Industrial Facilities Stormwater Pollution Prevention Program and Inspection Standard Operating Procedures

Boston Water and Sewer Commission

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Table of Contents

Appendices

List of Tables

Section 1: Introduction

The Boston Water and Sewer Commission (BWSC) Industrial Facility Stormwater Pollution Prevention Program (IFSPPP) is designed for the purpose of inspecting Industrial Facilities. The BWSC has developed this IFSPPP in compliance with its 1999 National Pollutant Discharge Elimination System ("NPDES") permit (Part 1(B)(2)(i) and Section VII, Part M, Paragraph 53 of the Consent Decree lodged on August 23, 2012 in the matter of Conservation Law Foundation, et al., v. BWSC, U.S. District of Massachusetts, C.A. No. 10-10250-RGS (hereinafter "Consent Decree"). This program will outline the procedures for identification, inspection and enforcement of those Industrial Facilities discharging substantial pollutant loads into the BWSC's municipal separate stormwater system ("BWSC MS4"). The Consent Decree defines an "Industrial Facility" as one that discharges to the BWSC MS4 from municipal landfills, hazardous waste treatment, storage, disposal and recovery facilities, facilities that are subject to EPCRA Title III, Section 313, facilities that hold, or are required to hold, NPDES stormwater permits, and each other industrial or commercial discharger that the BWSC determines is contributing a substantial pollutant load to the BWSC MS4.

The IFSPPP and Inspection Standard Operating Procedures (SOPs) are designed not only for the inspection and enforcement of Industrial Facilities but may also be used for the inspection of facilities with the potential to discharge substantial pollutant loads to the BWSC MS4. In most cases the inspection of non-permitted facilities may be initiated when pollution problems or complaints are brought to BWSC's attention by concerned citizens, alerts from other City of Boston or government agencies, reported spills, and/or problems discovered through the Illicit Discharge Detection and Elimination (IDDE) program, Fats Oil Grease (FOG) program, Cross Connection program, construction site inspections and general construction inspection,

Section 2: Authority to Conduct Inspections

The authority to conduct the inspections is provided in the Boston Water Sewer Commission Sewer Use Regulations Articles V (C), VI and VII (A, B). Specifically Article VII, Subarticle A states:

A. INSPECTION
Section 1 - Right of Access.
(a) Duly authorized representatives of the Commission may inspect the property or facilities of any user (including facilities under construction) to ascertain compliance with these Regulations or compliance with any permit issued pursuant to these Regulations.

(b) Owners or occupants of premises where stormwater or wastewater is either generated or discharged shall allow properly identified Commission representatives safe and ready access, at all reasonable times during normal business hours and at such other times as the Commission reasonably suspects that a violation of these Regulations or a permit issued pursuant to these Regulations may be occurring.

(c) Access shall be allowed to all such parts of the premises as would enable the Commission personnel to inspect, observe, measure, sample and test:

(i) internal plumbing;
(ii) pretreatment facilities;
(iii) internal discharge points or connections;
(iv) exterior connections;
(v) building sewers or building storm drains;
(vi) oil traps and grease traps;
(vii) any other facilities required by the Commission and/or the MWRA to be constructed, installed or utilized;
(viii) measurement, sampling and testing facilities and procedures that have been required by the Commission and/or the MWRA; and
(ix) such other facilities as the Commission reasonably believes may be contributing to a violation of these Regulations or a permit issued pursuant to these Regulations.

d) The Commission, by itself or in conjunction with the MWRA, may conduct routine, periodic inspections of certain types of facilities. It is anticipated that restaurants, other food handling or food processing establishments, service stations, and other entities which deal with grease or petroleum products are particularly likely to be subject to such an inspection program. Other industrial users may also be so inspected, as the Commission deems appropriate. Owners or occupants shall provide any labor or equipment needed by Commission or MWRA personnel to open, inspect, and operate oil and grease traps and other facilities.

Section 2 - Right of Entry.
Upon proper identification and at reasonable times during normal business hours and at such times as the Commission reasonably suspects that a violation of these Regulations or a permit issued pursuant to these Regulations may be occurring, duly authorized representatives of the Commission shall be permitted to enter all private property through which the Commission holds an easement for the purposes of inspection, observation, measurement, sampling, testing, maintenance, repair, or reconstruction of any portion of the Commission's wastewater or storm drainage systems lying within said easement. All entry and subsequent work, if any, shall be done in full accordance with the terms of said easement.

Section 3: Pre-inspection Procedures

General Procedures

General procedures apply to all field activities and include the following:

1. All field personnel entering private properties as part of facility inspections including building and site areas are required to carry photo identification

issued by BWSC and a copy of the BWSC Facility Inspection Notification Letter to show facility owners, owner's representatives and tenants identification, if requested while conducting the inspections as evidence that they have authorization from the Commission to perform the work.

2. Vehicles must be clearly labeled with the company name and phone number.
3. All field personnel will wear safety gear.
4. Field activities within public streets in the City of Boston may require a police detail. BWSC personnel, or designated representative shall notify the City of Boston Detail Clerk at (617)343-4556 at least 24 hours in advance of the need for a police detail to allow time to schedule the detail. Roads under the jurisdiction of Massachusetts Department of Transportation (MDOT) and Department of Conservation and Recreation (DCR) require state police details which require notification of the local state police barracks to schedule a detail. BWSC personnel, or designated representative shall obtain and sign detail slips and add project identification number. Weekly police detail tracking reports of detail usage shall be prepared with detail cards attached. The detail slips and log are to be submitted by mail to BWSC's project manager. The project identification number 800011-ISP is to be shown on and written in with signing all detail slips and logs.
5. Field personnel are to act in a professional manner at all times while conducting field activities and in dealing with the public. Field personnel shall not engage in any confrontation with the public regardless of the circumstances. Any problems that the field personnel encounter during the execution of their work shall be reported to BWSC for resolution.
6. Advanced notice should be provided to BWSC and public safety officials (if applicable) of the proposed locations and type of work to be performed at each site daily.

Facility Inspections

1. Prior to the start of the facility inspections including building and site areas, BWSC or designated representative will distribute the Facility Inspection Notification Letters to property owners and/or business owner of each property to be inspected. Notification shall be at least two (2) weeks prior to the start of site inspections.
2. If the inspection requires interior inspection of the building, field personnel shall only enter the building if permitted access by the property / business owner, or property / business owner's representative. If the property / business owner, or property / business owner's representative declines access, the field personnel shall cancel the proposed building inspection and inform BWSC of the refusal by the property / business owner, or property / business owner's representative to permit entry.
3. The property / business owner, or property / business owner's representative must be present prior to any building entry by field personnel.
4. Field personnel shall take care to not disturb or damage the property being inspected.

5. Information gathered during the building and site inspection shall be recorded on the data collection device standard inspection form or printed hard copy. This will include a sketch of the property and structure showing on site drainage features, flow of surface run-off and any stormwater infrastructure on the property. Data from each site inspection will be uploaded to the Industrial Facility database each evening after the completion of inspections.

Prior to the inspection of a facility, inspectors should also perform the pre-inspection procedures listed below to ensure that each inspection is conducted proficiently and in a professional manner. The pre-inspection procedures include the following:

- ♦ Prioritization of facilities to be inspected (by project manager)
- ♦ Review of guidance materials for inspection of industrial facilities
- ♦ Review of maps for drainage patterns and outfall locations
- ♦ Review of files for prior correspondence
- ♦ Facility contact and notification of inspection
- ♦ Proper inspection and safety equipment for entering the facility

Manhole Inspections

1. Designated representatives of BWSC shall carry on them a signed copy of the BWSC "Permit to Enter Commission Sewers" when performing manhole inspections.
2. Field personnel shall fully comply with the requirements of the Occupational Safety and Health Act in entering the Commission's sewers and drains. Inspections will be from the surface.
3. Prepare the site for the work and set up appropriate equipment and traffic safety cones. Mark and protect the work area with traffic safety cones prior to opening the manhole.
4. Personal Protective Equipment is required as defined by OSHA Regulations Section 1910.120 Appendix B.
5. Immediately report to BWSC any significant defects observed from the manhole inspection including flow blockages or severe structural deficiencies that pose the risk of collapse or other major failure of the structure.
6. Close the manholes and move to next location or store equipment and begin cleanup.
7. Private manholes will be opened by a facilty representative.

Prioritization of Inspections

The BWSC currently maintains an inventory of **1760** Industrial Facilities**,** of which ninety percent (90%) must be inspected every two (2) years pursuant to Section VII, Part M, Paragraph 58 of the Consent Decree. BWSC will update and maintain its inventory, as necessary, based upon inspections conducted and data collected. The Project Manager having oversight of the Industrial Facility Stormwater Pollution Prevention Program (IFSPPP) shall prioritize and assign a list of facilities for inspection to each

field person. Each field personnel will then be responsible for organizing his or her list of sites and set up an inspection schedule to comply with the priority established by the Project Manager.

In order to efficiently conduct the inspections, field personnel should prioritize the list of Industrial Facilities by reviewing maps and other information and also by driving by and doing a brief visual observation of the sites just prior to meeting with the facility representative. Review of maps will allow for the field personnel to group or organize sites within the same local area(s). The driving by and brief visual observation practice will give the field personnel a good idea of the general layout of the site(s), and more importantly, the range of associated outdoor activities. In addition, visiting facilities prior to the official inspection will provide an opportunity to observe some potential concerns, such as stressed or dying vegetation due to spills or leaks, improper discharges, and/or evidence of previous spills and adjust ranking of facilities due to actual conditions.

Facilities have been ranked based on their industrial classification types and risk of pollution prior to field inspections. Facilities in the high category, based on their industrial activities, would have greater potential for pollutants entering the BWSC MS4 and receiving waters and should be inspected first. Once all the high priority sites are inspected, then the field personnel should inspect facilities ranked medium and low priorities respectively. The three rankings are as follows:

High: Industrial Facilities in this category have a large amount of outdoor processing activities and/or material storage on-site or obvious poor housekeeping issues. An example of a high priority site would be a metal scrap yard or large manufacturer where materials and stored chemicals are in potentially uncovered areas without containment and in direct contact with the elements (i.e., precipitation).

