

## **ABSTRACT**

### **INTERNSHIP REPORT**

#### **BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES**

by Adam Michael Sackenheim

I interned with Butler County Department of Environmental Services (BCDES) from January to July, 2003. BCDES is a publicly-owned utility that provides water, wastewater treatment, solid waste management, and recycling and litter prevention services to the eastern portions of Butler County, Ohio. The Department provides environmental services to over 100,000 residents in West Chester, Liberty, Fairfield, Hanover and Ross Townships.

As an Environmental Intern, I had a variety of job duties. I worked in a laboratory as an assistant analyst. I served on the Department's Regulatory Compliance Team. I developed and implemented Stormwater Pollution Prevention Plans and Spill Prevention Control and Countermeasure plans for BCDES' two regional water reclamation facilities. I updated the Department's biosolids land application program. I worked on issues related to Woodsdale Landfill, including leachate collection and explosive gas monitoring. I also managed a wetland creation project, and assisted in the development of an Environmental Management System.

INTERNSHIP REPORT  
BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

An Internship Report  
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Master of Environmental Science  
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Dr. Bill Renwick

Dr. Gene Willeke

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BCDES

## **Dedication**

This report is dedicated to my wife, Sarah.

## I. INTRODUCTION

I began my internship with the Butler County Department of Environmental Services (BCDES) on January 21<sup>st</sup>, 2003. BCDES is a publicly-owned utility that provides drinking water, wastewater treatment, solid waste management, and recycling and litter prevention services to the eastern portions of Butler County, Ohio. Under the direction of the Board of County Commissioners, BCDES provides quality environmental services to a growing population of over 100,000 in West Chester, Liberty, Fairfield, Hanover and Ross Townships. Organizationally, the Department is managed by a Director and four “Deputy Directors”, or Division Heads. The Deputy Directors oversee a staff of 140+, all of whom fall into one of these four Divisions: Business, Engineering, Environmental and Operations (Figure A).

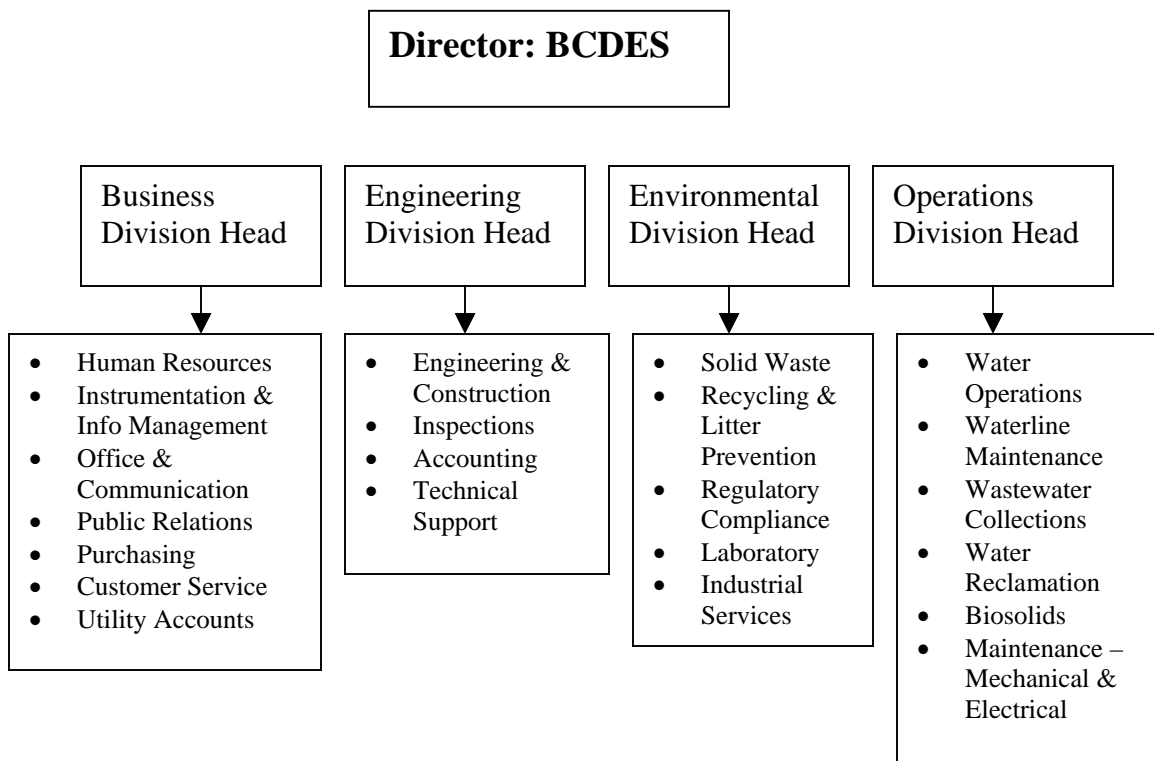


Figure A: Organizational chart of Butler County Department of Environmental Services. August 2004

As a utility, the Butler County Department of Environmental Services focuses primarily on drinking water distribution and water reclamation, or wastewater treatment. On average, BCDES delivers 11 million gallons of drinking water to homes and businesses each day, with peak distribution around 18 million gallons per day. To deliver this much water, BCDES maintains over 700 miles of water distribution lines (Figure B). As BCDES is not equipped to produce drinking water, it purchases it from the City of Hamilton and the City of Cincinnati. The Department also owns and operates two regional wastewater treatment facilities and three satellite treatment plants in Butler County, with a combined permitted discharge flow of 29 million gallons per day (MGD). On an average day, the Department treats around 16 MGD (Figure C).

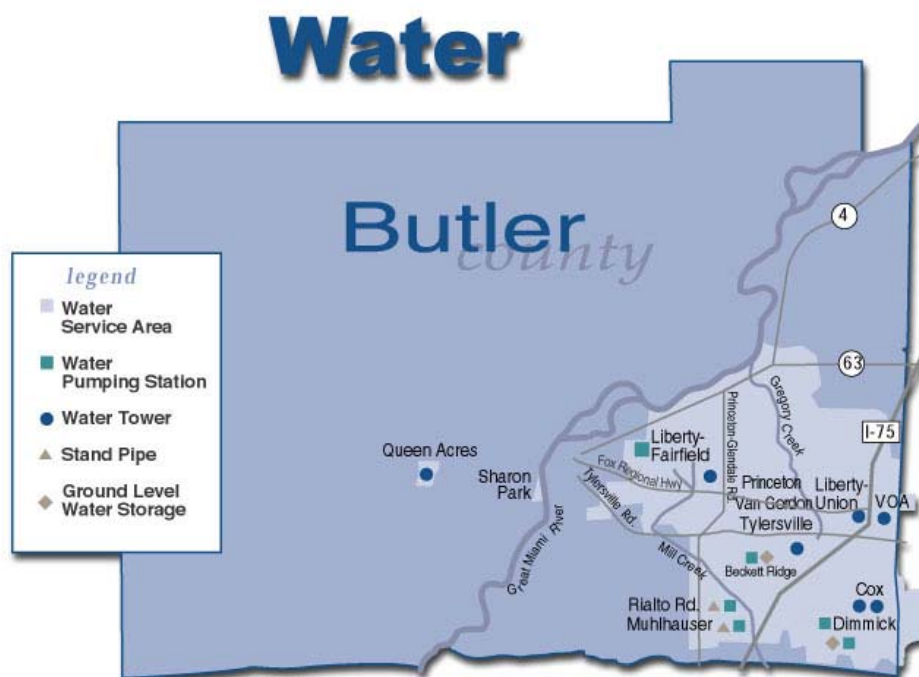


Figure B: Drinking Water Service Area, BCDES. August 2004

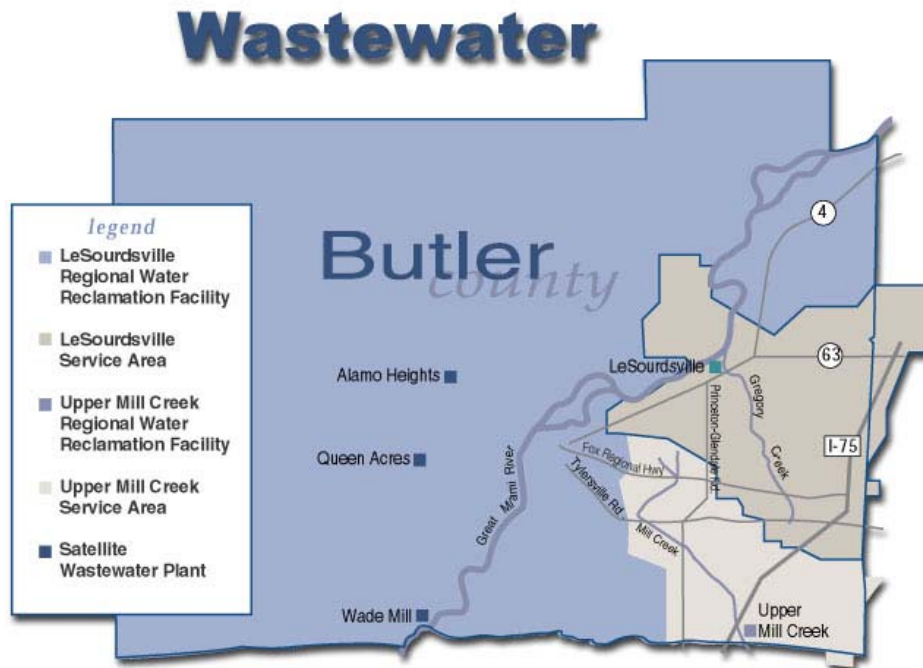


Figure C: Wastewater Treatment Service Area, BCDES. August 2004

On the first day as an Environmental Intern with BCDES, I met with Mary Moore, Environmental Division Head, to discuss potential work duties and projects. Mrs. Moore presented to me an assortment of things I could work on, and then allowed me to choose the projects and work duties most suited to my experience and interests. I decided I wanted to work on the many and varied regulatory issues that a public water and wastewater utility constantly faces, and I also decided to spend time in BCDES' certified laboratory to learn about analytical testing requirements and methodologies. I chose these two areas as I thought they would give me a good overview of how the utility operates under the regulatory supervision of both the Ohio Environmental Protection Agency (OEPA) and the United States Environmental Protection Agency (USEPA). I remain grateful to Mrs. Moore for allowing me the opportunity to pick projects and work duties that were of interest to me, as I doubt my internship experience would have been as enlightening or productive otherwise. Following my internship, I was hired on permanently as an Environmental Specialist.

## II. INTERNSHIP EXPERIENCES

The following is a summation of the duties and responsibilities I was assigned as an intern, subdivided into three general categories: lab duties; regulatory duties; and other duties.

### LAB DUTIES

One of my primary responsibilities as an Environmental Intern was to assist in the LeSourdsville laboratory. The LeSourdsville laboratory is owned and operated by BCDES, and it is where many of the required water and wastewater analyses are performed. As a drinking water provider, BCDES is required to test its water daily at various points throughout the distribution system. The Department must also perform tests whenever a break or depressurization occurs to ensure that the water is safe for human consumption. As a wastewater treatment utility, BCDES is required to test its wastewater daily at various points throughout the treatment process, including at the influent and effluent, to ensure that the water discharged to the Great Miami River and Mill Creek is safe to human health and the environment. BCDES also tests its biosolids (sludge) – the organic byproduct of wastewater treatment – as the Department actively uses land application of biosolids to fertilize and condition soil on permitted agricultural lands. The Department also tests the influent wastewater it receives from its permitted significant industrial users and industrial users as a means of ensuring that each industry's pretreatment system is functional.

As a “rookie” assistant laboratory analyst, I spent my first few weeks on the job learning about the equipment and methodologies of the lab. I read standard operating procedures and standard methods on how certain tests are performed, and I received comprehensive training from the BCDES chemists on the more basic wastewater analyses. Specifically, I learned to perform the following tests:

- Total Suspended Solids (TSS) for industrial influents and treatment plant influents and effluents – EPA method 160.2
- Biological Oxygen Demand (BOD) and Carbonaceous BOD for industrial influents and treatment plant influents and effluents – Standard method 5210B

- Various (bio)solids analyses used primarily for internal operational usage including percent total solids for ‘cake’ and digester samples, percent volatile solids for ‘cake’ and digester samples, and mixed liquor/mixed volatile suspended solids for oxidation ditch samples.

Over the course of my six month internship, I spent about 20 hours per week in the lab, primarily performing the wastewater tests listed above. My lab duties were generally relegated to the wastewater side of things, as drinking water analysts must be certified through the OEPA. However, I did learn how to perform the basic water chemistry/water quality tests used on new water lines. These tests are titration-based and quantify alkalinity, calcium hardness and total hardness. Additionally, I learned how to “log in” samples to the laboratory information management system (LIMS), and how to calculate final results from analyses and then enter those results into the LIMS.

In addition to learning and performing TSS, BOD/CBOD, and solids tests, I was introduced to the analysis of the parameters listed below :

- Cd; Cr; Cu; Ni; Pb; Zn : metals analysis on a variety of wastewater and biosolids samples via Inductively Coupled Plasma – Mass Spectrometry (ICPMS EPA method 200.8)
- Ammonia ( $\text{NH}_3$ ) analysis for industrial influents and wastewater influents and effluents – Standard Method 4500-NH<sub>3</sub> F
- Nitrate/Nitrite ( $\text{NO}_2/\text{NO}_3$ ) analysis for industrial influents and wastewater influents and effluents – Standard Method 4500-NO<sub>3</sub> F

Unfortunately, though, I never became proficient at metals and/or nutrient analysis because of unmet extensive training requirements. Generally speaking, I did not learn many more analytical techniques and/or testing procedures beyond the basic wastewater tests for TSS, BOD/CBOD, and solids. Throughout my internship, the LeSourdsville lab was sorely understaffed. Because of various personnel issues, the lab was left with just two fulltime chemists most of the time, which is two fewer than normal. Because of this staffing shortage, I was expected to run all solids (and TSS) analyses every day, in addition to running BOD and CBOD when necessary. Therefore, time for training was limited.

## REGULATORY DUTIES

### **Regulatory Compliance Team:**

As part of my internship agreement, I become a contributing member of BCDES' Regulatory Compliance Team (Reg Team). The primary responsibility of the Reg Team is to ensure that the Department remains in compliance with all local, county, state and federal rules and ordinances as they relate to water and wastewater and solid waste utility services. The Reg Team meets twice a month to review and act on current issues, such as NPDES permit renewals, and future issues, such as increasingly stringent disinfectant by-product rulings by OEPA for drinking water. The Reg Team consists of the following personnel: Division Head – Operations; Division Head – Environmental; Field Superintendent; Laboratory Manager; Environmental Compliance Coordinator; and Water Reclamation Manager. The Reg Team is extremely important for two reasons:

1. By ensuring that the Department meets or exceeds all legal regulatory requirements, the Reg Team provides assurance to customers that BCDES' services are safe to both human health and the environment
2. By complying with all legal regulatory requirements, the Department saves valuable money by avoiding administrative (violation) fines levied by agencies such as OEPA and USEPA. By reducing or eliminating these sorts of fines, BCDES can pass along savings to customers and spend money on more valuable things like infrastructure improvements.

As a Team member, my primary responsibility was to investigate future relevant regulatory requirements by researching pending and proposed regulations. I researched and tracked regulations primarily through the internet, relying on such websites as the 'Online Federal Register'. I also signed up for list-serves devoted to regulatory monitoring. Staying up-to-date on pending and proposed regulations is critical; it allows the Department to be proactive instead of reactive. Also, with proper planning, the Department has time to implement new requirements gradually, which is helpful for financial reasons.

On several occasions during my internship, I helped the Team draft and send comment letters and letters of support or opposition to OEPA and USEPA on various regulatory issues.

## **Stormwater Pollution Prevention Plan (SWPPP) Development and Implementation:**

As a member of the Reg Team, one of my duties was to research the Department's requirements under the Clean Water Act's Phase II stormwater regulations. By reviewing OEPA and USEPA guidance materials, and especially the Code of Federal Regulations (40 CFR), I determined that BCDES was required to obtain industrial stormwater permits for its two regional water reclamation facilities, and that permit approval was contingent on the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for each facility. The Reg Team voted that I take the lead in acquiring the permits and drafting the SWPPPs.

To obtain industrial stormwater permits for BCDES' regional water reclamation facilities (LeSourdsville WRF and Upper Mill Creek WRF), I first had to identify all the stormwater outfalls located at each plant. I did this through onsite investigation, with assistance from engineering personnel who were familiar with the drainage regimes of the facilities. After identifying all outfalls and assigning latitude and longitude coordinates for each (via GPS), I was able to fill out the necessary forms and send the Notices of Intent (NOI) for permit coverage to OEPA. Completing the NOIs was the easy part of the job – developing and implementing the SWPPPs would prove to be much more challenging.

The first thing I did before developing the SWPPPs for BCDES' two industrial facilities was research other plans via the internet. I reviewed sample plans from OEPA and from USEPA, and I also reviewed plans from such industrial operations as an electrical power production plant and a steel fabrication plant. By reading and studying these plans, and by consulting the regulations of OEPA, I was able to determine all BCDES' requirements and also devise a very comprehensive outline for the SWPPP manuals.

The next step was to perform site assessments at the two facilities. I walked the plants and identified potential areas of stormwater contamination, such as oil storage areas and uncovered biosolids (sludge) storage pads. I made an inventory of all significant exposed materials. With the help of some engineers, and using topographic blueprints created during recent plant upgrade projects, I delineated the drainage regime of both sites. Stormwater samples were also collected at each outfall and analyzed to see where in each plant stormwater was most polluted. After

looking at the drainage regime, the areas of potential stormwater contamination, and the results of the sampling, I was able to determine the “hot spots” of stormwater pollution at each facility. Once these “hot spots” were identified, I was able to devise stormwater best management practices (BMPs) that, once implemented, would greatly improve the quality of stormwater exiting BCDES’ facilities and entering surface waters of the state. The two most obvious “hot spots” were the sludge or biosolids storage pads.

After generating a substantial list of BMPs, I finalized the plans and the corresponding manuals and got them approved by the Reg Team. The SWPPPs are now permanently on file at BCDES’ central file location, where they are subject to random review by OEPA and other regulatory authorities during site inspections and pre-permit renewal evaluation visits. These are important plans because if they are ever found to be incomplete, outdated and/or missing, then an OEPA representative could revoke either our stormwater permit or our NPDES wastewater discharge permit, or both. [Appendix A]

As happy as I was to “complete” the SWPPP manuals, I knew that the battle for proper stormwater management and control at the industrial facilities was far from over. Requirements of SWPPPs include, but are not limited to, quarterly wet and dry weather outfall inspections, annual site compliance inspections, personnel training, and implementation of identified best management practices. Because of these requirements, I had to meet with various individuals to ensure that all of these things would be completed within the allotted timeframe. Thus, I met with the wastewater manager at each facility to coordinate the quarterly and annual inspections. I met with the human resources manager to formalize a training program that deals specifically with stormwater management. I also worked with the engineering staff, maintenance manager, and division heads to ensure that the identified BMPs would indeed be implemented. I learned to use the interactive web-based notification system (E-Man) used by BCDES to document all the requirements of the stormwater plans, so that future requirements such as inspections will be automatically emailed to the appropriate person. Through these dealings and efforts, I became confident that all the provisions of the SWPPPs would indeed be realized.

I was very excited to see that many of the BMPs specified in the SWPPPs were implemented almost immediately after the plans were completed, despite a generous timeframe for

implementation. To me, this meant that I had the all-important “buy in” of fellow workers and top management. To me, this meant that everyone from the shop mechanics to the division heads were supportive of the stormwater program, and understanding of its importance. Best management practices that were implemented well before their ‘implementation due-date’ included:

- Regrading of LeSourdsville biosolids (sludge) storage pad so that polluted runoff would be captured in sanitary-routed trench drains, as opposed to running offsite – untreated – into the nearby drainage swale.
- Adding sidewalls to the LeSourdsville biosolids storage building to prevent precipitation from directly entering the building, in an effort to minimize contamination exposure.
- Construction of large truck and equipment storage building at LeSourdsville, so vehicles and equipment could be stored indoors. This new building, with sanitary-routed floor drains, helps keep leaking vehicular fluids such as oil and gasoline and battery acid from entering the storm drains. The facility also has a truck wash “dock”, which means BCDES trucks are no longer washed outdoors. This helps reduce the volume of potentially contaminated wash water that enters the storm sewer system.
- Removal of leaky and outdated diesel fueling tank at Upper Mill Creek Water Reclamation Facility.
- Placement of all exposed containers of oils, paints and other chemicals in properly contained storage units at both facilities.
- Removal of large dirt hill (spoil hill), created from excavated materials from plant upgrades and from water line replacement projects, from behind the LeSourdsville WRF to minimize erosion problems.
- Lining of Upper Mill Creek biosolids (sludge) storage pad’s periphery with “sediment logs” (Figure D). Sediment logs filter runoff from the pad and prevent biosolids – high in nutrients and fecal bacteria – from exiting the site and entering surface waterways.



Figure D: Sediment logs placed around the biosolids storage area at Upper Mill Creek WRF as part of the SWPPP

## **Biosolids Land Application Program Update:**

### Land Application Issues

As a result of my continued involvement with the Department's regulatory compliance team (Reg Team), I also researched important technical issues related to the application of sewage sludge to agricultural lands. Primarily I focused my efforts on soil characteristics, sewage nutrient values and crop nutrient needs as they relate to BCDES' land application program.

The Butler County Department of Environmental Services land-applies Class B biosolids (non-exceptional sewage sludge) through a state-permitted (OEPA) program. In an effort to ensure continued compliance with all OEPA rules, the Reg Team decided to update BCDES' land application operation in May 2003. My responsibilities were two-fold. First, I was given the task of reviewing all of BCDES' permitted land application sites and characterizing them by the following criteria:

- Soil type(s)
- Slope range
- Hydrologic group

Then, I was responsible for calculating the following two values, for each permitted site:

- Soil erosion/Soil loss value (based on RUSLE – “revised universal soil loss equation”)
- Runoff class value

To determine soil type(s), slope range and hydrologic group for each land application site, I relied almost entirely on the ‘Soil Survey of Butler County, Ohio’, published January 1980. I also referenced the field-specific packets of information prepared by BCDES for OEPA, which contain maps of all fields and delineated application sites. The methods I used are as follows:

1. Use the field-specific information packets and included maps to determine precise location of a field, and then locate that same field within the Soil Survey;
2. Place tracing paper over the field on the Soil Survey map, and delineate the boundaries;
3. Delineate the soil types within the field, if more than one, again using tracing paper;

4. Place the paper with delineated soil types beneath a transparent grid and count the number of 'dots' within the four largest soil type areas;
5. Assign an appropriate percentage of the field to each soil type, so that total percentage equals 100;
6. Use the tables in the Soil Survey to assign the appropriate slope range and hydrologic group to each identified soil type.

To determine Runoff Class Input Values for each soil type, I referred to the OEPA Division of Surface Water Policy Manual 0100.028 – Ohio's Sewage Sludge Rules (8-23-02). By knowing the hydrologic group and slope range for each soil type, I was able to use a table to calculate the Runoff Class.

