

# Stormwater Pollution Prevention Plan (SWPPP)

**MTC-Fort Pickett**  
Recycling Center  
DPW Quarry  
157th Engineers' Quarry  
MATES Fueling Station  
Central Fueling Station #1  
Vehicle Fueling Station #2  
Vehicle Fueling Station #3

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Environmental, Engineering and Educational Solutions



**STORMWATER POLLUTION PREVENTION PLAN**  
**CERTIFICATION**

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

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## 1.0 INTRODUCTION

EEE Consulting, Inc. prepared this Stormwater Pollution Prevention Plan (SWPPP) for the Virginia Army National Guard, MTC-Fort Pickett in compliance with Clean Water Act (CWA) regulations.

### 1.1 Purpose

This SWPPP has been prepared in accordance with Parts II, III, and IV of the MTC-Fort Pickett Virginia Pollution Discharge Elimination System (VPDES) Industrial Stormwater General Permit for the following onsite facilities:

- Industrial Activity - Recycling Center;
- Nonmetallic Mineral Mining - DPW Quarry;
- Nonmetallic Mineral Mining - 157<sup>th</sup> Engineers' Quarry;
- Industrial Activity - Maneuver Area Training Equipment Sites (MATES) Fueling Station;
- Industrial Activity - Central Fueling Station #1;
- Industrial Activity - Vehicle Fueling Station #2; and
- Industrial Activity - Vehicle Fueling Station #3.

The goal of this SWPPP is to reduce or eliminate the concentration of pollutants in the stormwater discharges from MTC-Fort Pickett. The SWPPP has been prepared according to Good Engineering Practices, all sources of pollution on-site have been identified and all measures that will be implemented to reduce or remove the discharges of pollutants to stormwater runoff have been addressed. The development of the SWPPP involves the following steps:

- Identify the people that will be responsible for implementing the plan;
- Identify potential stormwater pollution sources;
- Implement Best Management Practices (BMPs); and
- Ensure the SWPPP remains current.

The SWPPP must be retained at MTC-Fort Pickett and shall be available upon request to the Director of the Virginia Department of Environmental Quality (VDEQ) or authorized representative; however, it is not required that the plan be submitted to the VDEQ. It is intended to be a living document, reflecting the current measures being taken by MTC-Fort Pickett to prevent stormwater pollution. For ease of use, this document consists of four main sections. These sections are:

- Introduction – presents the SWPPP layout, provides a description of MTC-Fort Pickett, reviews the regulatory requirements, and discusses SWPPP modifications;
- Pollution Prevention Team – lists the Stormwater Pollution Prevention Team (SWPPT) members and their responsibilities;
- Pollutant Source Assessment – describes the industrial activities at MTC-Fort Pickett, identifies potential pollutant sources and reviews past spills and stormwater data; and
- Stormwater Management Controls – details BMPs implemented at MTC-Fort Pickett.

## 1.2 Facility Description

MTC-Fort Pickett is located approximately thirty-five miles west of Petersburg, Virginia and 60 miles south of Richmond, Virginia. The facility consists of approximately 42,000 acres of land. MTC-Fort Pickett is bordered by Blackstone, Virginia, to the west and mostly rural land to the north, south, and east (**Figure B-1**). MTC-Fort Pickett is used primarily for training, base operations, and maneuvering for U.S. Army National Guard and U.S. Army Reserve units. In October 1997, operations at MTC-Fort Pickett were taken over by the Virginia Department of Military Affairs (VDMA) and the Virginia Army National Guard (VAARNG) as a result of the Base Realignment and Closure (BRAC) process. The installation was divided into three distinct areas; an area operated by the VDMA, the excess area relinquished to the Nottoway County Local Reuse Authority (LRA) and the research area operated by Virginia Tech. This SWPPP covers the activities operated by the VDMA.