Medium: A medium level site would be similar to a freight carrier facility that receives and delivers materials via tractor trailer trucks. Most activities involve the loading and unloading of materials under a covered loading dock. However, these facilities usually have a vehicle maintenance area which can be problematic in terms of releasing oil and grease products.

Low: A facility in low level ranking would have limited or no outdoor processing areas. After inspection and review with BWSC, a “Certificate of No Exposure” could be issued if it is determined to not present substantial pollutant loading from the site.

Industrial Facilities may be re-ranked based on results of initial field inspections.

Review of Guidance/Resource Material

Field personnel should familiarize themselves with several guidance and resource materials before conducting facility site inspections. The materials are provided to give beneficial information on the types of general stormwater permits, material handling and

storage activities associated with the different industries, industry terminology, equipment and structures which could be helpful to industries in regards to mitigating pollution concerns, and the components contained in a Stormwater Pollution Prevention Plan. The resource materials will be housed near the IFSPPP site inspections file and the Project Manager will also have copies available for review by field personnel.

The list of in-house guidance and resource materials includes (but not limited too) the following:

- *Massachusetts Department of Environmental Protection Nonpoint Source Pollution web page*: http://www.mass.gov/dep/water/resources/nonpoint.htm
- *Stormwater Discharges from Industrial Facilities, EPA Website:* http://cfpub.epa.gov/npdes/stormwater/indust.cfm
- *North American Industry Classification System (NAICS) Manual* (US Census Bureau 2012): http://www.census.gov/eos/www/naics/

Review of Drainage and Storm Sewer Outfall Maps

As a condition of the NPDES stormwater permit, a permitted facility should have a site map that displays on-site drainage patterns and storm drain outfalls. However, prior to the visiting an Industrial Facility site, inspectors should review in-house BWSC drainage and sewer maps from its GIS system.

BWSC and Governmental Record(s)Review

Coordination with and a review of BWSC and governmental agency records (including records from: City of Boston Assessing, Boston Fire Department, MassDEP, EPA, etc.) can be an important and valuable resource to assist with preparing for and conducting Industrial Facility inspections. Information and records collected can potentially provide information on the property ownership, uses, drainage and sewer facilities, possible records of spills, manufacturing processes and material storage, permit information, past water quality violations, and other reports that may give the inspector background history on the Industrial Facility site.

A list of BWSC and governmental agency records that could be beneficial for field personnel to review includes the following:

- Spill and Complaint Database
- Assessing Records
- Enforcement files
- Pretreatment inspections
- Inspections performed by the Fire Department or Plumbing Inspector

Any Industrial Facility that has a history of noncompliance, the field personnel performing the inspection should check for any records from the following:

- ♦ MassDEP
- ♦ The EPA's website for Industrial Facilities: http://www.epa.gov/enviro/html/qmr.html

Facility Notification

Initial facility notification will be by Facility Inspection Notification Letters mailed out to each facility on the inventory list. The letters will include a general description of the program, identification of authorized representative companies to perform the inspections on behalf of the Commission, activities to be performed and contact information should a facility have any questions. Notification letters will be mailed in batches so that inspections can be completed no later than three (3) months after notification.

Field inspection crews will perform inspections no sooner than two (2) weeks after notification letters are mailed out. Crews will arrive with copies of notification letters, authorization materials and photo identification and inspection equipment and gear. When arriving at the facility, the field personnel will ask to speak to the person who handles environmental matters for the site. It is common for Industrial Facilities to have one primary contact person who deals with all environmental issues. The representative will be advised that BWSC, either in-house or through its contractor or subcontractor, is conducting the inspection and what pertinent areas the inspection will focus upon (i.e., Stormwater Pollution Prevention Plan (SWPPP) review and physical walkthrough of the facility and site).

In some cases it may be required to schedule an inspection with the facility owner, representative or tenant.

Permit information (if available) should have the relevant contact information for each facility site to be inspected. However, in some cases this information could be incorrect or out of date. Field crews will record any updates to the contact information with the property / business owner, or property / business owner's representative.

If for some reason the property / business owner, or property / business owner's representative questions or is hesitant to allow the inspection, cordially explain the provisions of the applicable BWSC Sewer Use Regulation (as listed in section 2) that allows for access by the BWSC or its representatives to conduct an inspection of of the Industrial Facility and its discharges within the City of Boston.

In addition, if entry to a facility is denied and the issues cannot be resolved at the facility, the field personnel should leave the scene and discuss the matter with BWSC Project Manager for further direction.

Inspection and Safety Equipment

When making initial contact with the Industrial Facility, it is also important to ask the company representative what necessary equipment is needed for a safe entrance to the facility. Table 3.1 below includes a list of personal protective equipment and additional materials that may be needed to properly complete the inspection.

Table 3.1 List of Inspection Equipment

Documents and Inspection Tools	**Safety Equipment and Protective Clothing**
• BWSC ID and business cards • Facility file (records and maps) • Field notebook • Clipboard • Cell phone • Digital camera • Flashlight/mirror • Manhole pick • Tape measure • Field computer with inspection application form	• Hard hat • Hearing protection • Safety shoes (steel toe) • Reflective safety vest • Safety glasses • Gloves

Section 4: On-Site Inspection Procedures

Upon arrival at the Industrial Facility site, the field personnel should introduce himself or herself as a BWSC authorized representative and offer the appropriate credentials (i.e., BWSC issued ID and/or business card ID). After introductions, the field personnel should communicate to the company representatives the reason and extent of the inspection, which include the following:

- ♦ On-site records review
- ♦ Physical walkthrough of the facility
- ♦ Wrap-up meeting with company official

On-Site Records Review

Field personnel should begin the on-site records review with an evaluation of the facility's Stormwater Pollution Prevention Plan (SWPPP). As a requirement of the EPA NPDES program for permitted Industrial Facilities, the SWPPP is a document utilized by the facility to manage and minimize the likelihood of pollution due to stormwater runoff and spills. The Stormwater Industrial Inspection Form (Appendix A) should be used during the review of documents. It is important to document any pertinent notes about the plan on the inspection form or in the field notebook.

The SWPPP consists of five major components: Site Plan, Stormwater Management Plan, Spill Prevention and Response Plan, Preventative Maintenance and Good

Housekeeping Plan, and Training Schedules. When properly applied, all five elements of the SWPPP perform an important part in reducing pollution from stormwater runoff.

Once the review of the SWPPP is complete, the field personnel should have a good working knowledge of the Industrial Facility site and overall layout of any processing areas. In addition to the SWPPP, the field personnel should evaluate records that are relevant to the management of stormwater on the facility. Other relevant records may include items such as maintenance logs on facility equipment, prior correspondence with BWSC or other government agencies, stormwater sampling data, documentation from any reportable spills, and any other relevant documents.

Physical Walkthrough of the Facility

After review of the on-site records, the next phase of the inspection will be the physical walkthrough of the Industrial Facility site. A thorough inspection of the entire facility should be completed. A list of general things an inspector should look for is as follows:

- ♦ On-site BMPs
- ♦ Indicators or presence of illicit connections and improper disposal
- ♦ Evidence of past spills
- ♦ Material handling and storage areas, including loading/unloading areas
- ♦ Equipment fueling and maintenance areas
- ♦ Storm drain structures and receiving streams
- ♦ Ground disturbance and contamination

When conducting the on-site inspection, it will be beneficial to have the owner or owners's representative supply a copy of the site map that shows all areas of concern. In regards to impacts to stormwater runoff, field personnel should pay close attention to outside processing and manufacturing areas. Notice where and how materials are stored (materials should be properly labeled and located out of high traffic areas). Examine storm drains, drainage swales, and outfalls for debris and evidence of spillage. Document any non-stormwater (dry weather) flows in the storm drains and outfalls. If dry weather overflow is present, note presence of pollutant indicators like oily sheens, odors, flow discoloration, or unnatural algae blooms. Inspectors should also note whether to recommend those dry weather flows for further investigation.

An inspection checklist application form has been developed for use on iPad devices to assist in the site inspection. Use of the application will promote consistent data entry, standardize data and provide a more efficient platform for performing the inspection. The inspection data will be uploaded to the project database no less than on a weekly basis. It is appropriate for the field personnel to have a field notebook and camera to document any findings and perform sketches while doing the walkthrough. In some cases the facility owner or owner's representative may convey concerns about allowing the inspector to take photographs. If this situation occurs, cordially talk about the concerns and attempt to come up with a solution satisfactory to both parties. Allowing the owner or owners's representative to view the pictures on the camera's display or

avoiding pictures of sensitive areas that have no relevance to the inspection are potential fixes to this problem.

Not all scenarios that field personnel may encounter in the field can be covered in this document. Each site will be unique and will have different processes that have the potential to impact stormwater runoff. Field personnel need to keep the big picture scenarios in mind (e.g., noting where materials will go and how the BWSC MS4 may be affected during a rainfall event or if there is a spill). Moreover, field personnel should note whether the strategies outlined in the SWPPP are being implemented successfully and whether appropriate BMPs are in place. Remember that being on the site is the most opportune time to discuss the facility's operations with the owners's representative. When in doubt, ask for clarification; being hesitant may cause the inspector to miss a potential problem area.

Wrap-Up Meeting

A wrap-up meeting with the the property / business owner, or property / business owner's representative will provide a final opportunity to answer questions, gather information, and present findings. Field personnel should be prepared to discuss the preliminary findings of the inspection. However, it is not necessary to share all findings of the inspection with the facility owner or owner's representative, especially if advice or direction is needed on a particular issue. Explain the next steps in the process and what further communications BWSC may have with the company, such as sending the inspection form/letter or the possibility of a follow-up inspection.

Section 5: Sampling

During the walkthrough of the facility, if evidence exists to warrant monitoring, then BWSC may require that the property / business owner, or property / business owner's representative to perform future monitoring of industrial discharges to the BWSC MS4, on an as-needed basis. The collection of water samples will utilize sampling techniques similar to those employed in the ambient and in-stream stormwater monitoring programs. The chemical analyses to be conducted on the water samples should be done by a contracted state certified lab and include the parameters most often required of industrial sites that have an NPDES stormwater discharge permit. Extra parameters may need to be analyzed in the water samples depending on the materials used and stored on the site. Here is a common list of parameters:

- ♦ Oil and grease
- ♦ COD
- ♦ Nitrate + nitrite nitrogen
- ♦ TSS
- ♦ DO
- ♦ Heavy metals
- ♦ Conductivity
- ♦ BOD
- ♦ Total Kjeldahl nitrogen(TKN)
- ♦ Total phosphorus
- ♦ PH
- ♦ VOC's
- ♦ Tier 2 chemicals
- ♦ Temperature

Data will be used to ensure compliance with discharge limits and help the facility mitigate future non-stormwater discharges.

