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**APPENDIX A**  
**Stormwater Discharge Permit Application and Preliminary Stormwater Design Report**

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June 1, 2010

Mr. Jeff Martin  
Florida Department of Environmental Protection  
Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, FL 32256

**VIA FEDEX**

Subject: Individual Industrial NPDES Stormwater Discharge Permit Application and  
Preliminary Stormwater Design Report  
Beazer Property at 200 NW 23<sup>rd</sup> Avenue, Gainesville

Dear Mr. Martin:

On behalf of Beazer East, Inc. (Beazer), we are transmitting to you the enclosed application for a stormwater discharge permit and the associated report describing the preliminary design of stormwater controls on Site.

Note that these stormwater controls are designed as an interim measure until the Site-wide environmental remedy is implemented under the CERCLA (Superfund) process. Implementation of the Site-wide remedy will include stormwater controls consistent with the expected future use of the property.

Sincerely,



Gregory W. Council, P.E.  
Principal Engineer

cc: Mitchell Brouman, Beazer  
Scott Miller, USEPA



# WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

This form must be completed by all persons applying for a permit for a wastewater facility or activity under Chapter 62-620, F.A.C. See Form 1 to determine which other application forms you will need.

# DESCRIPTION OF PERMIT APPLICATION FORMS

Form 1 - General information. This booklet includes general information on applying for a permit for a wastewater facility or activity under Chapter 62-620, Florida Administrative Code (F.A.C.). **Form 1 is required for all permit applications.**

Form 2 - Specific information. This group of forms includes the specific information required for the type of wastewater facility or activity for which a permit is needed. Select the appropriate form(s) to be submitted with Form 1.

- Form 2A - Domestic Wastewater Facilities.
- Form 2B - Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities.
- Form 2CS -Industrial Wastewater Facilities (discharging process wastewater to surface waters).
- Form 2CG -Industrial Wastewater Facilities (discharging process wastewater to ground water).
- Form 2ES -Industrial Wastewater Facilities (discharging non-process wastewater to surface waters).
- Form 2EG -Industrial Facilities (discharging non-process wastewater to ground water).
- Form 2F - Stormwater Discharge Associated with Industrial Activity
- Form 2CR -Non-Discharging/Closed Loop Recycle System.

## SECTION A - GENERAL INSTRUCTIONS

### Who Must Apply:

Persons who are or are going to discharge wastewater to waters of Florida or the United States must file for and be granted a permit under Sections 403.087, 403.088, or 403.0885, Florida Statutes (F.S.). Persons that discharge stormwater associated with industrial activity to surface waters of the state must file for and be granted a permit under Section 403.0885, F.S. There are severe penalties for discharging without a permit.

There are some exceptions to this requirement. Discharges of domestic sewage from vessels and discharges from properly operating marine engines are not required to have a permit under the laws listed above. However, discharges of rubbish, trash, garbage or other such materials discharged overboard do require permits. Vessels operated in a capacity other than as a means of transportation are required to have a permit if they are discharging to waters. These types include vessels used as an energy or mining facility, a storage facility, a seafood processing facility, or an anchored facility for the purpose of mineral or oil exploration or development.

The introduction of sewage, industrial wastes, or other pollutants into a domestic wastewater treatment facility does not need a permit under Sections 403.087, 403.088 or 403.0885, F.S. Persons discharging to permitted wastewater treatment facilities must comply with all applicable pretreatment standards. If a person has a plan or an agreement to switch from direct discharge into waters of the state to discharge to a domestic treatment facility, it does not relieve the person from obtaining a permit for the discharge until such time as the connection is made and the discharge is stopped.

Most discharges from agricultural and silvicultural activities to waters of the state do not require a permit under Sections 403.087, 403.088, or 403.0885, F.S. However, permits under those sections are required for discharges from concentrated animal feeding operations, concentrated aquatic animal production facilities, activities associated with approved aquaculture projects, and silvicultural point sources.

### Where to Apply:

Permit applications must be filed with the Department of Environmental Protection (DEP) district office shown in Figure 1 for the county in which the wastewater facility or activity is located, except for permit applications for steam electrical generating power plants which are filed with the DEP office in Tallahassee. DEP offices are located at

**Figure 1. State Map Showing DEP District Offices**



**NORTHWEST DISTRICT**

160 Government Center, Ste 308  
Pensacola, Florida 32501-5794  
Phone No. (850) 585-8300

**NORTHEAST DISTRICT**

7825 Baymeadows Way, Suite B-200  
Jacksonville, Florida 32256-7577  
Phone No. (904) 448-4300

**SOUTHWEST DISTRICT**

3804 Coconut Palm Drive  
Tampa, Florida 33619-8318  
Phone No. (813) 744-6100

**CENTRAL DISTRICT**

3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767  
Phone No. (407) 894-7555

**SOUTH DISTRICT**

2295 Victoria Avenue, Suite 364  
Fort Myers, Florida 33901  
Phone No. (239) 332-6975

**SOUTHEAST DISTRICT**

400 North Congress Avenue  
West Palm Beach, Florida 33401  
Phone No. (561) 681-6600

**When to Apply:**

Applications must be filed with the appropriate DEP office 180 days before your current permit expires or 180 days before startup of a new or modified facility. If the submitted application is for a new facility or for a modification of an existing facility, the information required for describing the construction must be filed at least 90 days before construction begins. The DEP encourages applicants to file the materials describing the construction of a new facility or the modification of an existing facility as early as possible to avoid problems with delays in startup or facility redesign to achieve effluent limitations.

Federal regulations provide that a new source in the NPDES program may not be constructed or started to be constructed before the issuance of an operation permit. Because of this regulation, a permit application for a new source may need to be submitted well in advance of the required 180 days.

**Fees:**

Application fees are listed in Section 62-4.050, Florida Administrative Code (F.A.C.). An application will not be processed until the application fee has been paid. If the DEP determines that a permit should be issued for less than five years duration, the application fee will be pro rated.

If a permit is issued for a surface water discharge, the permittee will be assessed a regulatory and surveillance program fee annually. Those fees are listed in Section 62-4.052, F.A.C. Failure to pay the annual fee may result in revocation of the permit.

**Availability of Information to the Public:**

Information contained in these applications forms will, upon request, be made available to the public for inspection and copying. However, you may request confidential treatment for certain information which you may submit to supplement the information requested on these forms. Section 62-620.302, F.A.C., and 40 CFR 2 provide set forth the procedures for making the claim. No information on Forms 1 and 2A through 2EG may be claimed as confidential.

**Completion of Forms:**

Unless otherwise specified in instructions to the forms, each item in each form must be answered. To indicate that each item has been considered, enter "NA", for not applicable, if a particular item does not fit the circumstances or characteristics of your facility or activity.

If you have previously submitted information to the DEP which answers a question, you may either repeat the information in the space provided or attach a copy of the previous submission. DO NOT WRITE "ON FILE". Some items in the form require narrative explanation. If more space is necessary to answer a question, attach a separate sheet entitled "Additional Information."

## SECTION B - FORM 1 LINE-BY-LINE INSTRUCTIONS

**This form must be completed by all applicants.**

### **Completing This Form:**

Please type or print in the underlined areas only. Some items have a limited number of spaces or characters so that your response may be entered into a computer program. Please do not exceed this maximum number with your response. Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response.

### **Item I**

Space is provided at the upper right hand corner of Form 1 for insertion of your Facility Identification Number. If you have an existing facility, enter your identification number. If you don't know your identification number, please contact the appropriate DEP office which will provide you with your number. If your facility is new (not yet constructed), leave this item blank.

### **Item II**

Answer each question to determine which supplementary forms you need to fill out. Be sure to check the glossary in Section C of these instructions for the legal definitions of any words you are not certain of their meaning.

If you answer "no" to every question, then you may not need a permit. However, you should call the appropriate district office to determine if you have made a correct determination. If you answer "yes" to any question, then you must complete and file the supplementary form by the deadline listed in Section A along with this form.

### **Item III**

Enter the facility's official or legal name. Do not use a colloquial name.

### **Item IV**

Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility, with the facts reported in this application, and who can be contacted by reviewing offices if necessary.

### **Item V**

Give the complete mailing address of the office where correspondence should be sent. This often is not the address used to designate the location of the facility or activity.

### **Item VI**

Give the address or location of the facility identified in Item III of this form. If the facility lacks a street name or route number, give the most accurate alternative geographic information (for example, section number or quarter section number from county records or at intersection of Rts 426 and 22).

**Item VII**

List four, in descending order of significance, 4-digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge from the facility.

SIC code numbers are descriptions which may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D.C. Your local library may have a copy of this publication which you may use. Use the current edition of the manual. If you have any questions concerning the appropriate SIC code for your facility, please contact the appropriate DEP district office.

**Item VIII-A**

Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity which operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. Do not use a colloquial name.

**Item VIII-B**

Indicate whether the entity which operates the facility also owns it by marking the appropriate box.

**Item VIII-C**

Enter the appropriate letter to indicate the legal status of the operator of the facility. Indicate "public" for a facility solely owned by a local government, such as a city, town, county, etc.

**Items VIII-D through H**

Enter the telephone number and address of the operator identified in Item VIII-A.

**Item IX**

Indicate whether the facility is located on Indian Lands.

**Item X**

Give the number of each presently effective wastewater and stormwater permit issued to the facility listed in this application. List relevant federal, state, and local permits. **DO NOT LIST ALL YOUR PERMITS. LIST ONLY CURRENT ENVIRONMENTAL PERMITS RELATING TO THIS PROJECT.**

**Item XI**

Provide a topographic map or maps of the area extending at least to one mile beyond the property boundaries of the facility which clearly show the following:

- The legal boundaries of the facility;

- The location and serial number of each of your existing and proposed intake and discharge structures;
- All hazardous waste management facilities;
- Each well where you inject fluids underground; and
- All springs and surface water bodies in the area, plus all drinking water wells within 1/4 mile of the facility which are identified in the public record or otherwise known to you.

If an intake or discharge structure, hazardous waste disposal site, or injection well associated with the facility is located more than one mile from the plant, include it on the map, if possible. If not, attach additional sheets describing the location of the structure, disposal site, or well, and identify the U.S. Geological Survey (or other) map corresponding to the location.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude at the nearest whole second. On all maps of rivers, show the direction of the current, and in tidal waters, show the directions of the ebb and flow tides. Use a 7-1/2 minute series map published by the U.S. Geological Survey. If a 7-1/2 minute series map has not been published for your facility site, then you may use a 15 minute series map from the U.S. Geological Survey. If neither a 7-1/2 nor 15 minute series map has been published for your facility site, use a plat map or other appropriate map, including all the requested information; in this case, briefly describe land uses in the map area (for example, residential, commercial).

You may trace your map from a geological survey chart, or other map meeting the above specifications. If you do, your map should bear a note showing the number or title of the map or chart from which it was traced. Include the names of nearby towns, water bodies, and other prominent points.

You may obtain a topographic map from:

Eastern Mapping Center  
National Cartographic Information Center  
U.S. Geological Survey  
536 National Center  
Reston, VA 22092

## **Item XII**

Briefly describe the nature of your business (for example, products produced or services provided).

## **Item XIII**

Section 403.161, F.S., provides severe penalties for submitting false information on this application form or any reports or records required by a permit, if issued. There are both civil and criminal penalties, in addition to the revocation of the permit.

Rule 62-620.305, F.A.C., requires that the application and any reports required by the permit, if issued, to be signed as follows:

- A. For a corporation, by a responsible corporate officer as described in Rule 62-620.305, F.A.C.;
- B. For partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- C. For a municipality, state, federal or other public facility, by a principal executive officer or elected official.

## SECTION C - GLOSSARY

NOTE: This Glossary includes terms used in the instructions and in Forms 1, 2A through 2EG. If you have any questions concerning the meaning of any of these terms, please contact your DEP district office.

**Activity** means any action which results in a discharge of wastes into waters of the State or that is reasonably expected to be a source of water pollution.

**Aliquot** means a sample of specified volume used to make up a total composite sample.

**Animal Feeding Operation** means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

A. Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; and

B. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other or if they use a common area or system for the disposal of wastes.

**Animal Unit** means a unit of measurement for any animal feeding operation calculated by adding the following number: The number of slaughter and feeder cattle multiplied by 1.0; plus the number of mature dairy cattle multiplied by 1.4; plus the number of swine weighing over 25 kilograms (approximately 55 pounds) multiplied by 0.4; plus the number of sheep multiplied by 0.1; plus the number of horses multiplied by 2.0.

**Application** means the approved DEP standard forms for applying for a permit, including any approved additions, revisions, or modifications to the forms. Approved forms are numbered, Form 62-620.910, and have an effective date of October 1, 1994, or later.

**Aquifer** means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

**Best Management Practices (BMP)** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs include treatment requirements, operation procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Biological Monitoring Test** means any test which include the use of aquatic algal, invertebrate, or vertebrate species to measure acute or chronic toxicity, and any biological or chemical measure of bioaccumulation.

**Bypass** means the intentional diversion of wastes from any portion of a treatment facility.

**Concentrated Animal Feeding Operation** means an animal feeding operation which meets the criteria set forth in Chapter 62-670, F.A.C.

**Concentrated Aquatic Animal Production Facility** means a hatchery, fish farm, or other facility which contains, grows or hold aquatic animals as set forth in Chapter 62-660, F.A.C.

**Contact Cooling Water** means water used to reduce temperature which comes into contact with a raw material, intermediate product, waste product other than heat, or finished product.

**CWA** means the Clean Water Act as amended, 33 U.S.C. 1251 et seq.

**Dike** means any embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.

**Discharge (of a Pollutant)** means any addition of any pollutant or combination of pollutants to waters of the State from any point source; or any addition of any pollutant or combination of pollutants to the marine waters of the State from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes discharges into waters of the State from surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by the State, a municipality, or other person which do not lead to POTWs; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any indirect discharge.

**Effluent Limitation** mean any restriction imposed by the DEP on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the State.

**Effluent Limitation Guideline** means a regulation published under Section 304(b) of the Clean Water Act to adopt or revise effluent limitations.

**EPA** means the United States Environmental Protection Agency.

**Existing Source or Existing Discharger** means any source which is not a new source or a new discharger.

**Facility** or wastewater facility means any facility which can reasonably be expected to be a source of pollution and includes any or all of the following: a collection and transmission system, a wastewater treatment works, a reuse or disposal system, and a residuals management facility.