To determine Soil Erosion/Soil Loss Values (RUSLE modified) for each identified soil type, I employed the help of the local District Conservationist from Hamilton NRCS. Tim Wilson, District Conservationist, calculated all the Soil Loss Values for me. He attempted to explain the basic calculation to me, and although I never understood it completely, I know the following modified "Erosion Index" equation was used:

$$EI = [R \times K \times (L \times S)]/T,$$

Where:

- EI is erosion index, expressed as soil loss in tons per acre per year
- R is the RUSLE reduced rainfall-runoff value
- K is a soil erodibility averaging factor
- L is slope length factor
- S is slope steepness factor
- T is "T value" or tolerable soil loss

Tim Wilson also explained to me that EI values greater than 8 are considered highly erodible.

Upon determining all the values for all the permitted land application sites, as specified above, I developed a table to be used in conjunction with BCDES' internal 'Flow chart for complying

with biosolids nutrient requirements' (i.e. the 'Flow chart for completing the Phosphorus index risk assessment procedure'). The flow chart and table (with recommendations as to which sites are best suited to accept sewage sludge based on erodibility, slope, etc.) are now used by BCDES' biosolids section as a standard practice when determining the agronomic rate application for fields. These two documents, when used correctly, help ensure that the Department is land-applying biosolids in an environmentally-sound and legal manner. [Appendix B]

## **Spill Prevention, Countermeasure, and Control (SPCC) Plan Development and Implementation:**

Spill Prevention Control and Countermeasure regulations, found in 40 CFR Part 112 and originally enacted in 1974, have become increasingly stringent in recent years. SPCC Plans are now required by USEPA for all industrial facilities that have a total aboveground oil storage capacity of 1320 gallons or greater, and/or for facilities that have a single aboveground container with more than 660 gallons of oil storage capacity. Since both of BCDES' Water Reclamation Facilities store a significant amount of diesel fuel and oil for emergency generator use, both were subject to SPCC plan development and implementation. Since I was a qualified intern (and no one else wanted to create and implement such plans), I was assigned to research all SPCC-related requirements, become the resident "spill control expert" and write and implement the plans. It was an assignment that I took very seriously, as spill prevention and control can be critical in times of equipment failure, worker accidents, and natural disasters.

In writing and implementing the SPCC Plans, I had to address the following items:

- Operating procedures to prevent spills,
- Control measures (i.e. secondary containment) installed to prevent spills from reaching navigable waters, and
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill if it reaches navigable water.

In summary, prior to developing the plans I first had to inventory and inspect all oil storage containers at both the LeSourdsville (LES) and Upper Mill Creek (UMC) Regional Water Reclamation Facilities. By physically surveying all the containers through onsite inspections, I was able to see which ones needed replaced due to age and/or structural damage. I was also able to see which ones had the proper secondary containment, and which did not. Next I presented my findings to the Reg Team and proposed recommendations on container removal, container replacement and secondary containment "installation" – recommendations based on regulatory requirements and common sense. The Team agreed with me on most items, and the designated tanks were quickly removed and replaced by the maintenance division. In terms of the

secondary containment issue, the easiest and most important thing the Department did was move all the 55-gallon oil drums from their various locations around the plants into the oil storage buildings located at LES and UMC. These climate-controlled, secondarily-contained oil storage buildings were specifically purchased to safely house chemicals and oils and fuels, and yet they had never been fully utilized. In moving all the 55-gallon drums from their indoor or outdoor locations into the oil storage buildings, the Department eliminated a significant spill threat and created safer work environments. Larger secondary containment structures, such as square plastic pallets with grated flooring, were purchased and placed beneath a few of the larger oil containers. Most large (modern) stationary tanks did not need secondary containment, though, as they were designed and built with adequate containment.

In addition to moving, replacing, and “containing” oil storage totes, the SPCC Plans specified other measures including:

- Purchase and distribution of multiple spill control kits throughout the two (2) plants, with placement of kits in areas most likely affected by spilled oil
- Purchase and distribution of storm water drain covers/plugs
- Purchase and placement of secondary containment tote beneath the used oil storage vessel in the mechanic’s garage at LeSourdsville WRF.
- Creation and distribution of emergency spill “call-down” list with all names and numbers of individuals responsible for spill control and response (“first responders”)
- Proper training to all “first responders” on spill control procedures
- Proper training to all oil-handling employees on operational spill prevention
- Proper training to all oil-handling employees on spill response and countermeasure, including effective use of spill kit contents (sorbent booms, weirs, etc.)
- Creation of procedure for notifying appropriate authorities in the event of a spill, with specified timeframes and updated contact information

Most of items listed above were developed and implemented over several months. Similarly, though the “action items” of the SPCC Plans were developed early on in the planning process, the actual Plans and associated documents took several months to complete. [Appendix C]

## **Woodsdale Landfill:**

### Woodsdale Landfill

The Butler County Department of Environmental Services is in charge of monitoring and maintaining a now-abandoned solid waste dumpsite located on Woodsdale Road. This dumpsite, called Woodsdale Landfill, was operated by the City of Hamilton from 1971 to 1982.

As an intern at BCDES, I was delegated responsibility for several activities related to the Woodsdale Landfill. First, I was responsible for performing a site evaluation to determine the effectiveness of the landfill cap/cover. Second, I was responsible for getting the leachate collection system retrofitted in order to function more efficiently. Finally, I was given the task of monitoring for the subsurface migration of explosive gases.

Performing the site evaluation and cover inspection was fun and simple. I took about a half day and drove and walked the site (about 50 acres total) and visually inspected the structure. I took notes and sketched a diagram of the landfill, denoting “problem areas” where appropriate. All in all, the site was in good shape. The two major problems I encountered were exposed tires and erosion of the cover, and subsequent exposure of buried trash, along the steep sides of the mounds. After performing the inspection, I wrote a brief summary of my findings and gave that and the sketch to BCDES’ maintenance manager. He then had his workers remove the exposed tires and place more cover material on the areas where trash was exposed.

In retrofitting the leachate collection system that surrounds the landfill and collects potentially contaminated runoff and groundwater, I again worked with the maintenance manager and his crew. The leachate system needed retrofitted because BCDES vector truck, which empties the 2000-gallon underground holding tank, could not easily access and/or use the pump-out pipe, which was brittle PVC and often broke during the suction process. Also, the automated level sensors within the tank were not working well, causing the tank to fill up and subsequently back up the whole system before “alerting” SCADA (BCDES’ supervisory control and data acquisition center). While the maintenance workers fixed the level sensor problem, I consulted an engineer about the best way to fix the access/pipe problem. In the end, we took a simple approach and worked with the maintenance crew to install a new 4-inch, stainless steel suction

pipe with a 90° elbow supported by several steel above-ground pipe supports. The pipe was inserted directly through the existing manhole cover and bolted to the cover on the tank. The pipe was installed to a distance of 6 inches from the bottom of the tank, so the tank could be pumped out almost entirely by the vacuor truck. The retrofitted suction pipe has worked well since its installation, and the working level sensors have allowed the system to function properly by not backing up.

Monitoring for the subsurface migration of explosive gases at Woodsdale Landfill is a quarterly (reporting) requirement of OEPA, Division of Solid and Infectious Waste. I first monitored for explosive landfill gases at Woodsdale in May, while assisting the Industrial Services section. To conduct the monitoring, I utilized a properly calibrated Dynamation combustible gas meter attached to a mini-pump, connected to a section of clear tubing. Per standard operating procedure, I first inserted the end of the tubing into the fitting on top of one of six gas monitoring probes (one probe for each of the six 'monitoring wells'). Then I turned on the gas meter unit and pump, and opened the valve fitting on the gas monitoring probe. Next I observed the detected gas concentration as percentage combustible gas by volume and percent LEL (lower explosive level). Gas concentration observations were recorded continuously over a three-minute period. I monitored all six 'wells' for two-three minute cycles, and never detected any gases. According to Industrial Services, BCDES has been monitoring for explosive gases at the Woodsdale site for over six years and has never detected explosive gas. I consider this a good thing.

## OTHER DUTIES

### **319 Grant-funded Wetland Creation Project:**

#### 319 Grant Project

The Butler County Department of Environmental Services often applies for and receives grant money through OEPA's 319 nonpoint source pollution mitigation program. This program, as described by OEPA below, is an implementation-oriented initiative that provides funding for projects that improve Ohio's water resources.

**Ohio's 319 Grant Program and Schedule:** *In 1987 the federal Clean Water Act amendments created a national program to control nonpoint source pollution, established under Section 319 of the Clean Water Act. (33 U.S.C 1329). The Ohio Environmental Protection Agency (OEPA) is the designated water quality agency for Ohio and is responsible for administering Ohio's program. Each year since 1990, Ohio EPA has applied for, received and distributed Section 319 grant funds to correct water quality impairments to Ohio's surface and groundwater resources that are caused by NPS pollution. As a result, more than 200 state and local NPS projects throughout Ohio have been supported, representing an investment of approximately \$26 million of federal, state and local funds. Education, innovation, cost-sharing and voluntary compliance with locally developed watershed management plans are the cornerstones of Ohio's 319 program. (Summary taken from OEPA website - <http://www.epa.state.oh.us/dsw/nps/>)*

Towards the end of my internship, I was asked to manage one of the Department's 319-funded projects. The project – the last to be implemented with funds from a 1999 319 grant award – consisted of the construction and “revegetation” of a one-acre, two-“pool” wetland along the banks of the East Fork of Mill Creek in West Chester Township. Although the project was relatively small in scope, and was in fact an afterthought conceived to spend the remaining \$15,000 of 1999 grant money, I was extremely excited to be involved with it.

My first duty as project manager was to work with Oxbow River and Stream Restoration, Inc., a design-build restoration firm, to develop an acceptable design for the wetland. I rejected the first design I was shown because I thought it looked too “boxy”, with square berms and unnatural lines. The second wetland design was much better, with smoother, more natural lines. Once the

design was agreed upon, I worked with Steve Phillips, construction foreman and owner of Oxbow, to coordinate a good project start-date.

Since Steve had never actually been to the site, and since BCDES had important utility infrastructure onsite that needed protection, I decided to meet with Steve the day he started construction to go over some issues and show him the areas he would need to avoid. Steve and I also walked the site that day and agreed to change the design of the wetland slightly, so that it would be a more elongated, serpentine-shaped pool system paralleling the Mill Creek. Throughout construction, I visited the site from time to time to oversee progress.

Once construction was complete and the wetland and surrounding areas had been seeded with a switch grass/annual rye/orchard grass mix, and after I confirmed that the pools held water, I organized a BCDES volunteer planting event to install native wetland species in and around the constructed pools. I asked the Director of BCDES if I could offer ‘comp time’ to employees that helped out, and he approved. So I sent out a Department-wide email informing everyone of the event, and asked for volunteers. In all, about 15 employees spent an entire Saturday planting flowers, native plugs, shrubs and trees purchased with 319 funds. The event was a big success in my opinion, and everyone that attended left with a new “Environmental Volunteer” t-shirt, a full belly from a great lunch, and sense of stewardship towards the project.

The last thing I did relevant to the wetland was submit a final technical report to OEPA specifying, among other things, the benefits of the project. To summarize, I cited the following benefits of the constructed wetland:

1. Flood control
2. Erosion control
3. Water quality benefits (via nutrient and sediment removal) – Nonpoint source pollution mitigation
4. Habitat for aquatic and terrestrial species

Figures E – N show the site before, during, and soon after wetland construction, and during the volunteer planting event.



Figure E: Pre-construction, facing the riparian corridor of the East Fork of Mill Creek (looking downstream)



Figure F: Pre-construction, facing the riparian corridor of the East Fork of Mill Creek (looking upstream)



Figure G: Construction, facing away from East Fork of Mill Creek



Figure H: Construction, facing the riparian corridor of the East Fork of Mill Creek (looking downstream)



Figure I: Post-construction, facing the riparian corridor of the East Fork of Mill Creek (looking upstream)



Figure J: Post-construction, facing away from East Fork of Mill Creek



Figure K: Post-construction, facing East Fork of Mill Creek



Figure L: Volunteer planting event at wetland



Figure M: Volunteer planting event at wetland



Figure N: Volunteer planting event at wetland

## **Environmental Management System (EMS) Development and Implementation:**

### Environmental Management System (EMS) responsibilities

Perhaps my most important internship responsibility was assisting in the development and implementation of the Department's EMS.

In 2002, the Butler County Department of Environmental Services signed on as a “demonstration agency” with the National Biosolids Partnership (NBP) – a not-for-profit alliance formed in 1997 by the *Association of Metropolitan Sewerage Agencies (AMSA)*, *Water Environment Federation (WEF)*, and *U.S. Environmental Protection Agency (EPA)*. The NBP was formed to advance environmentally sound and accepted (wastewater treatment and) biosolids management practices. In joining the Partnership, BCDES pledged specifically to improve its wastewater and biosolids operations through the development and implementation of an NBP-directed environmental management system for biosolids. In general, an environmental management system for biosolids is a program that documents, monitors and optimizes biosolids management to fulfill regulatory requirements and address other issues of concerns. Also by joining the Partnership, BCDES solidified its commitment to being one of the most elite and progressive public utilities in the state of Ohio.

In order to get familiarized with the requirements of the EMS program, I attended an NBP-sponsored 3-day training workshop in Washington D.C. in June 2003. Through the training, I learned that all demonstration agencies must:

- Develop a comprehensive EMS manual – consisting of 17 specified “elements” or chapters – that describes all aspects of their wastewater and biosolids management operations;
- Train all employees directly or indirectly involved with their wastewater and biosolids management operations on the requirements and benefits of the EMS;
- Implement all provisions of their EMS as set forth in the manual;
- Conduct an internal “systems” audit of their program versus the standards and benchmarks as specified by the NBP; and

- Have an independent, third-party audit company perform a final audit of their program, with the ultimate goal of achieving third-party ‘verification’ (similar to ISO certification).

Most importantly from the training, I began to understand the major benefits of EMS implementation, or in the NBP vernacular, the “desired outcomes”:

1. Environmental Performance
2. Regulatory Compliance
3. Quality Management Practices and Quality Product
4. Public Participation and Acceptance

Upon returning from training with a much better understanding of the purpose and benefits of the EMS program, I set out to complete my first major task – drafting the various elements for inclusion in BCDES’ EMS manual. In developing the elements or chapters, I followed NBP guidance documents to ensure that I was not overlooking any requirements. Furthermore, I attained completed EMS elements from other demonstration agencies that were further along in the development and implementation process – such as Orange County, CA, and Los Angeles, CA – and used them for comparison purposes. While drafting these documents, I also had to get a lot of input and expertise from various BCDES staff members – chiefly the wastewater and biosolids operators – as I did not have a full understanding of our operations and how exactly we did things. Getting “buy-in” and cooperation from the field staff and operators was not always easy, but I managed to do so by stressing the importance of the EMS and constantly citing examples of how the program specifically affects, and oftentimes makes easier, certain job duties.

Upon completing a draft EMS element, I would send the document out to BCDES’ “EMS Team” for review. The Biosolids EMS Team, consisting of staff and personnel from Wastewater Operations, Biosolids, Environmental, Laboratory, Wastewater Collections, Industrial Pretreatment, Information Technology, Engineering, and Office and Communications Support, was formed to help provide clarity and direction to the program. In all, I drafted or assisted in the writing and development of all 17 of the required elements for the environmental

management system for biosolids [Appendix D], which are listed below within one of five major subcategories:

➤ POLICY

1. Documentation of EMS for biosolids
2. Policy (statement)

➤ PLANNING

3. Critical control points
4. Legal and other requirements
5. Goals and objectives (annual)
6. Public participation in planning

➤ IMPLEMENTATION

7. Roles and responsibilities
8. Training
9. Communication and public outreach
10. Operational control of critical control points
11. Emergency preparedness and response
12. EMS documentation and document control

➤ MEASUREMENT – CORRECTIVE ACTION

13. Monitoring and measurement
14. Nonconformances – preventive and corrective actions
15. Periodic biosolids program performance report
16. Internal EMS audit

➤ MANAGEMENT REVIEW

17. Periodic management review of performance

Through the duration of my internship, I kept myself very busy researching BCDES' operations, interviewing key field employees, meeting with the Biosolids EMS Team, and drafting elements as part of the Department's commitment to develop and implement an environmental management system for its wastewater and biosolids operations. I also began working closely with certain sections on implementing the various components of the EMS as required by the NBP. For example:

- I worked with the laboratory to develop and/or update formal standard operating procedures (SOPs) related to the performance of applicable wastewater and biosolids analyses (as part of the Monitoring and Measurement Element).
- I worked BCDES' Industrial Services section on an 'Industrial Spill Response Plan' (as part of the Emergency Preparedness and Response Element).
- I developed a procedure for annual goal setting, and then worked with the Reg Team to establish formal program goals for 2003 (as part of the Goals and Objective Element).
- I helped the Biosolids Manager update the 'Biosolids Spill Contingency Plan' and the 'Sludge Management Plan' (as part of the Emergency Preparedness and Response Element, and the Critical Control Points Element).
- I investigated various electronic document library systems and assisted Information Management staff in the acquisition of Microsoft Sharepoint, a web-based document storage server purchased for the EMS (as part of the EMS Documentation and Document Control Element).
- I worked with wastewater operators on the identification of operational "problem areas", and the development of appropriate controls (as part of the Critical Control Points Element and the Operational Control of Critical Control Points Element)

Though EMS development and implementation is time-consuming and resource-intensive, I feel that the benefits far outweigh the costs. Through my involvement with BCDES' program, I witnessed many positive changes in the Department, and especially in Operations, as a direct result of the EMS.

**Other General Duties:**

Throughout my internship, I represented BCDES at regular meetings such as the Regional Ozone Coalition (ROC), the Air Quality Policy Advisory Committee (AQPAC), Groundwater Protection Consortium, and the Mill Creek Watershed Council (MCWC). Attending these meetings was particularly helpful to me, as I got a chance to meet and network with a multitude of local environmental professionals. I was fortunate to meet some very interesting and very intelligent individuals.

### III. CONCLUSION OF INTERNSHIP

Interning with the Butler County Department of Environmental Services was challenging and busy, but also enlightening. I learned a lot about government work and even more about the general operation of a public utility. I learned about the regulatory chain of command, from federal to state to local entities.

As a new employee, I worked hard on important assignments and projects to show that I was competent and efficient, and as a result I think others viewed me as a true asset to the organization. For my job duties, I was required to use and further develop and improve my technical skills, my verbal and nonverbal communication skills, and my interpersonal skills daily. In six short months, I became the “resident expert” on stormwater management, spill control, and the Environmental Management System. I tried always to present myself in a professional manner through my work and through my interaction with others, and I tried to contribute to the Department in meaningful ways. Daily I worked to absorb as much information as possible about the environmental and regulatory compliance issues faced by a public utility.

My internship was both exciting and monotonous, depending on the day. I thoroughly enjoyed working on such things as the Stormwater Pollution Prevention Plans (SWPPP), the Spill Prevention Control and Countermeasure Plans (SPCC), and the EMS, especially the implementation aspects of them, but was never too keen on lab work. I enjoy performing site assessments and inventories, checking into problems and identifying solutions, which is what I did while working on the SWPPPs, SPCC Plans, and the EMS. I also liked managing the 319 project, and being a member of the Reg Team as the Team constantly worked on important compliance and environmental protection issues, issues that can be addressed in various ways. Because the issues have more than one “answer”, creative thinking and alternative solution analysis are required. This type of thinking and solution development is exciting and enjoyable for me, as it allows me to think outside the proverbial box. Unfortunately, the laboratory setting (as an analyst assistant) at BCDES rarely offered the opportunity for such creative thinking. Simply put, I don’t like to stand behind a bench in a windowless and dreary lab performing the same analyses day after day. I tend to get bored, and I especially don’t like the fact that interpersonal interaction is minimal in such a setting.

All in all, I am happy with my internship experience, and grateful to BCDES for the opportunity. I am proud of the work I did as an intern, and for helping to protect the natural resources of the area. In addition, I made some good friends “at the County”, and the importance of having friends at work cannot be understated in my opinion.

#### IV. FINAL THOUGHTS ON THE INSTITUTE OF ENVIRONMENTAL SCIENCES (IES), MIAMI UNIVERSITY, OXFORD OHIO

IES is a quality program that provides students with a broad knowledge base of environmental issues. I feel that the Public Service Project (PSP) requirement is particularly beneficial, as students learn how to manage a substantial long-term project. The PSP requirement also helps students learn how to address group and individual dynamics issues, which is critical for success in the working world. The PSP “experience” could be even better if more oversight and direction were provided to the groups in the beginning phases of the project development, either by IES staff or project sponsors.

To improve the Institute, I would suggest a few specific things:

1. Condense the two required statistics classes into one course. One four-hour course would provide more than enough statistical knowledge for the “average” environmental professional.
2. Replace the second statistics class with Environmental Law (550), as a requirement.
3. Make Environmental Measurements (601) a three-hour course to accurately reflect the amount of time required by the class. And even as a three-hour course, the number of required written reports could be reduced without losing any effect.
4. Do more “real-world relevant” field exercises in Environmental Measurements (601).

For example:

- a. Have students perform an environmental site evaluation at an industry
- b. Have students conduct a habitat assessment on a local stream (like QHEI)
- c. Have students perform a biological analysis on a local stream (like IBI or ICI)
- d. Have students collect soil samples, and teach them how and why the samples are analyzed in a laboratory
- e. Have students collect water (quality and chemistry) samples, and teach them how and why the samples are analyzed in a laboratory
- f. Have students collect air samples, and teach them how and why the samples are analyzed in a laboratory (could perhaps coordinate with Hamilton County Department of Environmental Services)

5. Make Environmental Policy Making and Administration (613) more structured by focusing discussions, presentations and papers on two or three current environmental issues.
6. Upgrade and update the IES facilities.
7. In general, hold all students to the same standards.

## APPENDICES

Appendix A: Stormwater Pollution Prevention Plan (SWPPP) for Butler County's LeSourdsville  
Regional Water Reclamation Facility

# **Storm Water Pollution Prevention Plan**

**LeSourdsville Regional Water Reclamation Facility  
Butler County Department of Environmental Services**

**March 10, 2003**

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## **1.0 INTRODUCTION**

### **1.1 Background**

In 1972, Congress passed the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waterways. The ultimate goal was to make sure that rivers and streams were fishable, swimmable, and drinkable. In 1987, the Water Quality Act (WQA) added provisions to the CWA that allowed the EPA to govern storm water discharges from industrial activities. Ohio EPA, under the authority of USEPA, published the final notice for Phase II of the General Storm Water Permit Program (effective August 1, 2000) in 2000, which included provisions for the development of a Storm Water Pollution Prevention Plan (SWPPP) by certain industrial facilities discharging storm water, including municipally-owned wastewater treatment works.

Development, implementation, and maintenance of this SWPPP will provide Butler County Department of Environmental Services' (BCDES) LeSourdsville Regional Water Reclamation Facility with the tools to reduce pollutants contained in storm water discharges and comply with the requirements of the General Storm Water Permit issued by the State of Ohio (NPDES general permit number: OHR000003). This plan, which includes provisions for amendment, will serve as the major guidance document for storm water concerns at LeSourdsville both now and in the future. The primary goals of the SWPPP will be to:

- Identify potential sources of pollutants that affect the quality of storm water discharges from the site;
- Describe the practices that will be implemented to prevent or control the release of pollutants in storm water discharges; and
- Create an implementation schedule to ensure that the practices described in this SWPPP are implemented and to evaluate the plan's effectiveness in reducing the pollutant levels in storm water discharge.