Section 6: Project Database and Documentation of the Inspection

An Industrial Facility SWPPP tracking database has been created for this project. The database contains tables that will be used for entering facility details, tracking inspections, and inspection details. The IFSPPP Database includes a unique facility indentification number that is linked to the building ID stored within BWSC GIS. This number will be used to track specific sites and file information regarding them. The database was developed taking into consideration the requirements of CASSWORKS, site specific information collected from the inventory, BWSC input, and specific information related to the physical site inspection. To integrate with CASSWORKS, 3 primary tables have been used. To integrate with the GIS, facilities have been related to the GIS building identifier of the primary building at a facility. Within the database, the facility table contains site information, contacts, associated primary building identifier from GIS, and the status of the facility. The inspection table includes information specific to the site inspections. Attributes for this table are defined by the inspection checklist. The inspection detail table will contain details collected during inspections. A list of potential attributes of the database can be found in Table 6.1. An entity-relationship (E-R) model was developed and provided to BWSC for their review.

Table 6.1 Potential Database Attributes

Tracking Table	Inspection Table
Industry Name	Inspection Date
Unique Site Identifier	Inspector
Site Address	Site Activities (land use)
SIC	Site Plan
Site Owner	Existing SWPP Plan
Contact Name	Presence of Storm Sewers
Contact Phone	Drainage Areas
Contact Email	Illicit Discharges to Stormwater System
Inspection Type	On-site BMPs
Inspection Status	Water Quality Monitoring Plan
Inspection Schedule Date	Chemical Storage
Inspection Results	Current Monitoring Initiatives
Enforcement Activities	Existence of Existing NPDES Permit
Enforcement Resolutions	Chemical Transfer Procedures
	Spill Prevention Countermeasure Control
	Potential Risks
	Employee Training

A subset of the project database will be periodically loaded into CASSWORKS. BWSC GIS staff have developed a process to load external data into the CASSWORKS Work Management System. Although information will be periodically loaded into

CASSWORKS, the project database will be the official repository of project information until the project is transitioned to BWSC.

In an effort to manage information and better communicate throughout the duration of the program, a project portal has been developed. The portal has been designed to utilize the project database created above. The portal will house data, support simple data reporting and promote communication and data exchange between BWSC and the regulated industrial community. Data housed within this portal includes; general stormwater industry fact sheets and guidance materials along with industry specific information including industry name, owner, points of contact, address, geographic references, industrial code, stormwater permits, SWPPP; monthly and annual industry compliance reports, water quality monitoring; records of BWSC inspections; inspection reports; BWSC record of enforcement activities and resolutions, etc. The database has been developed to be used throughout the duration of the project and will also be utilized to provide weekly status updates during the inspection period from the portal. Status will be reported through a series of reports and a GIS web map. Access to the portal is provided to BWSC staff at various levels and will be controlled by a user log-in.

An important final step in the inspection procedures is the documentation of observations made during the facility inspection. Field personnel should refer to the BWSC IFSPPP database on the project portal to generate the necessary form letters to be submitted to the facility contact informing them of the findings of the inspection, contact log, inspection database, and inspection form letters, which are stored within the IFSPPP database accessible on the project portal. These documents, as well as field notes, will serve as the main tools to record the findings of the inspection. A general description of the documentation forms is listed below.

Inspection Form (Appendix A)
An electronic application form has been developed for use on iPad devices to assist in the site inspection. This form will be completed by field personnel while conducting the Industrial Facility site inspection. It has been designed to give users a checklist of items to cover while doing the inspection. In addition, there is blank space below each section for comments. Inspectors may find it beneficial to carry a field notebook if extra space is needed for notes and/or sketches for subsequent transfer to database A hard copy inspection form has been provided in Appendix A should conditions warrant and then subsequently transferred to the electronic database.

Inspection Letters 1, 2 and 3 (Appendices B, C and D)
The form letters will be used to communicate the findings of the inspection to the facility owners. Letter 1 will be used when no or only minor issues are discovered during the compliance inspection. When more serious deficiencies at a facility are noted, inspectors will use letter 2. The use of letter 2 will also alert the facility owners that a follow-up inspection by BWSC will be conducted and the Commission may notify MassDEP and EPA.

If major water quality violations are observed during the inspection, then these findings will be discussed with the Project Manager. Based on the seriousness of the situation, it

may warrant implementation of formal enforcement protocols. If this occurs, inspectors will follow procedures outlined in the Enforcement Program and referred to the Office of General Counsel.

Letter 3 will be used for facilities with no exposure where materials or activities are not exposed to stormwater.

Contact Log for Industrial Inspections (Appendix E)
Field personnel will use the electronic contact log to document correspondence with the facility contact representative and/or owner. This would include emails, phone messages, voicemail, and letters. The keeping of a contact log will be especially helpful if questions are raised during the inspection notification process.

Sample Stormwater Pollution Prevention Plan (Appendix F)
A sample stormwater pollution prevention plan is included in Appendix F as an example.

Filing of Documents
The goal is to track and file all information within the IFSPPP database however if other documents are stored externally they will be organized by this facility number.
BWSC will prepare semi-annual reports in February and August of each year. The reports will document the facility inspections and summarize findings and recommendations. These reports will be generated from the project database.

This task will completed in February and August each year with a final project reports delivered October 28, 2015.

Section 7: Enforcement Procedures

The Commission will pursue enforcement action against non-complying industrial facilities. Every facility required to be covered under a NPDES Permit for Stormwater Discharge Asscoiated with Industrial Activity is required to submit a notice of intent and permit with the Commission, as set forth in the Regulations Governing Use of the Sanitary and Combined Sewers and Storm Drains (“Sewer Use Regulations”)., Article V, Part C, Section 4, additionally, discharges to sanitary sewers, combined sewers and storm drainage facilities are covered under Article V, Parts A, B, C and D. The Commission, it agents or representatives, are authorized to commence enforcement activites if a facility fails to comply with the Sewer Use Regulations pursuant to Article VII, including orders or demands for access to subject facilties.

Any post-inspection violations discovered by field personnel or others must be reported to the appropriate Commission personnel. Initial enforcement may be commenced by the Commission’s Engineering Planning Staff and additional enforcement matters may be referred to the Office of General Counsel.

Written Notice of Violation

As a first step to enforcement, the field personnel will inform the owner's on-site representative of any acts or evidence of non-compliance at the facility. The Commission will then provide a written warning notice to the owner's on-site representative to document the offense(s) and instruct the facility to remediate the violation(s).

The first written notice will inform the industrial facility of the violation(s), order the owner's representative to correct the violation(s) within a specified deadline, refer the operator to its SWPPP, and warn that failure to act may result in imposition of fines or other actions pursuant to the Sewer Use Regulations.

Fines

If issues of non-compliance exist after site meeting and written warning then fines may be assessed. Commission may assess on a case-by-case basis; however, all repeat violations will be subject to fines. Un-permitted discharges or illegal industrial discharges may result in fines up to $5,000.00 per day, with each day constituting a separate violation. Illegal discharges into a storm drain catch-basin violate several sections of the Sewer Use Regulations pursuant to Article V, Section D, as well as state and federal law and may result in fines up to $5,000.00 per day, with each day constituting a separate violation. Failure to permit access and failure to discharge pursuant to a permit can result in violations up to $1,000.00 per day. Other violations can result in additional fines in amounts set forth in the Schedule of Penalties adopted by the Commission from time to time in accordance with G.L. c. 83, section 10.

A second notice or subsequent enforcement letter will be sent to the owner's representative by the Office of General Counsel. The Commission may take other steps reasonable and necessary to ensure compliance, including issuance of a cease and desist order, notification of appropriate regulators (ISD, MassDEP, EPA) and revocation of necessary permits and approvals. The Commission may also take other necessary legal action to prevent illicit industrial discharges to the stormwater system that may impact public health or the environment.

Enforcement data collected for each industrial facility will be entered into the Industrial Facility tracking database and maintained.

Section 8: Training

The Commission will conduct training regarding Industrial Facility stormwater runoff control for personnel carrying out the BWSC's IFSPPP. All personnel performing Industrial Facility site inspections will be trained within thirty (30 days) of commencing their employment or assignment to perform inspections. Initial training for inspectors will be completed by February 19, 2013. Refresher training for all personnel performing inspections will occur on an annual basis. Training will be based upon real case studies and will provide the opportunity for the group of facility inspection personnel and BWSC staff to ask questions and interact with experienced industrial stormwater professionals.

Initial Training will include:

1) Introduction to EPA's Clean Water Act and Industrial Stormwater Pollution Prevention Program,
2) Overview of inventory list development,
3) Case studies of industry inspections presented in real life examples and situations experienced by other local agencies,
4) Field inspection best practices for accessing facilities,
5) Field inspection process and checklist including how to conduct an Industrial Facility inspection,
6) Overview of electronic data collection methods and use of the information management portal,
7) BMP inspections with examples to cover how to review best management practices ranging from programmatic (non-structural) to structural,
8) Post Inspection procedures,
9) Introduction to enforcement.

Case studies of what successful and un-acceptable best management maintenance will be presented. Specific consideration for inspection of a broad range of BMP's (from simple to complex) will be presented. The training will be provided in a workshop environment, utilizing a PowerPoint presentation, trainer/student active interaction on presentation topics and a post-presentation Q&A session. The workshop will last approximately 3 hours.

Field Training will include:

1) How to use and optimize the Information Management Portal with real world entry of data into electronic checklist and database,
2) How to conduct Industrial Facility Inspection, and integrate field exercises of various industrial sites representing different industrial activities.
3) New inspectors will "shadow " field crews to learn inspection process and data collection procedures.

The field training will be provided with a pre-inspection briefing on the workshop topics followed by hands-on learning through actual field inspections.