**Ground Water** means water below the land surface in a zone of saturation.

**Indirect Discharger** means an industrial discharger introducing pollutants to a publicly owned treatment works.

**Injection Well** mean a well into which fluids are injected.

**MGD** means millions of gallons per day.

**Municipality** means a city, village, town, borough, county, district, association, or other public body created by or under State law and have jurisdiction over disposal of sewage, industrial wastes, or other wastes.

**National Pollutant Discharge Elimination System (NPDES)** means the national program for issuing, modifying, revoking and reissuing, termination, monitoring and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA. The term includes a State program which has been authorized by EPA under 40 CFR Part 123.

**New Discharger** mean any building, structure, facility, or installation: (A) from which there is or may be a new or additional discharge of pollutants at a site at which on October 18, 1972, it had never discharged pollutants; (B) which has never received a finally effective NPDES permit for discharges at that site; and (C) which is not a "new source." This definition includes an indirect discharger which commences discharging into water of the State. It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing vessel, or aggregate plant that begins discharging at a location for which it does not have an existing permit.

**New Source** means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced: (A) after promulgation of standards of performance under Section 306 of the CWA which are applicable to such source; or (B) after proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

**Non-Contact Cooling Water** means water used to reduce temperature which does not come into direct contact with any raw material, intermediate produce, waste product (other than heat), or finished product.

**Off-Site** means any site which is not "on-site."

**On-Site** means on the same or geographically contiguous property which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right(s)-of-way. Non-contiguous properties owned by the same person, but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property.

**Operator** means the person responsible for the overall operation of a facility.

**Outfall** means a point source.

**Owner** means the person who owns a facility or part of a facility.

**Permit** means an authorization, license, or equivalent control document issued by the State to implement the requirements of 40 CFR 122, 123, and 124 and Chapter 403, F.S.

**Point Source** means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

**Pollutant** means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended), heat, wrecked or discarded equipment, rocks, sand, cellar dirt and industrial, municipal, and agriculture waste discharged into water. It does NOT mean: (A) sewage from vessels; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

**Privately Owned Treatment Works** means any device or system which is used to treat domestic wastewater from any facility which is not a POTW.

**Process Wastewater** means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

**Publicly Owned Treatment Works (POTW)** means any device or system used in the treatment (including recycling and reclamation) of domestic sewage or industrial wastes of a liquid nature which is owned by a State or municipality. This definition includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

**Residuals** means the solid, semisolid, or liquid residue generated during the treatment of domestic wastewater. Not included are solids removed from pump stations and lift stations, and screenings and grit removed from the headworks of domestic wastewater treatment facilities. Also not included are other solids removed prior to treatment of the residuals to meet the stabilization standards of Chapter 62-640, F.A.C., or ash generated during the incineration of residuals.

**Sewage From Vessels** means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under Section 312 of the CWA.

**Sewage Sludge** means residuals.

**Silvicultural Point Source** means any discernable, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into water of the State.

**Stormwater Discharge Associated with Industrial Activity** is as defined in 40 CFR 122.26(b)(14).

**Surface Impoundment or Impoundment** means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

**Toxic Pollutant** means any pollutant listed as toxic under Section 307(a)(1) of the CWA.

**Upset** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

**Waters of the State** means the waters defined in Section 403.031, F.S., and including waters of the United States to the seaward boundaries of the State.



# WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

**I - IDENTIFICATION NUMBER:**

Facility ID FLR05B160

**II - CHARACTERISTICS:**

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?		X	
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?		X	
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?		X	
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?	X		Form 2F
H. Is this facility a non-discharging/closed loop recycle system?		X	
I. Is this facility a public water system whose primary purpose is the production of potable water for public consumption and which discharges demineralization concentrate to surface water or groundwater?		X	

**III - NAME OF FACILITY:** (80 characters and spaces)

Beazer East, Inc. - Gainesville, FL
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**IV - FACILITY CONTACT:** (A. 30 characters and spaces)

A. Name and Title (Last, first, & title)	B. Phone (area code & no.)
Mitchell Brouman	(412) 208-8805

**V - FACILITY MAILING ADDRESS:** (A. 30 characters and spaces; B. 25 characters and spaces)

A. Street or P.O. Box: 200 NW 23 <sup>rd</sup> Avenue		
B. City or Town: Gainesville	State: FL	Zip Code: 32609

**VI - FACILITY LOCATION:** (A. 30 characters and spaces; B. 24 characters and spaces; C. 3 spaces (if known); D. 25 characters and spaces; E. 2 spaces; F. 9 spaces)

A. Street, Route or Other Specific Identifier: 200 NW 23rd Avenue		
B. County Name: Alachua	C. County Code (if known):	
D. City or Town: Gainesville	E. State: FL	F. Zip Code: 32609

**VII - SIC CODES:** (4-digit, in order of priority)

1. Code #: 2491	(Specify) Wood Preservi	2. Code #:	(Specify)
3. Code #:	(Specify)	4. Code #:	(Specify)

**VIII - OPERATOR INFORMATION:** (A. 40 characters and spaces; B. 1 character; C. 1 character (if other, specify); D. 12 characters; E. 30 characters and spaces; F. 25 characters and spaces; G. 2 characters; H. 9 characters)

A. Name: Beazer East, Inc. ,Gainesville		B. Is the name in VIII A. the owner?	
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
C. Status of Operator: F = Federal; S = State; P = Private; O = Other; M = Public (other than F or S)	(code) P	(specify) Developer	D. Phone No.: (412) 208-8805
E. Street or P. O. Box: One Oxford Center, suite 3000			
F. City or Town: Pittsburgh		G. State: Pa	H. Zip Code: 15219

**IX - INDIAN LAND:**

A. Is the facility located on Indian lands?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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**X - EXISTING ENVIRONMENTAL PERMITS:**

A. NPDES Permit No.	B. UIC Permit No.	C. Other (specify)	D. Other (specify)
MSGP		0003-003-AD	

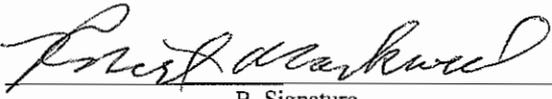
**XI - MAP:** Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

**XII - NATURE OF BUSINESS** (provide a brief description)

Inactive Industry. The industrial permit is to cover the transition period from a former timber treatment facility to implementation of a site-wide environmental remedy under the CERCLA (Superfund) process, which will include site-wide stormwater management controls consistent with site re-use.

**XIII - CERTIFICATION** (see instructions)

*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

<p>Robert Markwell  <hr/> A. Name (type or print)</p>	 <hr/> B. Signature
<p>Vice President  <hr/> Official Title (type or print)</p>	<p>06/01/10  <hr/> C. Date Signed</p>



# APPLICATION FORM 2F

PERMIT TO DISCHARGE STORMWATER ASSOCIATED WITH  
INDUSTRIAL ACTIVITY

## INSTRUCTIONS FOR FORM 2F

### Who Must File Form 2F

DEP Form 62-620.910(8) (Form 2F) must be completed by owners or operators of facilities or activities that have stormwater discharge associated with industrial activity to surface waters of the state and for which such discharge is not otherwise covered by a State of Florida generic permit.

In addition to Form 2F,

- a. owners or operators that have stormwater discharge associated with industrial activity at a facility which discharges process wastewater to surface water must complete and submit DEP Forms 62-620.910(1) and (5) (Forms 1 and 2CS). (See Rule 62-620.200, F.A.C., for a definition of process wastewater.)
- b. owners or operators that have stormwater discharge associated with industrial activity at a facility which discharges process wastewater to ground water must complete and submit DEP Forms 62-620.910(1) and (4) (Forms 1 and 2CG).
- c. owners or operators that have stormwater discharge associated with industrial activity at a facility which discharges non-process wastewater to surface water must complete and submit DEP Forms 62-620.910(1) and (7) (Forms 1 and 2ES). (See Rule 62-620.200, F.A.C., for a definition of non-process wastewater.)
- d. owners or operators that have stormwater discharge associated with industrial activity at a facility which discharges non-process wastewater to ground water must complete and submit DEP Forms 62-620.910(1) and (6) (Forms 1 and 2EG).
- e. owners or operators that have stormwater discharge associated with industrial activity from a domestic wastewater facility must complete and submit DEP Forms 62-620.910(1) and (2) (Forms 1 and 2A). (See Rule 62-620.200, F.A.C., for a definition of domestic wastewater facility.)

### Where to File Applications

The application forms should be sent to the appropriate Department office listed in Form 1.

### Completeness

Your application will not be considered complete unless you answer every question on this form and the other forms listed above. If an item does not apply to you, enter "NA" (for not applicable) to show that you considered the question.

### Public Availability of Submitted Information

You may not claim as confidential any information required by this form or the other required forms, whether the information is reported on the forms or in an attachment. Chapter 119, F.S., requires that all permit applications be made available to the public upon request. Any information, except effluent data, you submit to the Department which goes beyond that required by the forms listed above may be claimed as confidential if the requirements of 40 CFR 2 are met. If you do not assert a claim of confidentiality at the time of submitting the information, the Department may make the information public without further notice to you.

### Definitions

"Stormwater discharge associated with industrial activity" is as defined in 40 CFR 122.26(b)(14).

"Material handling activities" means the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate

from the industrial activities as long as the drainage from the excluded areas is not mixed with stormwater drained from the described areas.

"Significant materials" means raw materials, fuels, solvents, detergents, plastic pellets, finished materials, metallic products, raw materials used in food processing or production, hazardous substances designated under section 101(14) of CERCLA, any chemical the facility is required to report pursuant to section 313 of title III of SARA, fertilizers, pesticides, waste products, ashes, slag and sludge that have the potential to be released with stormwater discharges.

Additional significant terms used in these instructions and in the form are defined in the glossary found in Form 1 or in Chapters 62-600, 62-620, or 62-660, F.A.C.

### **ID Number**

Fill in your identification number at the top of each odd-numbered page of Form 2F. You may copy this number directly from Form 1. If you are applying for the initial permit for your facility or activity and do not have an identification number, leave this item blank and the Department will assign a number.

### **Item I**

Determine the latitude and longitude of each of your outfalls and the name of the receiving water. If your stormwater is combined with domestic, process or non-process industrial wastewater, indicate which of the outfalls identified on Form 2A, 2CS or 2ES will contain the combined wastewater.

### **Item II-A**

If the answer to this question is yes, complete all parts of the chart, or attach a copy of any previous submission you have made to the Department containing the same information.

### **Item II-B**

You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

### **Item III**

Attach a site map showing topography depicting the facility including:

each of its drainage and discharge structures;

the drainage area of each stormwater outfall;

paved areas and buildings within the drainage area of each stormwater outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in stormwater runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied;

each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste for less than 90 days);

each well where fluids from the facility are injected underground; and

springs, and other surface water bodies which receive stormwater discharges from the facility.

### **Item IV-A**

For each outfall, provide an estimate of the area drained by the outfall which is covered by impervious surfaces. For the purpose of this application, impervious surfaces are surfaces where stormwater runs off at rates that are significantly higher than background rates (for example, pre-development levels) and include paved areas, building roofs, parking lots, and roadways. Include an estimate of the total area, including all impervious and pervious areas, drained by each outfall. The site map required under Item III can be used to estimate the total area drained by each outfall.

#### **Item IV-B**

Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored, or disposed in a manner to allow exposure to stormwater; method of treatment, storage or disposal of these materials; past and present materials management practices employed, in the last three years, to minimize contact by these materials with stormwater runoff; materials loading and access areas and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied. Significant materials should be identified by chemical name, form (powder, liquid, etc.), and type of container or treatment unit. Indicate any materials treated, stored, or disposed of together.

#### **Item IV-C**

For each outfall, structural controls include structures which enclose material handling or storage areas covering materials, berms, dikes, or diversion ditches around manufacturing, production, storage or treatment units, retention ponds, etc. Non-structural controls include practices such as spill prevention plans, employee training, visual inspections, preventive maintenance, and housekeeping measure that are used to prevent or minimize the potential for releases of pollutants.

#### **Item V**

Provide a certification that all outfalls that should contain stormwater discharge associated with industrial activity have been tested or evaluated for the presence of non-stormwater discharges which are not covered by an wastewater permit under Rule 62-620, F.A.C. Tests for such non-stormwater discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. Part B must include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during a test. All non-stormwater discharges must be identified in the appropriate form from the "Form 2" series which must accompany this application.

#### **Item VI**

Provide a description of existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years.

#### **Item VII-A, B, and C**

These items require you to collect and report data on the pollutants discharged for each of your outfalls. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

##### **General Instructions for Item VII-A, B, and C**

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C requires you to report analytical data in two ways. For some pollutants addressed in Parts B and C, if you know or have reason to know that the pollutant is present in your discharge, you may be required to list the pollutant and test (sample and analyze) and report the levels of the pollutants in your discharge. For all other pollutants addressed in Parts B and C, you must list the pollutant if you know or have reason to know that the pollutant is present in the discharge, and either report quantitative data for the pollutant or briefly describe the reasons the pollutant is expected to be discharged. (See specific instructions on the form and below for Parts A through C.) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your

raw materials, material management practices, maintenance chemicals, history of spills and releases, intermediate and final products and by-products, and any previous analyses known to you of your effluent or similar effluent.

**A. Sampling:** The collection of the samples for the reported analyses shall be in accordance with 40 CFR 136 and Rule 62-160, F.A.C. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative, to the extent feasible, of your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples taken during the first 30 minutes, or as soon thereafter as practicable, of the discharge must be used. For all other pollutants both a grab sample collected during the first 30 minutes, or as soon thereafter as practicable, of the discharge and a flow-weighted composite sample must be analyzed. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period of greater than 24 hours.

All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area.

A grab sample shall be taken during the first 30 minutes, or as soon thereafter as practicable, and a flow-weighted composite shall be taken for the entire event or for the first three hours of the event.

Grab and composite samples are defined as follows:

**Grab sample:** An individual sample of at least 100 milliliters collected during the first 30 minutes, or as soon thereafter as practicable, of the discharge. This sample is to be analyzed separately from the composite sample.

**Flow-Weighted Composite sample:** A flow-weighted composite sample may be taken with a continuous sampler that proportions the amount of sample collected with the flow rate or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire event or for the first three hours of the event, with each aliquot being at least 100 milliliters and collected with a minimum period of 15 minutes between aliquot collections. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. Where GC/MS Volatile Organic Analysis (VOA) is required, aliquots must be combined in the laboratory immediately before analysis. Only one analysis for the composite sample is required.