## 1.3 Regulatory Requirements

In 1972, the United States Congress passed the CWA that prohibits the discharge of any pollutants to the waters of the United States of America from a point source unless the discharge is authorized by a National Pollution Discharge Elimination System (NPDES) permit. Although this was very instrumental in reducing the discharges of pollutants from industrial and municipal sources, it became evident that non-point sources are major contributors to the degradation of water quality. To further improve the quality of the nation's water, Congress passed the Water Quality Act (WQA) in 1987. In the WQA, the Environmental Protection Agency (EPA) was charged with establishing final regulations governing stormwater discharges within the NPDES program. In November 1990, the EPA published the final regulations that instituted the requirements for permitting stormwater discharges associated with industrial activities.

The federal regulations also authorized individual states to issue general or individual NPDES permits. Both the EPA and VDEQ identify 11 categories of industrial activity subject to stormwater regulations. These categories are described by the EPA in 40 CFR Chapter 122, Part 26 (b) (14) (i–xi) and by the VDEQ definition of “stormwater discharge associated with industrial activity” in 9 VAC 25-31-10 (1–11). MTC-Fort Pickett’s primary SIC is 9711 (National Security)<sup>1</sup>; however, five of the eleven categories described by the EPA and VDEQ are found at MTC-Fort Pickett. These five categories are:

- Hazardous waste treatment, storage or disposal facilities (No Exposure Form has been filed with VDEQ);
- Industrial Activity (Sector N – Scrap Recycling Facilities);
- Dewatering of granite-mining pit;
- Landfill (No Exposure Form has been filed with VDEQ); and
- Industrial Activity (Sector P – Land Transportation and Warehousing).

Due to these industrial and nonmetallic mineral mining activities, MTC-Fort Pickett is subject to stormwater regulations. Currently, MTC-Fort Pickett holds the following stormwater permits:

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<sup>1</sup> VDEQ, 4 December 2003, Letter to MTC-Fort Pickett RE: SIC code status MTC-Fort Pickett VAR541105.  
October 2014

- **VPDES Permit No. VAR050726** (Recycling Center);
- **VPDES Permit No. VAG840168** (DPW Quarry);
- **VPDES Permit No. VAG840211** (157<sup>th</sup> Engineers' Quarry);
- **VPDES Permit No. VAR052098** (MATES Fueling Station);
- **VPDES Permit No. VAR052101** (Central Fueling Station #1);
- **VPDES Permit No. VAR052100** (Vehicle Fueling Station #2); and
- **VPDES Permit No. VAR052099** (Vehicle Fueling Station #3).

Each of these stormwater permits expire on June 30, 2019. The general industrial permits include effluent limitations and monitoring requirements for one outfall at each of the following facilities: Recycling Center, MATES Fueling Station, Central Fueling Station #1, Vehicle Fueling Station #2, and Vehicle Fueling Station #3. The nonmetallic mineral mining permits include discharges for one outfall at the DPW Quarry and two outfalls at the 157<sup>th</sup> Engineers' Quarry.

In addition to containing stormwater monitoring requirements, the permits require MTC-Fort Pickett to have a SWPPP. The SWPPP should identify sources of potential stormwater pollution, describe the implementation of BMPs to reduce the chance of pollutants entering the storm sewers and assure compliance with the VPDES permit. This SWPPP has been written to fulfill these requirements.

The VDEQ VPDES permit regulation, 9 VAC-25-31-220 I.7.a, requires sites with industrial activity to conduct an annual inspection to evaluate the effectiveness of the SWPPP. This is addressed in the MTC-Fort Pickett VPDES permit through a requirement for an annual Comprehensive Site Compliance Evaluation (CSCE).

## **1.4 Comprehensive Site Compliance Evaluation**

There are four main components for performing a CSCE. First, all areas and outfalls associated with industrial activity are inspected and spill records and stormwater monitoring data are evaluated. Second, changes in potential pollutant sources and additional recommended BMPs are identified. Third, a report documenting the inspection findings and any resulting actions is prepared. Finally, deficiencies are corrected in a timely matter.