## **1.2     SWPPP Content**

This SWPPP, consistent with all other facility plans associated with NPDES permits, includes the following:

- Identification of the SWPPP coordinator with a description of responsibilities;
- Identification of the SWPPP implementation team members;
- Description of the site and site activities, including storm water drainage regime;
- Description of potential storm water contaminants;
- Description of storm water management measures and controls and various Best Management Practices (BMPs) necessary to reduce pollutants in storm water discharge;
- Description of the facility monitoring plan, including annual comprehensive site compliance evaluations; and
- Description of the implementation schedule and provisions for amendment of the plan.

## **2.0 SWPPP COORDINATOR AND DUTIES**

The SWPPP coordinator for the LeSourdsville Regional Water Reclamation Facility is the Water Reclamation Manager from the Operations Division of Butler County Department of Environmental Services. The coordinator's duties will include the following:

- Create a SWPPP team to aid in the implementation of the SWPPP;
- Implement the SWPPP;
- Oversee the maintenance practices identified as BMPs in the SWPPP;
- Develop, implement and oversee employee training according to this plan;
- Conduct or provide for inspection or monitoring activities according to this plan;
- Identify other potential pollutant sources and make sure they are added to this plan;
- Identify any deficiencies in the SWPPP and make sure they are corrected;
- Prepare and submit reports as required by this plan; and
- Ensure that any changes in facility operation are addressed in the SWPPP.

To aid in the implementation of the SWPPP, individuals from within the Butler County Department of Environmental Services will be designated as members of the storm water team. These individuals will help the coordinator by ensuring that all housekeeping and monitoring procedures are implemented, as well as ensuring the integrity of both structural and procedural BMPs. The storm water coordinator and team members will also utilize internal resources available through the Department to assist in this implementation process.

### **3.0 FACILITY DESCRIPTION**

#### **3.1 Facility Location**

The LeSourdsville Regional Water Reclamation Facility, operated by Butler County Department of Environmental Services, is located at 5260 Hamilton-Middletown Road in Hamilton, Ohio, 45011. Appendix A.1 presents a map showing the general location of the site. The facility is located in Lemon Township (Butler County) just east of the Great Miami River, south of the city of Middletown, OH, and west of the city of Monroe, OH.

#### **3.2 Site Activities**

The LeSourdsville Regional Water Reclamation Facility services southeastern Butler County and parts of western Warren County. The facility accepts municipal and industrial wastewater and, after an extensive treatment process, discharges the effluent into the Great Miami River. The LeSourdsville facility treats on average seven (7) million gallons per day, with a maximum capacity of 12 million gallons per day. Based on site activities, the facility's two-character code is TW (according to OEPA NOI instructions). The facility is operated 24 hours per day, seven (7) days per week. Typically, the facility is fully manned eight (8) hours per day, five (5) days per week. In addition, qualified personnel monitor the facility at all times (24 hours per day, seven (7) days per week) through an on-site Supervisor Control and Data Acquisition (SCADA) system.

At the most basic level, LeSourdsville Regional Water Reclamation Facility treats wastewater via a three- or four-step process. First, influent is pumped into the facility through the trunk line and passes through several bar screens and grit systems to remove debris, grit and other large materials. Second, the wastewater is mixed with Return Activated Sludge (Ras) and inserted into the 6 million gallon per day (mgd) carousel oxidation ditch. At this point, the wastewater/Ras mixture is blended with the existing Mixed Liquor Suspended Solids (MLSS) and aerated. BCDES operates on a 9-day sludge age cycle and runs aerators constantly to assure both nitrification and de-nitrification. Next, after the wastewater has been sufficiently mixed and aerated, it exits the carousel ditch and travels to the clarifier tanks. Here the MLSS settle out and are either returned to the headworks of the plant or pumped ("wasted") to the digesters for removal. After the solids settle, the clear, treated water travels through a set of flow-regulating weirs. From May to October, all water passes under U.V. lamps for disinfection purposes. Finally, the water is aerated by step aerators ("cascades") as it travels via gravity to the effluent discharge point on the Great Miami River.

The facility/operation consists of a pretreatment program, a preliminary treatment facility, a system of two (2) large oxidation ditches (one active, one inactive), several aerobic digester storage and blending tanks, five (5) final clarifier tanks, a belt filter press building, a tertiary filter building, a chlorine building and a sheltered biosolids storage pad. The facility also has an administrative building, a training building, a maintenance garage, and a service/sludge garage.

### **3.3 Site Description**

The total area of the site, which is entirely enclosed by security fencing, is approximately 17.36 acres (or 70,270 m<sup>2</sup>) and approximately 75 percent is impervious (i.e. pavement, buildings, open-water clarifier tanks and open-water oxidation ditch system). The remainder of the site consists of manicured grassy areas, grassed buffer zones between the operational areas and outer fences, a compacted gravel area for gravel storage, and other miscellaneous unpaved roadways and undeveloped areas. Appendix A.2 is a facility layout map showing the major site features and the locations of the storm drains. In addition to the enclosed area at LeSourdsville, BCDES also owns a tract of undeveloped, heavily vegetated (grassed and treed) land to the south and southwest of the front access gate. This area will not be further discussed as its runoff is unaffected by the wastewater treatment activities of LeSourdsville Regional Water Reclamation Facility.

### **3.4 Storm Water Drainage System and Drainage Regime of Site**

There are eight (8) storm water outlets surrounding the LeSourdsville Regional Water Reclamation Facility. These outlets drain all of the storm sewers on site. Therefore the site can be divided into eight (8) major storm sewer drainage areas. In addition, parts of the north-to-northwestern side of the facility drain via overland and sheet flow directly into a nearby, unnamed tributary of the Great Miami River, bypassing the storm sewers completely. The majority of the drainage areas are highly impervious, with runoff coefficients ranging from medium (40-70% impervious, such as packed soil) to high (70-100% impervious, such as asphalt). All of the storm water that drains from the facility eventually discharges into the unnamed tributary, which inflows to the Great Miami River at approximately river mile 45. The Great Miami River is a major tributary to the Ohio River. Appendix A.2 shows the locations of the drainage areas and apparent storm water drainage patterns (prior to BMP implementation). A detailed description of each drainage area can be found below.

- Drainage area DA-1 is located at the southwest side of the facility, near the front access security gate. This area is relatively pervious and consists of a grassy lawn and a paved road.
- Drainage area DA-2, located to the northwest of DA-1, is highly impervious (asphalt) with patches of gravel and grass. DA-2 consists of an oil container storage area, an equipment storage lot, and a vehicle wash pad.
- Drainage area DA-3 is located north of DA-2 and consists partially of the biosolids storage pad. In addition to the covered biosolids pad and asphalt work zone, the area is grassed with a few paved roadways. The area is mainly impervious.
- Drainage area DA-4 contains a section of the biosolids storage pad. This area is quite small with one storm drain serving the vicinity. It is highly impervious.

- Drainage area DA-5, to the northeast of DA's-3 & 4, consists of the area between the final clarifier tanks. This area is partially grassed with some asphalt pavement and a gravel storage zone.
- Drainage area DA-6 is located between the final clarifier tanks (numbers 3 and 4) and the two (2) oxidation ditches. This area also consists of grass, paved roads and a gravel storage zone.
- Drainage area DA-7, at the northeast corner of the LeSourdsville site, is a small drainage area covered by grass and gravel. This area consists of the odor adsorption field and part of the septage receiving station. This area is highly impervious.
- Drainage area DA-8 drains storm water through outlet 8, situated to the east of the pretreatment station. DA-8 is the largest drainage area at LeSourdsville, and essentially consists of the entire southeast side of the facility. DA-8 consists of paved parking lots, vehicle storage zones and roadways, grassy areas, compacted soil areas, and several maintenance and administrative buildings. Approximately half of DA-8 is drained via an open, paved trough running from southwest to northeast.

As mentioned above, in addition to these eight (8) drainage areas, a significant portion of the north-to-northwestern side of the plant drains directly via overland and sheet flow into the adjacent, unnamed tributary of the Great Miami River. This drainage area consists primarily of grassed and compacted dirt areas, with smaller sections of paved asphalt and gravel intermixed. During heavy rain events, sheet flow from the biosolids storage pad and loading zone runs off from these areas and drains into the nearby stream. Although a sanitary-routed trench drain along the northwest face of the biosolids pad is present and functional, the topography of the area prevents the complete capture and subsequent treatment of the storm water.

## **4.0 IDENTIFICATION OF POTENTIAL STORM WATER CONTAMINANTS**

This section identifies significant materials located at the facility that may contaminate storm water. Additionally, the section presents a record of past spills and leaks, identifies potential areas of storm water contamination, and summarizes available storm water sampling data.

### **4.1 Significant Exposed Material Inventory**

Few materials used at LeSourdsville Regional Water Reclamation Facility have the potential to be present in storm water runoff. Most of the substances maintained onsite are stored indoors or in covered areas, which eliminates possible contact with, and contamination of, storm water. The only two (2) significant materials that have the potential to be exposed to precipitation are listed and described below. See Appendix B.1 for additional information regarding these two (2) exposed materials.

- Diesel fuel: A constant supply of diesel fuel, which is a clear, blue-green to yellow liquid (unless dyed red), is kept at LeSourdsville for use in heavy equipment like front-end loaders. Diesel fuel is a potential storm water contaminant source as it contains such pollutants as benzene, petroleum distillate, oil & grease, naphthalene, toluene, and xylenes. Up to 500 gallons of off-road type, high sulfur diesel is stored in a large concrete tank located southwest of the biosolids storage pad in Drainage Area 3. While this tank is secondarily contained, the potential for storm water contamination still exists. This contamination threat will be addressed through the Spill Prevention Control and Countermeasure (SPCC) plan, as detailed in Section 5.3 of this plan. In addition, this SWPPP calls for the collection and treatment of the storm water captured in the area surrounding this diesel tank (See Section 5.9: 'Drainage Area 3').
- Biosolids (sludge): Biosolids handled and stored at LeSourdsville are another significant source of potential storm water contamination. Biosolids, brown to black mud-like substances produced from the wastewater treatment process, are a potential storm water contamination source as they may contain high levels of nitrogen, phosphorus, metals, suspended solids, fecal bacteria and/or BOD. While biosolids are stored on the covered, biosolids storage pad at the northwest end of the facility, precipitation still contacts sludge during rain and snow events. Contact occurs because biosolids are inevitably distributed in small amounts throughout the facility, and especially to the northwest of the pad in the materials transfer area – a result of sludge-covered wheels and chasses on BCDES dump trucks and front-end loaders. This contact introduces contaminants associated with biosolids into the storm water flows of the facility. In addition, precipitation can contact the biosolids pile directly during high-intensity rain events, as there are no sidewalls to the storage pad. To prevent storm water contamination by biosolids, this SWPPP calls for the capture and treatment of runoff from in and around the biosolids storage pad and materials transfer area (See Section 5.9:

‘Biosolids Storage Pad’). Sidewalls will also be erected around the pad to prevent direct precipitation on the biosolids storage area.

Various Hydraulic oils, lubricating oils, motor oils, mineral spirits and paints, along with supplies of gasoline and kerosene, are also stored at LeSourdsville Regional Water Reclamation Facility. While these substances could potentially contaminate storm water, they are contained in covered barrels or totes and stored primarily in the climate-controlled, secondarily contained ‘oil storage building’ located in Drainage Area 2. Small volumes of these substances might also be found in other locations throughout LeSourdsville, but always in covered buildings where the threat of storm water contact is nonexistent. In addition, a second aboveground diesel storage tank is located at LeSourdsville near the pretreatment facility at the northeast end of the plant. This diesel tank, used for emergency generator purposes only, is not a concern in terms of storm water pollution as it is specifically designed to prevent spills, leaks, and overfills (through secondary containment, insulation, etc.). Contact between diesel fuel and precipitation is eliminated by this containment system.

#### **4.2 Historic Spill and Leak Record**

According to Butler County Department of Environmental Services records, there have been no significant spills or leaks of toxic or hazardous pollutants in uncovered areas at LeSourdsville Regional Water Reclamation Facility in the past three (3) years.

#### **4.3 Potential Areas for Storm Water Contamination**

The following potential source areas of storm water contamination were identified and evaluated (refer to Appendix A.2 for identified areas of concern):

- Biosolids storage pad: The end product of the LeSourdsville wastewater treatment process is called biosolids (also known as sludge). LeSourdsville biosolids are stored on the covered biosolids storage pad on the northeast side of the plant prior to incorporation into agricultural fields or disposal in a landfill. BCDES trucks dump “new” biosolids in this storage area while a backhoe loads “old” biosolids into trucks for removal. Although beneficial to farmers as a soil amendment, biosolids can potentially contaminate storm water. For instance, runoff exposed to biosolids might contain high levels of nitrogen, phosphorus, metals, suspended solids, fecal bacteria and/or BOD.
- Heavy equipment and truck parking lot: BCDES heavy equipment, trucks, vans and cars are parked on the paved lot near the entrance of the plant. Leaking fluids from parked vehicles stored on this lot, northeast of the administrative and maintenance buildings, are potential storm water contaminants. These contaminants may contain oil & grease, heavy metals, mineral oil, benzene, ethylene glycol, glycols, MTBE, naphthalene, petroleum distillates, xylenes and toluene.

- Employee parking lot: Employees park their personal vehicles in the parking lot area located near the entrance of the plant, to the southwest side of the administrative and maintenance buildings. Leaking fluids from the parked vehicles in this area are also potential storm water contaminants. These contaminants may contain oil & grease, heavy metals, mineral oil, benzene, ethylene glycol, glycols, MTBE, naphthalene, petroleum distillates, xylenes and toluene.
- Drainage area 2 (DA-2): Drainage area 2 is located at the southwest side of the facility (see section 3.4). This area contains an oil storage unit area, a heavy equipment parking/storage area, and an equipment wash pad. Potential storm water contamination sources in this area include oil containers, leaking fluids from heavy equipment, and detergents used to wash equipment. Such contamination sources may contact storm water during routine material transport, handling, and/or usage. These contaminants may contain oil & grease, heavy metals, mineral oil, benzene, ethylene glycol, glycols, MTBE, naphthalene, petroleum distillates, xylenes and toluene. Other contaminants may include (high levels of) phosphates and/or zeolites, along with potentially toxic surfactants.
- Diesel fueling areas: There are two (2) aboveground diesel fuel tanks at LeSourdsville Regional Water Reclamation Facility. However, just one (1) of these tanks, the one used for off-road equipment filling, is a potential source of storm water contamination in this area. This tank, located southwest of the biosolids storage pad in Drainage Area 2, is a threat to storm water quality because it is not adequately constructed so as to prevent spills, leaks and overfills. The other tank, northeast of the pretreatment facility and used solely for emergency generator filling, is not a threat as it is sufficiently contained and protected from precipitation (review Section 4.1: ‘Significant Exposed Materials Inventory’). A leaking diesel tank or a diesel spill can degrade runoff quality by introducing such contaminants as naphthalene, oil & grease, petroleum distillate, and xylenes.
- Spoil hill – The “spoil hill”, located at the northeast end of the facility, is the area where BCDES trucks dump and temporarily store soil and other construction type materials (i.e. concrete) removed during water main construction and/or maintenance projects. This area has the potential to contaminate storm water with sediments via erosion. Spoil hill erosion might increase the amount of sediment in runoff, potentially degrading both water quality and biological integrity of the receiving waters.

#### **4.4 Summary of Available Storm Water Sampling Data**

Storm water sampling was conducted at LeSourdsville Regional Water Reclamation Facility on eight (8) different occasions from September 15, 2002 to November 10, 2002. Samples were collected at the eight (8) storm water outlets surrounding the plant, using standard sampling protocol. Samples were analyzed both at a local contract laboratory and at BCDES LeSourdsville Wastewater Lab. The following methods were used to analyze the samples for the listed parameters:

- ICPMS EPA 200.8: Cd; Cr; Cu; Ni; Pb; Zn
- CVAA EPA 245.1: Hg
- EPA 1664A: oil & grease
- EPA 351.2/351.3: TKN
- SM 4500-NH<sub>3</sub> F: NH<sub>3</sub>
- SM 4500-NO<sub>3</sub> F: NO<sub>2</sub>/NO<sub>3</sub>
- SM 5220D HACH modified: COD
- SM 5210B: CBOD
- EPA 160.2: TSS

Future storm water sampling and analysis will be conducted according to approved methods 40 CFR (Code of Federal Regulations) Part 136.

#### **4.5 Risk Identification and Summary of Potential Pollutant Sources**

The potential exists for storm water quality degradation at the LeSourdsville Regional Water Reclamation Facility. The most pressing concerns are storm water contamination from biosolids, sediment from roadways and the spoil hill, and chemicals and/or fuels from vehicles, equipment and storage tanks.

At the facility, large quantities of biosolids are produced, stored, and transported to off-site locations. The biosolids storage pad area is the most obvious location for potential storm water contact and contamination. However, small quantities of biosolids can be found on roads and parking pads throughout the entire facility – a result of the sludge-caked tires and chasses on BCDES biosolids dump trucks. Runoff polluted with biosolids is a concern as biosolids can contain high levels of nutrients, fecal bacteria, BOD, and suspended solids.

The second major area of concern at LeSourdsville is the erosion associated with the spoil area. In particular, the spoil hill at the northeast end of the facility has the potential for contributing significant amounts of sediment to site runoff. Runoff with high sediment value is detrimental to the water quality and biological integrity of receiving surface waters.

Additional concerns at LeSourdsville include the on-site handling and storage of oil and other hazardous chemicals; vehicle and equipment maintenance and storage; and the filling, storage and dispensing of diesel fuel. Fluids such as oil, gasoline, paint, and diesel fuel leaking from storage units or equipment or spilled during handling pose a significant threat to storm water quality. These fluids, when in contact with runoff, can introduce such pollutants as oil & grease, heavy metals, mineral oil, benzene, ethylene glycol, glycols, MTBE, naphthalene, petroleum distillates, xylenes and toluene.

## **5.0 STORM WATER MANAGEMENT CONTROLS**

This section discusses the storm water management controls required by the permit and describes the management practices selected to address the areas of concern identified in Section 4 of the SWPPP.

### **5.1 Good Housekeeping**

Good housekeeping refers to the maintenance of a clean and orderly facility. LeSourdsville Regional Water Reclamation Facility is at present a well-run, clean and orderly operation. Nevertheless, to improve on the cleanliness of the operation and to reduce the potential for storm water contamination, several facility-wide “good housekeeping” BMPs should be implemented. A description of these BMPs can be found in Section 5.9.

### **5.2 Preventive Maintenance**

Preventive maintenance refers to the inspection and maintenance of storm water management devices as well as inspecting and testing facility equipment and systems to uncover conditions that could cause a breakdown or failure resulting in discharges of pollutants to surface waters. Discussion of facility equipment and system maintenance and inspection can be found in Section 5.9.

### **5.3 Spill Prevention and Response Procedures**

LeSourdsville Regional Water Reclamation Facility is in the process of developing a Spill Prevention Control and Countermeasure (SPCC) plan, which will include best management practices (BMPs) for oil and oil-byproduct storage and handling procedures. The SPCC plan, to be completed April 17, 2003 according to USEPA Oil Pollution Prevention regulation under the authority of the Federal Water Pollution Control Act, will include BMPs that prevent storm water contamination. The plan will also include employee training mandates, emergency notification information, spill response procedures, and documentation guidelines. This plan will be kept on site at all times in the LeSourdsville Central File, located in the administration building, where it will be available to inspectors. Provisions from the plan will be implemented by August 18, 2003. Since these BMPs will be included in the SPCC plan, they are not included here.

LeSourdsville Regional Water Reclamation Facility also has a spill prevention and response plan for sludge, called the Biosolids Spill Contingency Procedure. The purpose of this plan is to ensure that specific measures are carried out to prevent spills of biosolids and to provide a plan in the event of an accidental spill during the loading, unloading and transportation of biosolids from county storage facilities to final disposal at land application sites or a sanitary landfill. A copy of this plan can be found in Appendix C.

## **5.4     Inspections**

Visual inspections of all storm sewer inlets, catch basins and swales will be made every six (6) months during dry weather conditions for evidence of non-storm water discharges. An employee under the SWPPP coordinator's direction will complete the visual inspection. The dry weather inspections will verify the site is not discharging sanitary or process water to storm sewers. If non-storm water discharges are discovered, the SWPPP coordinator will make the necessary structural and/or operational modifications to rectify the situation as quickly as possible. Information recorded on the inspection log sheet shall include: inspector name, date of inspection, storm sewer inlet/basin location, inspection results, potential significant sources on non-storm water discovered through testing, and actions taken to remedy the situation if any. Inspection records shall be maintained on site. Blank dry-weather inspections forms can be found in Appendix D of this SWPPP.

LeSourdsville Regional Water Reclamation Facility will also perform visual inspections of all storm sewer inlets, catch basins and swales every six (6) months during rain events to look for evidence of storm water contamination. Inspections will be conducted within the first 30 minutes of discharge or soon thereafter, but not exceeding 60 minutes. The visual inspection shall include any observations of color, odor, turbidity, floating solids, foam, oil sheen, or other obvious indicators of storm water pollution. If storm water contamination is discovered, the SWPPP coordinator will take the necessary steps to prevent future contamination via structural and/or operational modification. Information recorded during the semiannual (2/year) inspection shall include: inspector name, date of inspection, storm sewer inlet/basin location, inspection results, potential sources of storm water contaminants if discovered, and actions taken to remedy the situation if any. Inspection records shall be maintained on site. Blank wet-weather inspections forms can be found in Appendix E of this SWPPP.

In addition to these visual inspections of the storm sewer system, LeSourdsville employees will also conduct routine inspections of equipment and facility areas as designated by provisions in Section 5.9.

## **5.5 Employee Training**

An employee training program will be developed and implemented to educate BCDES employees about the requirements of the SWPPP. This education program will include background on the components and goals of the SWPPP and hands-on training in spill prevention and response (as dictated by SPCC plan and Biosolids Spill Contingency Procedure), good housekeeping, proper material handling, disposal and control of waste, container filling and transfer, and proper equipment storage, washing, and inspection procedures. All new employees will be trained by qualified personnel within 1 month of their start date. Additionally, all employees will be required to participate in a refresher training course once every five (5) years. An employee sign-in sheet for the refresher course can be found in Appendix F of this document. The training program will be reviewed annually by the SWPPP team to determine its effectiveness and to make any necessary modifications to the program.

## **5.6 Record-keeping and Internal Reporting Procedures**

Records, reports and monitoring information described in this SWPPP must be retained for at least six (6) years beyond the posted date of said record, report, and/or monitoring event (unless explicitly noted elsewhere in this plan). All such documents shall be kept in the LeSourdsville Central File, located in the administration building. These records shall be made available to the state or federal compliance inspection officer upon request. These records include, but are not limited to, wet and dry weather storm sewer inspection results, employee training records, and documented storm water maintenance activities. In addition, records of significant spills or leaks, along with remediation efforts, will be maintained on site according to SPCC and/or Biosolids Spill Contingency Procedure directives.