Data from samples taken in the past may be used, provided that all data requirements are met; sampling was done no more than three years before submission; and all data are representative of the present discharge.

Among the factors which would cause the data to be unrepresentative are significant changes in production level, changes in raw materials, processes, or final products, and changes in stormwater treatment. The Department may request additional information, including current quantitative data, if it is necessary to assess your discharges. The Department may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which the sampling takes place, the minimum duration between the previous measurable storm event and the storm event sampled, the minimum or maximum level of precipitation required for an appropriate storm event, the protocols for collecting samples under 40 CFR 136 or Rule 62-160, F.A.C., and additional time for submitting data on a case-by-case basis.

**B. Reporting:** All levels must be reported as concentration and mass. Grab samples are reported in terms of concentration. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages VII-1 and VII-2 if separate sheets contain all the required information in a format which is consistent with pages VII-1 and VII-2 in spacing and identification of pollutants and columns. Use the abbreviations listed below in the columns headed "Units."

### Concentration

ppb	parts per billion
ppm	parts per million
mg/L	milligrams per liter
ug/L	micrograms per liter

### Mass

lbs	pounds
ton	tons (English tons)
mg	milligrams
g	grams
kg	kilograms
T	tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless

- (1) An applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or
- (2) All approved analytical methods for the metal inherently measure only its dissolved form; or
- (3) The Department has determined that in establishing case-by-case limitations it is necessary to express the limitations on the metal in dissolved, valent, or total form to carry out the provision of the CWA. If you measure only one grab sample and one flow-weighted composite sample for a given outfall, complete only the "Maximum Values" columns and insert "1" into "Number of Storm Events Sampled" column. The Department may require you to conduct additional analyses to further characterize your discharges.

If you measure more than one value for a grab sample or a flow-weighted composite sample for a given outfall and those values are representative of your discharge, you must report them. You must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration and mass under the "Average Values" columns, and the total number of storm events samples under the "Number of Storm Events Sampled" columns.

**C. Analysis:** You must use test methods promulgated in 40 CFR 136 or Rule 62-160, F.A.C.; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of pollutant in your discharge provided that you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical outfalls, you may request permission to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the Department, on a separate sheet attached to the application form, identify which outfall you did test, and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

### Part VII-A

Part VII-A must be completed by all applicants for all outfalls who must complete Form 2F.

Analyze a grab sample collected during the first 30 minutes, or as soon thereafter as practicable, of the discharge and flow-weighted composite samples for all pollutants in this Part, and report the results except use only grab samples for pH and oil and grease. See discussion in General instructions to Item VII for definitions of grab sample collected during the first 30 minutes of discharge and flow-weighted composite sample. The "Average Values" column is not compulsory but should be filled out if data are available.

## Part VII-B

List all pollutants that are limited in an effluent guideline which the facility is subject to or any pollutant listed in the wastewater permit for the facility if the facility is operating under an existing wastewater permit. Complete one table for each outfall. The "Average Values" column is not compulsory but should be filled out if data are available. Analyze a grab sample for all pollutants in this Part, and report the results, except as provided in the General Instructions.

## Part VII-C

Part VII-C must be completed by all applicants for all outfalls which discharge stormwater associated with industrial activity. Use both a grab sample and a composite sample for all pollutants you analyze for in this part except use grab samples for residual chlorine and fecal coliform. The "Average Values" column is not compulsory but should be filled out if data are available. Part C requires you to address the pollutants in Table 2F-2, 2F-3, and 2F-4 for each outfall. Pollutants in each of these Tables are addressed differently.

**Table 2F-2:** For each outfall, list all pollutants in Table 2F-2 that you know or have reason to believe are discharged, except pollutants previously listed in Part VII-B. If a pollutant is limited in an effluent guideline limitation for the facility, the pollutant must be analyzed and reported in Part VII-B. If a pollutant in Table 2F-2 is indirectly limited by an effluent guideline limitation through an indicator (e.g., TSS used as an indicator to control the discharge of iron and aluminum), you must analyze for it and report the data in Part VII-B. For other pollutants listed in Table 2F-2, those not limited directly or indirectly by an effluent limitation guideline, that you know or have reason to believe are discharged, you must either report quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

**Table 2F-3:** For each outfall, list all pollutants in Table 2F-3 that you know or have reason to believe are discharged. For every pollutant in Table 2F-3 expected to be discharged in concentrations of 10 ppb or greater, you must submit quantitative data. For acrolein; acrylonitrile; 2,4 dinitrophenol; and 2-methyl-4, 6 dinitrophenol, you must submit quantitative data if any of these four pollutants is expected to be discharged in concentrations 100 ppb or greater. For every pollutant expected to be discharged in concentrations less than 10 ppb (or 100 ppb for the four pollutants listed above), then you must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

**Table 2F-4:** For each outfall, list any pollutant in Table 2F-4 that you know or believe to be present in the discharge and explain why you believe it to be present. No analysis is required, but if you have analytical data, you must report them. Certain discharges of hazardous substances may be exempted from the requirements of section 311 of the CWA which establishes reporting requirements. Please contact the Department for further information.

## Part VII-D

If sampling is conducted during more than one storm event, you only need to report the information requested in Part VII-D for the storm event(s) which resulted in any maximum pollutant concentration report in Part VII-A, VII-B, or VII-C.

Provide flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, the method of flow measurement, or estimation. Provide the data and duration of the storm event(s) sampled, rainfall measurement, or estimates of the storm event which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event.

## Part VII-E

List any toxic pollutant listed in Tables 2F-2, 2F-3, or 2F-4 which you currently use or manufacture as an intermediate or final product or by-product. In addition, if you know or have reason to believe that 2,3,7,8 tetrachlorodibenzo-p-dioxin (TCDD) is discharged, or if you use or manufacture 2,4,5-trichlorophenoxy acetic acid (2,4,5,-T); 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 3,4,5,-TP); 2-(2,4,5-trichlorophenoxy) ethyl, 2,2-dichloropropionate (Erbon); O,O-dimethyl O-(2,4,5-trichlorophenyl) phosphorothic acid (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophene (HCP); then list TCDD. The Department may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each

toxic pollutant and the Department has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

**Item VIII**

Self explanatory. The Department may ask you to provide additional details after your application is received.

**Item X**

Chapter 403, F.S., provides for severe penalties for submitting false information on this application form. Rule 62-620.305, F.A.C., requires the certification in this item to be signed by an appropriate and responsible authority. If the certification is not signed in accordance with this rule, the application will be deemed incomplete and returned.

**TABLE 2F-1  
CODES FOR TREATMENT UNITS**

**Physical Treatment Processes**

1-A Ammonia Stripping	1-N Microstraining
1-B Dialysis	1-O Mixing
1-C Diatomaceous Earth Filtration	1-P Moving Bed Filters
1-D Distillation	1-Q Multimedia Filtration
1-E Electrodialysis	1-R Percolation Pond
1-F Evaporation	1-S Rapid Sand Filtration
1-G Flocculation	1-T Reverse Osmosis (Hyperfiltration)
1-H Flotation	1-U Screening
1-I Foam Fractionation	1-V Sedimentation (Settling)
1-J Freezing	1-W Slow Sand Filtration
1-K Gas-Phase Separation	1-X Solvent Extraction
1-L Grinding (Comminutors)	1-Y Sorption
1-M Grit Removal	

**Chemical Treatment Processes**

2-A Carbon Adsorption	2-G Disinfection (Ozone)
2-B Chemical Oxidation	2-H Disinfection (Other)
2-C Chemical Precipitation	2-I Electrochemical Treatment
2-D Coagulation	2-J Ion Exchange
2-E Dechlorination	2-K Neutralization
2-F Disinfection (Chlorine)	2-L Reduction

**Biological Treatment Processes**

3-A Activated Sludge	3-E Pre-Aeration
3-B Aerated Lagoons	3-F Spray Irrigation/Land Application
3-C Anaerobic Treatment	3-G Stabilization Ponds
3-D Nitrification-Denitrification	3-H Trickling Filtration

**Other Processes**

4-A Discharge to Surface Water	4-C Reuse/Recycle of Treated Effluent
4-B Ocean Discharge Through Outfall	4-D Underground Injection

### Sludge Treatment and Disposal Processes

5-A Aerobic Digestion	5-M Heat Drying
5-B Anaerobic Digestion	5-N Heat Treatment
5-C Belt Filtration	5-O Incineration
5-D Centrifugation	5-P Land Application
5-E Chemical Conditioning	5-Q Landfill
5-F Chlorine Treatment	5-R Pressure Filtration
5-G Composting	5-S Pyrolysis
5-H Drying Beds	5-T Sludge Lagoons
5-I Elutriation	5-U Vacuum Filtration
5-J Flotation Thickening	5-V Vibration
5-K Freezing	5-W Wet Oxidation
5-L Gravity Thickening	

**TABLE 2F-2**

**CONVENTIONAL AND NON-CONVENTIONAL POLLUTANTS REQUIRED TO BE TESTED  
BY EXISTING DISCHARGER IF EXPECTED TO BE PRESENT**

Aluminum, Total	Manganese, Total
Barium, Total	Nitrate-Nitrite
Boron, Total	Nitrogen, Total Organic
Bromide	Oil and Grease
Chlorine, Total Residual	Phosphorus, Total
Cobalt, Total	Radioactivity
Color	Sulfate
Fecal Coliform	Sulfide
Fluoride	Sulfite
Iron, Total	Surfactants
Magnesium, Total	Tin, Total
Molybdenum, Total	Titanium, Total

**TABLE 2F-3  
TOXIC POLLUTANTS REQUIRED TO BE IDENTIFIED BY APPLICANT IF EXPECTED TO BE PRESENT**

**Toxic Pollutants and Total Phenol**

Antimony, Total	Copper, Total	Phenols, Total
Arsenic, Total	Cyanide, Total	Selenium, Total
Beryllium, Total	Lead, Total	Silver, Total
Cadmium, Total	Mercury, Total	Thallium, Total
Chromium, Total	Nickel, Total	Zinc, Total

**GC/MS Fraction Volatiles Compounds**

Acrolein	Chloroform	Methylene Chloride
Acrylonitrile	Dichlorobromomethane	1,1,2,2-Tetrachloroethane
Benzene	1,1-Dichloroethane	Tetrachloroethylene
Bromoform	1,2-Dichloroethane	Toluene
Carbon Tetrachloride	1,1-Dichloroethylene	1,2-Trans,Dichloroethylene
Chlorobenzene	1,2-Dichloropropane	1,1,1-Trichloroethane
Chlorodibromomethane	1,3-Dichloropropylene	1,1,2-Trichloroethane
Chloroethane	Ethylbenzene	Trichloroethylene
2-Chloroethylvinyl Ether	Methyl Bromide	Vinyl Chloride
	Methyl Chloride	

**Acid Compounds**

2-Chlorophenol	2,4-Dinitrophenol	Pentachlorophenol
2,4-Dichlorophenol	2-Nitrophenol	Phenol
2,4-Dimethylphenol	4-Nitrophenol	2,4,6-Trichlorophenol
4,6-Dinitro-O-Cresol	p-Chloro-M-Cresol	

**Base/Neutral**

Acenaphthene	2-Chloronaphthalene	Fluroanthene
Acenaphthylene	4-Chlorophenyl Phenyl Ether	Fluorene
Anthracene	Chrysene	Hexachlorobenzene
Benzidine	Dibenzo(a,h)anthracene	Hexachlorobutadiene
Benzo(a)anthracene	1,2-Dichlorobenzene	Hexachloroethane
Benzo(a)pyrene	1,3-Dichlorobenzene	Indeno(1,2,3-cd)pyrene
3,4-Benzofluoranthene	1,4-Dichlorobenzene	Isophorone
Benzo(ghi)perylene	3,3-Dichlorobenzidine	Napthalene
Benzo(k)fluoranthene	Diethyl Phthalate	Nitrobenzene
Bis(2-chloroethoxy)methane	Dimethyl Phthalate	N-Nitrosodimethylamine
Bis(2-chloroethyl)ether	Di-N-Butyl Phthalate	N-Nitrosodi-N-Propylamine
Bis(2-chloroisopropyl)ether	2,4-Dinitrotoluene	N-Nitrosodiphenylamine
Bis(2-ethylhexyl)phthalate	2,6-Dinitrotoluene	Phenanthrene
4-Bromophenyl Phenyl Ether	Di-N-Octylphthalate	Pyrene
Butylbenzyl Phthalate	1,2-Diphenylhydrazine (as Azobenzene)	1,2,4-Trichlorobenzene

### Pesticides

Aldrin	Dieldrin	PCB-1242
Alpha-BHC	Alpha-Endosulfan	PCB-1254
Beta-BHC	Beta-Endosulfan	PCB-1221
Gamma-BHC	Endosulfan Sulfate	PCB-1232
Delta-BHC	Endrin	PCB-1248
Chlordane	Endrin Aldehyde	PCB-1260
4,4'-DDT	Heptachlor	PCB-1016
4,4'-DDE	Heptachlor Epoxide	Toxaphene
4,4'-DDD		

### TABLE 2F-4 HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY APPLICANT IF EXPECTED TO BE PRESENT

#### Toxic Pollutant

Asbestos

#### Hazardous Substances

Acetaldehyde	Dinitrobenzene	Parathion
Allyl alcohol	Diquat	Phenolsulfonate
Allyl chloride	Disulfoton	Phosgene
Amyl acetate	Diuron	Progargite
Aniline	Epichlorohydrin	Propylene oxide
Benzonitrile	Ethion	Pyrethrins
Benzyl chloride	Ethylene diamine	Quinoline
Butyl acetate	Ethylene dibromide	Resorcinol
Butylamine	Formaldehyde	Stronthium
Carbaryl	Furfural	Strychnine
Carbofuran	Guthion	Styrene
Carbon disulfide	Isoprene	2,4,5-T (2,4,5-
Chlorpyrifos	Isopropanolamine	Trichlorophenoxyacetic acid)
Coumaphos	Kelthane	TDE (Tetrachlorodiphenyl ethane)
Cresol	Kepone	2,4,5-TP (2-(2,4,5-
Crotonaldehyde	Malathion	Trichlorophenoxy)propanoic
Cyclohexane	Mercaptodimethur	acid)
2,4-D (2,4-	Methoxychlor	Trichlorofan
dichlorophenoxyacetic acid)	Methylmercaptan	Triethylamine
Diazinon	Methyl methacrylate	Trimethylamine
Dicamba	Methyl parathion	Uranium
Dichlobenil	Mevinphos	Vanadium
Dichlone	Mexacarbate	Vinyl acetate
2,2-Dichloropropionic acid	Monoethyl amine	Xylene
Dichorvos	Monomethyl amine	Xylenol
Diethyl amine	Naled	Zirconium
Dimethyl amine	Napthenic acid	
	Nitrotoluene	

# FORM 2F



## APPLICATION FOR PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY

Facility I.D. Number: FL05B160

Please type or print in black ink. If additional space is needed for your answer, use plain sheets and attach to the application form.