### **1.4.1 Annual Comprehensive Site Compliance Inspection and Evaluation**

An annual inspection of the stormwater drainage system and individual activities discussed in this plan is conducted by the Fort Pickett Environmental Specialist, or a qualified contractor, to determine if any pollutants are entering the drainage system. **Table 1-1** lists the specific activities that should be done to ensure the inspection and evaluation are adequately performed. The inspection shall include the following elements:

- Physical inspections of industrial areas and perimeters where pollutant runoff may occur
- Identification of any non-stormwater discharges (NSDs) not detected or not occurring during the initial certification;

- Sampling any NSDs and analyzing the samples for a schedule of parameters dictated by the potential pollutants in the outfall;
- Evaluating evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall; and
- Review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs.

<b>Table 1-1 Annual Site Compliance Inspection Checklist</b>	
<b>Item</b>	<b>Checklist</b>
1	Update the list of Stormwater Pollution Prevention Team (SWPPT) positions and responsibilities ( <b>Table 2-1</b> ) to reflect any changes in personnel.
2	Check the Superfund Amendments and Reauthorization Act (SARA)/ Emergency Planning and Community Right-to-Know Act (EPCRA) 313 reporting for Section 313 Water Priority Chemicals (WPCs). If WPCs are used at Fort Pickett, upgrade the facility and SWPPP to comply with any special stormwater requirements for EPCRA 313 WPC use.
3	Inspect stormwater drainage areas and outfalls associated with industrial activities ( <b>Figures B-2 through B-8</b> ) for evidence of pollutants entering the storm drainage system. <ul style="list-style-type: none"> <li>a) Update list of significant materials stored in each industrial area.</li> <li>b) Note any changes in materials handling practices (new/improved containers, different storage area or practice, etc.).</li> <li>c) Identify any evidence of, or potential for, pollutants entering the stormwater drainage system (visible spills not properly cleaned up, improperly stored material, etc.).</li> </ul>
4	Evaluate existing BMPs to ensure that they are adequate and properly implemented (secondary containment in good condition and of proper volume, spill control devices operate properly, etc.) and whether additional measures are needed. <ul style="list-style-type: none"> <li>a) Inspect all areas to determine if existing Post-wide BMPs such as good housekeeping, sediment and erosion control, etc. are being followed.</li> <li>b) Inspect individual areas to ensure that specific area BMPs are being implemented.</li> <li>c) Note any newly implemented or proposed BMPs.</li> <li>d) Inspect all structural stormwater controls (catch basins, etc.) and structural pollution prevention measures (secondary containment, etc.) for proper operation and effectiveness.</li> <li>e) Inspect any equipment required to implement the SWPPP, such as spill response equipment.</li> </ul>
5	Evaluate stormwater monitoring data for elevated levels of pollutants or other significant differences from previous data.
6	Update the spill list to include any reported spills at Fort Pickett over the past year.
7	Review the above information and note any non-compliance and determine if additional BMPs or structural controls are needed.
8	Identify any incidents of noncompliance or certify that the facility is in compliance with the plan.
9	Prepare a report summarizing the inspection findings and follow-up actions, the date of the inspection and personnel who conducted the inspection.
10	Revise the description of potential pollutant sources and implemented BMPs identified in the SWPPP within 30 days of CSCE inspection.
11	Implement changes specified in revised plan within 60 days of the CSCE inspection.

### **1.4.2 Annual Site Compliance Report**

The results of the CSCE shall be documented in an annual site compliance report. Fort Pickett's VPDES permits specify that the following information shall be included in the report:

- Scope of the evaluation
- Personnel conducting the evaluation
- Date of the evaluation
- Observations relating to the implementation of the SWPPP
- Actions taken based on the observations
- Incidents of non-compliance

The CSCE report must be maintained with the SWPPP and signed by a ranking official. Based on the results of the evaluation, the SWPPP shall be modified as necessary. Revisions to the SWPPP shall be completed within 30 days following the evaluation, unless permission for a later date is granted in writing by the VDEQ. If existing control measures need to be modified or if additional control measures are necessary, implementation shall be completed before the next anticipated storm event, if practicable, but not more than 60 days after completion of the comprehensive site evaluation, unless permission for a later date is granted in writing by the Department.