## **5.7 Non-Storm Water Discharges**

Potential significant sources of non-storm water flow are minimal at LeSourdsville. Besides possible flows from fire fighting activities, there is just one (1) potential significant source of non-storm water that may be able to combine with storm water discharge at LeSourdsville Regional Water Reclamation Facility. This potential source is pavement washwater. Pavement washings have in the past been conducted on facility roads and parking pads, potentially supplying a source of non-storm water flow in the storm sewer system. To eliminate this potential source of non-storm water discharge, BCDES will in the future wash pavements in such a way so as to direct all washwater into nearby grassy areas. By directing this water into grassy areas and vegetated buffer zones next to roads and parking pads, two (2) things will be accomplished: the water will be filtered of contaminants, and a significant source of non-storm water flow will be minimized. In situations where pavement washings cannot be completed without some non-storm water flow entering the storm sewers, the vulnerable catch basins and/or inlets will be covered and the collected water will be swept/squeegeed into a grassy area.

Based on results of visual evaluations of storm sewer drainage points and practical knowledge of facility operations, BCDES certifies that storm water discharges from LeSourdsville Regional Water Reclamation Facility do not contain significant non-storm water flows. Results from storm water sampling also support this statement. As noted in Section 4.4, storm water sampling was conducted at LeSourdsville on eight (8) different occasions from September 15, 2002 to November 10, 2002. Samples were collected at the eight (8) storm water outlets surrounding the plant, using standard sampling protocol. Samples were analyzed both at a local contract laboratory and at BCDES LeSourdsville Wastewater Lab. The samples were analyzed for NO<sub>2</sub>/NO<sub>3</sub>; TKN; O&G; Cd; Cr; Cu; Ni; Pb; Zn; Hg; COD; NH<sub>3</sub>; CBOD; and TSS (see Section 4.4 for a description analysis methods). The results of the analysis indicate that none of these pollutants were at significant levels in any of the storm water samples, suggesting insignificant non-storm water contribution and overall high storm water quality.

Section 5.4 summarizes future procedures to be used to detect non-storm water discharges at LeSourdsville Regional Water Reclamation Facility.

## **5.8     Sediment and Erosion Control**

A description of the best management practices designed to reduce erosion and thus improve runoff quality can be found in Section 5.9.

## **5.9 Storm Water Management Practices**

Upon reviewing the potential pollutants at the facility and those associated with facility operations, LeSourdsville Regional Water Reclamation Facility, under the direction of BCDES, prepared a list of planned best management practices (BMPs). When implemented, these BMPs will control the discharge of potential pollutants in storm water runoff from each area of concern. This list of BMPs was reviewed by the operations manager and storm water team for applicability and feasibility. Review Appendix A.2 for drainage area delineations.

### **Site Wide Control Measures**

To prevent storm water contamination from the entire site, the following BMPs will be implemented at LeSourdsville Regional Water Reclamation Facility over the next five (5) years:

- As an ongoing practice, BCDES vehicles and equipment will be inspected and maintained, at minimum, every six (6) months to ensure that they are operating properly and not leaking any potentially harmful pollutants.
- As an ongoing practice, routine inspections of outdoor equipment and material storage areas will be conducted on an annual basis at LeSourdsville Regional Water Reclamation Facility. Obsolete or damaged equipment, vehicles, and parts will be reclaimed, recycled or properly disposed of in accordance to local guidelines.
- As an ongoing practice, litter and other debris will be picked up regularly at LeSourdsville Regional Water Reclamation Facility based on site conditions.
- As an ongoing practice, in an attempt to reduce the occurrence of sedimentation and erosion during on-site construction projects, silt fences will be strategically placed around exposed soil and mud to minimize storm water degradation. In addition, bales of straw will be placed in and around the trenches that drain these construction sites to further reduce sedimentation rates. Sediment control at construction sites greater than one (1) acre in size will be dictated per the requirements and recommendations from *Rainwater and Land Development: Ohio's Standards for Storm Water Management, Land Development and Urban Stream Protection* (Second Edition, Ohio Department of Natural Resources, 1996).

- By August 18, 2003, the Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented for the LeSourdsville facility. This SPCC Plan will specify procedures related to oil and oil-byproduct management, handling, and spill prevention and response. The plan will detail employee training requirements, inspection requirements and structural modification requirements. Within the contents of the plan, specifications will be made for explicit (procedural) BMPs necessary for the prevention of storm water contamination by oil and/or oil-byproducts.
- By August 18, 2003, spill control kits will be strategically located at LeSourdsville Regional Water Reclamation Facility and employees will be trained on their correct usage. Locations of such kits, training programs, and other relevant information regarding spill control procedures will be designated according to SPCC specifications.
- Within six (6) months of the date of this plan, the entire storm sewer drainage system at LeSourdsville will be cleaned by a BCDES truck-mounted vacuum unit. After this initial cleaning the drainage system, including inlets, catch basins and outlets, will be cleaned as needed based on semiannual (2/year) visual inspection results.
- Within three (3) years of the date of this plan, existing ecologically-minded landscape management and maintenance policies will be expanded at LeSourdsville Regional Water Reclamation Facility. Expanded policies will call for a decreased reliance on chemical pesticides, herbicides and fertilizers. When needed, these chemicals will be applied in small doses according to recommended usage instructions. Chemical usage on or near streambanks or other riparian areas will be avoided. Chemical applications before storms and/or when soils are saturated will also be avoided.
- Within four (4) years of the date of this plan, uncontrolled on-site vehicle and/or equipment washing will be prohibited. All future vehicle and/or equipment washing will take place per the directives listed in Section 5.9, 'Site-Specific Control Measures: Drainage Area 8'.

- Within five (5) years of the date of this plan, the long-term storage ‘spoil hill’ at the northeast end of facility grounds will be closed to large-volume dumping. This spoil hill is the area of greatest concern at LeSourdsville for erosion potential. Prior to closing, much of the spoil material (soil, concrete, etc) will be transported off site – significantly reducing the size of the hill. Once the hill is reduced in size, the area will be smoothed out and revegetated with grasses and other native plant species. Closing this site and eliminating most truck traffic will minimize the potential for storm water contamination by sediment. Establishing grassy vegetation on the spoil hill site will further reduce rates of erosion, effectively improving runoff and receiving water quality. Prior to closure, other erosion management BMPs will be utilized at LeSourdsville Regional Water Reclamation Facility to minimize storm water degradation via sediment loss on and near the spoil hill.

### **Site-Specific Control Measures:**

To prevent storm water contamination in specific areas at the LeSourdsville facility, the following BMPs will be implemented over the next five (5) years:

#### **Drainage Area 1:**

No specific BMPs will be implemented for DA-1 (small region near front access security gate), as this area has little potential to negatively impact storm water. Review ‘Site Wide Control Measures’ for a description of BMPs and good housekeeping procedures designed to minimize storm water contamination throughout the entire facility.

#### **Drainage Area 2:**

Drainage Area 2 has a high potential to impact storm water at LeSourdsville Regional Water Reclamation Facility. DA-2, as delineated in Appendix A.2, is the site of a heavy equipment storage lot, an oil storage container, and an equipment wash pad. Development and implementation of the SPCC plan at LeSourdsville, along with the distribution of spill control kits, will help minimize the chance of storm water contamination both in DA-2 and throughout the facility (Review Section 5.9: ‘Site Wide Control Measures’). To prevent storm water pollution from this area specifically, the following BMP will be implemented:

- Within four (4) years of the date of this plan, the equipment wash pad located in Drainage Area 2 will be closed. At that time, all equipment and/or vehicle washing will be strictly prohibited in the area. See ‘Site-Specific Control Measures: Drainage Area 8’ for a description of where BCDES equipment and vehicles will be washed in the future.

### **Drainage Area 3**

Drainage Area 3 has a high potential to impact storm water at LeSourdsville Regional Water Reclamation Facility. Drainage Area 3 drains a small part of the biosolids storage pad as well as the diesel fueling area. Development and implementation of the SPCC plan at LeSourdsville, along with the distribution of spill control kits, will reduce the chance of storm water contamination in DA-3 and throughout the facility (Review Section 5.9: ‘Site Wide Control Measures’). To prevent storm water pollution from DA-3, the following BMP will also be implemented:

- Within two (2) years of the date of this plan, the storm sewer inlet nearest to the biosolids storage pad in DA-3 will be rerouted and connected to a sanitary sewer line. Rerouting this inlet, located southwest of the pad and adjacent to the diesel tank, should substantially improve the quality of runoff from DA-3.

### **Drainage Area 4**

General good housekeeping Best Management Practices will be implemented for DA-4 (region to the north of biosolids storage area) at this time. Although DA-4 is directly adjacent to the biosolids pad and thus the possibility for storm water pollution does exist, BCDES believes that the specific BMPs to be implemented at the biosolids storage pad will effectively reduce most potential contamination (See Section 5.9: ‘Site-Specific Control Measures: Biosolids Storage Pad’). Review also ‘Site Wide Control Measures’ for a description of BMPs and good housekeeping procedures designed to minimize storm water contamination throughout the entire facility.

### **Drainage Area 5**

No specific BMPs will be implemented for DA-5 (region between final clarifier tanks 3, 4, and 5), as this area has little potential to negatively impact storm water. Review ‘Site Wide Control Measures’ for a description of BMPs and good housekeeping procedures designed to minimize storm water contamination throughout the entire facility.

### **Drainage Area 6**

No specific BMPs will be implemented for DA-6 (region between oxidation ditch structure and clarifier tanks 3 and 4), as this area has little potential to negatively impact storm water. Review ‘Site Wide Control Measures’ for a description of BMPs and good housekeeping procedures designed to minimize storm water contamination throughout the entire facility.

### **Drainage Area 7**

DA-7 drains a significant portion of the septage receiving area. As a result, a spill or leak at the septage station could potentially degrade storm water quality within DA-7. The distribution of spill control kits will reduce the likelihood of storm water contamination in the event of a spill in both this area and throughout the facility (Review Section 5.9: ‘Site Wide Control Measures’). In addition, to prevent storm water contamination in this area specifically, the following BMP will be implemented:

- Within one (1) year of the date of this plan, the ‘septage-receiving’ standard operating procedure (SOP) will be developed and implemented to minimize the likelihood of an untreated septic waste spill. Minimizing the chance of a spill will effectively minimize the potential for storm water contamination in this area.

### **Drainage Area 8**

As noted above, DA-8 is the largest drainage area at LeSourdsville and essentially consists of the entire southeast side of the facility. Because of its size and the fact that it contains several paved parking lots, vehicle storage zones and roadways, there is potential for contact of storm water and contaminant sources. See ‘Site Wide Control Measures’ for a description of BMPs and good housekeeping procedures designed to minimize storm water contamination throughout the entire facility, and in particular Drainage Area 8. Additionally, the following site-specific BMPs will be implemented:

- Within four (4) years of the date of this plan, a new and fully enclosed vehicle storage building will be constructed at LeSourdsville Regional Water Reclamation Facility. This building, to be situated near the front access gate at the southwest corner of the facility, will be used to store many of the BCDES vehicles and heavy equipment units that are currently stored in outdoor parking lots in Drainage Area 8. By storing these vehicles and other pieces of machinery indoors, the potential for storm water contamination via leaking, rusting and/or faulty equipment will be effectively minimized.
- Within four (4) years of the date of this plan, an enclosed vehicle and equipment wash bay will be constructed at LeSourdsville as part of the vehicle storage building construction project. The bay will be located in Drainage Area 8, near the front access gate of the facility. This wash bay, to be surrounded by an impervious concrete barrier, will prevent the dispersal of potential storm water contaminants such as biosolids or detergents during washing. The drains in the wash bay will be connected to a sanitary line to ensure that all water from this area is delivered to the head of the facility for treatment. All BCDES vehicles will be washed in this area only.

**OR**

Within four (4) years of the date of this plan, Butler County Department of Environmental Services will contract with Ohio Department of Transportation

(ODOT) to use their facility located on Kyles Station Road for all heavy equipment and large truck wash needs. This ODOT facility, situated in Liberty Township, is equipped with enclosed wash bays connected to sanitary sewer lines. Smaller BCDES equipment and vehicles will also be washed off-site, at a commercial car wash facility with a properly routed sanitary drainage system.

#### **Biosolids Storage Pad (NW Face of Facility)**

The biosolids storage pad at LeSourdsville Regional Water Reclamation Facility has the greatest potential for storm water pollution. In an effort to prevent storm water contamination in and around the biosolids storage pad, the following BMPs will be implemented:

- Within two (2) years of the date of this plan, the material transfer area (loading/unloading zone) to the northwest of the biosolids storage pad will be equipped with a sanitary-routed drainage system, regraded, and repaved. A series of sanitary-routed catch basins will be constructed to the northwest of the transfer area, after which time the transfer area will be regraded to ensure that runoff is directed to and captured in these basins. Capturing this storm water and treating it prior to discharge (via the facility's wastewater treatment process) should significantly reduce runoff amount and improve the runoff quality in this area.
- Within two (2) years of the date of this plan, and in conjunction with the regrading of the sludge pad material transfer area, standard operating procedures (SOPs) will be devised and implemented to ensure that the sanitary-routed storm water drainage system remains free of clog-inducing biosolids accumulations.

## **6.0 FACILITY MONITORING PLAN**

### **6.1 Comprehensive Site Compliance Evaluation**

An annual storm water compliance inspection will be conducted approximately one (1) year following implementation of this SWPPP and annually thereafter. The inspection will look for evidence of, and the potential for, pollutants entering the storm drainage system. The inspection will also determine if the BMPs have been successfully implemented and will assess their effectiveness. Additionally, the inspection will determine if site operations have changed since development of this SWPPP. If operational changes have been made, the SWPPP coordinator (BCDES Water Reclamation Manager) will determine if those changes will impact storm water quality and develop new BMPs to address such changes. Any new concerns regarding storm water pollutant sources, all operational changes, and new BMPs will be recorded in this SWPPP. Additionally, the inspection date, the inspection personnel, the scope of the inspection, major observations, and any needed revisions will be recorded. Revisions to the plan will occur within 14 days after the annual inspection and will provide for the implementation of any necessary changes. Provisions for the implementation of changes shall be executed no later than twelve (12) weeks after the annual inspection. Annual compliance inspection reports will be retained on site as part of this SWPPP for at least three (3) years after inspection completion. Blank annual compliance inspections forms can be found in Appendix G of this SWPPP.

## **7.0 PLAN CONSISTENCY**

This storm water pollution prevention plan for LeSourdsville Regional Water Reclamation Facility includes references to the facility's Spill Prevention Control and Countermeasure (SPCC) plan as well as its Biosolids Spill Contingency Procedure plan. The requirements of this SWPPP are consistent with the provisions contained in these other plans, just as the SPCC and Biosolids Spill Contingency Procedure plans are consistent with the storm water plan.

## **8.0 SWPPP SUMMARY AND REPORTING REQUIREMENTS**

### **8.1 Summary**

As per the requirements of LeSourdsville Regional Water Reclamation Facility's general permit number OHR000003, LeSourdsville Regional Water Reclamation Facility, under the direction of Butler County Department of Environmental Services, is required to prepare and initiate a SWPPP by March 10, 2003. The SWPPP will be kept at the facility for at least six (6) years and will be made available to the state or federal compliance inspection officer upon request.

### **8.2 Implementation Schedule**

In accordance with the State of Ohio, the SWPPP implementation schedule is presented in Appendix B.2. Appendix B.3 presents the implementation schedule for the individual BMPs. This schedule corresponds to the March 10, 2003 effective date of the SWPPP.

### **8.3 Provisions for Amendment of the Plan**

If LeSourdsville Regional Water Reclamation Facility expands, experiences any significant process modifications, or changes any significant material handling or storage practices which could impact storm water, the SWPPP will be amended appropriately. The amended SWPPP will have a description of the new activities that contribute to the increased pollutant loading and planned source control activities.

The SWPPP will also be amended if the state or federal compliance inspection officer determines that it is ineffective in controlling storm water pollutants discharged to waters. Such changes will be made within 30 days of official notification, and written certification of the changes will be submitted to the appropriate regulatory agency within that same time period.

### **8.4 Principal Executive Officer Signature**

In accordance with the State of Ohio and under the authority of the Director of Butler County Department of Environmental Services, this plan has been approved and signed by the Water Reclamation Manager of LeSourdsville Wastewater Treatment Facility, the authorized representative responsible for the operation of the facility.

## 8.5 **Official Certification**

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 gathered and evaluated 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.

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Name

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Title

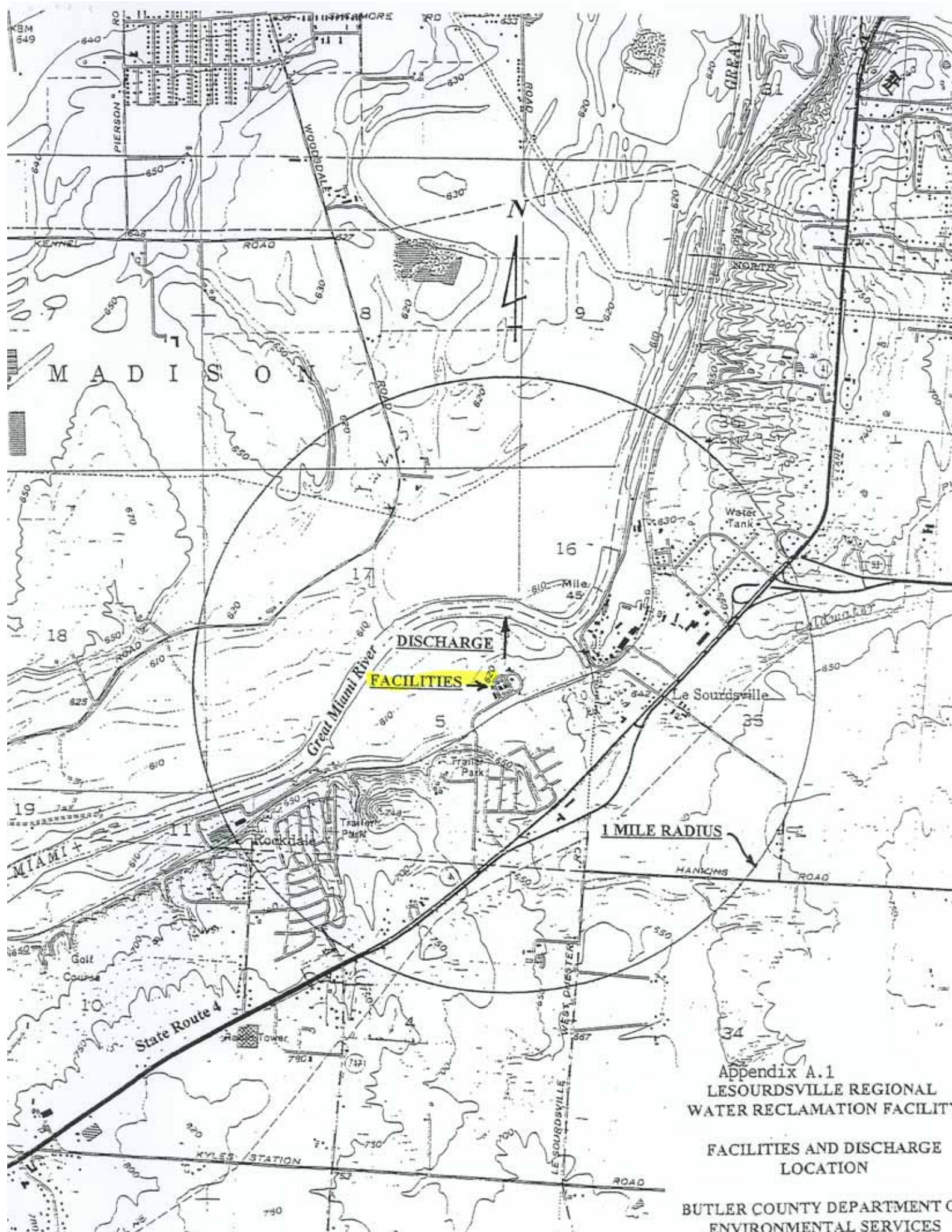
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Date

## **APPENDICES**

### **LeSourdsville Regional Water Reclamation Facility**

**Appendix A:**  
**List of Figures**



## **Appendix B:**

### **List of Tables**

## Appendix B.1: Table 1

### Significant Exposed Materials at LeSourdsville Regional Water Reclamation Facility

Trade Name Material	Chemical/Physical Description	Onsite Location	Storm Water Pollutants
Diesel Fuel	Clear, blue-green to yellow liquid (unless dyed red)	Concrete diesel storage tank next to biosolids pad (Drainage Area 3)	Benzene, petroleum distillate, oil & grease, naphthalene, toluene, and xylenes
Biosolids (sludge)	Brown to black mud-like solid	Biosolids storage pad and materials transfer area at northwest corner of facility	Nitrogen, phosphorus, metals, suspended solids, fecal bacteria and/or BOD

## Appendix B.2: Table 2

### Storm Water Pollution Prevention Plan Implementation Schedule

SWPPP Action Items	Implementation Date
Implement employee training	New employees: comprehensive training within 1 month of hiring date; Existing employees: refresher training every 5 years as of date of this plan
Semiannual visual dry-weather inspections of storm sewer outfalls	September 10, 2003; March 10, 2004; and semiannually thereafter
Semiannual visual wet-weather inspections of storm sewer outfalls	During rain events on or around October 10, 2003; April 10, 2004; and semiannually thereafter
Implementation of individual best management practices (BMPs)	See Appendix B: Table 3
Annual facility site compliance inspection	March 10, 2004 and annually thereafter

### Appendix B.3: Table 3

#### BMP Implementation Schedule

Best Management Practice	Implementation Date <sup>(1)</sup>	Area(s) of Improvement
BCDES vehicles and equipment will be inspected and maintained every six (6) months	Ongoing	Site-wide
Outdoor equipment and material storage areas will be inspected on an annual basis; obsolete equipment will be reclaimed, recycled, or disposed of properly	Ongoing	Site-wide
Litter and other debris will be picked up regularly around the facility according to site conditions	Ongoing	Site-wide
Silt fences and straw bales will be used to reduce erosion at small-scale construction sites at LeSourdsville, while other various erosion management BMPs will be employed according to ODNR standards for larger construction sites (> 1 acre)	Ongoing	Site-wide
SPCC Plan will be implemented	August 18, 2003	Site-wide; DA-2; DA-3
Spill control kits will be strategically placed throughout the facility, and employees will be trained on kit usage	August 18, 2003	Site-wide; DA-2; DA-3; DA-7
Entire storm sewer drainage system at LeSourdsville will be cleaned by a BCDES truck-mounted vacuum unit; subsequent system cleansings will occur according to semiannual visual inspection results	Within six (6) months	Site-wide
'Septage-receiving' standard operating procedure (SOP) will be developed and implemented to reduce spill potential	Within one (1) year	DA-7

(1) The implementation schedule is relative to March 10, 2003, the effective date of this SWPPP.