### I. Outfall Location:

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (list)	B. Latitude			C. Longitude			D. Receiving Water (Name)
Outfall 1	29	40'	34"	82	10'	10"	Springstead Creek

### II. Improvements:

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of stormwater or wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions?

1. Identification of Conditions, Agreements	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	No.	Source of Discharge		a. required	b. projected
Site Demolition	01	Plant wide	Remove process equipment	N/A	2011
Site Stabilization	01	Plant wide	Implement site stabilization measures	N/A	2011

B. You may attach additional sheets describing any additional water pollution or other environmental projects which may affect your discharge that you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

### III. Site Drainage Map:

Attach a site map showing topography depicting the facility including each of its intake and discharge structures; the drainage area of each stormwater outfall; paved areas and buildings within the drainage area of each stormwater outfall; each known past or present areas used for outdoor storage or disposal of significant materials; each existing structural control measure to reduce pollutants in stormwater runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units; each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive stormwater discharges from the facility. Show hazardous waste storage or disposal areas that do not require a RCRA permit separate from those which do require a permit.

**IV. Narrative Description of Pollutant Sources:**

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces, including paved areas and building roofs, drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall No.	Area of Impervious Surface (units)	Total Area Drained (units)	Outfall No.	Area of Impervious Surface (units)	Total Area Drained (units)
1	1.5 Acres (approximate)	86 Acres			

B. Provide a narrative description of significant materials that are currently, or in the past three years have been, treated, stored or disposed in a manner that allows exposure to stormwater; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

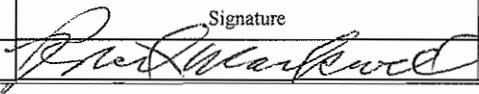
The site has transitioned over the past few months; all of the treated wood material and treatment facilities have been removed from the site. Wood-treatment related constituents have been detected in Site soil and have previously been measured in stormwater discharge. The attached Preliminary Design Report describes planned stormwater improvements.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in stormwater runoff; and a description of the treatment the stormwater receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall No.	Treatment	Table 2F-1 Code
1	Proposed stabilization plan includes impounding stormwater on the east and west side of the existing ditch. Maintenance will be conducted as needed, inspections will be annually.	I-V

**V. Non-stormwater Discharges:**

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in either an accompanying DEP Form 62-620.910(5) or (7) (Forms 2CS or 2ES) application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
Robert Markwell, Vice President		06/01/10

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

The site is vacant with the exception of a groundwater treatment facility that discharges to the Gainesville Regional Utilities sewer system under permit. There is no capacity for industrial activity on the site. There is no potential for non-stormwater discharge. Also, there was no non-stormwater discharge from the facility prior to its recent decommissioning and dismantling. Also, no non-stormwater discharge locations were observed during a site visit.

**VI. Significant Leaks or Spills:**

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

**VII. Discharge Information:**

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E. Potential discharges not covered by analysis - is any toxic pollutant listed in Table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or by-product?  
 Yes (list all such pollutants below)       No (go to section VIII)

Note: Former timber treatment facility used chromated copper arsenate (CCA) as the wood - treating preservative  
 No current use of these materials.

**VIII. Biological Toxicity Testing Data**

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?  
 Yes (list results below)       No (go to Section IX)

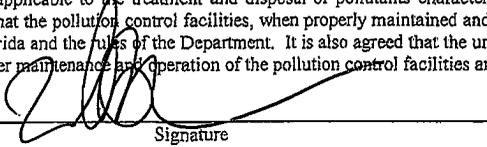
**IX. Contract Analysis Information**

Were any of the analysis reported in item VII performed by a contract laboratory or consulting firm?  
 Yes (list the name, address, and telephone number of, and pollutants analyzed by each such laboratory or firm below)       No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Advanced Environmental Laboratories	6815 Archer Rd., Gainesville, FL 32608	(352) 377-2349	See Below

**X-A. CERTIFICATIONS FOR NEW OR MODIFIED FACILITIES**

I certify that the engineering features of this pollution control project have been designed by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department. It is also agreed that the undersigned, if authorized by the owner, will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

  
Signature

William Musser  
Name (please type):

(Affix Seal)  
6-1-2010

Tetra Tech, Inc.  
Company Name:

Address: 201 E Pine Street, Suite 1000  
Orlando, FL 32801

Florida Registration No.: 4118

Telephone No.: (407) 839-3955

Date: 6/1/2010

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Robert Markwell, Vice President  
Name & Official Title (type or print)

  
Signature

(412) 208-8812  
Telephone No. (area code & no.)

06/01/10  
Date Signed

**X-B. CERTIFICATIONS FOR PERMIT RENEWALS**

I certify that the engineering features of this pollution control project have been examined by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department.

\_\_\_\_\_  
Signature  
\_\_\_\_\_  
Name (please type):

(Affix Seal)

\_\_\_\_\_  
Company Name:  
Address: \_\_\_\_\_

Florida Registration No.: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Date: \_\_\_\_\_

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Name & Official Title (type or print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Telephone No. (area code & no.)

\_\_\_\_\_  
Date Signed





**PRELIMINARY STORMWATER DESIGN REPORT**

**BEAZER EAST INC.  
(Former Koppers Wood Treating Plant)  
200 NW 23<sup>RD</sup> AVENUE-GAINESVILLE FLORIDA SITE**

***PREPARED FOR:***

**BEAZER EAST, INC.**

***PREPARED BY:***

**TETRA TECH, INC.  
201 E. PINE STREET, SUITE 1000  
ORLANDO, FLORIDA 32801**

**JUNE 1, 2010**

**Tt #200-01299-10002**

**BEAZER EAST INC. - GAINESVILLE SITE  
PRELIMINARY DESIGN REPORT**

Tetra Tech, Inc.  
201 E. Pine St., Suite 1000  
Orlando, FL 32801  
Engineering Business #2429  
William David Messer, P.E.

Florida Registration # 41118

**JUN 01 2010**

# PRELIMINARY STORMWATER DESIGN REPORT

## BEAZER EAST INC. (Former Koppers Wood Treating Plant) 200 NW 23<sup>RD</sup> AVENUE-GAINESVILLE FLORIDA SITE

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APPENDIX A – Stormwater Calculations

APPENDIX B – FDEP Industrial RAI letter dated August 18, 2009



# SECTION 1

# SECTION 1 INTRODUCTION

Beazer East, Inc. (Beazer) is preparing to implement stormwater improvements at its property located at 200 NW 23<sup>rd</sup> Avenue, Gainesville, Florida (the “Site”). This federal Superfund Site has been decommissioned as a wood preservative facility and is expected to be redeveloped after completion of substantial Site remediation activities currently being planned. Beazer is working in cooperation with federal, state, and local authorities to select and design a final Site remedy and end use for the property. Thus, future land use modifications are not finalized at this time. The preliminary stormwater analysis is for the transition stage of the facility and not for the final developed conditions, which have not been designed. The “development” activities described herein, are thus “interim” Site Best Management Practice (BMP) measures which make the attached permit application different from most permits submitted. We are modifying the developed industrial Site back to a more natural condition with less runoff capabilities until final development plans are developed.

## 1.1 PURPOSE

The purpose of this Preliminary Design Report (PDR) is to accompany the Florida Department of Environmental Protection (FDEP) Permit to Discharge Stormwater Associated with Industrial Activity (environmentally impacted property).

## 1.2 GENERAL SITE DESCRIPTION

The approximately 86-acre Site is currently vacant property. The previous Site use was the Koppers Wood Treatment Facility. The Site address is 200 NW 23<sup>rd</sup> Avenue, Gainesville, Florida 32609. The Site is located in Alachua County, Florida. The Site is bound on the south by NW 23<sup>rd</sup> Avenue (State Highway 120), on the west by a residential neighborhood, on the north by several residences and a City of Gainesville storage facility, and on the east by railroad right of way.

The FDEP Identification Number for the Site is FLR05B160. The Site is currently regulated by the FDEP under both the National Pollutant Discharge Elimination System (NPDES) and the Industrial Wastewater Departments. A Notice of Intent to Use Multi Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity (MSGP) was submitted by Beazer East in March 2010.

It should be noted that the St. Johns River Water Management District (SJRWMD) reviewed proposed stormwater development activities as well, and granted a permit for the previous Site operations as 400-001-23427-1. The authorized stormwater activities under the SJRWMD permit were not implemented on the Site, however, and the permit expired.

The existing drainage patterns are shown on the attached Figure 1. The Site drains generally from south to the north. The ultimate receiving water body for stormwater discharge from the Site is Springstead Creek. The Site is currently divided by a stormwater drainage conveyance ditch that separates the Site into an eastern and western half as the drainage ditch runs south to north. Much of the Site remains un-cleared and is forested. Those areas of the Site will be left undisturbed at this time, thus the BMPs proposed on the property only directly affect approximately 36 acres of the total Site area of 86 acres. The 36 acres affected are the disturbed portions of the Site where the industrial activities used to take place.

### 1.3 PROPOSED SITE IMPROVEMENTS

The property has been recently purchased from Koppers, Inc., by Beazer. The ultimate intended use of the property is still under consideration. However, in the interim period, the Koppers facility has been and will be undergoing demolition and decommissioning activities to place the Site in an interim no-use status. The Site is also undergoing environmental remediation operations that will not affect the stormwater discharge from the interim no-use Site condition.

As stated above, all previous wood treatment activities have ceased and all previous industrial use facilities are in the process of being removed. The decommissioned Site is scheduled for erosion and stabilization improvements consisting of root rake disking the disturbed limerock storage areas and associated seeding and mulching to facilitate improved vegetative stabilization. In addition, the creation of interceptor swales and containment berms will provide stormwater treatment prior to discharge off-Site. There are no additional impervious areas proposed or Site operations planned for at this time. A net reduction of the runoff characteristics is anticipated for the interim condition of the Site. Thus the Curve Number (CN) will be less in the interim BMP use than it is in the existing condition.

## SECTION 2

## **SECTION 2**

### **FDEP REGULATORY REQUIREMENTS**

#### **2.1 NPDES MULTI SECTOR GENERIC PERMIT (MSGP) REQUIREMENTS**

The Site is currently regulated under the NPDES MSGP requirements for Sector A, Timber Product Facilities per Section 403.8885 of the Florida Statutes. As part of the MSGP, the Site is required to have a Stormwater Pollution Prevention Plan (SWPPP). In general, the SWPPP describes the pollution prevention procedures and Best Management Practices (BMPs) for the Site and associated operations. The SWPPP identifies the pollution prevention team members, assesses the sources of potential Site-related constituents, and provides BMPs to prevent potential constituent discharges off-Site. In addition to periodic evaluations of the effectiveness of the BMPs, periodic sampling at the Site outfall is also required. The monitoring required under Sector A includes chemical oxygen demand (COD), total suspended solids (TSS), zinc, arsenic, and copper. The Site is presently regulated under this permit; however, there is no active timber product activity as that industrial activity has been completely halted and all processing capabilities removed or decommissioned.

#### **2.2 STORMWATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY**

The Site is also under review of the FDEP Industrial Wastewater Department. The FDEP NPDES and Industrial Wastewater are different departments within the FDEP. While the forms and associated permitting requirements have various differences; the overall intent is the same, to prevent the discharge of constituents from the Site. In addition to all of the BMPs required as part of the NPDES MSGP, the Industrial Wastewater division has also requested sampling for dissolved oxygen (DO), turbidity, pH, and chromium. Monitoring frequency and parameters are further discussed in the sampling portion of this report, Section 6.

During the interim non-use of the property, there will be no stormwater runoff associated with potential contact of active industrial uses. Since the property used to have industrial activity and the cleanup activities are not complete, interim stormwater management BMP activities are proposed as part of this application.

## SECTION 3

## SECTION 3 PROPOSED SITE MODIFICATIONS

### 3.1 PROPOSED MODIFICATIONS

The proposed Site modifications consist of demolition and abandonment of the vacant Koppers Wood Treatment Facility and associated interim Site stabilization measures to control erosion and sediment. Upon demolition of the wood treatment facility, the area is to be root rake-disked, seeded, and mulched (Figure 3). Interior roadways are to be covered with mulch to prevent sediment/dust discharge off Site. Site fencing will be installed around the perimeter of Site modifications to inhibit erosion and sediment migration (Sheet D-1). Interceptor swales are proposed adjacent to the FDOT drainage ditch that bisects the Site in order to provide treatment of runoff prior to stormwater entry into the drainage ditch (Sheet D-2). A sodded containment berm to minimize off Site discharge of stormwater runoff is also to be provided (Sheet D-3). A graphic representation of the proposed Site improvements is given on the attached Conceptual Interim Erosion Control and Drainage Measures Map, Figure 3.

The overall result of the proposed interim BMP Site modifications will result in stabilization of the Site and significant reduction of compacted limerock/dirt areas and an on-Site impoundment of surface runoff during storms through the creation of a containment berm. The interim Site modifications will reduce the volume of stormwater runoff that exits the Site during any storm event (see Section 4, Appendix A). The modifications will also substantially decrease the amount of off-Site sediment transport, reducing the potential for discharge of Site-related constituents.

### 3.2 TENTATIVE SCHEDULE

The demolition and stabilization operations are anticipated to be complete by June 2011. The timeframe from June 2011 through June 2013 is anticipated to be operation and maintenance of the temporary erosion and sediment control measures consisting of but not limited to: mulched roadways, perimeter silt fencing, preserved vegetative buffers, shallow stabilized interceptor swales, stabilized containment berms; and other on Site Best Management Practices during vacant interim Site operations. From June 2013 through June 2014 installation of permanent erosion control measures are anticipated.