### **1.4.3 Recordkeeping and Internal Reporting**

The management of the SWPPP requires detailed documentation. Analyses of past incidents can help to detect problems and prevent similar incidents. The Environmental Coordinator will be responsible for keeping all records relative to the SWPPP, its implementation, compliance, reviews, updates and reports. The annual site compliance report must be kept for at least 3 years from the date that coverage under this permit expires or is terminated as per Part II, Section B, Subsection 2 of the Fort Pickett VPDES permits. This section also requires all monitoring information, calibration and maintenance records, all reports required by the permit and any data used to complete the application for the permit to be retained for a period of 3 years from the date of the sample, measurement, report or request for coverage. Recordkeeping of SWPPP activities at MTC-Fort Pickett includes the following:

- Updated copies of the plan
- Supporting documents to the plan, including field notebooks, drawings and maps
- Certificates of NSD inspections and analyses
- Records of stormwater quality and flow data
- Records of annual reviews, inspections, certifications, and updates
- Records of any correspondence from Federal and State regulators concerning the plan and its implementation
- Any other document pertinent to the plan deemed necessary by the Environmental Coordinator

#### **1.4.4 SWPPP Revision/Correction of Deficiencies**

Each year, the SWPPP will be revised based upon the information gathered during the annual CSCE or whenever there is a change at the facility that could have an effect on the potential for pollutants to be discharged to surface waters. Any deficiencies noted during the CSCE will be corrected in a timely manner, but no later than 60 days after the completion of the CSCE. However, funding resources or any authorization that must be obtained outside the installation may affect the implementation schedule.

#### **1.5 SWPPP Modifications/Updates**

The VPDES permits require the SWPPP to be amended whenever there is a change in design, construction, operation, or maintenance, which has significant effect on the potential for the discharge of pollutants to surface waters of the state, or if the SWPPP proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in the permits.

The SWPPP at MTC-Fort Pickett will be reviewed annually at a minimum, or on an as-needed basis, depending upon the frequency of operational or equipment changes. The Environmental Specialist (NGVA-FMO-ENV) will be responsible for conducting or coordinating the review internally or through qualified consultants. Any formal updates of the SWPPP will require recertification by a ranking elected official or his duly authorized representative.

In addition, several modifications have been made to the Fort Pickett SWPPP based on information gathered during the site visits for the 2014 update. Because modifications frequently occur, a table has been created to track the changes made to the SWPPP and is included in **Appendix A**.

### **2.0 POLLUTION PREVENTION TEAM**

The first step in the SWPPP process is to identify the personnel responsible for the development, implementation, maintenance and revisions of the plan. The team consists of on-site personnel who will be responsible for the day-to-day implementation of the plan. The SWPPP Team (SWPPT) will report to the Installation Commander.

#### **2.1 Team Members and Responsibilities**

The following people have been appointed members of the SWPPT (**Table 2-1**) to develop, implement, modify and provide required reports on the SWPPP and related activities:

- Facilities Management – Environmental Specialist (Chairperson)
- Directorate of Public Works – Recycling Manager
- Directorate of Public Works – Roads and Grounds Supervisor
- 157<sup>th</sup> Engineers Company – Commander or Designated Representative
- Directorate of Logistics – Fuel Manager
- MATES Fueling Station – Fuel Manager