### Appendix B.3: Table 3 - Continued

#### BMP Implementation Schedule

Best Management Practice	Implementation Date <sup>(1)</sup>	Area(s) of Improvement
Material transfer area near the biosolids storage pad will be equipped with a sanitary-routed drainage system, regraded, and repaved	Within two (2) years	Biosolids pad
Standard operating procedures (SOPs) will be developed and implemented to ensure that the sanitary-routed storm water drainage system serving the biosolids area remains free of clog-inducing biosolids accumulations	Within two (2) years	Biosolids pad
Storm sewer inlet nearest to sludge pad in DA-3 will be rerouted and connected to a sanitary line	Within two (2) years	DA-3
Existing ecologically-minded landscape maintenance policies will be expanded to further reduce BCDES' reliance on horticultural chemicals	Within three (3) years	Site-wide
A new and fully-enclosed vehicle storage building will be constructed, and many of the BCDES vehicles and equipment currently stored outdoors will be relocated to this structure	Within four (4) years	DA-8; Site-wide
An enclosed, sanitary-routed vehicle and equipment wash bay will be constructed at LeSourdsville <b>OR</b> BCDES will contract with ODOT to use their facility for heavy equipment and large truck wash needs, while smaller vehicles will be washed off-site	Within four (4) years	DA-8; DA-2; Site-wide;
Uncontrolled on-site vehicle and equipment washing will be prohibited and the equipment wash pad in DA-2 will be closed	Within four (4) years	Site-wide; DA-2
The long-term storage 'spoil hill' will be closed to large-volume dumping, reduced in size, smoothed, regraded and revegetated	Within five (5) years	Site-wide

(1) The implementation schedule is relative to March 10, 2003, the effective date of this SWPPP.

**Appendix C:**  
**Biosolids Spill Contingency Procedure**

BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES  
WATER RECLAMATION SECTION  
BIOSOLIDS SPILL CONTINGENCY PROCEDURE

I. PURPOSE:

A Spill Contingency Procedure ensures that specific measure are carried out to prevent spills of biosolids and to provide a plan in the event of a accidental spill during the transportation of biosolids from county storage facilities to final disposal at a land application sites or sanitary landfill.

II. DEFINITIONS:

BCDES- Butler County Department of Environmental Services

SCADA- Supervisory Control And Data Acquisition

PPE- Personal Protective Equipment

III. EQUIPMENT AND SUPPLIES:

- First Aid Kit
- Road Flares
- Reflector Vests and Triangles
- Shovels
- CB or two-way radio
- PPE - rubber and /or latex gloves, rubber boots, face and/or eye protection.
- Backhoe
- Front- End Loader
- Vactor Trucks
- Dump Trucks
- Hand Sanitizer

IV. HEALTH AND SAFETY CONCERNS:

PPE such gloves, rubber boots, and eye protection are recommended. Reflective vest for flaggers and proper traffic control equipment may be necessary.

V. TIME INFORMATION:

Time to complete task will vary depending the situation.

VI. WORK ASSIGNMENT/APPLICABILITY:

Employees that are trained on the spill contingency plan will complete the procedure.

## VII. TRAINING INFORMATION:

Training will be provided to all Employees who may be involved in this procedure annually. BCDES has a training goal of at least 40 hours per year for all staff members. This training goal is a combination of Job Specific, Safety, Cross Training and Personal Skills. These training requirements are met by a combination of internal and external classes, seminars, conferences, and self teaching.

## VIII. PROCEDURE:

### Preventive Measures

1. The weight of the load must not exceed the legal capacity of the truck.
2. Trucks are to be loaded in a manner to allow the material room to shift when stopping or accelerating so that there is no spillage over the sides of the truck.
3. Before leaving the biosolids storage facility the driver must check the bed of the truck for any leakage, check the seal on the tailgate and tighten the turnbuckles.
4. Any material on the outside of the bed or tires must be cleaned off prior to leaving the facility.
5. All traffic laws must be obeyed at all times when transporting biosolids.

### SPILL PROCEDURE

In the event of a spill the following action should be taken

1. The driver of the truck should notify the SCADA operator with the following information.
  - A. Location
  - B. Time of spill
  - C. Quantity spilled
  - D. Equipment and manpower needed to contain and clean up.
2. If the cause of the spill was vehicle accident and there were no injuries the driver should set road flares and safety triangles around the area and try to stop any more of the material from spilling. If the accident resulted in injuries to the driver, the responding BCDES personnel shall notify SCADA of the need for a clean-up crew or materials.

3. When the SCADA operator has all the necessary information, they should contact the following supervisors.

Mark Withers  
659-8513 Cell Phone  
819-2772 Pager  
856-7883 Home

Brian Custer  
520-5212 Cell  
892-2731 Home

Jack Thornsberry  
659-0394 Cell Phone  
819-5146 Pager  
539-0321 Home

4. Call the appropriate Law Enforcement officials and inform them of the location of the spill. (911)
5. Contact the Ohio Environmental Protection Agency emergency response line at 1-800-282-9378 and report the spill within 24 hours.
6. Call the Butler County Safety Director – Utah Bailey at 383-5313 or by pager at 819-7281.
7. One of the supervisors listed above will coordinate cleanup activities by directing personal and equipment to the location of the spill.
8. A backhoe or front-end loader, or shovels will be used to load the bulk of the material into a dump truck.
9. The area will be pressure washed and the vacuum truck will be used to remove the liquid from the site.

#### IX. DATA AND RECORD MANAGEMENT:

- All spills shall be recorded in MP2, and a follow-up letter to the OEPA shall be generated and mailed within 3 days of the spill. All spill letters and associated documentation shall be filed in the Biosolids Reports file located at the LeSourdsville Regional WRF. Training event forms shall be completed and forwarded uptown for inclusion in each individual's training file.
- This SOP will be provided to all work sections in BCDES that have been identified as needing SOP's.

- The control copy of this procedure is located on the Department's internal Sharepoint website, and the electronic version is the only official copy of this procedure.

X. APPROVAL:

Prepared By:

Date:

Approved By:

Date:

**Appendix D:**  
**Semiannual Dry Weather Inspection Log**

**Appendix D: Semiannual Non-Storm Water (Dry Weather) Discharge Assessment Log**

Date	Drainage Area and Inlet/ Basin/ Swale Location	Flow <sup>(1)</sup> (Y/N)	If Flow is Yes, Complete this Section		
			Possible Source(s)	Observations <sup>(2)</sup>	Corrective Action(s)
	Drainage Area 1 –				
	Drainage Area 2 –				
	Drainage Area 3 –				
	Drainage Area 4 –				

(1) Evaluation shall take place during dry periods.

(2) Observations include flow, stains, sludge, color, odor, or other indications of non-storm water discharge.

**Appendix D (Continued): Semiannual Non-Storm Water (Dry Weather) Discharge Assessment Log**

Date	Drainage Area and Inlet/ Basin/Swale Location	Flow <sup>(1)</sup> (Y/N)	If Flow is Yes, Complete this Section		
			Possible Source(s)	Observations <sup>(2)</sup>	Corrective Action(s)
	Drainage Area 5 –				
	Drainage Area 6 –				
	Drainage Area 7 –				
	Drainage Area 8 –				

(1) Evaluation shall take place during dry periods.

(2) Observations include flow, stains, sludge, color, odor, or other indications of non-storm water discharge.

**Inspector's Name** \_\_\_\_\_

**Appendix E:**  
**Semiannual Wet Weather Inspection Log**

### Appendix E: Semiannual Storm Water (Wet Weather) Discharge Assessment Log

<b>Date</b>	<b>Time<sup>(1)</sup></b>	<b>Drainage Area and Inlet/ Basin/ Swale Location Description</b>	<b>Weather Conditions</b>	<b>Observations<sup>(2)</sup></b>	<b>Probable Source(s) of Observed Contamination</b>	<b>Corrective Action(s)</b>
		Drainage Area 1 –				
		Drainage Area 2 –				
		Drainage Area 3 –				
		Drainage Area 4 –				

(1) Inspections shall be conducted within the first 30 minutes of discharge or as soon thereafter as practical, but not exceeding 60 minutes.

(2) Observations include color, odor, turbidity, floating solids, sludge, foam, oil sheer, etc.

**Appendix E (Continued): Semiannual Storm Water (Wet Weather) Discharge Assessment Log**

<b>Date</b>	<b>Time<sup>(1)</sup></b>	<b>Drainage Area and Inlet/ Basin/ Swale Location Description</b>	<b>Weather Conditions</b>	<b>Observations<sup>(2)</sup></b>	<b>Probable Source(s) of Observed Contamination</b>	<b>Corrective Action(s)</b>
		Drainage Area 5 –				
		Drainage Area 6 –				
		Drainage Area 7 –				
		Drainage Area 8 –				

(1) Inspections shall be conducted within the first 30 minutes of discharge or as soon thereafter as practical, but not exceeding 60 minutes.

(2) Observations include color, odor, turbidity, floating solids, sludge, foam, oil sheer, etc.

**Inspector's Name** \_\_\_\_\_

**Appendix F:**

**Storm Water Training Employee Sign-In Sheet**

## Appendix F

## Storm Water Training Refresher Course<sup>(1)</sup> Employee Sign-In Sheet

[illegible]

(1) All employees will be required to participate in a refresher training course once every 5 years.

**Appendix G:**  
**Annual Facility Site Compliance Inspection Log**

**Appendix G: Annual Facility Site Compliance Inspection Log <sup>(1)</sup>**

<b>Date</b>	<b>Drainage Area</b>	<b>Potential Pollutant(s) and Source(s)</b>	<b>Current BMP Effectiveness (Y/N)</b>	<b>Changes in Drainage Conditions or Operations since Last Inspection <sup>(2)</sup></b>	<b>Current and Proposed BMPs</b>	<b>Implementation Schedule for Proposed BMPs</b>
	DA-1					
	DA-2					
	DA-3					
	DA-4					

(3) The scope of this inspection is to verify that BMPs are properly operated and are adjusted if operational or site changes require new BMPs to prevent storm water contamination.

(4) Changes in drainage conditions or operations require revisions to the SWPPP.

**Appendix G (Continued): Annual Facility Site Compliance Inspection Log <sup>(1)</sup>**

<b>Date</b>	<b>Drainage Area</b>	<b>Potential Pollutant(s) and Source(s)</b>	<b>Current BMP Effectiveness (Y/N)</b>	<b>Changes in Drainage Conditions or Operations since Last Inspection <sup>(2)</sup></b>	<b>Current and Proposed BMPs</b>	<b>Implementation Schedule for Proposed BMPs</b>
	DA-5					
	DA-6					
	DA-7					
	DA-8					

(1) The scope of this inspection is to verify that BMPs are properly operated and are adjusted if operational or site changes require new BMPs to prevent storm water contamination.

(2) Changes in drainage conditions or operations require revisions to the SWPPP.

Inspector's Name \_\_\_\_\_

Appendix B: Soil Erosion and Runoff Values, and BCDES' Flow Chart used to calculate Agronomic Rates for the Land Application of Sewage Sludge

**Phosphorus Index Input Values for Phosphorus Worksheet**  
**Based on NRCS data for Butler County, Ohio**

The values in the yellow columns are those to be inserted into the Phosphorus Worksheet (steps 1 and 3) for the appropriate field being evaluated for Phosphorus Risk. For fields with more than one soil type, use the more restrictive of the input values provided in bolded print to the right. Field numbers with an asterisk indicate agricultural fields well suited for the land application of biosolids. The input values are based on the soil type determined to be on the land application field by the Butler County Soil Survey.

1. Soil Erosion: Baker Farm				
Field #	Soil Type	Percentage of Field	Soil Erosion/ Soil Loss (RUSLE) Input Value	
1*	WeA: Wea silt loam	65%	1	1
	Ee: Eel silt loam	35%	1	
2*	Gn: Genesee loam	100%	1	
3*	St: Stonelick fine sandy loam	100%	1	
4*	Gn: Genesee loam	100%	1	

<b>3. Runoff Class Determination: Baker Farm</b>						
<b>Field #</b>	<b>Soil Type</b>	<b>Percentage of Field</b>	<b>Slope Range</b>	<b>Hydrologic Soil Group</b>	<b>Runoff Class Input Value</b>	
1*	WeA: Wea silt loam	65%	0-2%	B	1-2	<b>4</b>
	Ee: Eel silt loam	35%	0-2%	C	3-4	
2*	Gn: Genesee loam	100%	0-2%	B	1-2	<b>2</b>
3*	St: Stonelick fine sandy loam	100%	0-2%	B	1-2	<b>2</b>
4*	Gn: Genesee loam	100%	0-2%	B	1-2	<b>2</b>

1. Soil Erosion: Harris Farm				
Field #	Soil Type	Percentage of Field	Soil Erosion/ Soil Loss RUSLE Input Value	
3*	DaA: Dana silt loam	30%	2	2
	XeB: Xenia silt loam	30%	2	
	ElA: Eldean loam	20%	2	
	OcA: Ockley silt loam	20%	2	
4*	Gn: Genesee loam	60%	1	1
	St: Stonelick fine sandy loam	40%	1	
5*	Gn: Genesee loam	80%	1	1
	St: Stonelick fine sandy loam	20%	1	

3. Runoff Class Determination: Harris Farm						
Field #	Soil Type	Percentage of Field	Slope Range	Hydrologic Group	Runoff Class Input Value	
3*	DaA: Dana silt loam	30%	0-2%	B	1-2	3
	XeB: Xenia silt loam	30%	2-6%	B	2-3	
	ElA: Eldean loam	20%	0-2%	B	1-2	
	OcA: Ockley silt loam	20%	0-2%	B	1-2	
4*	Gn: Genesee loam	60%	0-2%	B	1-2	2
	St: Stonelick fine sandy loam	40%	0-2%	B	1-2	
5*	Gn: Genesee loam	80%	0-2%	B	1-2	2
	St: Stonelick fine sandy loam	20%	0-2%	B	1-2	

1. Soil Erosion: LCI Fields				
Field #	Soil Type	Percentage of Field	Soil Erosion/ Soil Loss (RUSLE) Input Value	
3	MrC2	25	9	9
	RvB(2) <sup>1</sup>	25	5	
	DaB	25	3	
	PrB	25	2	
4	RvB	80	5	5
	Br	20	1	
5	Br	50	1	5
	RvB(2) <sup>1</sup>	30	5	
	XeB	20	2	
6	Br	65	1	4
	RvB2	35	4	
7*	XeB	60	2	2
	XeA	20	2	
	Br	20	1	
8	XeB	40	2	3
	DaB	35	3	
	Br	15	1	
	DaA	10	2	
9	RvB2	30	4	4
	XeA	30	2	
	Br	20	1	
	DaB	20	3	
12*	XeB	55	2	5
	RvB(2) <sup>1</sup>	45	5	
13*	RpB	40	3	3
	XeA	20	2	
	XeB	20	2	
	FhA	20	2	
14	Pc	50	2	5
	RvB(2) <sup>1</sup>	50	5	
15*	Pc	100	2	
16*	Pc	100	2	
17*	Pb	100	2	

<sup>1</sup>RvB(2) indicates a mixture of both RvB and RvB2 soil types; most conservative values used for this soil type.

3. Runoff Class Determination: LCI Fields						
Field #	Soil Type	Percentage of Field	Slope Range	Hydrologic Group	Runoff Class Input Value	
3	MrC2	25	8	C	7	7
	RvB(2) <sup>1</sup>	25	2-6	B	2-3	
	DaB	25	2-6	B	2-3	
	PrB	25	2-8	B	2-5	
4	RvB	80	2-6	B	2-3	7
	Br	20	1-2	B/D	2-7	
5	Br	50	1-2	B/D	2-7	7
	RvB(2) <sup>1</sup>	30	2-6	B	2-3	
	XeB	20	2-6	B	2-3	
6	Br	65	1-2	B/D	2-7	7
	RvB2	35	2-6	B	2-3	
7*	XeB	60	2-6	B	2-3	7
	XeA	20	0-2	B	1-2	
	Br	20	1-2	B/D	2-7	
8	XeB	40	2-6	B	2-3	7
	DaB	35	2-6	B	2-3	
	Br	15	1-2	B/D	2-7	
	DaA	10	0-2	B	1-2	
9	RvB2	30	2-6	B	2-3	7
	XeA	30	0-2	B	1-2	
	Br	20	1-2	B/D	2-7	
	DaB	20	2-6	B	2-3	
12*	XeB	55	2-6	B	2-3	3
	RvB(2) <sup>1</sup>	45	2-6	B	2-3	
13*	RpB	40	2-6	C	4-5	5
	XeA	20	0-2	B	1-2	
	XeB	20	2-6	B	2-3	
	FhA	20	1-2	C	4	
14	Pc	50	1-2	B/D	2-7	7
	RvB(2) <sup>1</sup>	50	2-6	B	2-3	
15*	Pc	100	1-2	B/D	2-7	7
16*	Pc	100	1-2	B/D	2-7	7
17*	Pb	100	1-2	B/D	2-7	7

<sup>1</sup>RvB(2) indicates a mixture of both RvB and RvB2 soil types; most conservative values used for this soil type.

Appendix C: Spill Prevention Control and Countermeasure (SPCC) Plan for Butler County's  
Upper Mill Creek Regional Water Reclamation Facility

**SPILL PREVENTION, CONTROL AND  
COUNTERMEASURE (SPCC) PLAN**

UPPER MILL CREEK REGIONAL WATER  
RECLAMATION FACILITY

WEST CHESTER, OHIO  
BUTLER COUNTY

**FOR SPILL RESPONSE AND REPORTING  
INFORMATION AND PROCEDURES,  
TURN TO SECTIONS 4.6 AND 4.7**

May 2003

## **Executive Summary**

Contained within this report is the Spill Prevention, Control and Countermeasure (SPCC) Plan for the Upper Mill Creek Regional Water Reclamation Facility as required by Title 40 of the Code of Federal Regulations (CFR), Part 112 (Oil Pollution Prevention – revised July 2002).

This SPCC Plan was developed for two reasons: (1) to prevent oil discharges from reaching navigable waters of the United States or adjoining shorelines, and (2) to ensure the effective response in the event of an oil discharge. This plan clearly addresses the following three areas:

- Operating procedures designed to prevent oil spills;
- Control measures installed to prevent a spill from reaching navigable waters; and
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters.

Per federal mandate, this plan was updated before August 17, 2004 to ensure compliance with all applicable sections of 40 CFR 112. Implementation of SPCC Plan provisions will occur no later than February 18, 2005.

A copy of this plan will be maintained at the facility at all times, according to 40 CFR 112.3(e). An additional copy will also be stored in the LeSourdsville Central File within the Administration Building at LeSourdsville Regional Water Reclamation Facility, Hamilton, Ohio 45011. The plan will be available to State and Federal Compliance Inspection Officers during normal working hours for on-site review at Upper Mill Creek, or for off-site review at LeSourdsville.

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## **1.0 Facility Information**

### **1.1 General Information**

Name:	Upper Mill Creek (UMC) Regional Water Reclamation Facility
Address:	6055 Center Park Drive West Chester, OH 45069 Butler County
Telephone:	(513) 785-5281
Fax:	(513) 887-3785
Latitude/Longitude:	39-18.30 N Latitude 84-26.017 W Longitude

The Upper Mill Creek (UMC) Regional Water Reclamation Facility, owned and operated by Butler County Department of Environmental Services (BCDES), is located at 6055 Center Park Drive in West Chester, Ohio, 45069. This wastewater treatment facility is located in West Chester Township (Butler County) just east of the East Fork of Upper Mill Creek, north of the City of Sharonville, OH, and east of the City of Fairfield, OH.

The Upper Mill Creek (UMC) Regional Water Reclamation Facility services southeastern Butler County and small parts of western Warren County and northern Hamilton County. The facility accepts municipal and industrial wastewater and, after an extensive treatment process, discharges the effluent into the East Fork of Mill Creek. The Upper Mill Creek facility treats on average eight (8) million gallons per day, with a maximum capacity of 16 million gallons per day. Based on site activities, the facility's Standard Industrial Code (SIC) is 4952 – sewerage systems. The facility is operated 24 hours per day, seven (7) days per week. Typically, the facility is fully manned eight (8) hours per day, five (5) days per week. In addition, qualified personnel monitor the facility at all times (24 hours per day, seven (7) days per week) through an off-site, remote-networked Supervisor Control and Data Acquisition (SCADA) system located at BCDES' LeSourdsville Regional Water Reclamation Facility.

At the most basic level, Upper Mill Creek (UMC) Regional Water Reclamation Facility treats wastewater via a four- or five-step process. First, influent is pumped into the facility from the trunk line and passes through several bar screens and grit systems to remove debris, grit and other large materials. Second, the wastewater is mixed with Return Activated Sludge (RAS) and inserted into the 6 million gallon per day (mgd) oxidation ditch. At this point, the wastewater/RAS mixture is blended with the existing Mixed Liquor Suspended Solids (MLSS) and aerated. BCDES operates on a 9-day sludge age cycle and runs aerators constantly to assure both nitrification and de-nitrification.

Next, after the wastewater has been sufficiently mixed and aerated, it exits the oxidation ditch and travels to the clarifier tanks. Here the MLSS settle out and are either returned to the headworks of the plant or pumped (“wasted”) to the digesters for removal. After the solids settle, the clear, treated water travels through a set of flow-regulating weirs. During high flow events only, the water is directed to the tertiary building where a set of four (4) filters and anthracite and sand remove any additional solids that did not settle in the clarifier tanks. From May to October, all water passes under U.V. lamps for disinfection purposes. Finally, the water is aerated by step aerators (“cascades”) as it travels via gravity to the effluent discharge point on the East Fork of Upper Mill Creek.

The facility/operation consists of a pretreatment program, a preliminary treatment facility, two (2) large oxidation ditches, four (4) aerobic digester storage and blending tanks, four (4) active and four (4) inactive final clarifier tanks, a sludge dewatering/belt press building, a tertiary building, a chlorine building and a sheltered biosolids storage pad. Both oxidation ditches and all four (4) active final clarifier tanks are utilized only during high flow events; otherwise, just the newest ditch and two (2) newest tanks are employed during the wastewater treatment process. The facility also has a flow equalization lagoon, several pump stations, a ‘rotating biological contactor’ system, an effluent building, a maintenance building (the old influent pump station), a generator (electrical) building, a blower building, an administrative building and various other smaller buildings. There are two (2) aboveground diesel fuel tanks at Upper Mill Creek, one with a capacity of 300 gallons and the other with a capacity of 3,000 gallons. The 3,000-gallon tank connects to a 150-gallon ‘day tank’, which fuels the emergency generator unit located in the generator (electrical) building. An underground storage tank, regulated by the Bureau of Underground Storage Tanks (BUSTR), Division of State Fire Marshal, is also maintained onsite and likewise used to hold diesel fuel. This underground tank connects to a second ‘day tank’ with a capacity of 75 gallons. The 75-gallon ‘day tank’ fuels a second emergency generator unit housed in the blower building. Two (2) active 250-gallon plastic totes used to hold waste oil are kept onsite for the temporary storage of used motor, hydraulic, lube and bearing oils. Most other petroleum oils are contained in drum quantities and stored in a climate-controlled, secondarily contained oil storage building. Refer to Section 4.5, page 16 (and Appendix C), for a description of oil storage locations and containment areas.