## SECTION 4

## SECTION 4 PRELIMINARY STORMWATER CALCULATION RESULTS

### 4.1 WATER QUANTITY – SITE DISCHARGE

As the proposed interim Site operations consist of demolition of existing wood treatment facilities and installation of associated stabilization and erosion control measures, the post-development (i.e. interim-state) stormwater runoff will be less than the pre development stormwater runoff for any storm event (from the smaller storm events such as the mean annual event up to and including the more extreme events such as the 100 year/24 hour event). In addition, as there will be less stormwater discharge off-Site, the potential release of constituents from the Site via stormwater will be significantly reduced. Furthermore, the proposed swale and berm creation will further reduce stormwater discharge as the swales and associated containment berms are placed in locations to impound the first flush of runoff from the stabilized cleared areas and treat Site runoff (through sediment removal) prior to entry into the FDOT drainage ditch. The proposed improvements will provide a level of stormwater treatment that is not currently provided for this Site. Therefore, the volumetric discharge as well as the flow rate of stormwater discharging from the Site upon completion of the demolition and interim stabilization measures for any storm event will be less than that of the existing Site condition. See Appendix A for calculations of the 10-yr and 100-yr storm flow for the current (pre-development) and proposed interim (post-development) conditions.

### 4.2 WATER QUALITY-RUNOFF TREATMENT

As the proposed Site modifications will remove impervious areas and compacted areas and replace them with disked and seeded areas, additional stormwater management areas are not necessary to reduce stormwater volume release. This is especially valid as the Site modifications also include for swale creation as well as a perimeter berm to be located along the northern developed areas of the property. The swales and berm will capture and periodically detain quantities of stormwater that in the pre-developed condition would have been direct discharge off Site with no treatment.

Pursuant to 62-25.035 and 62-25.801 of Florida Administrative Code (FAC), facilities which provide retention, detention, or detention with filtration shall provide for one half inch of runoff from the drainage area. To further demonstrate proactive interim Site BMP modifications, Beazer will provide on-Site stormwater impoundment behind containment berms sufficient to accommodate the FDEP water quality requirements described in 62-25 FAC.

Upon preliminary analysis, there are approximately 36 acres of the Site that currently have direct stormwater runoff across the de-activated but disturbed portions of the property. One half inch of runoff would generate 1.5 acre-feet of runoff over this area (Appendix A). Therefore, 1.5 acre-feet of stormwater management would be required to accommodate FAC 62-25. The preliminary location of the surface water containment areas are shown on attached Figure 3.

It is important to note that the BMP measures do not require any excavation and the berms will be no higher than three (3) feet tall at the lowest collection point. The stabilized berm will range in height from one foot (once the containment volume contour has been achieved) to the maximum height at the northern (lowest point) area of the site. The contractor shall provide a specific design level survey for the final design, so that complete assurance that the containment has been properly designed. The berm will extend beyond the containment volume area to assure that the surface runoff is captured. For the preliminary design report we have estimated that distance to be approximately 500 feet, but the design survey noted above will be used to verify the specific distance required. The berms will be stabilized with sod and contain slopes no steeper than 3:1 (H:V). Our preliminary calculations indicate that the on-Site impoundment areas will meet a minimum of one half inch of runoff treatment over the decommissioned disturbed areas.

It is also important to note that the berms will be constructed entirely inside of the existing monitoring and extraction wells. The design documents and specifications will require the contractor to locate the wells and guarantee that the berm will not interfere with the wells.

## SECTION 5

## **SECTION 5 INSPECTION AND MAINTENANCE**

### **5.1 GENERAL**

The Site existing conditions, general history, pollution prevention objectives, pollution prevention team, inventory of previously exposed materials, Site spill history, and many other detailed information items are contained in the Site Stormwater Pollution Prevention Plan (SWPPP) that has been submitted to FDEP as part of the NPDES MSGP and is available upon request. This level of detail exceeds the scope of the preliminary design report (PDR) and as a result the PDR includes excerpts of inspection, maintenance, and sampling requirements.

### **5.2 PREVENTIVE MAINTENANCE**

Stormwater management impoundments, swales, berms, and outlet structures, will be inspected at least monthly and after storms producing significant runoff. These will be inspected for signs of erosion, excess collected silt from runoff, and collection of debris, which could interfere with discharge monitoring or flow.

On-Site drainage ways will be inspected for signs of erosion, high silt loads, or turbidity during runoff events. Such inspections will be made at least four times a year, approximately quarterly, depending on storm events. Sources of turbidity or silt will be identified and potential corrective actions identified. Corrective actions which should be considered include; re-routing of traffic, additional mulch or gravel surfacing roads, ditch modifications, culvert additions or changes, changing stabilization management, and Site grading.

Maintenance needs identified by inspections will be accomplished on a schedule appropriate for each situation. Leaking mobile equipment will not be operated until leaks are repaired.

### **5.3 INSPECTIONS**

Stormwater management devices such as swales, silt fencing, perimeter berms, outlet structures, and other applicable devices will be inspected monthly and after storms producing significant runoff. Up-gradient ditches and drainage systems will be inspected at least four times a year during runoff events. These inspections will be performed by the Site Operation and Maintenance contractor. The Stormwater Management Inspection Form will be used to document each inspection as part of the NPDES SWPPP. Maintenance or repair needs will be

identified on the form. The form will also be used to document when and how identified needs are corrected. The forms and records are maintained on Site as part of the SWPPP.

The in-place inspection process will provide for periodic identification of any required management system designs such as berm repair or even design modification requirements, for example if the berm height needed to be extended, etc. Any required Site modifications are to be documented as part of the NPDES SWPPP.

## SECTION 6

## SECTION 6 SAMPLING

### 6.1 GENERAL

The previous industrial use (wood treatment facility) required Site stormwater discharge monitoring for constituents associated with wood treatment facilities. As the previous Site history is relevant in the current cleanup and interim Site operations, this report identifies which constituents were previously required to be sampled for, the maximum allowable concentrations stated, the periodicity requirements for the sampling events, the reporting requirements, the rainfall event qualifications, and the sample locations.

### 6.2 CONSTITUENTS

Sector A, Timber Products Facilities, as described in the Federal Register Volume 60, Number 189 requires the following parameters to be sampled for as part of the previous owner's use of the facility:

<u>Parameter</u>	<u>Maximum Allowable Concentration</u>
Chemical Oxygen Demand (COD)	120 mg/L
Total Suspended Solids (TSS)	100 mg/L
Zinc, Total Recoverable	0.065 mg/L
Total Recoverable Arsenic	0.16854 mg/L
Total Recoverable Copper	0.0636 mg/L

In addition, as part of the Koppers' Site permitting under the FDEP Industrial Wastewater Division, the additional requirements of dissolved oxygen (DO), turbidity, pH, and total recoverable chromium were also requested to be analyzed for; please refer to the request for additional information letter (RAI) dated August 18, 2009, located in Appendix B. The Industrial Wastewater Division did not specifically state maximum allowable concentrations on the additional requested parameters.

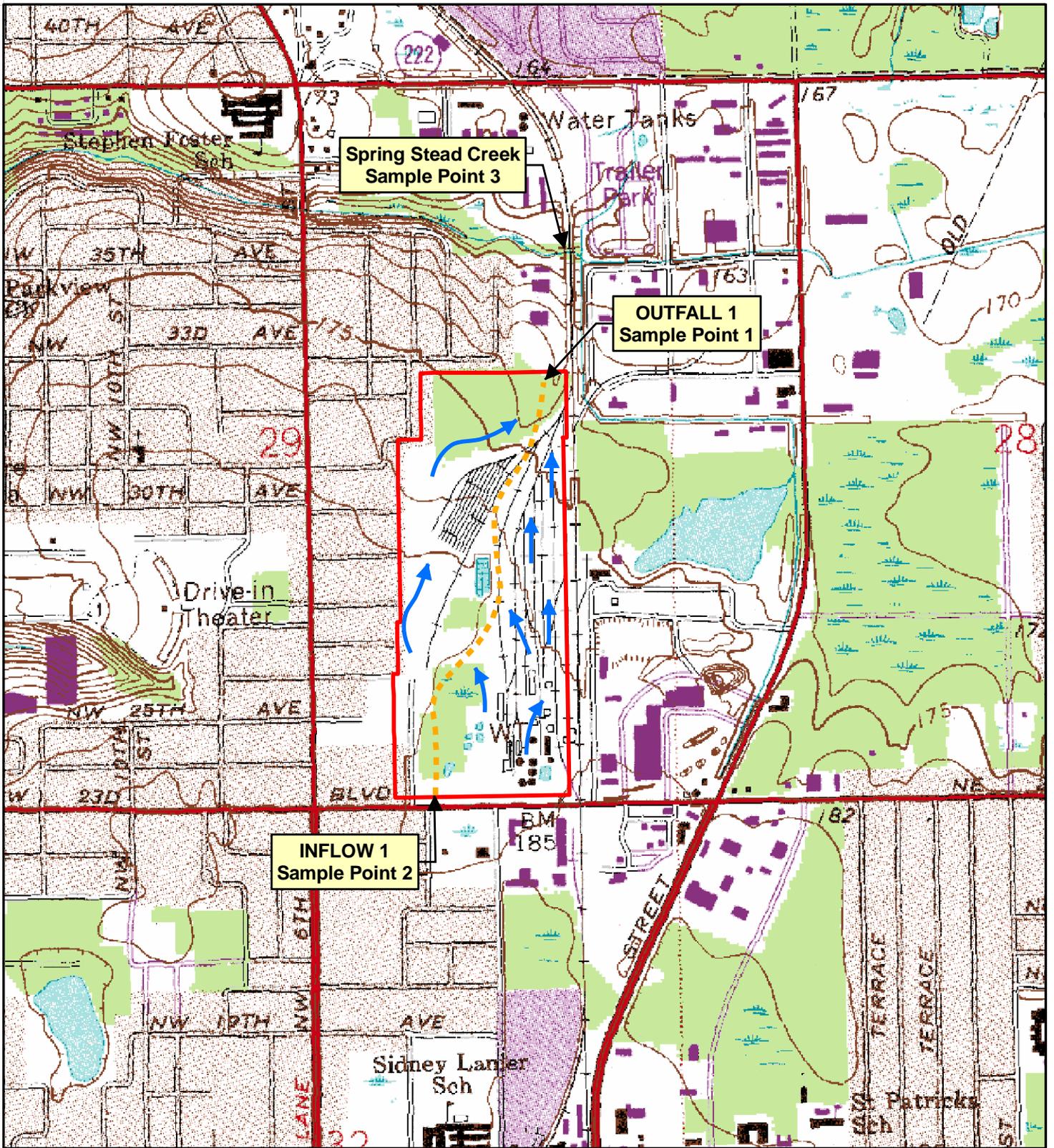
### 6.3 SAMPLE AND PERIODICITY REQUIREMENTS

Sampling will be conducted on a quarterly basis during the first qualifying storm event of the quarter occurring on a normal work day. A qualifying storm event is greater than 0.1 inches in magnitude that occurs at least 72 hours from the previously measurable (greater than 0.1 inch) event; a storm must also produce flow at the Site outfall to qualify. Sampling shall be performed within 30 minutes of flow at the outfall. All samples shall be grab samples.

## 6.4 LOCATION

There is a single outfall for this facility. All areas drain into the same ditch and exit the Site at outfall 1, see attached USGS Topographic Map, Figure 1. Outfall 1 is the location currently utilized in the NPDES program for sampling. Outfall 1 and two additional sample locations will be sampled for each sampling event. The first additional sample locations is the Site inflow location in the main stormwater ditch (Sample Point 2 on the attached USGS Topographic Map, Figure 1). The other additional sample location is at Springstead Creek, downstream of the Site-ditch confluence (Sample Point 3, attached Figure 1).

The overall outfall of Springstead Creek is designated as Class III Surface water and is designated under F.A.C. 62-302 requirements.



Source: Alachua County 2008 Aerial Imagery; USGS 735 Minute Topo Quad; Gainesville East

**LEGEND**

- Site Boundary
- ▶ General Drainage Pattern
- Section 29
- Township 9S
- Range 20E
- Stormwater Ditch



0 1,000  
Feet




USGS TOPOGRAPHIC MAP  
200 NW 23rd AVE, GAINSEVILLE, FL

FIGURE  
1

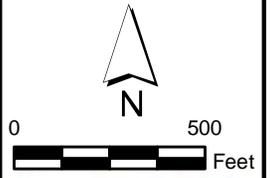
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Source: Alachua County 2008 Aerial Imagery

LEGEND

- Site Boundary
- Alachua County Parcels

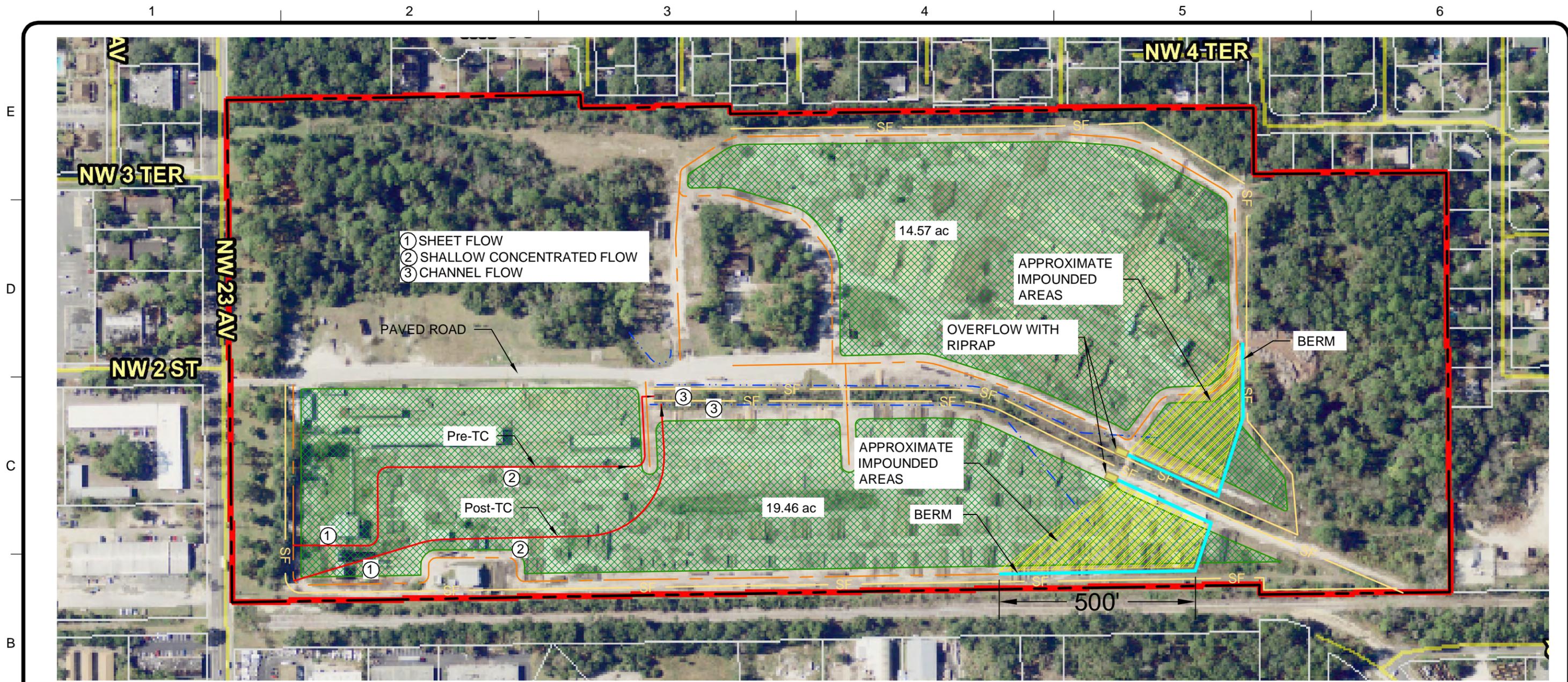


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AERIAL MAP  
 200 NW 23rd AVE, GAINSEVILLE, FL