Appendix A: Industrial Facility Stormwater Inspection Report Form

Boston Water and Sewer Commission

Industrial Facility Stormwater Inspection Checklist (2013)

Facility Information

Company Name: _____ Date: _____
Address: _____ Phone #: _____
Contact Person: _____ Contact Title: _____
Facility_ID: _____ SIC Code: _____
Building_ID: _____ Industrial Activity: _____
Parcel_ID: _____ MA Permit ID#: _____
Notes: _____ Inspection Priority: ___

Activity

Activity_ID: _____ Name: _____
Facility_ID: _____ Date: _____
Activity Type: _____ Time: _____
Notes: _____

Inspection Detail

Inspection_ID: _____ Form_Item: _____
Activity_ID: _____ Visit_Type: _____
Form_Type: _____

Stormwater Pollution Prevention Plan/Spill Plan Review	Yes	No	N/A
Does a stormwater pollution prevention plan/spill plan exist?			
A. SWPPP & SITE MAPS			
1. Is a copy of the signed SWPPP at the facility?			
2.Is the general location map present?			
3. Is there a site map that shows drainage patterns, outfalls, flood drains, etc?			
4. Is there a written or unwritten Stormwater Facility Inspection Program (i.e. routine site observations noting potential issues)?			
5. Does the facility discharge stormwater directly to waters of the State?			
6. Are the names of receiving water(s) listed (or shown and labeled on the site map)?			
7. Does the facility have any exposed materials that could be documented as pollutants should they be discharged into waters of the State?			
8. Does an employee training program exist for SWPPP?			
9. Was a copy of the SWPPP obtained?			

Industrial Facility Stormwater Inspection Checklist (2013)

B. SPILL PREVENTION & RESPONSE PLAN			
1.Are procedures in place for spill response and cleanup?			
2. Is there a list of major spills that have occurred since permit was issued?			
3. Does the spill plan state how to properly dispose of materials after a spill?			
4. Are appropriate spill containment and cleanup materials/equipment kept onsite and located in a obvious or convenient location?			
5. Is the contact person(s) and plan up-to-date?			

C. MONITORING			
1. If analytical water quality sampling is a requirement under the permit (vehicle maintenance activities onsite, 55 gal. of new motor oil/month), has sampling been completed?			
2. Are sampling records available and up-to-date?			

Site Inspection

A. PREVENTATIVE MAINTENANCE/GOOD HOUSEKEEPING			
1. Tanks			
1a. Presence of storage tanks (above/below ground)?			
1b. Tank Size			
1c. Number of Tanks			
1d. Tank Location (indoors/outdoors)			
1e. Last Test Date of Tank			
1f. Evidence of leaks			
1g. Is there adequate secondary containment for above-ground storage tanks and material handling areas (i.e. appropriate storage capacity based on visual observation)?			
1h. Is there a process in place for properly removing rainwater from the secondary containment areas, and do valves have functioning locks?			
1i. Contents Stored			
1j. Are materials (e.g., chemicals) properly labeled?			
2. Other Containers (buckets, drums, etc.)			
2a. Container type			
2b. Number of containers			
2c. Size of containers			
2d. Evidence of Leaks			
2e. Contents Stored			
2f. Are containers stored in areas that limit exposure?			
2g. Are containers properly labeled?			
3. Dumpster or Trash Compactors			
3a. Are containers covered to limit exposure?			
3b. Evidence of leaks			
3c. Typical waste contained			

Industrial Facility Stormwater Inspection Checklist (2013)

4. Vehicle & Equipment Storage or Repair			
4a. What is the parking area material?			
4b. Are trucks or heavy equipment parked outside?			
4c. Are there any storm drains or ditches within the parking area?			
4d. Sign of leaks?			
4e. Onsite repair of maintenance activities?			
4f. Are repair & maintenace areas covered?			
4g. Are there drains within the maintenance area?			
4h. Is there spill prevention/containment in maintenance areas?			
4i. If a fueling area is present, is it covered?			
4j. Is there an oil water separator on site?			
4k. Are vehicles washed on site?			
4l. If so inside or outside?			
4m. Are there drains within the wash area?			
5. Material Handling			
5a. Is the material handling area covered?			
5b. Are leaks present at material-handling?			
5c. Are loading and unloading areas being properly maintained to prevent non-stormwater discharges?			
5d. What types of materials are handled?			
6. Outdoor Manufacturing			
6a. Do manufacturing processes take place outside?			
6b. Are the areas covered to limit exposure?			
6c. Does the manufacturing process present a potential for pollution?			
7. Site Sketch			
7a. Was a site sketch developed or provided?			
B. NON-STORMWATER DISCHARGES			
1. Was the stormwater drainage system inspected for non-stormwater discharges or evidence thereof?			
2. Do the stormwater outfalls listed on the site map match what is observed in the field?			
C. Inspection Results			
Final Evaluation			
Follow Up Inspection required?			
Notes:			
Enforcement			
Enforcement Level			

Inspector Signature: _____

Indicates a specific domain value. Domain values can be found on domain tab.

Industrial Facility Stormwater Inspection Checklist (2013)

Domain Values

InspectionPriority Should be pre populated from the inspection list.

- High
- Medium
- Low

Activity Type

- Inspection
- Enforcement

Name

- Inspector Name 1
- Inspector Name 2
- Inspector Name 3

Visit Type

- Routine
- Investigative
- Compliance Verification
- Enforcement Follow-up

Form Type

- Inspection 2013
- Inspection 2014
- Enforcement 2013
- Enforcement 2014

Tank Type

- Above Ground
- Underground
- None

Tank Location

- Indoors
- Outdoors
- Outdoor Covered

Container Type

- 55 gal Barrel - Plastic
- 55 gal Barrel - Metal
- Bucket

Industrial Facility Stormwater Inspection Checklist (2013)

Number of Containers

- 1-5
- 5-10
- 10-15
- 15 or more

Container Size

- 5 gal
- 10 gal
- 55 gal
- 100 gal
- 500 gal

Contents

- Oil
- Fuel
- Paint
- Other

Parking Material

- Gravel
- Asphalt
- Concrete

Yes/No

- Yes
- No
- N/A

Final Evaluation

- Compliant
- Minor Issues
- Major Issues
- Water Quality Violation

Enforcement Level

- Level 1 - Warning Notice
- Level 2 - Notice of Violation
- Level 3 - Formal/Action
- Level 4 - Legal Action

Appendix B: Sample Industrial Inspection Letter 1

Boston Water and
Sewer Commission

<<Date>>

<<ABC Scrap Metal Center>>
Attn: *<<Mr. EFG, Environmental Compliance Officer>>*
<<1400 ABC Drive>>
<<Boston, MA

SUBJECT: Industrial Compliance Inspection
Inspection location: *<<ABC Scrap Metal Center>>*
<<1400 ABC Drive>>
SW Permit#: *<<NCG050000>>*

Dear *<<Mr. EFG>>*:

On *<<date>>*, the Boston Water and Sewer Commission completed an industrial compliance inspection of the *<<ABC Scrap Metal Center>>*. Local regulations permit an inspection of industrial facilities. This inspection consisted of two parts: a review of the facility files/records and an on-site facility inspection.

The inspection was performed by *<<inspector's name>>* and *<<inspector #2's name>>*, *<<company>>*, and the following deficiencies/observations were noted during the inspection.

Site Plan and Stormwater Pollution Prevention Plan

- *No analytical monitoring had been conducted as required by the subject permit.*

Spill Prevention and Response Plan

- *No deficiencies observed.*

Preventative Maintenance and Good Housekeeping

- *The above-ground storage tanks (ASTs) were not properly labeled.*
- *55-gallon drums of Muriatic Acid, Hydrochloric Acid, and Sulfuric Acid were stored around the entire facility in areas of heavy traffic with no protection. These type materials should be stored in a protected area.*

Employee Training

- *No deficiencies observed.*

Non-Stormwater Discharges

- *No discharges observed.*

It is recommended that <<*ABC Scrap Metal Center*>> take appropriate actions to correct the above mentioned deficiencies. If you have any questions concerning this letter or the enclosed inspection report, please contact me at 617-<<####>>.

Sincerely,

<<*Inspector's name*>>, <<*job title*>>
Boston Water and Sewer Commission

Enclosure: Industrial Inspection Report

cc: Industrial Inspection File

Appendix C: Sample Industrial Inspection Letter 2

Boston Water and
Sewer Commission

<<Date>>

<<ABC Scrap Metal Center>>
Attn: *<<Mr. EFG, Environmental Compliance Officer>>*
<<1400 ABC Drive>>
<<Boston, MA #>>

SUBJECT: Industrial Compliance Inspection
Inspection location: *<<ABC Scrap Metal Center>>*
<<1400 ABC Drive>>
SW Permit#: *<<XXYY>>*

Dear *<<Mr. EFG>>*:

On *<<date>>*, the Boston Water and Sewer Commission completed an industrial compliance inspection of the *<<ABC Scrap Metal Center>>*. Local regulations permit an inspection of industrial facilities. This inspection consisted of two parts: a review of the facility files/records and an on-site facility inspection.

The inspection was performed by *<<inspector's name>>* and *<<inspector #2's name>>*,*<<company>>*, and the following deficiencies/observations were noted during the inspection.

Site Plan and Stormwater Pollution Prevention Plan

- *No analytical monitoring had been conducted as required by the subject permit.*

Spill Prevention and Response Plan

- *The facilities Spill Prevention Control and Countermeasures Plan (SPCC) is outdated and does not address the new material storage area on the west side of the property.*

Preventative Maintenance and Good Housekeeping

- *The above-ground storage tanks (ASTs) were not properly labeled.*
- *55-gallon drums of Muriatic Acid, Hydrochloric Acid, and Sulfuric Acid were stored around the entire facility in areas of heavy traffic with no protection. These type materials should be stored in a protected area.*

Employee Training

- *Since the permit was issued in 2013, no employee training has occurred on spill procedures.*

Non-Stormwater Discharges

- *Evidence of a prior release/spill was observed in the storm drain near the loading dock.*

Based on the above deficiencies, the BWSC may notify the Massachusetts Department of Environmental Protection (MADEP) and EPA and request a follow up inspection. <<*ABC Scrap Metal Center*>> may be notified by MADEP in advance of this inspection so proper scheduling of personnel can take place. Furthermore, any penalties assessed against the City by the State as a result of this non-compliance will be assessed against <<*ABC Scrap Metal Center*>>.