<b>Table 2-1 Specific Duties of the SWPPP Team</b>		
<b>Member</b>	<b>Name/ Phone Number</b>	<b>Duties</b>
Facilities Management	Jennifer Donnell (434) 298-6121	(1) Overall responsibility for the implementation of the SWPPP. Sign documents and certificates required in the SWPPP. Reviews and approves the SWPPP, its modifications, and updates.
Environmental Specialist		(2) Delegates responsibility for implementation of the elements of the SWPPP. Coordinates final preparation, review, and approval of the SWPPP. Coordinates implementation of compliance phase. Prepares cost estimates of implementation of Plan for BMPs. Maintains updated records of spills as part of the SPCCP and updates files on the SWPPP, reflecting recent spills and measures to prevent them. Coordinates with State and Federal regulators for modifications to the SWPPP.
		(3) Conducts or contracts periodic and annual inspections and certification of dry-weather discharges from outfalls.
		(4) Ensures the Hazardous Materials/Waste Management Standard Operating Procedures (HMWMSOP) meet requirements of the SWPPP. Conducts inspections of Hazardous Waste sites at the installation to ascertain compliance with the SWPPP. Coordinates the management and disposal of hazardous waste and toxic materials that can cause stormwater pollution as described in the SWPPP.
		(5) In conjunction with activity directors, develops appropriate training programs.
Directorate of Public Works  Recycling Manager	Hunter Quarles (434) 292-2800	(1) Responsible for the implementation of the SWPPP at the Recycling Center. (2) Conducts quarterly visual inspections of Recycling Center and maintains inspections. (2) Attends annual SWPPP training and ensures recycling center personnel receive annual training.
157 <sup>th</sup> Engineers Company	SFC Clarence Craddock (434) 292-2260	(1) Responsible for the implementation of the SWPPP at the 157 <sup>th</sup> Engineers' Quarry. (2) Attends annual SWPPP training and ensures 157 <sup>th</sup> Engineer Company personnel receive annual training.
Directorate of Public Works  Roads and Grounds Supervisor	David Dukes (434) 292-2203	(1) Responsible for the implementation of the SWPPP at the DPW Quarry. (2) Attends annual SWPPP training and ensures DPW personnel assigned to the quarry receive annual training.
Directorate of Logistics  Fuel Site Manager	SGT Anthony Smith (434) 298-5531	(1) Responsible for the implementation of the SWPPP at Fuel Stations #1, #2 and #3. (2) Attends annual SWPPP training and ensures DOL personnel assigned to fueling operations receive annual training.
MATES  Fuel Manager	SGT Marvin Saul (434) 292-2403	(1) Responsible for the implementation of the SWPPP at the MATES Fuel Station. (2) Attends annual SWPPP training and ensures MATES personnel assigned to the fueling operation receive annual training.

## 2.2 Consistency With Existing Environmental Management Plans

In addition to overseeing the implementation of the SWPPP, SWPPT members must evaluate other existing environmental management plans for consistency and decide if any provisions in these other related plans can be incorporated into the SWPPP. Related environmental management plans at MTC-Fort Pickett include the Integrated Contingency Plan (ICP) which combines the Spill Prevention Control and Countermeasures (SPCC) Plan and the Oil Discharge Contingency Plan (ODCP), both of which address the prevention/response of oil and hazardous substance spills, and the Hazardous Waste Management Plan (HWMP). The ICP shows the drainage patterns from the majority of the industrial activities. In order to reduce the duplication of sources, this document will reference the other plans whenever possible. The SWPPT chairperson will resolve any conflicts within the plans. If needed, the SWPPP will be amended to reflect the decision of the SWPPT chairperson.

## 3.0 POLLUTANT SOURCE ASSESSMENT

An assessment of industrial areas that present potential sources of pollution to storm runoff was conducted as required under the stormwater regulations. Industrial activities that may contribute to stormwater pollution were identified and are outlined throughout this document.

### 3.1 Exposed Materials Inventory

#### 3.1.1 Industrial and Mineral Mining Activities

An inventory of the regulated activities at MTC-Fort Pickett that may discharge pollutants to stormwater was compiled from existing facility plans, staff interviews and field reconnaissance. The stormwater regulations require the development of a site map indicating the locations of industrial areas that may be potential sources of pollution to stormwater. The point at which the stormwater discharge leaves the particular activity is identified as an outfall and is shown on the individual activity maps. These areas are discussed in the following sections. The industrial activities at MTC-Fort Pickett that are subject to the stormwater regulations have been tabulated in **Table 3-1** and are listed as follows:

- Recycling Center;
- DPW Quarry;
- 157<sup>th</sup> Engineers' Quarry;
- MATES Fueling Station;
- Central Fueling Station #1;
- Vehicle Fueling Station #2; and
- Vehicle Fueling Station #3.