FIGURE  
 2

5/27/2010 4:44:56 PM - P:\200-01299-10002 - GEOTRANS - BEAZER\CAD\FIG 3.DWG - ANDRADE, FREDDY



- ① SHEET FLOW
- ② SHALLOW CONCENTRATED FLOW
- ③ CHANNEL FLOW

**LEGEND**

- IMPOUNDED AREA
- ROOT RAKE-DISK AND SEED & MULCH
- INTERCEPTOR SWALE
- SILT FENCE
- MULCHED ROAD
- PROPERTY LINE
- BERM

**NOTES:**

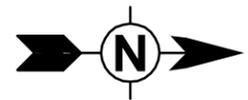
IMPROVEMENTS WILL PREVENT SEDIMENT EROSION ON SITE AND WILL INTERCEPT A SIGNIFICANT PORTION OF THE "FIRST FLUSH" OF STORMWATER TO A SWALE PRIOR TO THE DITCH.

**TASK ITEMS:**

1. ROOT RAKE-DISK CLEARED SITE TO BREAK UP HARDENED LIMESTONE (36 AC)
2. INTERCEPTOR SWALES GRADED BOTH SIDES ALONG DITCH
3. SWALES SOD (3,800 LF, 2' DEEP; SODDING ONLY 1' BOTTOM 8' WIDE)
4. SEED & MULCH (HYDROSEEDING - GEOSKIN)
5. SILT FENCE (DITCH & PERIMETER) AS SHOWN
6. SWALE OVERFLOW W/RIPRAP (FABRIC-FORMED)
7. USE EXISTING MULCH AVAILABLE ON-SITE TO COVER ACCESS ROADS ON SITE

**NOTE:**

ALTHOUGH THE AERIAL SHOWN IS RELATIVELY RECENT, IT DOES NOT REFLECT THAT ALL WOOD TREATING ACTIVITIES HAVE TERMINATED.



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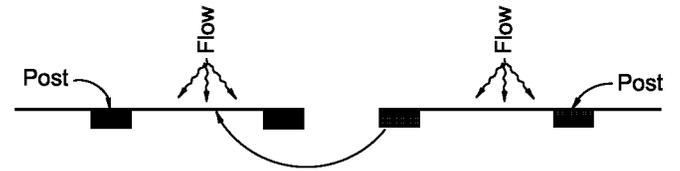
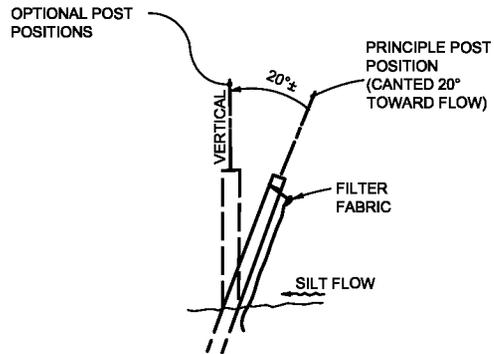
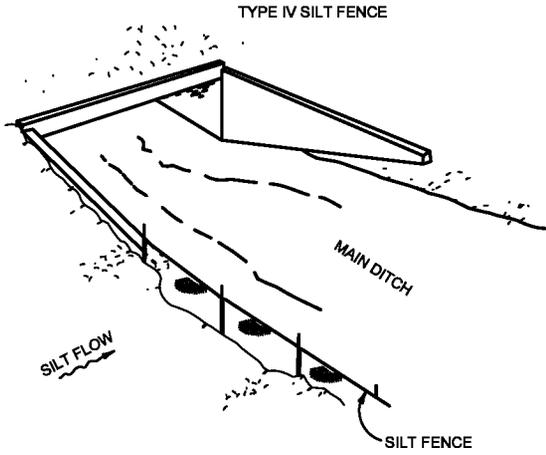
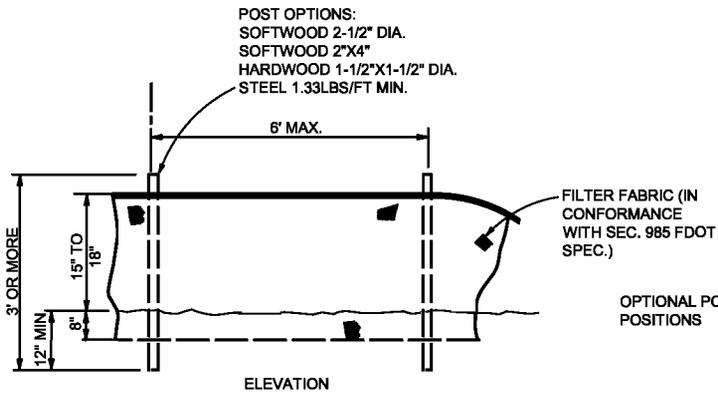
William D. Musser, P.E.  
P.E. No. 41118, FL  
201 East Pine Street, Suite 1000  
Orlando, Florida 32801  
Engineering Business No. 2429  
DATE \_\_\_\_\_

MARK	DATE	DESCRIPTION	BY

Beazer East, Inc.  
City of Gainesville, Florida  
Beazer Site Improvements  
**CONCEPTUAL INTERIM EROSION CONTROL AND DRAINAGE MEASURES**

Project No:	200-01299-10002
Designed By:	RDB
Drawn By:	FBA
Checked By:	WRJ
<b>FIG-3</b>	

07/2010 9:13:33 AM - P:\200-01299-10002 - GEOTRANS - BEAZERCAD\1-DWG - WARNER, JAMES



Place the end post of one fence behind the end post of the other fence as shown.



Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.



Drive both posts into the ground and bury flap.



PLAN VIEW  
 JOINING TWO SILT FENCES

**NOTES FOR SILT FENCES:**

1. TYPE IV SILT FENCE TO BE USED.
2. DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE UPLAND.

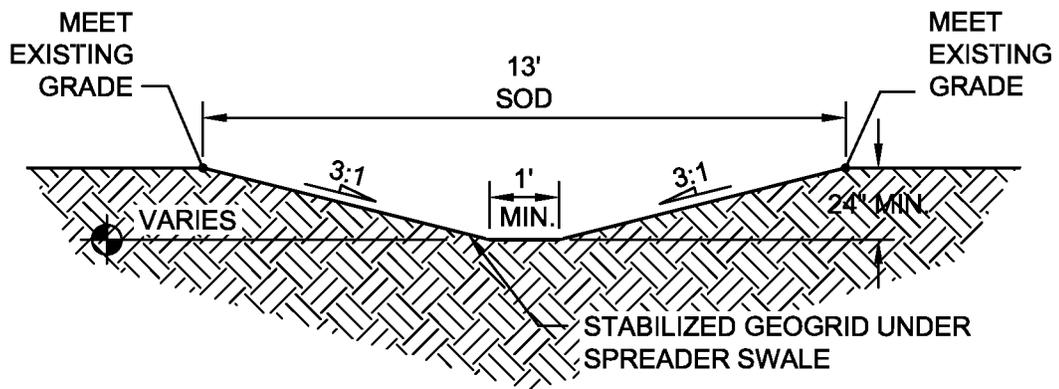
**SILT FENCE DETAIL**

AS PER 2006 FDOT INDEX #102  
 NOT TO SCALE



<p><b>TETRA TECH</b></p> <p>www.tetrattech.com</p> <p>201 EAST PINE STREET, SUITE 1000                  ORLANDO, FLORIDA 32801                  PHONE: (407) 839-3855 FAX: (407) 839-3790</p>	Beazer East, Inc.	Project No.: 200-01299-10002
	BEAZER SITE IMPROVEMENTS CONCEPTUAL INTERIM EROSION CONTROL SILT FENCE	Date: 05-25-10 Designed By: B. Reardon
		Supplemental <b>D-1</b>

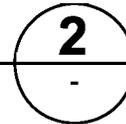
6/2/2010 9:14:51 AM - P:\200-01299-10002 - GEOTRANS - BEAZERICAD\ID-2.DWG - WARNER, JAMES



CUT: ± 1,370 CY  
 SOD: ± 4,000 SY  
 GEO GRID: ± 4,000 SY

## TYPICAL SWALE DETAIL

SCALE: NOT TO SCALE



**TETRA TECH**

www.tetrattech.com

201 EAST PINE STREET, SUITE 1000  
 ORLANDO, FLORIDA 32801  
 PHONE: (407) 839-3955 FAX: (407) 839-3790

Beazer East, Inc.

BEAZER SITE  
 IMPROVEMENTS

CONCEPTUAL INTERIM EROSION  
 TYPICAL SWALE SECTION

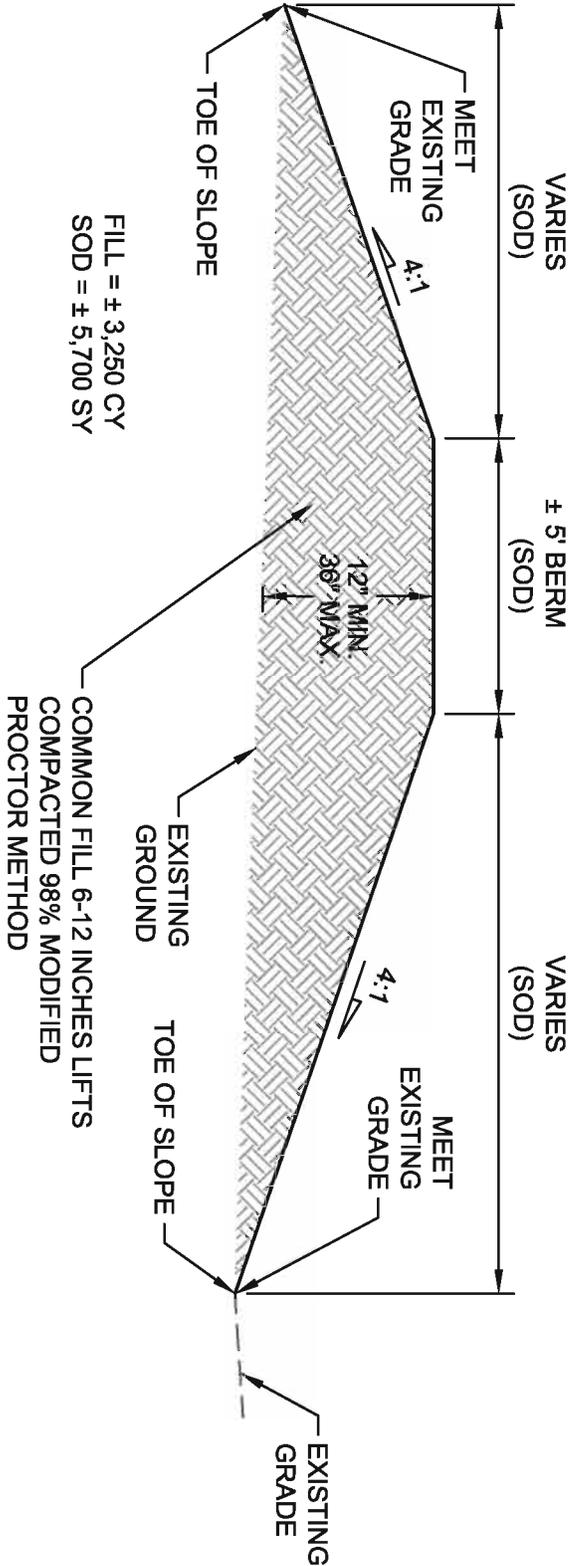
Project No.: 200-01299-10002

Date: 05-25-10

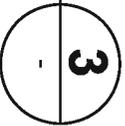
Designed By: B. Reardon

Supplemental

**D-2**



# TYPICAL BERM SECTION



SCALE: NOT TO SCALE

 <p><b>TETRA TECH</b></p> <p>www.tetrattech.com</p> <p>201 EAST PINE STREET, SUITE 1000 ORLANDO, FLORIDA 32801 PHONE: (407) 839-3855 FAX: (407) 839-3790</p>	Beazer East, Inc.	BEAZER SITE IMPROVEMENTS	Project No.: 200-01299-10002
	<p>CONCEPTUAL INTERIM EROSION TYPICAL BERM SECTION</p>	<p>DATE: 05-25-10</p> <p>DESIGNED BY: B. REARDON</p> <p>SUPPLEMENTAL</p>	<p>D-3</p>

## APPENDIX A

BEAZER SITE IMPROVEMENTS  
WATER QUALITY CALCULATIONS

*Water Quality (PAV)*

Provide off-line retention of the first one half inch of runoff

$$PAV = 0.5" \times A$$

PAV = Pollution Abatement Volume (ac-ft)

A = watershed area (ac)

0.5" = first one half inch of runoff

$$PAV = 0.5"/12 \times 36 = \begin{array}{l} 1.50 \text{ ac-ft} \\ 65,340 \text{ cf} \end{array}$$