## 1.2 Name, Address and Telephone Number of Owner

Name:	BCDES - Butler County Department of Environmental Services
Address:	Butler County Administrative Center 130 High Street Hamilton, OH 45011
Telephone:	(513) 887-3061
Fax:	(513) 887-3777

1.3 Name and Telephone of People Responsible for Oil Spill Prevention  
At Upper Mill Creek Regional Water Reclamation Facility

Primary Contact:	Mark Withers, Water Reclamation Manager Work: (513) 887-3686 Cell: (513) 659-8513 Pager: (513) 819-2772 Home: (513) 856-7883
Alternate Contact:	Sue Vance, Technical Services Supt. Work: (513) 887-5552 Cell: (513) 582-0736 Pager: (513) 819-2523 Home: (513) 737-7986
Alternate Contact:	Jack Thornsberry, Operations Division Head Work: (513) 887-3929 Cell: (513) 260-3680 Pager: (513) 819-5146 Home: (513) 539-0321
Alternate Contact:	Dick Roemer, Maintenance Supervisor Work: (513) 887-5550 Cell: (513) 659-8435 Pager: (513) 819-3299 Home: (513) 893-1089

## **2.0 Professional Engineer Certification of the Plan [40 CFR 112.3]**

Facility Name: UMC Regional Water Reclamation Facility

Date(s) site visited: April 2, 2003

I hereby certify that:

- I am familiar with the requirements of 40 CFR 112;
- I have (or my agent has) visited and examined the facility;
- The SPCC Plan has been prepared in accordance with good engineering practice, including the consideration of applicable industry standards, and with the requirements of 40 CFR 112;
- The SPCC Plan establishes procedures for required inspections and testing; and
- The SPCC Plan is adequate for the facility.

Certifying Engineer:

Name: \_\_\_\_\_

State: \_\_\_\_\_

P.E. Number: \_\_\_\_\_

Signature: \_\_\_\_\_

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

Engineering Seal:

### 3.0 Amendments to the Plan [40 CFR 112.4 & 112.5]

#### 3.1 Determination of Needed Amendments by EPA/State Agencies following spills [40 CFR 112.4(a),(b)&(c)]

If UMC Regional Water Reclamation Facility discharges more than 1,000 U.S. gallons of oil in a single discharge, or discharges more than 42 U.S. gallons of oil in each of two (2) discharges within any twelve (12) month period, then the following information must be submitted in writing to both U.S. EPA Region 5 and Ohio EPA Southwest District Office, Emergency Response Program **within 60 days of becoming subject to this part.** These agencies will review this information and determine if changes or amendments to the SPCC Plan for Upper Mill Creek are necessary.

Required information:

1. Name of the facility
2. Owner/operator name
3. Location of facility
4. Maximum storage capacity of oil at the facility and normal daily usage
5. Corrective actions and countermeasures taken in response to oil discharge(s), including a description of equipment repairs and replacements
6. A description of the facility including maps, flow diagrams and topographical maps, as necessary
7. Cause of the discharge(s), as well as a failure analysis of the system
8. Additional preventive measures taken or contemplated to prevent recurrence
9. Other information pertinent to the Plan or discharge(s) as required by EPA or the State (possibly including a complete copy of this SPCC Plan)\*

\*See Section 4.7, Item No. 7 (page 23) for additional written notification requirements. A standard spill report form must also be completed and submitted to the appropriate regulatory agencies as specified in Section 4.6 (page 21) and Section 4.7, Item No. 7 (page 23). A spill report form is available as Appendix A.

The original report should be sent to:

Regional Administrator  
United States Environmental Protection Agency  
Region 5  
Emergency Response Program  
230 South Dearborn Street  
Chicago, Illinois 60604

A copy of the report should be sent to:

Ohio Environmental Protection Agency  
Southwest District Office  
Emergency Response Program  
401 East Fifth Street  
Dayton, Ohio 45402

### 3.2 Amendments as required by EPA/State Agencies [40 CFR 112.4(d),(e),&(f)]

There have been no amendments to this plan as a result of EPA or State comments or requirements.

Any amendments to this SPCC Plan that would be required as described in Section 3.1 above must be made within 30 days of final notification, and said amendments must be implemented no later than six (6) months after plan amendment. Upon receipt of initial notification of a *proposed* amendment, however, BCDES may submit written information, views, and arguments regarding the proposal to U.S. EPA Region 5 and/or Ohio EPA. After reviewing these materials, U.S. EPA Region 5 and/or Ohio EPA will request more information regarding the amendment, rescind the proposed amendment or make the amendment a requirement.

A written appeal to a *required* SPCC Plan amendment may be filed by BCDES on behalf of Upper Mill Creek Regional Water Reclamation Facility within 30 days of receipt of final amendment notice from either U.S. EPA Region 5 or Ohio EPA.

### 3.3 Amendments due to facility changes or 5-year review [40 CFR 112.5(a)&(b)]

In accordance with 40 CFR 112.5, a review and evaluation of this SPCC Plan is to be conducted at least once every five (5) years by an individual familiar with both facility operations and SPCC regulations. As a result of this review and evaluation, Butler County Department of Environmental Services will amend the SPCC Plan within six (6) months of the review to include more effective prevention and control technology if: (1) such technology will significantly reduce the likelihood of a spill event at the facility, and (2) if such technology has been field-proven at the time of review. Additionally, BCDES will also amend the Plan within six (6) months of the time a change occurs in facility design, construction, operation, or maintenance that materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Any technical amendments to the Upper Mill Creek Regional Water Reclamation Facility's SPCC Plan will be certified by a Professional Engineer (See Section 3.4 below). All actions identified in an amended plan will be fully implemented within six (6) months after an amendment.

As a result of the 5-year review requirement, a review form will be completed and maintained on file in both the LeSourdsville Central File and in the Administration building at Upper Mill Creek. A copy of this form is available as Appendix B.

3.4 Technical amendments certified by Professional Engineer [40 CFR 112.5(c)]

Any amendments to this Plan that materially affect the facility's potential for the discharge of oil into or upon the navigable waters of the U.S. require the recertification of the Plan by a P.E. A new certification page should be included in Section 2.0, and revision records should be amended to reflect appropriate changes.

Certified amendments will be recorded below, in the format shown.

<u>Revision No.</u>	<u>Date</u>	<u>Comments</u>
1.0	May 9, 2003	SPCC Plan revised and certified in accordance with new regulations

#### **4.0 General Requirements for SPCC Plans [40 CFR 112.7]**

##### **4.1 Written commitment of resources [40 CFR 112.7]**

By my signature below, I certify that this Plan was prepared in accordance with good engineering practices. Additionally, I certify that I have the authority to commit the necessary resources for full implementation of this Plan and that all necessary manpower, equipment and materials will be available at all times to control and remove any quantity of oil discharged from Upper Mill Creek Regional Water Reclamation Facility which may be harmful to navigable waters and/or the general environment.

Authorized Representative:

Mark Withers

Title:

Water Reclamation Manager

Signature:

\_\_\_\_\_

Date:

\_\_\_\_\_

##### **4.2 Proposed facilities, methods or equipment not yet fully operational [40 CFR 112.7]**

The following paragraphs describe additional facilities or procedures, methods, or equipment not yet fully operational at Upper Mill Creek Regional Water Reclamation Facility. These facilities or procedures, methods, or equipment will be operational by February 18, 2005, as required by SPCC regulations, unless otherwise specified.

- All 55-gallon drums of petroleum products currently located at various collection points throughout the facility will be transferred to the oil storage (safety storage) building for proper storage and protection.
- The two (2) 250-gallon waste oil totes currently located outdoors near the belt press (sludge dewatering) building will be moved into the oil storage building for safe storage and protection. This oil building will provide the necessary secondary containment for the oil totes, as required by this SPCC Plan.
- Two (2) comprehensive spill control kits will be strategically distributed throughout the facility. These kits, each with the ability to control a 75-gallon spill or leak, will be placed in the oil storage building and in the maintenance building (the old influent pump station). Refer to Section 4.5.4 (page 17) for more information on these kits and their locations.

- One (1) impervious surface drain mat will be stored in the maintenance building. This mat will be used to cover storm and/or sanitary drains in the event of an oil spill or leak at Upper Mill Creek. See Section 4.5.4 (page 17) for more information.
- The 300-gallon aboveground diesel storage tank, centrally located between the generator (electrical) building, the belt press building and the biosolids storage pad, will be drained of its contents, disassembled and transported offsite. This tank, which has no secondary containment and is beginning to show signs of corrosion, will be drained, disassembled and moved according to the requirements of Federal and/or State Regulations. The tank will not be replaced.

**The rest of this SPCC Plan will read as though the facilities or procedures, methods, or equipment described above are indeed fully operational at Upper Mill Creek Regional Water Reclamation Facility.**

#### 4.3 Discussion of facility conformance [40 CFR 112.7(a)(1)]

After the disassembly of the 300-gallon diesel tank (see Section 4.2), there will be just one (1) aboveground diesel fuel tank present at Upper Mill Creek. This secondarily contained tank, with a total capacity of 3,000 gallons, is filled with diesel fuel via local tank truck delivery. This tank, which is contained within an enclosed steel dike structure, sits next to the generator building (electrical building) adjacent to the primary oxidation ditch. The 3,000-gallon tank connects via aboveground piping to a 150-gallon ‘day tank’, which fuels the emergency generator unit located in the generator (electrical) building. An underground storage tank, regulated by the Bureau of Underground Storage Tanks (BUSTR), Division of State Fire Marshal, is also maintained onsite and likewise used to hold diesel fuel. This UST connects to a 75-gallon ‘day tank’, which fuels another generator unit housed in the blower building in the north-central vicinity of the plant. Most other petroleum oils are contained in drum quantities (55-gallon capacities) and stored in a climate-controlled, ventilated and secondarily contained oil storage building. Refer to Section 4.5 (and Appendix C) for a description of oil storage locations and containment areas.

Upper Mill Creek Regional Water Reclamation Facility is in conformance with all requirements of 40 CFR 112 with the exception of the items outlined below. However, equivalent environmental protection has been provided (as described in Section 4.4).

#### 4.4 Deviations from requirements [40 CFR 112.7(a)(2)]

This facility is in complete conformance with all applicable requirements of 40 CFR 112 with the following exceptions:

**(1). *Deviation from Requirement:***

A spill containment system designed to hold at least the capacity of a single compartment of the standard delivery tank truck is not provided for the loading/unloading area of the 3,000-gallon diesel tank located next to the emergency generator/electrical building (adjacent to the primary oxidation ditch).

***Equivalent Protection:***

A spill in this area is highly unlikely. Nevertheless, if a spill were to occur, it would likely result from a broken or frayed tank truck dispensing hose. A broken hose may cause a spill of 20 to 100 gallons of diesel, depending on the original rate of fuel transfer and the time it takes for the driver to shut off the main valve on the truck. A diesel spill resulting from a broken hose would most likely flow to the storm sewer catch basin directly north of the tank. Because of the rare frequency at which the tank is filled and the presence of safety-minded unloading procedures, on-truck spill kits, onsite facility spill kits, and impervious catch basin covers, full containment has been deemed unnecessary for the prevention of offsite spill migration.

**(2). *Deviation from Requirement:***

An interlocked warning light or physical barrier system for fuel delivery trucks is not provided in the loading/unloading area of the 3,000-gallon aboveground diesel storage tank.

***Equivalent Protection:*** Safety-minded unloading procedures, supervised fuel dispensing, and proper delivery truck driver training – including compliance with all applicable DOT fuel delivery requirements – have been deemed sufficient for the prevention of tank truck departure from the loading/unloading area prior to complete disconnection between hose and stationary tank.

**(3). *Deviation from Requirement:***

Portable tanks and tanks less than 1,000 gallons in capacity that can be readily visually inspected are not subjected to non-destructive, formal integrity shell testing (i.e. hydrostatic, radiographic, ultrasonic) due to size, design and age.

***Equivalent Protection:***

Periodic visual integrity testing has been deemed appropriate for these tanks because of their location, age and minimal potential to release materials to navigable waterways.

#### 4.5 Physical layout and facility design [40 CFR 112.7(a)(3)]

The facility diagram is contained in Appendix C. This shows the locations of all oil storage containers (or areas in which they are located). Petroleum transfer areas have also been delineated. No significant, exposed aboveground oil piping areas are present at Upper Mill Creek Regional Water Reclamation Facility.

##### 4.5.1 Container contents and capacity [40 CFR 112.7(a)(3)(i)]

<u>Container Name and/or Location</u>	<u>Volume</u>	<u>Contents</u>
Aboveground storage tank (AST-1) near generator/electrical building	3,000 gallons	Diesel fuel
‘Day tank’ in generator building	150 gallons	Diesel fuel
Underground storage tank (UST) near blower building	1,500 gallons	Diesel fuel
‘Day tank’ in blower building	75 gallons	Diesel fuel
Oil storage (safety storage) building	1875 gallons	Up to 25 (55-gallon) barrels of various lubricating & hydraulic oils; plus two 250-gallon waste oil totes
<b>Total <u>aboveground</u> bulk And drum oil storage</b>	<b>5100 gallons</b>	

##### 4.5.2 Discharge prevention procedures [40 CFR 112.7(a)(3)(ii)]

Inspection procedures are described in Section 8 (page 32). All oil-handling employees are trained according to procedures described in Section 9 (page 33). Unloading and filling procedures for tanks are described in Section 11 (page 37).

##### 4.5.3 Drainage controls [40 CFR 112.7(a)(3)(iii)]

Secondary containment controls for containers and the facility in general are described in Section 15.

#### 4.5.4 Discharge countermeasures [40 CFR 112.7(a)(3)(iv)]

Spill kits are strategically positioned around unloading areas and storage tanks and near transfer operations for use in containing spills. Each individual spill kit has the ability to absorb and contain 75 gallons of petroleum product. A listing of these kits is shown below:

<u>Spill kit location</u>	<u>Contents</u>
In oil storage building	Absorbent socks, booms, and pads; floor-dry; miscellaneous hand tools; etc
In maintenance building (old influent pump station)	Same as above

Upper Mill Creek Regional Water Reclamation Facility also keeps onsite at least one (1) impervious sewer plug/catch basin mat. This plug/mat is kept in the maintenance building and is readily available to serve as a spill control device should the need ever arise.

In addition to these spill kits and drain cover(s), BCDES may call upon outside contractors for help in the cleanup and remediation of an oil spill. A listing of these potential contacts and their phone numbers can be found in Section 4.7, Item No. 6 (page 21).

#### 4.5.5 Methods of disposal [40 CFR 112.7(a)(3)(v)]

Small amounts of spilled materials resulting from incidental spills and leaks that are cleaned up with Oil-Dri or other absorbent materials will be disposed of in accordance with local regulations through the contracted solid waste disposal company. For larger spills, arrangements will be made with a cleanup contractor to reclaim or dispose of the spilled material in accordance with all applicable State and Federal Standards.

#### 4.5.6 Contact list [40 CFR 112.7(a)(3)(vi)]

Refer to Section 4.7, Item No.'s 2, 4 and 6 (pages 19-21).

#### 4.6 Discharge reporting information [40 CFR 112.7(a)(4)]

If an oil spill has caused a sheen on a receiving water, or has exceeded secondary containment capacity and resulted in a spill of greater than 25 gallons beyond the property line of the facility, then that spill must be verbally reported to the appropriate agencies within 30 minutes of the spill under 40 CFR 110 as directed in Section 4.7, Item No.'s 5 & 6 (page 21) of this Plan. As required under 40 CFR 112.7(a)(4), certain information must be provided when reporting an oil spill. A list of this information is provided below, and on the spill report form in Appendix A.

- Name of person making the report of an oil discharge
- Name of the facility
- Exact address or location of the facility
- Phone number of contact at facility
- Date and time of discharge
- Type of material discharged
- Estimates of total quantity of material discharged
- Estimates of total quantity of material reaching navigable waters of the U.S.
- Source of the discharge
- Description of all affected environmental media
- Cause of discharge
- Damages or injuries caused by discharge
- Actions taken to stop, remove, or mitigate the effects of discharge
- Necessity of evacuation
- Names of other individuals and/or organizations who have also been contacted

In addition to a verbal report, a completed spill report form (see Appendix A, containing the information enumerated above) and a corresponding narrative detailing the spill must be submitted **in writing** to Ohio EPA Southwest District Office **within five (5) days of a spill**. This information should be sent to the following address:

Ohio Environmental Protection Agency  
Southwest District Office  
Emergency Response Program  
401 East Fifth Street  
Dayton, Ohio 45402

Also, as specified in Section 3.1 (page 10) and Section 4.7, Item No. 7 (page 23), if a spill is greater than 1,000 gallons or two (2) significant spills occur within any 12-month period, then additional notification requirements will apply.

#### 4.7 Emergency procedures [112.7(a)(5)]

This section outlines initial response actions for a spill or release of oil at Upper Mill Creek Regional Water Reclamation Facility outside of secondary containment. It does not detail the necessary actions of a major release, which is improbable given the relatively small amount of oil maintained at the facility. Rather, this section provides assistance for minimizing potential damage from a release. The intent of this plan is to provide appropriate guidance for response to spills of oil, not hazardous substances. This plan may not clearly address all compliance issues for spills covered by regulations mandated by laws other than the Clean Water Act (i.e. RCRA, CERCLA, or Ohio requirements). The guidelines should be followed to the extent possible and practical.

General guidelines for spill response are outlined in the following numbered items.

##### 1. IF POSSIBLE, STOP THE SOURCE OF THE SPILL IMMEDIATELY

Close the valve, shut down pumping, and/or take whatever actions are necessary and possible to stop any further discharge of oil. If conditions are hazardous (i.e. fire or explosion potential), do NOT approach.

##### 2. SEEK HELP IMMEDIATELY

**If conditions are hazardous or an injury has occurred, seek emergency assistance by calling 911.** Call SCADA immediately and report the spill (ext. 5554). Call the Facility Response Coordinator. If the Coordinator is not onsite, call the alternates in the order listed below. If none of these are available at the facility, call the pager and/or home telephone numbers. The Facility Response Coordinator will designate the appropriate personal safety equipment to be worn when approaching an oil release.

Facility Response Coordinator:	Mark Withers, Water Reclamation Manager
	Work: (513) 887-3686
	Cell: (513) 659-8513
	Pager: (513) 819-2772
	Home: (513) 856-7883

First alternate:	Sue Vance, Technical Services Supt.
	Work: (513) 887-5552
	Cell: (513) 582-0736
	Pager: (513) 819-2523
	Home: (513) 737-7986

Second alternate: Jack Thornsberry, Operations Division Head  
Work: (513) 887-3929  
Cell: (513) 659-0394  
Pager: (513) 819-5146  
Home: (513) 539-0321

Third alternate: Dick Roemer, Maintenance Supervisor  
Work: (513) 887-5550  
Cell: (513) 659-8435  
Pager: (513) 819-3299  
Home: (513) 893-1089

If safety is not an issue, call other nearby employees for assistance in stopping the release. Notify the area or shift supervisor as soon as possible.

Once the Facility Response Coordinator (or designated alternate) arrives at the scene of the spill, all other response actions are to be under his or her direction. The Facility Response Coordinator (or designated alternate) should then determine the necessary response actions, including whether evacuation of parts or all of the plant is necessary for employee safety. The release should be confined to the smallest area possible.

### 3. PREVENT THE SPILL FROM REACHING SURFACE WATERS

- Obtain a spill control kit from either of the two (2) following locations:
  1. Belt press building
  2. Maintenance building (old influent pump station)
- If necessary, obtain an impervious storm sewer drain cover/catch basin mat from the maintenance building and place over the surface drains “at risk” of contamination. This device will prevent oil from reaching receiving waters via sewer line conveyance.
- Use booms, pillows, socks, absorbent pads (from spill control kits) and/or sandbags to prevent the spread of the discharge. If necessary, use shovels or the Bobcat unit with appropriate attachment to dig small trenches to stop oil from reaching surface waters. Also, utilize Oil-Dri (or equivalent product), woodchips, and/or sawdust to absorb the excess.
- Put down booms or pads, dig a diversion ditch, or use soil to form a containment berm.
- If the release reaches water, attempt to place floating booms around the spill to contain the release or, if necessary, block downstream drainage of the spill via temporary berm construction to prevent further discharge.

#### 4. NOTIFY FIELD ENGINEER OR ENVIRONMENTAL SPECIALIST

The Facility Response Coordinator will immediately report the situation to the Field Engineer or Environmental Specialist for advice and suggestions on how to effectively control the discharge and prevent damage.

The field and environmental contacts are:

Field Engineer: Brian Custer  
Work: (513) 887-3974  
Cell: (513) 520-5212  
Home: (513) 892-2731

Environmental Specialist: MaryLynn Lodor  
Work: (513) 887-5551  
Cell: (513) 505-2676  
Home: (513) 677-8154

#### 5. DETERMINE IF THE SPILL IS REPORTABLE TO FEDERAL AND/OR STATE AUTHORITIES

The Field Engineer or Environmental Specialist contact will determine if the spill is reportable to Local, State and/or Federal Authorities. If it is an oil spill that has caused a sheen on a receiving waterway, then it is reportable under 40 CFR 110. If the release of oil into the environment does not reach surface water but escapes secondary containment, travels beyond the property line of the facility and is greater than 25 gallons, then it is also reportable.

If neither the Field Engineer nor Environmental Specialist is available, then the Facility Response Coordinator must determine if the spill is reportable to Local, State and/or Federal Authorities.

#### 6. REPORT THE SPILL

If it is determined that the spill is reportable, obtain as much information as possible about the spill. Acquire an MSDS (Material Safety Data Sheet) for the petroleum product by contacting the 3E Company at 800-451-8346. Attain a Spill Report Form (Appendix A) as described in Section 4.6 (page 18) and use it to aid in the collection of all required and pertinent information.

If the spill is reportable, the Facility Response Coordinator or Environmental Specialist MUST immediately contact the following four (4) entities to provide an oral report. At the latest, this information MUST be translated to these entities within 30 minutes of the spill.

- **EPA National Response Center** (800) 424-8802
- **Ohio EPA Emergency Response Unit** 1-800-282-9378 or (614) 224-0946
- **Local Fire Department (West Chester)** (513) 777-1133
- **Butler County Local Emergency Management Agency (EMS) – Local Emergency Planning Commission (LEPC)** (513) 785-5810

Others to contact, if deemed necessary:

- Environmental Enterprises (Cleanup Contractor) (513) 772-2818
- BHE Environmental (Cleanup Contractor) (513) 326-1500
- Local Police Department (West Chester) (513) 777-2231
- Highway Patrol (513) 863-4606
- Fort Hamilton Hospital (513) 867-2000
- Mercy Hospital Fairfield (513) 870-7000
- Middletown Regional Hospital (513) 424-2111
- US EPA Region 5, Chicago, Illinois (312) 353-2000

If any of the above is contacted, provide as much information as possible. Under all circumstances, provide only factual information. DO NOT SPECULATE. The Spill Report Form in Appendix A will help you collect and report the required and most important information. Copies of completed forms should be kept with all other records associated with this Plan. Completed forms should be sent to Ohio EPA SW District Office as specified above in Section 4.6 (page 18).

Under SARA Title III (Community Right-to-Know Act) Section 304, the notification for reported spills of listed hazardous materials (Note: oil is not a listed hazardous material) should also include:

- Chemical name
- Whether it is extremely hazardous
- Quantity released
- Time and duration of release
- Whether released into or upon soil or water
- Any known health risks
- Actions taken
- Name and telephone number of facility contact person

## 7. SUBMIT WRITTEN REPORTS AS REQUIRED

If an oil spill causes a sheen on a receiving waterway, or a spill escapes secondary containment, travels beyond facility grounds and is greater than 25 gallons, then a written report must be submitted to Ohio EPA Southwest District Office within five (5) days of said spill (as specified in Section 4.6, page 18). The address is listed below:

Ohio Environmental Protection Agency  
Southwest District Office  
Emergency Response Program  
401 East Fifth Street  
Dayton, Ohio 45402

Additional written notification regarding an oil spill is required if either 1,000 gallons or more of oil is spilled, or two (2) significant spills (>42 gallons each) occur within any 12-month period. If a written report is required under these circumstances, the Facility Response Coordinator should submit the following information to both US EPA Region 5 and to Ohio EPA Southwest District Office (Emergency Response Program) **within 60 days**. Refer to Section 3.1 for further notification requirements. The Environmental Specialist or a similar contact should be consulted for a complete list of written notification requirements.