If you have any questions concerning this letter or the enclosed inspection report, please contact me at 617-<<####>>.

Sincerely,

<<*Inspector's name*>>, <<*job title*>>
Boston Water and Sewer Commission

Enclosure: Industrial Inspection Report

cc: Industrial Inspection File

Appendix D: Sample Industrial Inspection Letter 3

Boston Water and Sewer Commission

<<Date>>

<<ABC Scrap Metal Center>>
Attn: *<<Mr. EFG, Environmental Compliance Officer>>*
<<1400 ABC Drive>>
<<Boston, MA ##>>

SUBJECT: Industrial Compliance Inspection
Inspection location: *<<ABC Scrap Metal Center>>*
<<1400 ABC Drive>>
SW Permit #: <<*XXYY*>>

Dear *<<Mr. EFG>>*:

On *<<date>>*, the Boston Water and Sewer Commission Stormwater completed an industrial compliance inspection of the *<<ABC Scrap Metal Center>>*. Local regulations permit an inspection of industrial facilities under authority granted by BWSC. This inspection consisted of two parts: a review of the no exposure certificate and an on-site facility inspection.

The inspection was performed by *<<inspector's name>>* and <*<inspector #2's name>>*, *<<company>>*, and the following observations were noted during the inspection.

Certificate of No Exposure

- *Certificate was current.*

On-Site Facility Inspection

- *No industrial materials or activities were noted as exposed to stormwater.*

If you have any questions concerning this letter or the enclosed inspection report, please contact me at 617-*<<####>>*.

Sincerely,

<<Inspector's name>>, *<<job title>>*
Boston Water and Sewer Commission

Enclosure: Industrial Inspection Report

cc: Industrial Inspection File

Appendix E: Contact Log for Industrial Inspections

Contact Log for Industrial Inspections

Company Name____________________ **Address_______________________**

Date: ____________________
Type of Contact (On-site, telephone/voicemail, letter, etc.): ____________________________________
Contact with whom (name and position/title): ____
Contact phone number (if applicable):____
Nature of Contact:
____
____
____
____

Date: ____________________
Type of Contact (On-site, telephone/voicemail, letter, etc.): ____________________________________
Contact with whom (name and position/title): ____
Contact phone number (if applicable):____
Nature of Contact:
____
____
____
____

Date: ____________________
Type of Contact (On-site, telephone/voicemail, letter, etc.): ____________________________________
Contact with whom (name and position/title): ____
Contact phone number (if applicable):____
Nature of Contact:
____
____
____
____

Date: ____________________
Type of Contact (On-site, telephone/voicemail, letter, etc.): ____________________________________
Contact with whom (name and position/title): ____
Contact phone number (if applicable):____
Nature of Contact:
____
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____
____

Date: ____________________
Type of Contact (On-site, telephone/voicemail, letter, etc.): ____________________________________
Contact with whom (name and position/title): ____
Contact phone number (if applicable):____
Nature of Contact:
____
____
____
____

SAMPLE
Stormwater Pollution Prevention Plan

Magerr's Scrap and Recycling

September 15, 2000

The best management practices included in this sample SWPPP are just examples. Your plan may have other requirements.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

1.1 Background

In 1972, Congress passed the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CW A), 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 CW A that allowed the EP A to govern stormwater discharges from industrial activities. EP A published the final notice for Phase I of the Multi-Sector General Stormwater Permit program (Federal Register Volume 60 No. 189, September 20, 1995, page 50804) in 1995 which included provisions for the development of a Stormwater Pollution Prevention Plan (SWPPP) by each industrial facility discharging stormwater, including scrap and recycling facilities.

Development, implementation, and maintenance of the SWPPP will provide Magerr's Scrap and Recycling with the tools to reduce pollutants contained in stormwater discharges and comply with the requirements of the General Stormwater Permit issued by the State of Maryland (permit No. MDSI234567-8). The primary goals of the SWPPP will be to:

Identify potential sources of pollutants that affect stormwater discharges from the site;

Describe the practices that will be implemented to prevent or control the release of pollutants in stormwater discharges; and

Create an implementation schedule to ensure that the practices described in this SWPPP are in fact implemented and to evaluate the plan's effectiveness in reducing the pollutant levels in stormwater discharge.

1.2 SWPPP Content

This SWPPP includes all of the following:

Identification of the SWPPP coordinator with a description of this person's duties;

Identification of the SWPPP implementation team members;

Description of the facility including information regarding the facility's location and activities as well as a site description, three maps, and a summary of the stormwater drainage system;

Identification of potential stormwater contaminants;

Description of stormwater management controls and various Best Management Practices (BMP's) necessary to reduce pollutants in stormwater discharge;

Description of the facility monitoring plan; and a

Description of the implementation schedule and provisions for amendment of the plan.

2.0 SWPPP COORDINATOR AND DUTIES

The SWPPP coordinator for the facility is Mrs. Mary Smith (phone number: (301) 555-6434). Mrs. Smith's duties include the following:

Create a SWPPP team to aid in the implementation of the SWPPP plan;

Implement the SWPPP plan;

Oversee maintenance practices identified as BMP's in the SWPPP;

Implement and oversee employee training;

Conduct or provide for inspection or monitoring activities;

Identity other potential pollutant sources and make sure they are added to the plan;

Identity any deficiencies in the SWPPP and make sure they are corrected;

Prepare and submit reports; and

Ensure that any changes in facility operation are addressed in the SWPPP.

To aid in the implementation of the SWPPP plan, the members of the SWPPP team are Tom Johnson and Mike Carter. Tom Johnson will ensure that all housekeeping and monitoring procedures are implemented, while Mike Carter will ensure the integrity of the structural BMP's.

3.0 FACILITY DESCRIPTION

3.1 Facility Location

Magerr's Scrap and Recycling facility is located at 6400 Addison Road in Capital Heights, Maryland. Figure 1 presents a map showing the location of the site. The facility is a 19.3-acre parcel located in Section 30, Township 7N, Range 21 East. The facility is bound to the north by Rolling Ridge Drive, to the west by Addison Road, to the south by residential property, and to the east by Margaret's Drive.

3.2 Site Activities

Magerr's Scrap and Recycling facility consists of a receiving area for scrap metal, an area to crush or compact the scrap metal, a scrap storage and loading area, a maintenance garage, and an office building. Based on site activities, Magerr's Scrap and Recycling falls under the Standard Industrial Classification code of 5093. Typically, the facility operates 8 hours per day, 5 days per week, and maintains a staff of approximately 18 people.

3.3 Site Description

The total area of the site is approximately 19.3 acres and approximately 1.4 acres, or 7 percent, is impervious (i.e., pavement, buildings). The remainder of the site consists of a 3.4-acre compacted gravel scrap receiving area, a 3-acre compacted gravel scrap storage and loading area, a 6.4-acre undeveloped wooded area, and approximately 5.1 acres of miscellaneous unpaved roadways and undeveloped areas. Seven storm drains are located throughout the property. Figure 2 is a facility layout map showing the major site features and the locations of the storm drains.

3.4 Stormwater Drainage system

The site can be divided into 5 major drainage areas. Table 1 describes the significant characteristics of each drainage area. Figure 2 shows the locations of the drainage areas and the apparent stormwater drainage patterns. Drainage area DA-04 located along the southeast one-third of the property is undeveloped wooded area and generally covered by vegetation. Because of the high permeability of the soils and the absence of site activities in this area, this drainage area is not significant and will not be addressed further in this SWPPP. Paved parking areas are affected by industrial activities and are therefore included in this SWPPP. Drainage areas DA-01 (scrap receiving area), DA-02 (compactor/crusher area and roof drains from the office building and maintenance garage), DA-03 (scrap storage and loading area) and DA-05 (paved parking and drive areas) ultimately discharge to Cabin Branch Creek through a municipal storm system. Cabin Branch Creek discharges into Beaver Dam Creek approximately two miles downstream, which in turn empties into the Anacostia River approximately 8 miles downstream. The Anacostia River is a major tributary to Chesapeake Bay.