### 3.1.2 Exposed Materials Inventory, Handling and Storage

This section inventories significant materials by organization. The EPA's *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices*<sup>2</sup> defines significant materials as including but not limited to:

...raw materials; fuels; materials such as solvents, detergents and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(4) of the Comprehensive Environmental Response, Compensations and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have a potential to be released with stormwater discharges.

When significant materials are exposed to stormwater runoff, they may be carried to a receiving water body with the stormwater flow. Therefore, identification of these materials and their associated storage area helps determine where potential stormwater contamination may occur. Each of the significant materials can be considered "Potential Pollutant Sources" as described in the VPDES permit for the Post. **Table 3-1** provides a list of the significant materials potentially exposed on the Post including the quantity, location, handling practices, potential spill routes/exposure and applicable BMPs to help prevent stormwater pollution from these sources.

In **Tables 3-1 and 3-2**, materials noted as "Stored/Used Outdoors" pose a greater risk for exposure to stormwater, whereas materials noted as "Stored/Used Indoors" have far less exposure potential. The potential for a release or spill of materials typically stored indoors will likely occur during transport and delivery to and from the buildings.

## 3.2 Potential Sources of Pollutants

This section discusses the industrial areas that may reasonably be expected to add significant amounts of pollutants to stormwater discharges. Individual site maps have been developed for each area to identify the material storage areas and drainage patterns and are included in **Appendix B**.

### 3.2.1 Recycling Center

The Recycling Center is located along Dearing Avenue between Hospital Road and East 27th Street. The Recycling Center stockpiles aluminum cans, copper, brass, aluminum pieces, tin, machine parts, appliances (stoves, refrigerators etc.), furniture, batteries, cardboard and paper. Batteries, aluminum cans, baled cardboard and paper are transported off site for recycling, while the remaining items are stored on site and sold to recyclers. Intact saleable items, cardboard, paper and aluminum cans are stored indoors. All other storage is outdoors on the gravel lot.

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<sup>2</sup> U.S EPA, October 1992, Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices Summary Guidance, <http://www.epa.gov/npdes/pubs/owm0236a.pdf>, page 9.

Most of the materials are stored directly on the ground, although machine parts with oily surfaces are stored in 100-150 gallon covered metal hoppers.

The Center also houses the 90-day accumulation site for hazardous waste for MTC-Fort Pickett. Wastes include used batteries, gasoline, antifreeze, used oil filters, used oil, petroleum-contaminated absorbents, paints/solvents, and fluorescent light bulbs. All wastes are stored inside Building 2361 or in locked metal storage lockers with secondary containment, located behind and to the right of the building. The facility also has two 10-yard covered, lined roll off containers, one for petroleum contaminated soil and for petroleum contaminated absorbents.

The following control measures have been implemented at the Recycling Center to minimize the likelihood of receiving materials that may be significant pollutant sources to stormwater discharges:

- Residual fluids must be drained and properly disposed of prior to delivery to the facility (e.g., from equipment engines, radiators, and transmissions, oil-filled transformers, and individual containers or drums, appliances), and on removal of mercury switches prior to delivery to the facility.
- Established procedures to minimize the potential of any residual fluids from coming in contact with precipitation or runoff (e.g., oil contaminated soil and absorbents are stored in lined and covered rolloff containers);
- Established procedures for accepting scrap lead-acid batteries;
- Established procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and nonleaking containers and disposed or recycled in accordance with all requirements under the Resource Recovery and Conservation Act (RCRA), and other state or local requirements; and
- Permanent or semipermanent covers (e.g., recyclable brass is stored on a concrete pad under a metal-roofed structure, rolloff containers are covered with secured tarps).

Stormwater flows over the central portion of the yard towards the north. All surface drainage flows to a roadside ditch along Dearing Avenue, where a drop inlet directs stormwater across the street to Outfall 001. Outfall 001 discharges to an unnamed tributary to Birchen Creek. **Figures B-1a and B-2** graphically illustrate the location and layout of the Recycling Center along with material/waste storage areas, surface drainage patterns and the location of the outfall.