**BEAZER SITE IMPROVEMENTS**  
**WATER QUANTITY CALCULATIONS**

*Rational formula:*

$$Q_p = CIA$$

$Q_p$  = peak discharge (cfs)  
C = runoff coefficient (dimensionless)  
i = rainfall intensity (in/hr)  
A = watershed area (ac)

*Pre Development*

$$Q_{p(100yr)} = 0.7 \times 4.0 \times 36 = 100.80 \text{ cfs}$$

$$Q_{p(10yr)} = 0.7 \times 2.9 \times 36 = 70.08 \text{ cfs}$$

*Post Development*

$$Q_{p(100yr)} = 0.3 \times 3.3 \times 36 = 35.64 \text{ cfs}$$

$$Q_{p(10yr)} = 0.3 \times 2.4 \times 36 = 25.92 \text{ cfs}$$

$Q(\text{cfs}) = C \times i(\text{in/hr}) \times A(\text{ac})$

**Pre Development**

$Q_{100} = 0.7 \times 4.0 \times 36 = 100.80 \text{ cfs}$

$Q_{10} = 0.7 \times 2.9 \times 36 = 70.08 \text{ cfs}$

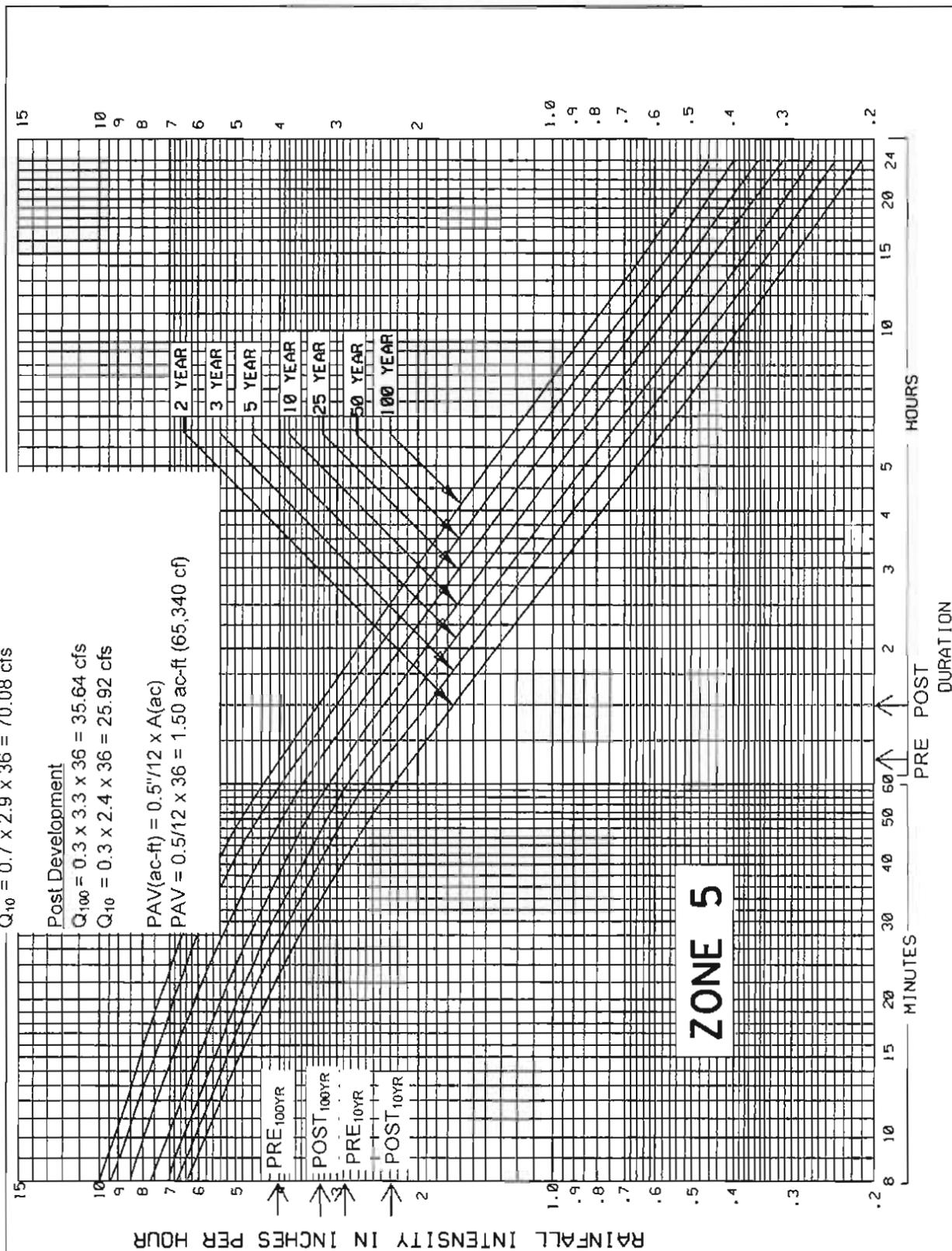
**Post Development**

$Q_{100} = 0.3 \times 3.3 \times 36 = 35.64 \text{ cfs}$

$Q_{10} = 0.3 \times 2.4 \times 36 = 25.92 \text{ cfs}$

$\text{PAV}(\text{ac-ft}) = 0.5/12 \times A(\text{ac})$

$\text{PAV} = 0.5/12 \times 36 = 1.50 \text{ ac-ft (65,340 cf)}$



RAINFALL INTENSITY-DURATION-FREQUENCY CURVES  
 ZONE 5

**BEAZER SITE IMPROVEMENTS**

**TIME OF CONCENTRATION CALCULATIONS (TR-55 METHOD)**

**BASIN ID =>**

Beazer Site

**SHEET FLOW**

Segment  
 Surface description Paved = 1, Unpaved = 0  
 Manning's roughness coefficient (n) (short grass)  
 Flow Length L (ft)  
 Elevation Change (ft)  
 2 Year 24 hour Rainfall (P<sub>2</sub>) inches  
 Slope of hydraulic grade line (s) ft/ft  
 Travel time (T<sub>t</sub>) hours  $T_t = 0.007 (nL)^{0.8} / (P_2^{0.5} S^{0.4})$   
 Travel time (T<sub>t</sub>) minutes

PRE	POST
1	1
0	0
0.15	0.15
215	300
0.50	0.50
4.60	4.60
0.002	0.002
0.59	0.89
35.7	53.2

**SHALLOW CONCENTRATED FLOW**

Segment  
 Surface description Paved = 1, Unpaved = 0  
 Flow Length - L (ft)  
 Elevation Change (ft)  
 Slope of hydraulic grade line (s) ft/ft  
 Average Velocity (V) ft/s (equations from appendix F)  
 Travel time (T<sub>t</sub>) hours  $T_t = L / (3600 * V)$   
 Travel time (T<sub>t</sub>) minutes

2	2
1	0
1060	910
1.5	1.5
0.001	0.002
0.76	0.66
0.39	0.39
23.1	23.2

**CHANNEL FLOW**

Segment  
 Description P-Pipe, C-Channel  
 Flow Length (L) ft  
 Elevation Change (ft)  
 Manning's roughness coefficient (n)  
 Pipe Diameter (ft)  
 Trapezoidal Channel Side Slopes  
 Bottom Width (ft)  
 Approximate Depth (ft)  
 Wetted Perimeter (P<sub>w</sub>) ft  
 Cross-sectional flow area (a) ft<sup>2</sup>  
 Slope of hydraulic grade line (s) ft/ft  
 Average Velocity (V) ft/s  $V = [1.49 R^{2/3} s^{1/2}] / n$   
 Hydraulic radius (R = a / P<sub>w</sub>) ft  
 Travel time (T<sub>t</sub>) hours  $T_t = L / (3600 * V)$   
 Travel time (T<sub>t</sub>) minutes

3	3
C	C
2100	2100
4	4
0.026	0.026
2:1	3:1
6	1
3	2
19.42	13.66
36.00	14.00
0.002	0.002
3.78	2.54
1.85	1.02
0.15	0.23
9.3	13.8

**Time of Concentration (T<sub>c</sub>) hours =**

**1.13 1.50**

**Time of Concentration (T<sub>c</sub>) minutes =**

**68.0 90.1**

## Sheet flow

Sheet flow is flow over plane surfaces. It usually occurs in the headwater of streams. With sheet flow, the friction value (Manning's  $n$ ) is an effective roughness coefficient that includes the effect of raindrop impact; drag over the plane surface; obstacles such as litter, crop ridges, and rocks; and erosion and transportation of sediment. These  $n$  values are for very shallow flow depths of about 0.1 foot or so. Table 3-1 gives Manning's  $n$  values for sheet flow for various surface conditions.

**Table 3-1** Roughness coefficients (Manning's  $n$ ) for sheet flow

Surface description	$n$ <sup>1/</sup>
Smooth surfaces (concrete, asphalt, gravel, or bare soil) .....	0.011
Fallow (no residue) .....	0.06
Cultivated soils:	
Residue cover ≤20% .....	0.06
Residue cover >20% .....	0.17
Grass:	
Short grass prairie .....	0.15 //
Dense grasses <sup>2/</sup> .....	0.24
Bernudagrass .....	0.41
Range (natural) .....	0.13
Woods: <sup>3/</sup>	
Light underbrush .....	0.40
Dense underbrush .....	0.80

<sup>1</sup> The  $n$  values are a composite of information compiled by Engman (1986).

<sup>2</sup> Includes species such as weeping lovegrass, bluegrass, buffalo grass, blue grama grass, and native grass mixtures.

<sup>3</sup> When selecting  $n$ , consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.

For sheet flow of less than 300 feet, use Manning's kinematic solution (Overtop and Meadows 1976) to compute  $T_c$ :

$$T_c = \frac{0.007(nL)^{0.8}}{(P_2)^{0.6} s^{0.4}} \quad (\text{eq. 3-3})$$

where:

- $T_c$  = travel time (hr),
- $n$  = Manning's roughness coefficient (table 3-1)
- $L$  = flow length (ft)
- $P_2$  = 2-year, 24-hour rainfall (in)
- $s$  = slope of hydraulic grade line (land slope, ft/ft)

This simplified form of the Manning's kinematic solution is based on the following: (1) shallow steady uniform flow, (2) constant intensity of rainfall excess (that part of a rain available for runoff), (3) rainfall duration of 24 hours, and (4) minor effect of infiltration on travel time. Rainfall depth can be obtained from appendix B.

## Shallow concentrated flow

After a maximum of 300 feet, sheet flow usually becomes shallow concentrated flow. The average velocity for this flow can be determined from figure 3-1, in which average velocity is a function of watercourse slope and type of channel. For slopes less than 0.005 ft/ft, use equations given in appendix F for figure 3-1. Tillage can affect the direction of shallow concentrated flow. Flow may not always be directly down the watershed slope if tillage runs across the slope.

After determining average velocity in figure 3-1, use equation 3-1 to estimate travel time for the shallow concentrated flow segment.

## Open channels

Open channels are assumed to begin where surveyed cross section information has been obtained, where channels are visible on aerial photographs, or where blue lines (indicating streams) appear on United States Geological Survey (USGS) quadrangle sheets. Manning's equation or water surface profile information can be used to estimate average flow velocity. Average flow velocity is usually determined for bank-full elevation.

Manning's equation is:

$$V = \frac{1.49r^{\frac{2}{3}}s^{\frac{1}{2}}}{n} \quad [\text{eq. 3-4}]$$

where:

- V = average velocity (ft/s)
- r = hydraulic radius (ft) and is equal to  $a/p_w$
- a = cross sectional flow area (ft<sup>2</sup>)
- $p_w$  = wetted perimeter (ft)
- s = slope of the hydraulic grade line (channel slope, ft/ft)
- n = Manning's roughness coefficient for open channel flow.

Manning's n values for open channel flow can be obtained from standard textbooks such as Chow (1959) or Linsley et al. (1982). After average velocity is computed using equation 3-4,  $T_c$  for the channel segment can be estimated using equation 3-1.

### Reservoirs or lakes

Sometimes it is necessary to estimate the velocity of flow through a reservoir or lake at the outlet of a watershed. This travel time is normally very small and can be assumed as zero.

### Limitations

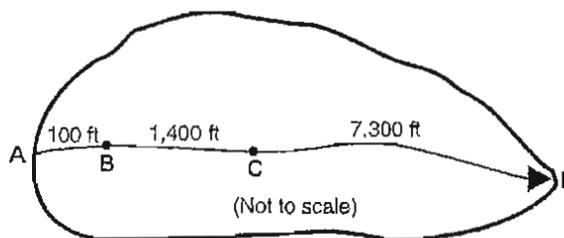
- Manning's kinematic solution should not be used for sheet flow longer than 300 feet. Equation 3-3 was developed for use with the four standard rainfall intensity-duration relationships.
- In watersheds with storm sewers, carefully identify the appropriate hydraulic flow path to estimate  $T_c$ . Storm sewers generally handle only a small portion of a large event. The rest of the peak flow travels by streets, lawns, and so on, to the outlet. Consult a standard hydraulics textbook to determine average velocity in pipes for either pressure or nonpressure flow.
- The minimum  $T_c$  used in TR-55 is 0.1 hour.
- A culvert or bridge can act as a reservoir outlet if there is significant storage behind it. The procedures in TR-55 can be used to determine the peak flow upstream of the culvert. Detailed storage routing procedures should be used to determine the outflow through the culvert.

### Example 3-1

The sketch below shows a watershed in Dyer County, northwestern Tennessee. The problem is to compute  $T_c$  at the outlet of the watershed (point D). The 2-year 24-hour rainfall depth is 3.6 inches. All three types of flow occur from the hydraulically most distant point (A) to the point of interest (D). To compute  $T_c$ , first determine  $T_t$  for each segment from the following information:

Segment AB: Sheet flow; dense grass; slope ( $s$ ) = 0.01 ft/ft; and length ( $L$ ) = 100 ft. Segment BC: Shallow concentrated flow; unpaved;  $s = 0.01$  ft/ft; and  $L = 1,400$  ft. Segment CD: Channel flow; Manning's  $n = .05$ ; flow area ( $a$ ) = 27 ft<sup>2</sup>; wetted perimeter ( $p_w$ ) = 28.2 ft;  $s = 0.005$  ft/ft; and  $L = 7,300$  ft.

See figure 3-2 for the computations made on worksheet 3.



## Appendix F

## Equations for figures and exhibits

This appendix presents the equations used in procedure applications to generate figures and exhibits in TR-55.