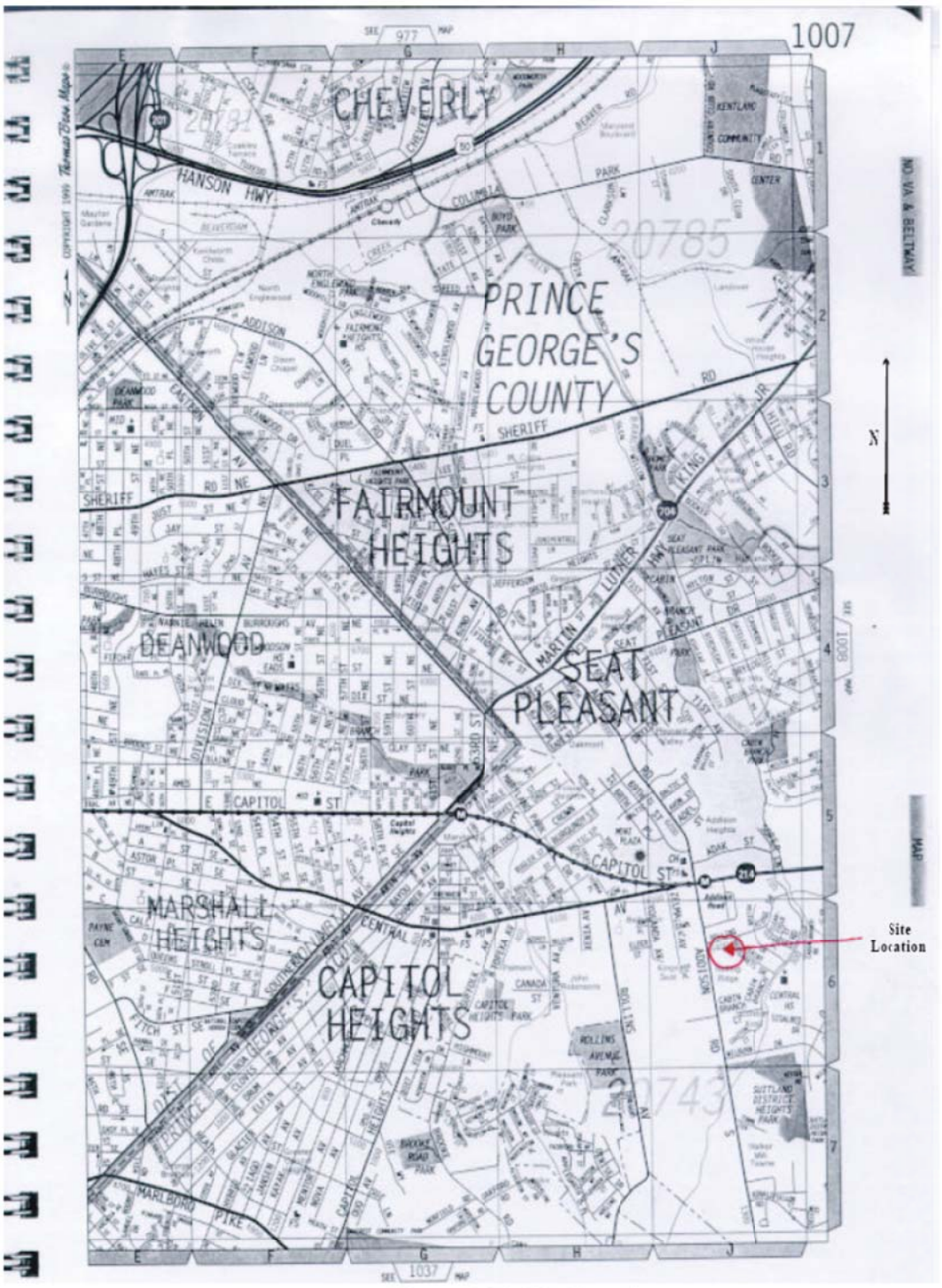
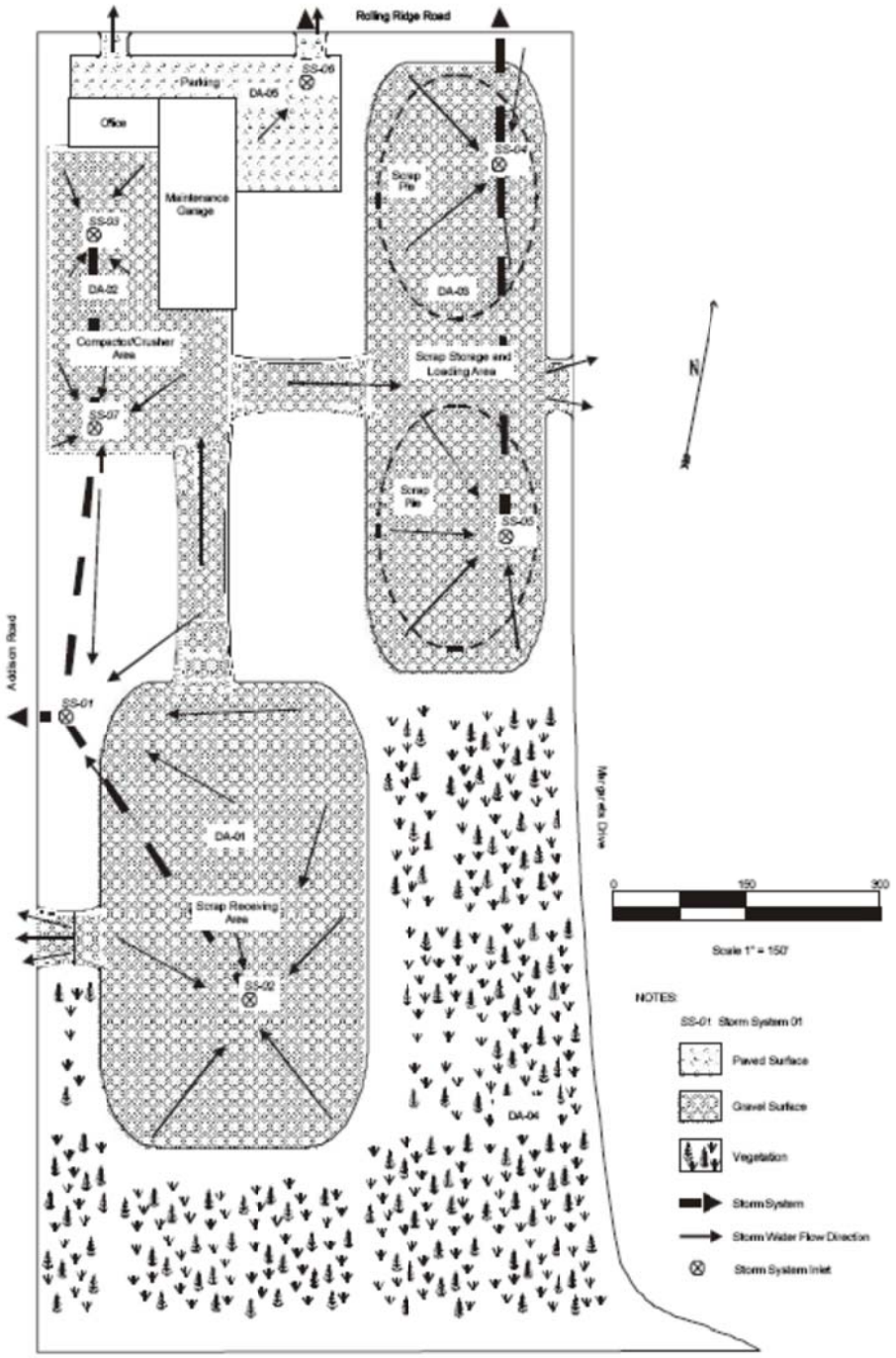


Figure 1. Facility Location

3-4



I:\MJOE\CAD\Sitemaps\Scrap.dgn Scrap Figure 2

Figure 2. Site Map with Drainage Areas and Storm Water Flow (Prior to BMP Implementation)

3-5

Table 1

Characteristics of Storm Water Drainage

Drainage Area[1]	Storm water Flow Description	Total Size (sq. feet)	Impervious Surface Area (sq. feet)	Runoff Coefficient[2]	Drainage Discharge Point
DA-01	**Scrap Receiving Area:** Overland flow across the compacted gravel area to storm inlets SS-01 and SS-02.	150,000	0	Medium	Cabin Branch Creek
DA-02	**Compactor/Crusher Area:** Sheet flow across the compacted gravel area to storm inlets SS-03 and SS-07. All roof drains from the office area and the maintenance garage discharge to storm inlet SS-03.	60,400	60,400	High	Cabin Branch Creek
DA-03	**Scrap Storage and Loading Area:** Overland flow across the compacted gravel area to storm inlets SS-04 and SS-05.	130,000	0	Medium	Cabin Branch Creek
DA-04	**Grass-covered Area:** All grass-covered areas located southeast of the scrap receiving yard. Flow from this area does not leave the site as storm water run off.	281,250	0	Low	None
DA-05	**Parking Area:** Sheet flow across paved area to storm inlet SS-06.	18,200	18,200	High	Cabin Branch Creek

(1) See Figure 2 for drainage areas.
(2) Runoff Coefficient:
High: 70-100% impervious (example: asphalt, buildings, paved surfaces)
Medium: 40-70% impervious (example: packed soils)
Low: 0-40% impervious (example: grassy areas)

4.0 IDENTIFICATION OF POTENTIAL STORMWATER CONTAMINANTS

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

4.1 Significant Material Inventory

Materials used by the facility that have the potential to be present in stormwater runoff are listed in Table 2. This table includes information regarding material type, chemical and physical description, and the specific regulated stormwater pollutants associated with each material.

4.2 Historic Spill and Leak Record

According to the facility records, there have not been any spills in uncovered areas of the facility in the past three years.

4.3 Potential Areas for Stormwater Contamination

The following potential source areas of stormwater contamination were identified and evaluated:

Scrap receiving area: Scrap metal received by the facility is stored in the scrap receiving area until it is crushed/compacted. Stormwater from this area can be potentially contaminated by fluids leaking on to the gravel surface from the scrap metal automobiles and appliances. These contaminants may contain mineral oil, petroleum distillates, oil & grease, heavy metals, ethylene glycol, propylene glycol, benzene, toluene, xylene, and MTBE.

Compactor/crusher area: Scrap metal is compacted/crushed so that it may be shipped off-site for recycling. Stormwater from this area can be

potentially contaminated by fluids spilling on to the gravel surface from the scrap metal as it is being crushed and by waste water from compactor cleaning operations. These contaminants may contain mineral oil, petroleum distillates, oil & grease, heavy metals, ethylene glycol, propylene glycol, benzene, toluene, xylene, and MTBE.

Scrap storage and loading area: Scrap metal is stored in this area prior to offsite shipment. Stormwater nom this area can be potentially contaminated by iron oxide nom rusting metal and any residual oil and grease or fluids remaining on scrap metal. These contaminants may contain iron oxides, oil & grease, ethylene glycol, ammonia, benzene, ethyl benzene, toluene, xylene, MTBE, and sulfuric acid.

Parking lot: Employees park their vehicles in the parking lot area. Stormwater nom this area can be potentially contaminated by leaking fluids nom the parked vehicles. These contaminants may contain oil & grease, heavy metals, mineral oil, benzene, and toluene.

Table 3 presents site specific information regarding stormwater pollution potential nom each of these areas.

4.4 A Summary of Available Stormwater Sampling Data

Magerr's Scrap and Recycling has no available sampling data because sampling has not been conducted at the site to date.

Table 2

Significant Materials Used at Magerr's Scrap and Recycling

Trade Name Material	Chemical/Physical Description(1)	Storm Water Pollutants(1)
Lubricants	Black/brown oily liquid hydrocarbon	Oil & grease, lead, cadmium
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil
Brake Fluid	Ethylene glycol-based syrupy liquid	Ethylene glycol
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)
Windshield washer fluid	Clear blue liquid	Ammonia, methanol
Oil recovered from steam cleaning	Brown oily water	Oil & grease, solids
Wastewater recovered from steam cleaning	Water	Oil & grease, solids
Gasoline	Colorless, pale brown, or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE
Battery acid	White translucent liquid or gel	Sulfuric acid
Transmission Fluid	Red liquid	Mineral oil, glycols, heavy metals, petroleum distillates
Degreasing Solvents	Colorless or white liquid	Trichloroethylene, trichloroethane, perchloroethylene
Motor oil	Clear, amber liquid petroleum hydrocarbon	Mineral oil, petroleum distillates
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes
Rust	Reddish solid	Iron oxides
Car batteries	Clear, slightly yellow liquid	Lead sulfate

(1) Data obtained from MSDSs when available.