- Name and address of facility
- Name and address of owner/operator
- Name and address of the registered agent, if any
- Date of initial facility operation
- NPDES permit number
- Maximum and average daily storage and handling capacity of facility
- Description of facility including maps and a flow diagram of the facility's oil-handling units/areas
- Date of spill
- Quantity and type of material spilled
- Cause of spill or release
- Corrective actions taken
- A completed Spill Report Form (Appendix A)
- A copy of the information specified in Section 3.1 of this Plan
- A copy of this SPCC Plan in its entirety

If the spill involves hazardous material(s) in addition to oil, the written report should include the same details that were provided in the oral report (as specified in Item No. 6 of this section), appropriately updated with any new information on quantity, hazards, and corrective actions.

Copies of all such notifications, along with other information relevant to this SPCC Plan such as completed spill report forms, will be maintained at LeSourdsville

Central File and at the UMC Administration building for a minimum of three (3) years as required by EPA, or longer if required by state rules.

## 5.0 Spill Scenarios from Equipment Failures [40 CFR 112.7(b)]

### 5.1 Historical spills [40 CFR 112.7(b)]

According to Butler County Department of Environmental Services records, there has been one (1) significant spill of a toxic or hazardous substance in an uncovered area at Upper Mill Creek Regional Water Reclamation Facility in the past three (3) years. On September 3, 2002, approximately 150 gallons of used oil were spilled onto the ground near the southeastern dock of the tertiary building (at south-central edge of facility). The spill occurred after an oil tote fell from its plastic spill containment platform, which had become warped as a result of extreme heat. BCDES workers immediately contacted Environmental Enterprises, Incorporated (EEI) for cleanup guidance and assistance. A dumpster for the contaminated soil was soon delivered to Upper Mill Creek, and on September 17, 2002, workers excavated all impacted soil from the delineated spill area. On September 18, 2002, EEI took three (3) soil samples, all of which indicated below detection limits for total petroleum hydrocarbons. The area was deemed sufficiently clean and on October 8, 2002, the dumpster containing the impacted soil was removed by EEI and delivered to Rumpke landfill. The area was then filled in with topsoil. BCDES officials did not report the spill to OEPA Division of Surface Water as it was contained onsite and did not reach a water body. As a result of this spill, oil totes (and other potentially hazardous materials and chemicals) are now stored in the oil/chemical containment building located near the belt press/sludge building.

The following table lists historical oil spills at Upper Mill Creek Regional Water Reclamation Facility and the corrective actions taken to prevent the possibility of recurrence. These spills (and potential new ones) will be reviewed when considering annual training requirements and/or the need for any refresher training courses or other special attention. Table 1 will be updated as necessary in the event of a future oil spill.

Table 1: Historical Spills at Upper Mill Creek

Date of Spill	Material Released	Spill Quantity	Discharged to Surface Water?	Apparent Cause	Corrective Measure
09-03-2002	Waste oil	~150 gallons	No	Collapsed containment skid	250-gallon used oil totes moved to oil storage unit

## 5.2 Potential spills [40 CFR 112.7(b)]

The following table lists potential sources of oil spills and describes potential spill dispersal directions. The potential ‘Rate’ of flow of oil spills is based on worst-case scenarios for each of the containers (such as complete tank rupture). The presence of containment is ignored in the ‘Direction of Flow’ column in Table 2. Refer to Appendix C for facility layout drawings.

Table 2: Potential Oil Spills at Upper Mill Creek

<b>Source</b>	<b>Type of Failure</b>	<b>Volume (Gallons)</b>	<b>Rate</b>	<b>Direction of Flow</b>	<b>Containment</b>
Aboveground storage tank (AST-1) connected to generator unit, between electrical building & 1° oxidation ditch	Rupture/ Leak/ Overfill	3,000 gallons	3,000 gpm	A diesel spill in this area would flow to the storm sewer catch basin north of the tank, and would eventually exit the site through the wetlands on the western edge of the facility	Secondary containment (110%) provided by tank-specific, built-in steel dike system
‘Day tank’ linking 3,000-gallon AST to generator unit; located in generator building	Rupture/ Leak/ Overfill	150 gallons	150 gpm	A diesel spill in this area would spread out on the concrete floor of the generator building and flow into the sanitary-routed surface drains beneath the tank	Control of a diesel release from this tank would be provided by spill control kits, sorbent materials like sawdust, and drain plugs
‘Day tank’ linking 1,500-gallon UST to generator unit; located in blower building	Rupture/ Leak/ Overfill	75 gallons	150 gpm	A diesel spill in this area would spread out on the concrete floor of the blower building and flow into the sanitary-routed surface drains beneath the tank	Control of a diesel release from this tank would be provided by spill control kits, sorbent materials like sawdust, and drain plugs

Table 2 (Continued): Potential Oil Spills at Upper Mill Creek

Source	Type of Failure	Volume (Gallons)	Rate	Direction of Flow	Containment
Oil storage (safety storage) building	Drum Rupture/ Leak	250 gallons or less	250 gpm or less	An oil spill in this building would be contained beneath the grated floors	Secondary containment (110%) provided by grated flooring and significant under-floor drainage storage capacity

## **6.0 Facility Containment for Spill Scenarios [40 CFR 112.7(c)]**

### **6.1 Spill prevention systems - onshore [40 CFR 112.7(c)(1)]**

There is one (1) aboveground diesel fuel tank present at UMC Regional Water Reclamation Facility. This secondarily contained tank, with a total capacity of 3,000 gallons, is filled with diesel fuel via local tank truck delivery. The tank (AST-1), which is contained within an enclosed steel dike structure, sits next to the generator building (electrical building) adjacent to the newer oxidation ditch. The 3,000-gallon tank connects via aboveground piping to a 150-gallon 'day tank', which fuels the emergency generator unit located in the generator (electrical) building. An underground storage tank, regulated by the Bureau of Underground Storage Tanks (BUSTR), Division of State Fire Marshal, is also maintained onsite and likewise used to hold diesel fuel. This UST connects to a 75-gallon 'day tank', which fuels another generator unit housed in the blower building. Most other petroleum oils are contained in drum quantities (55-gallon capacities) and stored in a climate-controlled, ventilated and secondarily contained oil storage building. Refer to Section 4.5, page 16, (and Appendix C) for a description of oil storage locations and containment areas.

As noted above in the 'Containment' column of Table 2, all major sources of potential oil contamination are adequately and secondarily contained, with the possible exceptions of the 150-gallon 'day tank' located in the generator (electrical) building and the 75-gallon 'day tank' located in the blower building. The 150-gallon 'day tank' connects the 3,000-gallon diesel tank with an emergency generator unit; the 75-gallon 'day tank' connects the 1,500-gallon UST with a second generator unit. Though neither tank is secondarily contained, they are monitored daily and both are situated indoors and away from any sort of vehicular traffic. An overfill of either tank is highly unlikely as both have a high liquid level alarm system (visual light system). The tanks also have emergency relief venting. Despite these safety features and the tanks' protected locations, the possibility of an oil spill still exists. In the event of an accident or tank failure resulting in an oil discharge, any spilled oil would be controlled by trained personnel utilizing spill kit materials (i.e. socks, pads, pillows and/or booms) and sorbent substances such as sawdust or Oil-Dri. During the cleanup, sewer plugs would be used to cover the sanitary-routed floor drains in an effort to protect the sewer system. A spill control kit is maintained in the nearby oil storage building for easy access. Additionally, a drain plug is kept in the maintenance building at all times. Storm water is not an issue for these 'day tanks' as both are located indoors and thus are protected from the elements.

The 3,000-gallon diesel storage tank (AST-1) situated between the generator/electrical building and the oxidation ditch – used for emergency generator purposes only – is secondarily contained within a fully enclosed steel dike retention system. This system provides double-walled protection from spills, leaks and overfills, along with safeguards against explosions and fire. Most importantly, the system provides 110% containment for the diesel fuel. The fill pipe on the tank is located adjacent to a sight glass, so the tank can be checked visually during loading to prevent overfills. In addition, both a high liquid level warning light system and a leak detection sensor exist on the tank. In the

event of an overfill, diesel fuel would be contained in an external storage compartment specifically designed for overfill scenarios. Storm water is not an issue for this tank as the containment system is completely enclosed.

While the 3,000-gallon diesel storage tank (AST-1) is completely contained, the loading/unloading area adjacent to the tank is not equipped with a containment system designed to control a major spill from a tank truck, as noted in Section 4.4, Item No. 1 (page 15). Thus, for example, a break in the delivery hose during the fuel transfer process would result in an uncontained diesel spill. This deviation from spill control protocol is, however, deemed acceptable due to the infrequent nature of fuel transfer in this area, the supervision of all fuel transfer activities by qualified BCDES staff and safety-minded delivery drivers, and the presence of on-truck and onsite spill control kits and surface drain covers.

The oil storage building (safety storage unit) is a ventilated, climate-controlled unit specifically designed to hold potentially harmful materials such as oil and chemicals. Only containers with capacities of 250 gallons or less are stored in this building, with the majority of the containers being 55-gallon drums. The grated flooring system provides 110% containment for the largest oil container, and actually much more. In the event of an oil spill or leak within this unit, qualified individuals would drain the building according to manufacturer specifications and dispose of the oil according to federal and local regulations. Storm water contamination is not an issue as the building is completely enclosed and thus all containers are protected from the elements.

A storm water drainage system exists at Upper Mill Creek Regional Water Reclamation Facility, consisting of a series of interconnected catch basins, inlets and drainage swales. There are three (3) main storm water outlets (discharge points) surrounding the facility. These outlets drain all of the storm sewers and most of the drainage swales on site. In addition, the south-central side of the facility drains via a system of two (2) small vegetated swales into a nearby, unnamed tributary of the East Fork of Mill Creek, bypassing the storm sewers completely. All of the storm water that drains from the facility eventually discharges, either directly or through the unnamed tributary, into the East Fork of Mill Creek approximately one (1) mile above its confluence with the West Fork of Mill Creek. Plant drainage pathways and control structures are shown in Appendix C. In addition, they are discussed in much greater detail in the Storm Water Pollution Prevention Plan (SWPPP) for the facility, maintained onsite (in Administration building) and at LeSourdsville Central File.

(While SPCC Plan regulation does not require discussion of underground storage tanks, BCDES certifies that the 1,500-gallon UST used to hold diesel fuel at UMC Regional Water Reclamation Facility complies with the most recent technological and regulatory standards in terms of continuous leak detection, secondary containment and cathodic protection.)

6.2 Spill prevention systems – offshore [40 CFR 112.7(c)(2)]

This section is not applicable to the Upper Mill Creek facility.

**7.0     Impracticality of Specific Requirements [112.7 (d)]**

7.1     Oil spill contingency plan [40 CFR 112.7(d)(1)]

This section is not applicable to the Upper Mill Creek facility.

7.2     Written commitment of manpower, equipment, and materials for spill control  
[40 CFR 112.7(d)(2)]

This section is not applicable to the Upper Mill Creek facility.

## **8.0 Inspections, Tests and Records [40 CFR 112.7(e)]**

All petroleum storage tanks and containers with capacities of 55 gallons or greater are visually inspected on a monthly basis. The inspections rely on the visual examination of container condition, tank supports, containment structures and foundations for signs of deterioration. Oil leaks from tank piping, seams, gaskets, rivets and/or bolts causing a visible stain and/or an accumulation of oil in a containment area are repaired immediately. Tanks or containers with noticeable deterioration are replaced prior to becoming problematic. The monthly Inspection Checklist is included as Appendix D. Additionally, thorough Visual Integrity Inspections are conducted annually on the 3,000-gallon aboveground diesel storage tank (AST-1) at Upper Mill Creek. A copy of this form is included as Appendix E. The 3,000-gallon tank will also become subject to Formal Integrity Testing (i.e. hydrostatic, radiographic, ultrasonic, and acoustic) within ten (10) years of the date of this plan. Formal Integrity Testing will be performed at least once every ten (10) years or more frequently if deemed necessary. This testing will be contracted to qualified inspectors. See Section 15.6 (page 42) for additional information regarding Formal Integrity Testing.

Current inspection records are maintained for three (3) years both onsite (Administration building) and at LeSourdsville Central File. These records can be found with the contents of this SPCC Plan and other associated materials.

## **9.0 Personnel, Training and Discharge Prevention Procedures [40 CFR 112.7(f)]**

### **9.1 Personnel training [40 CFR 112.7(f)(1)]**

Each Upper Mill Creek Regional Water Reclamation Facility employee is responsible for recognizing the potential for an occurrence of any oil spill and for calling this to the attention of the appropriate personnel. Depending on the situation, appropriate personnel at the facility include supervisors, Facility Response Coordinators and alternates, Environmental Specialists and/or maintenance staff.

Specific training will be provided to oil-handling employees and will address the following topics:

- The operation and maintenance of equipment to prevent discharges;
- Discharge procedure protocols (including spill communication procedures);
- Location of spill control kits, surface drain covers and other spill cleanup equipment;
- Applicable pollution control laws, rules and regulations;
- General facility operations; and
- The location and content of this SPCC Plan.

Personnel receiving training at the facility include maintenance and operational staff that are involved in activities related to oil storage, equipment operation, oil transfer operations, and emergency response/spill control coordination.

### **9.2 Designated person accountable for discharge prevention [40 CFR 112.7(f)(2)]**

Mark Withers is the designated person accountable for spill prevention at the facility and reports to facility management.

Facility Response Coordinator:	Mark Withers, Water Reclamation Manager
	Work: (513) 887-3686
	Cell: (513) 659-8513
	Pager: (513) 819-2772
	Home: (513) 856-7883

### **9.3 Discharge prevention briefings [40 CFR 112.7(f)(3)]**

At minimum, discharge prevention briefings will be conducted with oil-handling employees on an annual basis to ensure the adequate understanding of the SPCC Plan for Upper Mill Creek Regional Water Reclamation Facility. In addition to the topics described in Section 9.1 above, these briefings will also highlight the following:

- Known discharges of oil from the UMC facility and/or other similar facilities into or upon the waters of the U.S. and failures in preventing such discharges
- The contribution of any malfunctioning operational equipment or spill prevention equipment to the discharges described above
- The remedies, controls or precautionary measures recently developed to prevent and/or control similar discharges in the future.

Records of the training briefings will be maintained for a period of three (3) years and will include a short description of the topics covered in addition to an employee sign-in sheet. A copy of the training form can be found as Appendix F. Training records will be kept both onsite and in the LeSourdsville Central File.

## **10.0 Security [40 CFR 112.7(g)]**

### **10.1 Facility fencing [40 CFR 112.7(g)(1)]**

UMC Regional Water Reclamation Facility is surrounded entirely by chain-link security fencing. The main access gate is closed and locked at night, when the facility is unmanned. All reasonable measures are taken at the facility to ensure the safety and security of the site.

### **10.2 Securing of container drain valves [40 CFR 112.7(g)(2)]**

All master flow and drain valves and any other valves permitting direct outward flow from the 3,000-gallon aboveground diesel fuel tank (AST-1) are locked at all times.

No drain valves are present on the 150-gallon ‘day tank’ located in the generator/electrical building. Likewise, no drain valves are present on the 75-gallon ‘day tank’ located in the blower building.

### **10.3 Locking of oil pump starter controls [40 CFR 112.7(g)(3)]**

The starter control for the diesel fuel supply pump associated with the 3,000-gallon AST (AST-1) is located in the main control panel box, on the outside of the tank’s steel containment structure. This box is locked at all times and accessible only by authorized BCDES employees. The secure location of this starter control ensures that the pump remains in the “off” position at all times, or at least until emergency generator power is needed. When and if emergency power is needed, authorized personnel and/or the supervisory computer system will unlock the control and allow diesel fuel to be pumped to the generator unit.

The starter control for the 150-gallon ‘day tank’, which connects AST-1 with the emergency generator unit, is located within the generator/electrical building. This building is centrally located within the secured and fenced area of Upper Mill Creek Regional Water Reclamation Facility. The tank is accessible only to authorized personnel of BCDES.

The starter control for the 75-gallon ‘day tank’, which connects the UST with an emergency generator unit, is located within the blower building. This building is also centrally located within the secured and fenced area of UMC Regional Water Reclamation Facility. The tank is accessible only to authorized personnel of BCDES.

#### 10.4 Securing of loading/unloading connections [40 CFR 112.7(g)(4)]

The fill port connection on the 3,000-gallon tank is located on top of the tank. This port is securely capped when not in use, and is only accessible to authorized personnel of BCDES.

There is no fill port connection on the 150-gallon 'day tank', as it receives fuel directly from the 3,000-gallon tank. Similarly, there is no fill port on the 75-gallon 'day tank', as it receives diesel directly from the underground storage tank.

#### 10.5 Facility lighting [40 CFR 112.7(g)(5)]

The facility is sufficiently well lit to detect oil spills during nighttime hours. The security fencing, lighting and remote location of the facility combine to help prevent illicit nighttime discharges of oil via acts of vandalism or terrorism.

## **11.0 Facility Loading/Unloading Racks [40 CFR 112.7(h)]**

### **11.1 Containment for loading/unloading racks [40 CFR 112.7(h)(1)]**

The facility does not have any loading/unloading racks.

### **11.2 Warning systems [40 CFR 112.7(h)(2)]**

All incoming petroleum shipments are made in either drum quantity or by tank truck delivery (from local fuel provider). When filling the 3,000-gallon aboveground storage tank, the fuel supplier's tank truck driver has direct view of the sight glass showing the tank's liquid level; thus tank overfill is highly unlikely. The tank is also equipped with audible air vents for additional overfill protection, and has a high liquid level warning light system. In addition, tank truck departure before the complete disconnection of tank and oil transfer line is also highly unlikely as all delivery drivers are thoroughly trained in spill prevention protocol.

All delivery drivers comply with DOT (Department of Transportation) regulations in 49 CFR Part 177, Subpart B and facility contractor rules.

### **11.3 Vehicle inspection procedures [40 CFR 112.7(h)(3)]**

Prior to tank filling and/or truck departure, the fuel delivery driver and BCDES unloading personnel examine the vehicle's drain and lowermost outlets for signs of leakage or discharge. If necessary, the drain and/or outlets are tightened, adjusted or replaced.

## **12.0 Brittle Fracture Evaluation of Field-Erected (Field-Constructed) Containers [40 CFR 112.7(i)]**

Upper Mill Creek Regional Water Reclamation Facility has no ‘field-constructed’ aboveground containers; thus, this section is not applicable.

However, if the 3,000-gallon pre-assembled aboveground tank undergoes a repair, alteration, reconstruction or change in service that might affect the risk of a discharge, BCDES will evaluate the container, assess the perceived risk and take appropriate action.

### **13.0 Conformance with State Requirement [40 CFR 112.7(j)]**

There are no other **required** oil-related prevention standards beyond those listed in this federally mandated SPCC Plan, including no additional state or local rules, regulations, and/or guidelines.

## **14.0 SPCC Plan Requirements for Onshore Facilities [40 CFR 112.8(b)]**

### **14.1 Diked storage area drainage [40 CFR 112.8(b)(1)]**

This section is not applicable as there are no exposed, diked storage areas at UMC.

The diked containment system for the 3,000-gallon aboveground diesel storage tank (AST-1) is completely enclosed and therefore unexposed to precipitation. Likewise, the oil storage building is covered, the 150-gallon ‘day tank’ is stored within the generator/electrical building and the 75-gallon ‘day tank’ is enclosed in the blower building. Because these oil-holding containers are covered, their associated containment dike systems do not need (storm water) drainage procedures.

### **14.2 Valve design for diked area drainage [40 CFR 112.8(b)(2)]**

This section is not applicable.

### **14.3 Drainage from undiked areas [40 CFR 112.8(b)(3)]**

Only one (1) undiked area exists at Upper Mill Creek where a discharge of oil could potentially migrate offsite and into a waterway. This area is the loading area zone of the 3,000-gallon aboveground storage tank (AST-1), situated between the generator (electrical) building and the primary oxidation ditch. A spill during the dispensing of diesel fuel from tank truck to storage tank would most likely flow north to a storm sewer catch basin directly adjacent to the loading zone. In the event of a spill, a drain mat would be placed over the drain to prevent oil from contaminating the storm sewer system. Spill kit materials would then be used to contain the spill. If necessary, other measures would be taken and cleanup contractors would be contacted to ensure the complete remediation of the spill. See Appendix C for a review of facility diagrams, including oil storage locations and fuel transfer areas.

### **14.4 Alternate drainage systems [40 CFR 112.8(b)(4)]**

While the undiked unloading area near AST-1 does NOT drain to a sanitary-routed sewer, BCDES believes the presence of sewer plugs, spill control kits and absorbent materials will be sufficient to prevent a spill from reaching the storm sewer until the spill can be appropriately contained. In addition, the UMC facility is extremely flat, which would allow for any spilled oil to soak into the topsoil as opposed to flowing offsite.

### **14.5 Safeguards for human error and equipment failure [40 CFR 112.8(b)(5)]**

There are no outdoor, undiked areas at the facility to which this section applies.

## **15.0 Bulk Storage Containers [40 CFR 112.8(c)]**

### **15.1 Container materials and construction compatibility [40 CFR 112.8(c)(1)]**

The 3,000-gallon aboveground diesel storage tank (AST-1) was factory-erected. It was primed and painted by the manufacturer. It is constructed of steel. The steel is compatible with the diesel fuel stored inside. Both ‘day tanks’ are also made of steel compatible with fuel storage.

55-gallon drums are typically constructed of mild steel, compatible with the type of petroleum product stored inside. Some drums are constructed of plastic, depending on the material being stored. The 250-gallon waste oil totes are also constructed of plastic.

A listing of oil containers and their locations can be found in Section 4.5 (page 16). Also refer to Appendix C for a facility diagram, with oil storage locations specified.

### **15.2 Containment [40 CFR 112.8(c)(2)]**

The 3,000-gallon aboveground diesel fuel tank’s steel containment dike system provides 110% containment of the tank’s maximum capacity. This technologically advanced containment system is self-enclosed and sufficiently impervious to contain discharged oil. The tank (AST-1), located between the generator (electrical) building and the primary oxidation tank, is protected against fire, explosion, leak and spill hazards.

Both 250-gallon waste oil totes and all 55-gallon oil drums stored at Upper Mill Creek are maintained in the ventilated, climate-controlled and secondarily contained oil storage building. This building, with grated flooring and significant under-floor storage capacity, provides 110% containment of the largest oil storage drum kept within.

Neither the 150-gallon ‘day tank’ in the generator building nor 75-gallon ‘day tank’ in the blower building are secondarily contained. Complete spill control kits, each with the ability to contain and absorb up to 75 gallons of oil, are therefore kept onsite at all times. Kits are located in the oil storage building and in the maintenance building for easy and quick access; an impervious drain cover is kept in the maintenance building as well.