Figure 2-1 (runoff equation):

$$Q = \frac{\left[ P - .2 \left( \frac{1000}{CN} - 10 \right) \right]^2}{P + 0.8 \left( \frac{1000}{CN} - 10 \right)}$$

where

Q = runoff (in)

P = rainfall (in)

CN = runoff curve number

Figure 2-3 (composite CN with connected impervious area):

$$CN_c = CN_p + \left( \frac{P_{imp}}{100} \right) (98 - CN_p)$$

where

CN<sub>c</sub> = composite runoff curve number

CN<sub>p</sub> = pervious runoff curve number

P<sub>imp</sub> = percent imperviousness.

Figure 2-4 (composite CN with unconnected impervious areas and total impervious area less than 30%):

$$CN_c = CN_p + \left( \frac{P_{imp}}{100} \right) (98 - CN_p) (1 - 0.5R)$$

where

R = ratio of unconnected impervious area to total impervious area.

Figure 3-1 (average velocities for estimating travel time for shallow concentrated flow):

Unpaved  $V = 16.1345 (s)^{0.6}$

Paved  $V = 20.3282 (s)^{0.6}$

where

V = average velocity (ft/s)

s = slope of hydraulic grade line  
(watercourse slope, ft/ft)

These two equations are based on the solution of Manning's equation (eq. 3-4) with different assumptions for n (Manning's roughness coefficient) and r (hydraulic radius, ft). For unpaved areas, n is 0.05 and r is 0.4; for paved areas, n is 0.025 and r is 0.2.

Exhibit 4 (unit peak discharges for SCS type I, IA, II, and III distributions):

$$\log(q_u) = C_0 + C_1 \log(T_c) + C_2 [\log(T_c)]^2$$

where

q<sub>u</sub> = unit peak discharge (csm/in)

T<sub>c</sub> = time of concentration (hr)

(minimum, 0.1; maximum, 10.0)

C<sub>0</sub>, C<sub>1</sub>, C<sub>2</sub> = coefficients from table F-1

Figure 6-1 (approximate detention basin routing through single- and multiple-stage structures for 24-hour rainfalls of the indicated type):

$$\frac{V_s}{V_r} = C_0 + C_1 \left( \frac{q_o}{q_i} \right) + C_2 \left( \frac{q_o}{q_i} \right)^2 + C_3 \left( \frac{q_o}{q_i} \right)^3$$

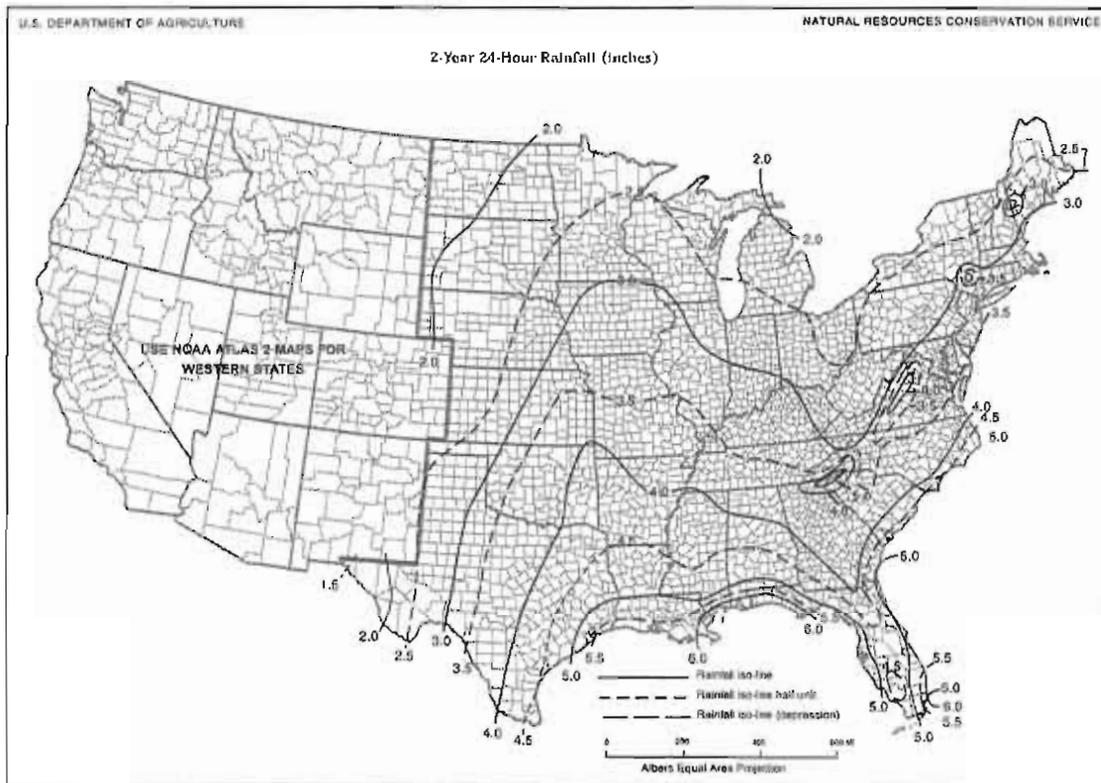
where

V<sub>s</sub>/V<sub>r</sub> = ratio of storage volume (V<sub>s</sub>) to runoff volume (V<sub>r</sub>)

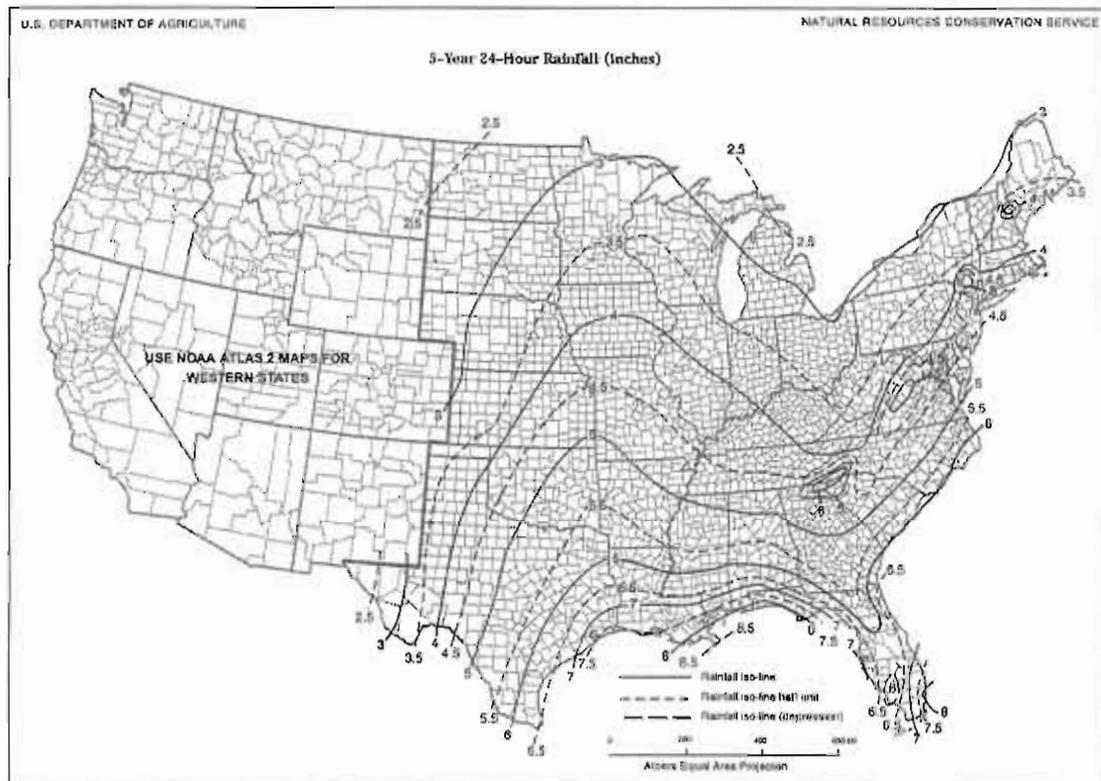
q<sub>o</sub>/q<sub>i</sub> = ratio of peak outflow discharge (q<sub>o</sub>) to peak inflow discharge (q<sub>i</sub>)

C<sub>0</sub>, C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub> = coefficients from table F-2

**Figure B-3** 2-year, 24-hr rainfall



**Figure B-4** 5-year, 24-hour rainfall



## Manning's n-Values

<u>Pipes</u>	<u>Manning's "n"</u>
Reinforced concrete	0.013
Vitrified clay pipe	0.013
Smooth welded pipe	0.011
Corrugated metal pipe	0.023
Polyvinyl chloride (PVC)	0.010
 <u>Natural Channels</u>	
Gravel beds, Straight	0.025
Gravel beds, large boulders	0.040
Earth, straight, some grass	0.026 //
Earth, winding, no vegetation	0.030
Earth, winding	0.050
 <u>Miscellaneous</u>	
Smooth surfaces (concrete, asphalt, bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils	0.06-0.17
Short grass	0.15
Dense grass	0.24
Bermuda grass	0.41
Light underbrush woods	0.40
Dense underbrush woods	0.80

SOURCE: HYDROFLOW EXTENSION FOR AUTO CAD (2008)

# Appendix A

---

## Runoff Coefficients (C)

<u>Description of Area</u>	<u>Coefficient</u>
<b>Business:</b>	
Central business	0.70 - 0.95
District and local	0.50 - 0.70
<b>Residential:</b>	
Single family	0.35 - 0.45
Multi-units	0.40 - 0.75
1/2 acre lots or larger	0.25 - 0.40
<b>Industrial:</b>	
Light	0.50 - 0.80
Heavy	0.60 - 0.90 // (0.7)
Parks, cemeteries	0.10 - 0.25
Playgrounds	0.20 - 0.35
Railroad yards	0.20 - 0.40
Unimproved	0.10 - 0.30 //
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Roofs	0.75 - 0.95

SOURCE: HYDROFLOW EXTENSION FOR AUTOCAD (2003)

## APPENDIX B

BEAZER

200 01299-10002



## Florida Department of Environmental Protection

Northeast District  
7825 Baymeadows Way, Suite E200  
Jacksonville, Florida 32256-7590  
Phone: 904/807-3300 + Fax: 904/448-4366

Charlie Crist  
Governor

Jeff Koutkamp  
Lt. Governor

Michael W. Sole  
Secretary

August 18, 2009

Joyce M. Fankulewski,  
Environmental Manager  
Koppers, Inc.  
436 Seventh Avenue  
Pittsburg, PA 15219-1800  
[Fankulewski@koppers.com](mailto:Fankulewski@koppers.com)

Re: Alachua County - Wastewater  
Request for Additional Information  
Koppers, Inc.- FLR05B160-003

Dear Ms. Fankulewski:

This is in reference to the wastewater permit application for the above referenced project received in our office on May 21, 2009 and additional information received through July 22, 2009. The Department of Environmental Protection (DEP) has reviewed the applications and determined that the permit application is incomplete. In accordance with Florida Administrative Code (FAC) Chapter 62-4.055 and 62-620.510(1), the following additional information is needed to complete the review of your application.

1. Form 1 and Form 2F. Original signatures were submitted. Although Koppers, Inc. is listed as a Florida Corporation, the applicant is not listed as a corporate officer or director in Florida (Leslie Hyde). The responsible authority must be a corporate officer of Koppers, Inc. Please note that in accordance with Rule 62-620.305 (1)(a), FAC, for a corporation, all permit applications shall be signed by a responsible corporate officer.
2. Section II, page 2F-13 - The project for ditch excavation and stabilization of ditch sediment was indicated as complete in April 2009. Provide further details and an update on the progress and results of soil stabilization tests. Provide an update on the progress of the pilot test on the 900 CY so far. Although a survey was submitted, it was not signed and sealed. Is a signed and sealed survey available?

3. Section III, page 2F-13 - While a drawing and a plan were submitted for the site, the map does not provide enough detail of the topography nor was a survey provided with information to adequately determine elevations, slopes and the drainage pattern. There is a reference to Attachment #5, however, no attachment was found with the submittal.
4. Section IV, page 2F-14 - The estimate of the drainage areas provides the total areas, and a curve number, but the impervious area for each basin needs to be provided based on a site survey, topographic map, or with GIS techniques. Need the map in question #3 above (attachment #5) in order to determine the status of the response to this question.
5. Section VII -
  - a. Have any further samples been collected and analyzed? Is further information available such as flow DO, turbidity, pH, total recoverable copper, and total recoverable chromium (trivalent)?
  - b. Additionally, are there any ambient sample results available for upstream and downstream locations for the ditch that traverse the Koppers property? In particular, are upstream results available near NE 23<sup>rd</sup> Avenue (southern boundary) or upstream for the traversing ditch just beyond the Koppers property (northern boundary)? There is a reference to Attachment #6, however, no attachment was found with the submittal.
  - c. The TSS values ranged from 69 to 504 mg/L and are indicative of a high amount of suspended solids discharge. Have any further samples been collected since the turbidity controls have been in place since April?
  - d. It is acknowledged that several projects have been initiated. Provide an update on the vegetation planting and other on-going site efforts and their sufficiency since April.
  - e. Does the new fencing installed by the FDOT appear to be an effective improvement?

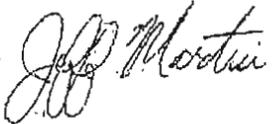
*Request for Addition Information*  
*Koppers, Inc. FLR05B160-003*  
*August 18, 2009*  
*3 of 3*

The subject application cannot be processed until the above-requested information is provided or corrected. The Department will hold the application in abeyance until September 30, 2009 for supplement or amendment

All information requested must be submitted by the applicant and certified by the professional engineer named in the application. Two copies of the requested response must be submitted.

If you have any questions concerning this matter, please contact me at (904) 807-3314 or by electronic mail at [jeff.martin@dep.state.fl.us](mailto:jeff.martin@dep.state.fl.us).

Sincerely,



Jeff Martin, P.E.  
Wastewater Permitting Supervisor

Cc:

Pat Salisbury, Koppers Gainesville  
Steve C. Cullen, P.E.; Koogler & Associates, Inc.  
Jessica Kleinfelter, DEP Tallahassee  
Kelsey Helton, DEP Tallahassee  
Michael Fitzsimmons, FDEP, NED  
John Mousa, Alachua County EPD [jm@alachuacounty.com](mailto:jm@alachuacounty.com)  
[Miller.Scott@epamail.epa.gov](mailto:Miller.Scott@epamail.epa.gov)