### **3.2.2 Directorate of Public Works (DPW) Quarry**

The primary activity conducted at the facility is the quarrying of rocks and the crushing of the quarried rocks for road building within MTC-Fort Pickett. Engineering units operate the quarry during military exercises. Only minor maintenance of the crusher equipment is conducted at the facility. The rocks that are crushed as part of normal operations are sometimes stockpiled adjacent to the crusher. These piles can be a source of silt that could wash into Hurricane Branch. A minimum distance of fifty feet between the rock piles and the outfall will be set to

reduce the possibility of a silting event. A gravel berm, approximately 4 feet high, is in place along the southwestern edge of the quarry, along Hurricane Branch, to minimize runoff into the stream. **Figures B-1b and B-3** graphically illustrate the location and layout of the DPW Quarry, along with material storage areas, surface drainage patterns, and the location of the outfall. Surface flow in this area is generally west/southwest toward Hurricane Branch.

The DPW Quarry has one 500-gallon double-walled aboveground gasoline tank used to refuel vehicles and one 250-gallon double-walled aboveground diesel tank used to fuel a generator located in Building 487. The gasoline tank was removed from the MATES Fuel Station and placed at the quarry in 2014. The AST is used to fill various equipment such as forklifts and generators. The AST is double-walled and fire rated. Two small hazardous material storage sheds are located at the quarry and house materials such as petroleum products, used oil and absorbent pads. Both sheds have grated floors which provide integral secondary containment.

The DPW Quarry has not been active since summer 2012. The old equipment has been dismantled and new equipment is being stored on-site. The facility is currently in design phase for a new headwall.

The following stormwater controls have been implemented at the DPW Quarry to reduce the likelihood of pollutants entering the stormwater discharge:

- Drip pans are placed under vehicles and equipment with known leaks; oil absorbents are used; and gravel surfaces are routinely cleaned to remove oil and grease;
- Adequate spill cleanup equipment is available;
- Storage vessels of all hazardous materials (e.g., for used oil or oil filters, spent solvents, paint wastes, hydraulic fluids) are maintained in good condition and plainly labeled (e.g., "used oil," "spent solvents," etc.). Hazardous materials are stored outdoors in storage lockers with integral secondary containment;
- Gravel berm installed along southwestern portion of quarry;
- Gravel piles are maintained at least 50 feet from the outfall; and
- Vehicle and equipment cleaning are performed only at designated wash rack areas that are connected to an oil/water separator which drains to the sanitary sewer system.

### **3.2.3 157<sup>th</sup> Engineers' Quarry**

The primary activity conducted at the facility is the quarrying of rocks and the crushing of the quarried rocks for road building within MTC-Fort Pickett. The 157<sup>th</sup> Engineer Company operates the quarry during military exercises. Only minor maintenance of the crusher equipment is conducted at the facility. The rocks that are crushed as part of normal operations are sometimes stockpiled adjacent to the crusher. These piles can be a source of silt that could wash into Tommeheton Creek.

The following stormwater controls have been implemented at the 157<sup>th</sup> Engineers' Quarry to

reduce the likelihood of pollutants entering the stormwater discharge:

- Drip pans are placed under vehicles and equipment with known leaks; oil absorbents are used; and gravel surfaces are routinely cleaned to remove oil and grease;
- Adequate spill cleanup equipment is available;
- Storage vessels of all hazardous materials (e.g., for used oil or oil filters, spent solvents, paint wastes, hydraulic fluids) are maintained in good condition and plainly labeled (e.g., "used oil," "spent solvents," etc.). Hazardous materials are stored outdoors in storage lockers with integral secondary containment;
- Gravel piles are maintained at least 50 feet from the outfalls;
- Three stormwater management ponds constructed onsite to manage runoff; and
- Vehicle and equipment cleaning are performed only at designated wash rack areas that are connected to an oil/water separator which drains to the sanitary sewer system.

