricaded to prevent its use.

15. During the inspection, we discussed the area along Eagles Landing. We pointed out that the area needed to be addressed by immediately removing all residual sand from the construction of the retaining wall and to stabilize the area with stone mulch.

16. Fresh concrete was identified on the ground on the northeast side of the site. The concrete was removed for disposal during the time we were on-site; however, you had indicated that the site did not have a pit for the washout of concrete trucks. As we discussed, a washout pit must immediately be re-established as shown on the SWP3, and the pit must be routinely used.

17. The perimeter area on the southwest side of the eastern portion of the property had serious erosion problems. It appeared that only silt fencing was being used to

control sediment runoff; however, the silt fencing was inundated with sediment at various locations. The erosion was causing sediment to flow onto the sidewalk and Lincoln St. at locations of concentrated flow. Based on the amount of erosion identified during the inspection, silt fencing is not appropriate for this location because of the slope, and because of the apparent rate of stormwater runoff.

The SWP3 must be modified to identify a BMP capable of controlling sediment runoff from this area of the site. As we discussed, steps may need to be taken to divert runoff away from the steep bank along Lincoln St. We discussed the installation of a berm or a diversion ditch to re-direct storm water to the sediment pond.

In the interim, the embankments along Lincoln Street must be immediately stabilized to prevent the runoff of sediment. When permanently stabilizing these slopes, temporary erosion control or turf reinforced mating may be necessary to achieve final stabilization. The selected BMP must be capable of fulfilling the post-construction requirements to reduce pollutant runoff from the site and to prevent downstream erosive effects on area streams.

18. During the inspection, trash was apparent throughout the site. You indicated that trash is collected each night; however, trash must be controlled at all times to prevent it from leaving the site. Contractors at the site must be aware that the control of trash is a continuous effort in order to prevent migration from the site. Good housekeeping to control trash must be continuously practiced.

You may contact this writer at (330) 963-1251 or at john.kwolek@epa.state.oh.us to discuss any questions you may have. Be advised that any modifications of the SWP3 must be approved by Jennifer Barone at the city of Kent.

Respectfully,

John Kwolek
District Engineer
Division of Surface Water

JK/cs

cc. Jenifer Barone, P.E., Development Engineer