Table 3

Locations of Potential Sources of Storm Water Contamination

Drainage Area[1]	Potential Storm Water Contamination Point	Potential Pollutant	Potential Problem
DA-01	Scrap receiving area	All materials in Table 2	Leaking fluids from automobiles and appliances as they await crushing.
DA-02	Compactor/crusher area	All materials in Table 2	Fluid spills as the scrap metal is crushed. Wastewater from compactor/crusher cleaning operations.
DA-03	Scrap storage and loading area	Solids, iron oxide, oil & grease	Iron oxide generated from rusting scrap metal in the storage and loading area. Residual oil and grease or fluids on the scrap metal.
DA-05	Parking lot	All materials in Table 2	Leaking fluids from employee vehicles in the parking areas.

(1) See Figure 2 for drainage areas.

5.0 STORMWATER MANAGEMENT CONTROLS

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

5.1 Compliance with Other Programs

Storage of fluids collected from the scrap metal complies with the requirements of the Resource Conservation and Recovery Act (RCRA). Under RCRA, Magerr's Scrap and Recycling conducts weekly inspections of the area storing the fluids to verify labeling, placarding, storage times, and the integrity of storage containers. During the RCRA inspection, leaks or spills which may impact stormwater are noted and cleaned immediately. The BMP's included in this SWPPP are also intended to prevent soil contamination which could lead to a CERCLA enforcement action. Magerr's Scrap and Recycling has also developed a Spill Prevention Control and Countermeasure (SPCC) Plan which includes BMP's for oil storage. The BMP's in the SPCC Plan prevent stormwater contamination. Since these BMP's are included in the SPCC Plan, they are not included in this SWPPP.

5.2 Stormwater Management Practices

Upon reviewing the potential pollutants at the facility and the facility operations, Magerr's Scrap and Recycling prepared a list of planned Best Management Practices (BMP's).

When implemented, these BMP's will control the discharge of potential pollutants in stormwater runoff from each area of concern. Passive treatment BMP's were developed with a goal to remove 80% of all stormwater pollutants. The list of BMP's was reviewed by the operations manager for applicability and feasibility. Figure 3 shows the structural BMP's that will be implemented to prevent stormwater contamination.

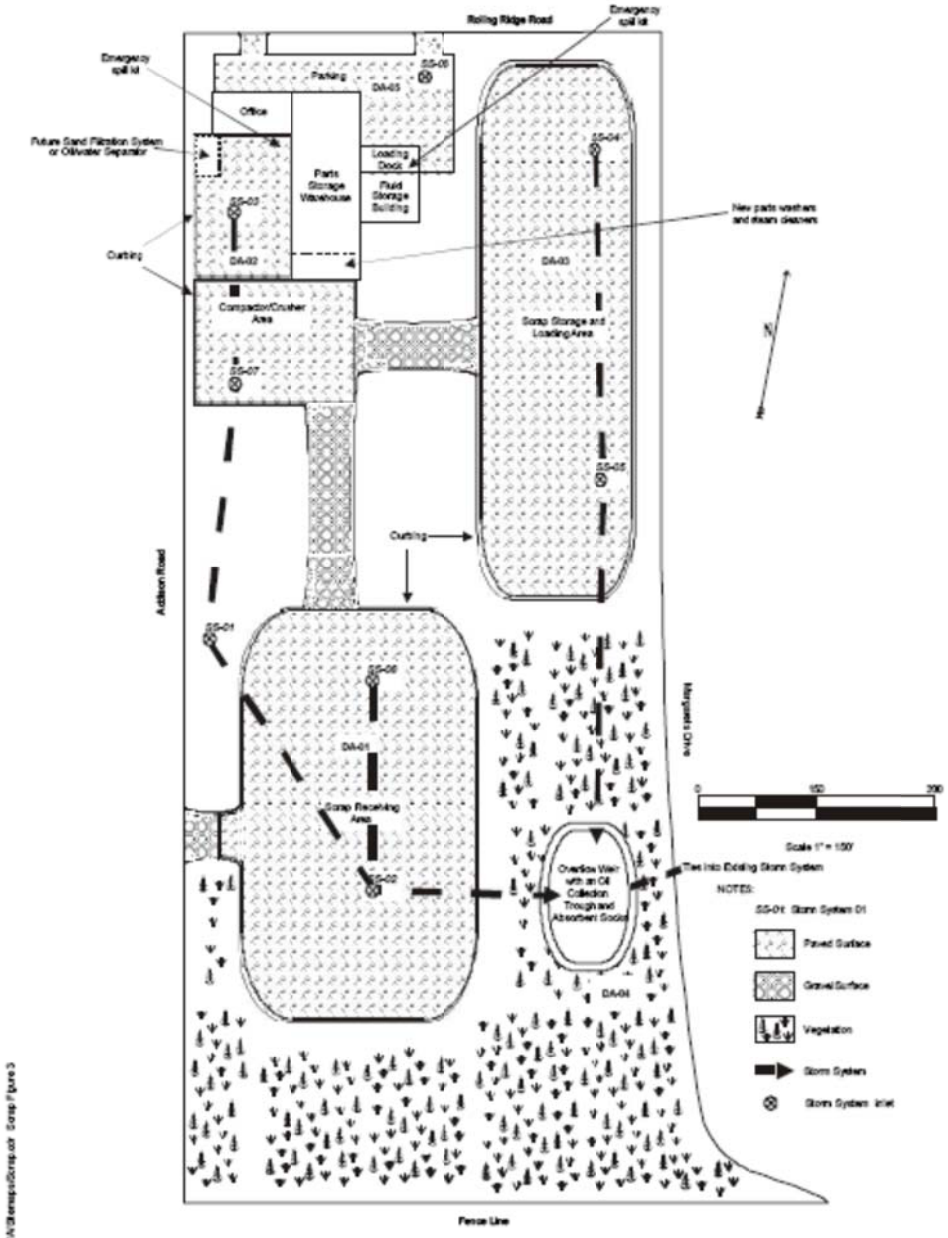


Figure 3. Site Map with Structural BMPs

5-2

DA-01

To prevent stormwater impacts in the scrap and receiving area (DA-01), the following BMP's will be implemented:

As of the date of this plan, scrap automobiles and appliances will not be stored for more than two weeks before being crushed to minimize the amount of leaking fluid.

Within 30 days of the date of this plan, a new storm system inlet, SS-08, will be constructed.

Within 30 days of the date of this plan, absorbent oil socks will be placed on storm system inlets SS-01, SS-02, and the newly constructed storm system SS-08 to contain any fluid that may have leaked from the scrap metal.

Within two years of the date of this plan, the scrap receiving area will be paved and curbing will be placed along the perimeter to provide for better containment and cleanup of leaking fluids.

DA-02

The compactor/crusher area (DA-02) currently has the greatest potential to impact stormwater at the site due to fluids spilling from the scrap metal as it is crushed. To prevent stormwater pollution from this area, the following BMP's will be implemented:

Within 30 days of the date of this plan, the compactor/crusher area will be paved and sloped to contain all spilled fluid.

Within 30 days of the date of this plan, absorbent oil socks will be placed on storm system inlets SS-03 and SS-07.

Within 30 days of the date of this plan, water from steam cleaning operations and wastewater from hydroblasting operations will drain into a 55-gallon drum for off-site disposal. Any wastewater not collected in the drum during steam cleaning will be vacuumed and placed into the drum.

Within 30 days of this plan, all fluid drained from the compacted scrap metal will be collected in a collection tank and transferred into 55-gal drums for storage. These drums will be stored, until shipment off-site, inside a fluid storage building that will be constructed within one year of the date of this plan next to the maintenance garage.

Immediately after construction of the fluid storage building, weekly inspections of the fluid storage building will be conducted to look for leaks or deterioration of fluid storage containers. Any leaks identified during the inspection will be immediately cleaned using a dry absorbent.

Within 30 days of the construction of the fluid storage building, all containers in the fluid storage building will be placed on pallets with secondary containment (a plastic grate on top of a tub approximately 9 inches deep to contain any leaks or spills).

Within 30 days of the construction of the fluid storage building, an emergency spill kit and telephone will be placed inside the fluid storage building.

Within one year of the date of this plan, Magerr's Scrap and Recycling will install a sand filtration system or an in-ground oil-water separator to collect settleable solids and floating oil from the cleaning wastewater. To determine which system will be implemented, pollutant removal efficiency data will be requested from vendors of both systems.

For spills which can not be managed by the emergency spill kit, the local fire department will be immediately telephoned.

All spills which reach the storm system will be reported to the National Response Center at 1-800-424-8802.

DA-03

To prevent stormwater contamination from the scrap storage and loading area, the following BMP's will be implemented:

As of the date of this plan, the area will be inspected weekly for evidence of leaks and detected leaks will be cleaned immediately using a dry absorbent.

As of the date of this plan, to prevent excessive rust contamination, scrap metal will be shipped off site within 30 days of entering the storage and loading area.

Within 30 days of the date of this plan, oil absorbent socks will be placed on storm system inlets SS-04 and SS-05.

Within two years of the date of this plan, this area will be paved and curbing will be placed along the perimeter to prevent uncontrolled runoff.

DA-05

To prevent stormwater contamination in the parking lot and newly constructed loading dock area (DA05), the following BMP's will be implemented:

Immediately after the construction of the loading dock, no 55-gallon drum handling will take place at the loading dock during rain events. This will prevent any spills from combining with stormwater and discharging from the site.

Immediately after the construction of the loading dock, during the handling of drums, storm system SS-06 will be covered to contain possible spills during clean up.

Within 30 days of the construction of the loading dock, Magerr's Scrap and Recycling will place an emergency spill kit on the loading dock.

Site Wide Control Measures

To prevent stormwater contamination from the entire site, the following BMP's will be implemented within 2 years of the date of this plan.

Magerr's Scrap and Recycling will construct a stormwater retention pond in the southeast comer of the property within two years of the date of this plan. The retention pond will slow the flow of water from the storm system and allow the heavier suspended matter to settle out. An overflow weir with an oil collection trough and absorbent socks will also be constructed to remove oil from the collected stormwater. Drainage from the overflow weir will be piped to an existing storm system on Margaret's Drive.