### **15.3 Drainage procedures from diked areas [40 CFR 112.8(c)(3)]**

#### **15.3.1 Drain valves [40 CFR 112.8(c)(3)(i)]**

This section is not applicable as there are no open, diked containment areas at Upper Mill Creek. Because the 3,000-gallon tank is self-contained within a steel dike structure, the 150-gallon ‘day tank’ is located within the generator building and all other oil containers are stored in the oil storage building, storm water contamination is not an issue.

15.3.2 Inspection of accumulated storm water [40 CFR 112.8(c)(3)(ii)]

This section is not applicable to Upper Mill Creek Regional Water Reclamation Facility.

15.3.3 Supervised drainage [40 CFR 112.8(c)(3)(iii)]

This section is not applicable to Upper Mill Creek Regional Water Reclamation Facility.

15.3.4 Drainage records [40 CFR 112.8(c)(3)(iv)]

This section is not applicable to Upper Mill Creek Regional Water Reclamation Facility.

15.4 Corrosion protection of USTs [40 CFR 112.8(c)(4)]

There is one (1) underground storage tank (UST) at Upper Mill Creek. The Bureau of Underground Storage Tanks (BUSTR), Division of State Fire Marshal, regulates this 1,500-gallon underground diesel storage tank, centrally located near the blower building. This fiberglass, double-walled tank complies with the most recent technological and regulatory standards in terms of continuous leak detection, secondary containment and cathodic (corrosion) protection.

15.5 Corrosion protection of partially buried tanks [40 CFR 112.8(c)(5)]

There are no partially buried tanks at Upper Mill Creek Regional Water Reclamation Facility.

15.6 Integrity testing of aboveground containers [40 CFR 112.8(c)(6)]

Facility personnel observe the 3,000-gallon aboveground storage tank during normal operating hours. Likewise, BCDES employees regularly observe the two ‘day tanks’ used to supply fuel to the generator units. Formal inspections of oil containers greater than or equal to 55 gallons are conducted monthly according to provisions in Section 8 (page 32). These inspections are documented using the Inspection Checklist found in Appendix D.

55-gallon drums containing oil are stored in the oil storage (safety storage) building. Most of these drums are quickly used. Both maintenance personnel and operations people check these drums regularly. If a drum is determined to be unsuitable for oil storage, it will be replaced immediately. Additionally, oil vendors are required to provide drums that meet all applicable DOT regulations. The two (2) 250-gallon plastic totes used to hold waste oil are also stored in the oil storage building. BCDES employees regularly check these totes for leaks and/or structural defects.

The only container subject to **visual** integrity testing requirements at Upper Mill Creek is the 3,000-gallon aboveground diesel storage tank (AST-1). Annual Visual Integrity Inspections will be conducted annually on this tank or whenever a major repair is completed, according to specifications in Section 8 (page 32) of this Plan. A copy of this form is in Appendix E.

**Formal** Integrity Testing will only be performed on AST-1 as well, as specified in Section 8 of this SPCC Plan. Formal Integrity Testing on AST-1 will be contracted to qualified inspectors. Formal Integrity Testing will be based on the guidelines of the Steel Tank Institute, SP001-00. This testing will include wall thickness readings taken externally on the tank shell via hydrostatic, radiographic, ultrasonic, acoustic or other similar non-destructive technique. Formal Integrity Testing will be completed every ten (10) years or more frequently if deemed necessary, as specified in Section 8.

All recommendations and/or results from tank inspection reports will be documented and addressed.

#### 15.7 Tank internal heating coils [40 CFR 112.8(c)(7)]

Upper Mill Creek Regional Water Reclamation Facility does not have any tanks with internal heating coils.

#### 15.8 Fail-safe overfill and liquid level devices [40 CFR 112.8(c)(8)]

The 3,000-gallon aboveground storage tank (AST-1) is equipped with direct vision gauges for the monitoring of liquid fuel levels. These gauges ensure that the tank will not be overfilled. Since the fuel supplier's delivery driver filling this aboveground diesel tank will have express control over the fuel transfer, including direct vision of liquid level gauges, additional overfill prevention measures are not necessary. In addition, AST-1 and both 'day tanks' have audible (emergency) air vents and a high liquid level warning light.

#### 15.9 Effluent treatment system inspections [40 CFR 112.8(c)(9)]

As Upper Mill Creek is a wastewater treatment facility, the effluent is constantly monitored via visual and analytical techniques. Any possible discharge of oil into the treated effluent would be immediately detected and corrected. Additionally, a discharge of oil into the influent flow of water would also be detected and, if necessary, corrective actions would be taken.

15.10 Correction of visible discharges and removal of oil accumulation from diked areas  
[40 CFR 112.8(c)(10)]

Visible oil leaks and/or spills noted during routine inspections or during the course of normal operations are to be reported to the Facility Response Coordinator or Environmental Specialist (or appropriate designees) and corrected in a timely manner.

15.11 Mobile/portable containers siting and containment [40 CFR 112.8(c)(11)]

With the exception of the 55-gallon drums of hydraulic, lubricating, and motor oils stored in the oil storage building, the facility has no mobile or portable oil storage units. The vast majority of petroleum drums at UMC are stored in the secondarily contained oil storage building and moved only when they become empty; therefore a release to the environment is highly unlikely.

## **16.0 Facility Transfer Operations, Pumping and Facility Process [40 CFR 112.8(d)]**

### **16.1 Corrosion provisions for buried piping [40 CFR 112.8(d)(1)]**

Upper Mill Creek Regional Water Reclamation Facility has neither installed nor replaced any buried (oil) piping at the facility since August 16, 2002. If the facility installs or replaces buried piping to transport oil at any point in the future, the piping must be cathodically protected from corrosion.

### **16.2 Security of transfer connections [40 CFR 112.8(d)(2)]**

Aboveground piping connects AST-1 to the 150-gallon ‘day tank’, located within the generator/electrical building. This silver piping, appropriately labeled with the necessary “warning” decals, is situated away from vehicular traffic and is safeguarded by bright yellow concrete protection pillars. There is no terminal connection. The aboveground piping associated with the 75-gallon ‘day tank’ is contained within the blower building and is thus protected from equipment and vehicles.

### **16.3 Pipe support design [40 CFR 112.8(d)(3)]**

The supports for the aboveground piping network connecting AST-1 and the 150-gallon ‘day tank’ are constructed of steel and were designed according to good engineering standards. Similarly, the supports associated with the piping network of the 75-gallon ‘day tank’ are made of steel and were designed according to good engineering standards.

Pipe supports for potential future aboveground piping networks will also be constructed of steel and designed utilizing current good engineering practices. The load of the piping, abrasion and corrosion potential, and expansion and contraction due to temperature variations will all be considered during the design phase on any new piping system.

### **16.4 Inspections of aboveground valves, piping and appurtenances [40 CFR 112.8(d)(4)]**

The aboveground piping networks will be inspected monthly to identify and correct any problems. Review Section 8 for general tank and piping inspection criteria, and see Appendix D for a copy of the monthly Inspection Checklist.

### **16.5 Warning practices for vehicles [40 CFR 112.7(d)(5)]**

This section is not applicable. There is no exposed oil piping that is accessible to vehicular traffic at Upper Mill Creek.

## 17.0 Inapplicable Sections

The following sections of SPCC regulations are NOT APPLICABLE to this facility:

Rule Citation	Title
<b>Subpart A</b>	<b>General requirements for all facilities and all types of oil</b>
112.7(c)(2)	Spill prevention systems – offshore
112.7(d)(1)	Oil spill contingency plan
112.7(d)(2)	Written commitment of manpower, equipment and materials for spill control
112.7(h)	Facility loading/unloading racks
112.7(i)	Evaluation of field-erected tanks for brittle fracture
<b>Subpart B</b>	<b>Requirements for petroleum oils and non-petroleum oils</b>
112.8(b)(1)	Diked storage area drainage
112.8(b)(2)	Valve design for diked area drainage
112.8(b)(5)	Safeguards for human error and equipment failure
112.8(c)(3)	Drainage procedures from diked areas
112.8(c)(5)	Protection of partially-buried storage tanks
112.8(c)(7)	Tank internal heating coils
112.8(d)(1)	Provisions for buried piping
112.8(d)(5)	Warning practices for vehicles
112.9	Requirements for onshore oil production facilities
112.10	Requirements for onshore oil drilling and workover facilities
112.11	Requirements for offshore oil drilling, production, or workover facilities
<b>Subpart C</b>	<b>Requirements for animal fats, oils and greases and vegetable oils</b>
112.12	Onshore facilities
112.13	Onshore oil production facilities
112.14	Onshore oil drilling and workover facilities
112.15	Offshore oil drilling, production, workover facilities
<b>Subpart D</b>	<b>Response requirements</b>
112.20	Facility response plans
112.21	Facility response training and drills/exercises

**APPENDIX A**  
**SPILL REPORT**

### SPILL REPORT

Name of your facility	
Your name (reporting person's name)	
Location of facility	
Phone number of facility	
The approximate date and time of discharge (including, to the extent known, when the discharge began and stopped)	
The type of material discharged	
An estimate of total quantity discharged	
An estimate of the quantity of oil that was discharged to the environment (ground or water)	
An estimate of the quantity of oil reaching navigable waters of the U.S.	
Source of discharge/name of container	
What specific environmental media was contaminated (water, ground)	
The maximum storage or handling capacity of facility (or specific container) and normal daily throughput	
Cause of the discharge	
Damages or injuries caused by the discharge (including the extent and nature of the impact on waterways, for example)	
Actions taken to stop, remove, or mitigate the effects of the discharge	
Was an evacuation needed	
Names of individuals and/or organizations who have been contacted	

## **APPENDIX B**

### **5-YEAR REVIEW OF SPCC PLAN**

## 5-YEAR REVIEW OF SPCC PLAN

I have completed the review and evaluation of this Spill Prevention, Control and Countermeasure Plan for the Upper Mill Creek Regional Water Reclamation Facility, West Chester, Ohio, on the date listed below. The Plan WILL / WILL NOT (circle one) need amendment at this time\*. The Plan WILL / WILL NOT (circle one) require recertification by a professional engineer (PE) at this time\*\*.

\*If the Plan requires amendment, please attach amended provisions and details to this 5-year review form.

\*\*Recertification by a professional engineer is needed only if amendments significantly affect the facility's potential for oil discharge into or upon navigable waters of the United State of America.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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

\*\*(If required)

PE Number: \_\_\_\_\_

Engineering Seal:

**APPENDIX C**  
**FACILITY DRAWINGS**

## **APPENDIX D**

### **MONTHLY INSPECTION CHECKLIST**

## MONTHLY INSPECTION CHECKLIST

Inspector name: \_\_\_\_\_

Date of inspection: \_\_\_\_\_

### Spill Prevention, Control & Countermeasure

Look for: evidence of damage, bulges, rust spots, or defects in tanks, process piping and containment structures/areas; evidence of general inadequacies of structural integrity of petroleum storage units; evidence of staining and/or distressed vegetation if applicable. Verify that containment areas are clear of debris and storm water, and ensure that containment structures are intact and functional. Also check to make sure labels are clear (especially on drums and totes) and that loading and unloading procedures are posted throughout the facility.

Area Inspected	Status <sup>1</sup>	Notes <sup>2</sup>	CAC <sup>3</sup>
<p>Aboveground storage tank (AST-1) between generator building and primary oxidation ditch</p> <ul style="list-style-type: none"> <li>• Check for leaks in containment dike (via leak detection sensor)</li> <li>• Inspect tank/dike for damage and corrosion</li> <li>• Inspect and clean as necessary any emergency vents</li> <li>• Inspect attached aboveground piping for corrosion/damage</li> </ul>			
<p>150-gallon 'day tank' located in generator building</p> <ul style="list-style-type: none"> <li>• Inspect tank for structural damage and/or corrosion</li> <li>• Inspect and clean as necessary any emergency vents</li> <li>• Inspect attached aboveground piping for corrosion/damage</li> </ul>			

Area Inspected	Status <sup>1</sup>	Notes <sup>2</sup>	CAC <sup>3</sup>
75-gallon 'day tank' located in blower building <ul style="list-style-type: none"> <li>Inspect tank for structural damage and/or corrosion</li> <li>Inspect and clean as necessary any emergency vents</li> <li>Inspect attached aboveground piping for corrosion/damage</li> </ul>			
Oil storage (safety storage building) <ul style="list-style-type: none"> <li>Inspect structural integrity of building walls and floor</li> <li>Inspect under-floor containment area for spilled or leaked oil</li> <li>Inspect drums for leaks or holes or corrosion problems</li> <li>Ensure labels are present on oil drums</li> <li>Remove empty or damaged drums</li> </ul>			

1. Status notation: Commendable (C), Good (G), or Unacceptable (U).
2. Notes: include in this section comments regarding observations, potential issues, and/or proposed corrective actions that should be taken.
3. CAC stands for 'corrective actions completed' – check off this column when proposed corrective actions have been completed.

**APPENDIX E**

**ANNUAL VISUAL INTEGRITY INSPECTION**

## ANNUAL VISUAL INTEGRITY INSPECTION

Inspector\_\_\_\_\_ Tank ID\_\_\_\_\_ Date\_\_\_\_\_

TANK INSPECTION CHECKLIST	OK	Problem(s) Identified	Corrective Actions
<b>Check tanks for leaks, specifically looking for:</b>			
Drip marks or leaked fluids			
Tank discoloration			
Corrosion			
Cracks or bulges			
<b>Check piping and hoses, if applicable, for:</b>			
Leaks			
Discoloration			
Corrosion			
Bowing of pipes between supports			
Condition of valves or seals			
Condition of joints			
Localized dead vegetation			
<b>SECONDARY CONTAINMENT INSPECTION</b>			
<b>Inspect secondary containment – checking the following</b>			
Cracks or leaks			
Presence of spilled or leak materials (standing liquid)			
Corrosion			
Valve conditions			
Dead vegetation near containment area/device			
Available capacity of containment			
<b>TANK SUPPORTS</b>			
Check concrete saddle supports for cracks, breaks			
Check iron supports for corrosion or bowing			
Check iron supports for corrosion at tank connections and at foundation			

## **APPENDIX F**

### **ANNUAL TRAINING RECORD**

The training of oil-handling employees will address the following topics, at minimum. For more information regarding employee training, refer to Sections 9.1 and 9.3 of this SPCC Plan.

- Date of training: \_\_\_\_\_ Instructor: \_\_\_\_\_

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[illegible]

**APPENDIX G**

**SUBSTANTIAL HARM CRITERIA**

**APPENDIX H**  
**INSPECTION RECORDS**

Appendix D: Element (Chapter) 8 – Training – of BCDES’ Biosolids Environmental Management System

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	<b>CHAPTER TITLE:</b> Element 8: Training	<b>REVISION NUMBER (REVISION DATE):</b> Rev. 0 (N/A)
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## **ELEMENT 8: TRAINING**

### **1.0 Purpose**

To establish and maintain a training program to ensure that employees involved in biosolids management activities and environmental management system (EMS) functions are competent in performing their assigned tasks and duties. The program shall provide general EMS awareness training, including how each employee's assigned roles and responsibility relate to the entire biosolids value chain.

### **2.0 General/Background**

The Butler County Department of Environmental Services (BCDES) has a training program in place that provides employees with the necessary awareness, skill and knowledge to perform assigned biosolids-related duties. The training program ensures that BCDES employees can carry out job-specific responsibilities efficiently and effectively, and also that employees have a sufficient understanding of how their activities impact the biosolids management program and relate to the biosolids value chain.


Training requirements are based on an employee's level of involvement with the Department's biosolids management program and Biosolids EMS. Section 5.0 of this Element describes training requirements and specific topics.

### **3.0 [Definitions](#)**

### **4.0 Responsible Persons**

Butler County Department of Environmental Services' Human Resources (HR) Department is ultimately responsible for specifying training requirements, coordinating training opportunities, tracking training, and securing appropriate training for newly hired employees. BCDES' EMS Coordinator, with assistance from the EMS Team, is responsible for developing and implementing training programs related to the Biosolids EMS. The EMS Coordinator and EMS Team are responsible for working directly with the HR Department to help ensure that employees receive Biosolids EMS training as required. Section Managers – especially those in charge of Biosolids, Wastewater

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Treatment, Industrial Services and the Laboratory – are responsible for ensuring that appropriate employees receive job-specific training as required. Ultimately, though, individual employees are responsible for knowing their own training requirements and for completing them in a timely manner.

For a more detailed account of roles and responsibilities related to this Biosolids EMS, review Element 7.

## 5.0 Procedures

### 5.1 General Training Requirements

All BCDES employees with job responsibilities directly or indirectly related to biosolids management will have “overview” training that, at minimum, addresses the following elements or topics:


- The biosolids EMS – what it is and why the Department is implementing it;
- Basic requirements of the National Biosolids Partnership (NBP);
- General tenets of the NBP ‘Code of Good Practice’;
- The biosolids value chain and overall biosolids management program;
- BCDES’ Biosolids policy statement (Element 2);
- Goals and objectives of BCDES’ biosolids management program (Element 5);
- Desired outcomes of the biosolids EMS
- Roles and responsibilities applicable to the biosolids EMS (Element 7)
- Internal EMS audit (Element 16)

To see biosolids EMS training requirements by section, please refer to ‘Matrix of EMS Training Requirements by BCDES Section’.

### 5.2 Job Specific Training Requirements

In addition to overview training, some employees will receive supplemental training as it relates to specific job duties. Training topics may include, but are not limited to, the following:

- Critical control points within the biosolids value chain (Element 3);  
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- Biosolids-related legal and regulatory requirements that apply directly or indirectly to jobs (Element 4);
- Public participation in program planning (Element 6);
- Training applicable to the biosolids EMS (Element 8);
- Communications and public outreach (Element 9);
- Standard operating procedures (SOPs) and work instructions that are necessary to meet biosolids legal, quality and public acceptance requirements (Element 10);
- Emergency preparedness and response (Element 11)
- Documentation, document control and recordkeeping (Element 12)
- Monitoring and measurement activities (Element 13);

BCDES employees with technical responsibilities and/or special job duties directly related to biosolids production, processing, transport, storage and/or end use will receive additional, comprehensive job-specific training on EMS functions and biosolids management issues. Primarily, such training will focus on the identification of critical control points (Element 3) and the implementation of associated operational controls (Element 10). In depth training may also focus on emergency response scenarios (Element 11) and/or biosolids monitoring and measurement activities (Element 13).

Employees will also receive appropriate training whenever any SOP, CCP or other part of the EMS is revised.


To see biosolids EMS training requirements by section, please refer to 'Matrix of EMS Training Requirements by BCDES Section'.

### 5.3 Training Methods and Activities

The Butler County Department of Environmental Services employs a wide variety of training techniques and training activities to educate its employees. Specifically, the biosolids EMS training program utilizes and/or recognizes the following approved methods of instruction:

- Emailed "hot topic" training issues/emailed updates
- Interactive, web-based training (through intranet)

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- Formal classroom training (lectures; videos; brown bag lunches; presentations through such venues as ‘Health and Safety Day’; etc.)
- On-the-job training (mentoring within a section)
- Cross-training (mentoring between two (2) or more sections)
- Mock-emergencies; Tabletop exercises
- Certification training through regulatory agencies such as USEPA and OEPA
- Certification and licensing training through other agencies such as Ohio Department of Motor Vehicles (DMV)
- Contact hour training through:
  - Regulatory agencies (like OEPA)
  - Industry agencies (like Water Environment Federation and Association of Metropolitan Sewerage Agencies)
  - Registered education contractors
- “Passive” training through such mechanisms as:
  - Reference cards
  - Biosolids EMS posters
  - Display/Information boards
- Others as approved by HR personnel and EMS Coordinator

#### 5.4 Training Tracking and Records Control

The HR Department at BCDES tracks formal training, including training related to the Biosolids EMS. Formal training consists of interactive web-based training, classroom training, on-the-job training, certification training, and contact hour training, among others. The tracking process entails the following steps:

1. Employees participate in a training event.
2. Employees fill out hard copy or electronic training “tracker” forms to document completed training. Forms are available at High Street, LeSourdsville and Upper Mill Creek, and also through the internal web. (Refer to an internal tracker form for more information)
3. Employees then give or send tracker form to appropriate supervisor for approval and signature (digital signature if electronic).
4. Completed tracker forms are then sent via inter-office mail, or electronically, to the HR Department.
5. HR personnel record the training in an electronic database.

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6. Towards the end of each year, HR personnel review the training records of all fulltime BCDES employees. Employees missing required training hours are informed of what they need to make up, as are the supervisors of said employees.
7. Additional training events are then usually held to give BCDES employees a chance to fulfill all training requirements.

Not all training related to the Biosolids EMS will be documented or tracked. For example, certain informal or passive training “events” (such as studying ‘EMS information boards’) may not be documented due to difficulties in quantifying actual time spent on the training.

## 6.0 Timeline


At the beginning of each year, the HR Department compiles a list of all (annual) training requirements by section, including requirements related to the Biosolids EMS. This information is then disseminated to employees either directly by the HR Department, or more often by section supervisors. Once training requirements are made known, it becomes the responsibility of the individual employee to attain the necessary training. Throughout the year, though, section supervisors and HR personnel help employees achieve annual training requirements by reminding them of voluntary events and by scheduling mandatory events. Similarly, the EMS Coordinator and EMS Team help employees achieve training requirements as they relate to the Biosolids EMS by scheduling and conducting training.

Job-specific and “overview” training opportunities related to the Biosolids EMS are provided throughout the year. Training events are scheduled at times considered most convenient for employees.

## 7.0 References

[Biosolids EMS Guidance Manual, National Biosolids Partnership \(most recent version\). Prepared by PA Consulting Group, Inc.](#)

[BCDES Internal Training Tracker Form; Current edition. Prepared by BCDES](#)

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['Matrix of EMS Training Requirements by BCDES Section'; Current edition. Prepared by BCDES](#)

[National Biosolids Partnership \(NBP\) Code of Good Practice](#)

[EMS Element 2, 'Biosolids Management Policy' – BCDES Biosolids EMS](#)

[EMS Element 3, 'Critical Control Points \(CCPs\)' – BCDES Biosolids EMS](#)

[EMS Element 4, 'Legal and Other Requirements' – BCDES Biosolids EMS](#)

[EMS Element 5, 'Goals and Objectives' – BCDES Biosolids EMS](#)

[EMS Element 6, 'Public Participation in Planning' – BCDES Biosolids EMS](#)

[EMS Element 7, 'Roles and Responsibilities' – BCDES Biosolids EMS](#)

[EMS Element 8, 'Training' – BCDES Biosolids EMS](#)

[EMS Element 9, 'Internal EMS Audit' – BCDES Biosolids EMS](#)

[EMS Element 10, 'Operational Control of CCPs – BCDES Biosolids EMS](#)

[EMS Element 11, 'Emergency Preparedness and Response' – BCDES Biosolids EMS](#)

[EMS Element 12, 'EMS Documentation and Document Control' – BCDES Biosolids EMS](#)


[EMS Element 13, 'Monitoring and Measurement' – BCDES Biosolids EMS](#)

[EMS Element 16, 'Internal EMS Audit' – BCDES Biosolids EMS](#)

## 8.0 Attachments

None

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## RECORD OF REVISIONS FOR ELEMENT 8

Document control #	Revision #	Revision date	Reason for revision

<b>ELEMENT PREPARED BY:</b>	
Name: Position:	Name: Position:
<b>ELEMENT APPROVED BY:</b>	
Name: Position:	
Signature: _____ Date: _____	

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