Piping will be installed to connect storm system inlets SS-03 and SS-07, both in the compactor/crusher area, with the storm system inlets in the scrap receiving area, SS-01, SS-02, and the newly constructed SS-08. Stormwater collected in the five storm system will be piped to the new retention pond.

Piping will be installed to connect storm system inlets SS-04 and SS-5, both in the scrap storage and loading area, and covey the collected stormwater to the retention pond.

5.3 Stormwater Treatment

No stormwater treatment measures are currently in place at the facility. As discussed above, Magerr's Scrap and Recycling will install a sand filtration system or an in-ground oil-water separator to collect settleable solids and floating oil from steam cleaning and hydroblasting operations.

6.0 FACILITY MONITORING PLAN

Visual inspections of all storm system inlets will be made quarterly during dry weather conditions for evidence of non-stormwater discharges. The visual inspection will be completed by an employee under the SWPPP Coordinators' direction. The dry weather inspections will verify the site is not discharging sanitary or process water to storm system. Information recorded on the inspection log shall include: date of inspection, storm system inlet location, inspection results, and potential significant sources of non-stormwater discovered through testing. Blank dry-weather inspections forms can be found in Appendix A of this SWPPP.

Magerr's Scrap and Recycling will perform quarterly visual inspections of all storm system inlets during rain events to look for evidence of stormwater contamination. Inspections will be conducted within the first thirty 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 stormwater pollution. Information recorded during the quarterly inspection shall include: date of inspection, storm system inlet location, inspection results, and potential significant sources of stormwater contaminants if discovered. Blank quarterly inspections forms can be found in Appendix A of this SWPPP.

An annual stormwater compliance inspection will be conducted approximately one year following implementation of this SWPPP and annually thereafter. The inspection will determine if the BMP's have been implemented and will assess their effectiveness. The inspection will also determine if site operations have changed since development of this SWPPP. If operational changes have been made, the SWPPP Coordinator will determine if those changes will impact stormwater quality and develop new BMP's to address the change. All operational changes and new BMP's 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 fourteen days after the annual inspection. Blank annual compliance inspections forms can be found in Appendix A of this SWPPP.

7.0 COMPLIANCE AND REPORTING REQUIREMENTS

7.1 SWPPP and SWPPP Summary

As per the requirements of Magerr's Scrap and Recycling's general permit number MD-S1234567-8, Magerr's Scrap and Recycling is required to prepare a SWPPP by the effective date of September 15, 2000. The SWPPP will be kept at the facility and will be made available to the state or federal compliance inspection officer upon request.

7.2 Employee Training

An employee training program will be developed and implemented to educate 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, good housekeeping, proper material handling, disposal and control of waste, container filling and transfer, and proper storage, washing, and inspection procedures. All new employees will be trained within one week of their start date. Additionally, all employees will be required to participate in an annual refresher training course. An employee sign-in sheet for the refresher course can be found in Appendix A of this document. The training program will be reviewed annually by the SWPPP coordinator to determine its effectiveness and to make any necessary changes to the program.

7.3 Implementation Schedule

In accordance with the State of Maryland, the SWPPP implementation schedule is presented in Table 4. Table 5 presents the implementation schedule for the individual BMP’s. This schedule corresponds to the September 15, 2000 effective date of the SWPPP.

Table 4

Implementation Schedule

Storm Water Pollution Prevention Action Items	Implementation Date
Implement employee training	Immediate
Biannual visual inspections of outfalls	March 15, 2001; September 15, 2001; and biannually thereafter
Quarterly visual monitoring during rain events	December 15, 2000; March 15, 2001; June 15, 2001; September 15, 2001; and quarterly thereafter
Implementation of BMPs	See Table 5
Annual facility site compliance inspection	September 15, 2001 and annually thereafter

Table 5
BMP Implementation Schedule

Drainage Area[1]	Best Management Practices	Implementation Date
DA-01	Scrap metal will not be stored for more than 14 days prior to crushing.	Immediately
	Oil catches (e.g., absorbent socks) will be placed on storm system inlets SS-01, SS-02, and SS-08.	Within 30 days
	The scrap receiving area will be paved and curbing placed along the perimeter to prevent uncontrolled runoff.	Within 2 years
	Storm system inlets SS-01, SS-02, and SS-08 will be linked together and will discharge to the newly constructed storm water retention pond and overflow weir.	Within 2 years
DA-02	The compactor/crusher area will be paved and sloped to contain all spilled fluids.	Within 30 days
	Oil catches (e.g., absorbent socks) will be placed on the storm system inlets SS-03 and SS-07.	Within 30 days
	All 55-gallon drums in the maintenance garage will be placed on pallets with secondary containment to collect spills or leaks during fluid transfer.	Within 30 days
	A collection tank will collect the fluids drained from the compacted scrap metal. Fluids in the collection tank will then be transferred to 55-gal drums.	Within 30 days
	A fluid storage building, with a covered loading dock, will be constructed next to the maintenance garage to store the 55-gal drums.d All fluid storage containers in the fluid storage building will be placed on pallets with secondary containment to collect spills and leaks. The fluid storage building will be inspected weekly for leaks and spills. All spills will be treated immediately with absorbent and drummed. Defective storage containers will be repaired or properly disposed. An emergency spill kit and telephone will be placed inside the fluid storage building within 30 days of its construction.	Within 1 year
	All steam cleaning and hydroblasting operations will be conducted on a concrete pad with a drain leading to a sand filtration system or in-ground oil water separator to remove settleable solids and floating oil. Sand filtration and oil/water separator equipment vendors will be contacted immediately to investigate removal efficiencies and implementability.	Within 1 year
	Storm system inlets SS-03 and SS-7 will be linked and will discharge to the newly constructed storm water retention pond and overflow weir.	Within 2 years

7-3

Table 5 (Continued)

Drainage Area[1]	Best Management Practices	Implementation Date
DA-03	Scrap metal will be shipped off site within 30 days of entering the scrap yard to prevent excessive rust generation.	Immediately
	The scrap storage and loading area will be inspected weekly for evidence of spills or leaks. Spills or leaks will be cleaned immediately using a dry absorbent material.	Immediately
	Oil catches (e.g., absorbent socks) will be placed on the storm system inlets SS-04 and SS-05.	Within 30 days
	Storm system inlets SS-04 and SS-05 will be linked and will discharge to the newly constructed storm water retention pond and overflow weir.	Within 2 years
	The scrap storage and loading area will be paved and curbing placed along the perimeter to prevent uncontrolled runoff.	Within 2 years
DA-05	No drum handling will occur on the fluid storage building loading dock during rain events. In addition, when drums at the fluid storage loading dock are handled (loading on to shipping trucks), storm system inlet SS-06 will be covered to contain the release during clean up.	Immediately after the construction of the loading dock
	An emergency spill kit will be placed on the loading dock. Employee training regarding the use of the spill kit will be provided.	Within 30 days

(1) See Figure 2 for drainage areas.
NOTE: BMPs are in chronological order according to drainage area.

7.4 Record Retention Requirements

Records described in the SWPPP must be retained on site for 5 years beyond the date of the cover letter (September 15, 2000) notifying the facility of coverage under a stormwater permit, and shall be made available to the state or federal compliance inspection officer upon request. Additionally, employee training records and waste and recycling receipts or vouchers shall also be maintained.

7.5 Principal Executive Officer Signature

In accordance with the state of Maryland, this plan has been approved and signed by Mr. Mike Jones, the authorized representative responsible for the operation of the facility.

7.6 Provisions for Amendment of the Plan

If the facility expands, experiences any significant production increases or process modifications, or changes any significant material handling or storage practices which could impact stormwater, 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 stormwater pollutants discharged to waters.

7.7 Corporate 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 manages the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____
Name

_____
Title

_____
Date

Appendix A

Inspection Logs

Refresher Course

Employee Sign-In Sheet

Date	Employee Name	Employee Signature

Quarterly Non-Storm Water Discharge Assessment Log

Date	Outfall Number or Description	Flow[1] (Y/N)	If Flow is Yes, Complete This Section		
			Possible Source	Observations[2]	Corrective Action
	DA-01 - SS-01, SS-02, SS-08		Leaking fluids from automobiles and appliances awaiting crushing.		
	DA-02 - SS-03, SS-07		Fluid spills as the scrap metal is crushed. Wastewater from cleaning operations.		
	DA-03 - SS-04, SS-05		Rusting steel and residual oil and grease on the scrap metal		
	DA-05 - SS-06		Leaking fluids from employee vehicles in the parking areas.		

(1) Evaluation shall take place during dry periods.
(2) Observations include flow, stains, sludge, color, odor, or other indications of a non-storm water discharge.

Inspector's Name _____

A-2

Annual Facility Site Compliance Inspection Log[1]

Date	Drainage Area	Potential Pollutants and Source	Changes in Drainage Conditions or Operations Since Last Inspection[2]	BMP Effective (Y/N)	Current and Proposed BMPs	Implementation Schedule for proposed BMPs
	DA-01	Leaking fluids from automobiles and appliances awaiting crushing.				
	DA-02	Fluid spills as the scrap metal is crushed. Wastewater from cleaning operations.				
	DA-03	Rusting steel and residual oil and grease on the scrap metal.				
	DA-05	Leaking fluids from employee vehicles in the parking area.				

(1) 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 _____

A-4

Quarterly Visual Monitoring Inspection Log

Date	Time[1]	Outfall Number or Description	Weather Conditions	Observations[2]	Probable Source of Any Observed Contamination
		DA-01 - SS-01, SS-02, SS-08			Leaking fluids from automobiles and appliances awaiting crushing.
		DA-02 - SS-03, SS-07			Fluid spills as the scrap metal is crushed. Wastewater from cleaning operations.
		DA-03 - SS-04, SS-05			Rusting steel and residual oil and grease on the scrap metal.
		DA-05 - SS-06			Leaking fluids from employee vehicles in the parking areas.

(1) Inspections shall be conducted within the first thirty minutes of discharge or as soon thereafter as practical, but not exceeding sixty minutes.
(2) Observations include color, odor, turbidity, floating solids, foam, oil sheer, etc.

Inspector's Name _____

A-3