Surface drainage is generally to the south. Surface drainage from the main quarry flows through two stormwater management ponds before it discharges at a piped Outfall 001, located across the gravel road. Another stormwater management pond is located north of the quarry to receive drainage from undeveloped areas north and east of the quarry. Surface drainage from the former quarry pit flows east into a roadside ditch and eventually outfalls across the gravel road. There is no piped outfall at Outfall 002. Both outfalls discharge to an unnamed tributary to Tommeheton Creek. **Figures B-1c and B-4** graphically illustrate the location and layout of the 157<sup>th</sup> Engineers' Quarry along with material storage areas, surface drainage patterns and the location of the two outfalls.

### 3.2.4 MATES Fuel Station

The MATES Fuel Station consists of the following petroleum storage locations, which are subject to the VPDES permit.

*Underground Storage Tank Fueling Area:* Two 8,000-gallon fiberglass diesel fuel USTs are located within the compound at Building 134. They were upgraded in 1998 to meet the technical standards for USTs as required by 40 CFR Part 280 and State Administrative Code. The USTs are single-walled fiberglass equipped with overflow/spill containment sumps and an automatic tank gauge (ATG) system. The lines connecting the tanks to the dispensers are double-walled fiberglass equipped with interstitial monitoring sensors. Vehicles are refueled on a concrete pad using two fuel dispensers. The wheels of the vehicles are chocked prior to refueling. The driver of the vehicle remains with the vehicle during the refueling to prevent overfilling of the vehicle.

*2,500 Gallon Refueling Truck:* The MATES Fueling Station has one 2,500-gallon diesel fuel dispensing truck. This truck receives bulk fuel issue from Central Fueling Station #1 and distributes to the individual pieces of equipment throughout the different Organizational In-storage Maintenance Shops (OISMs). The refueling truck is permanently fixed at MATES and equipped with adequate secondary containment for 110% of the largest vehicle. The fueling

truck is stored in covered secondary containment structures and parked empty when not in use.

The following stormwater controls have been implemented at the MATES Fuel Station to reduce the likelihood of pollutants entering the stormwater discharge:

- The storage of vehicles and equipment awaiting maintenance with actual or potential fluid leaks is confined to designated areas. Drip pans are placed under vehicles and equipment, vehicles and equipment are stored indoors; oil absorbents are used; and pavement surfaces are routinely cleaned to remove oil and grease;
- Fueling areas have adequate spill cleanup equipment;
- Storage vessels of all hazardous materials (e.g., for used oil or oil filters, spent solvents, paint wastes, hydraulic fluids) are maintained in good condition and plainly labeled (e.g., "used oil," "spent solvents," etc.). Hazardous materials are stored indoors or outdoors in storage lockers with integral secondary containment;
- Vehicle and equipment cleaning are performed only at designated wash rack areas that are connected to an oil/water separator which drains to the sanitary sewer system; and
- Vehicle and equipment maintenance activities are performed indoors; drip pans are used; an organized inventory of materials is maintained at each shop; wet spill clean up practices are prohibited where the practices would result in the discharge of pollutants to stormwater drainage systems.

Surface drainage flows west, across Military Road, to a stormwater management pond that discharges to an unnamed tributary to Hurricane Branch. Outfall 001 is located at the west side of the stormwater management pond. **Figures B-1d and B-5** graphically illustrate the location and layout of the MATES compound along with material storage areas, surface drainage patterns, and the location of the outfall.

### **3.2.5 Central Fuel Station #1**

The Central Fuel Station #1 (Building 2474) has the greatest potential for spills within MTC-Fort-Pickett. Nine underground storage tanks ranging in size from 10,000-gallons to 30,000-gallons are present. Bulk transfer and retail fueling activities are conducted at Station #1. Petroleum storage at Central Fuel Station #1 is as follows:

*Diesel USTs:* Two 15,000-gallon and four 20,000-gallon double-walled fiberglass tanks containing diesel fuel were installed in 1995 to meet the technical standards for USTs as required by 40 CFR Part 280 and the State Administrative Code.

*MOGAS USTs:* One 10,000-gallon double-walled fiberglass tank containing MOGAS (gasoline) was installed in 1995 to meet the technical standards for USTs as required by 40 CFR Part 280 and the State Administrative Code.

*JP-8 USTs:* One 30,000-gallon and one 10,000-gallon double-walled fiberglass tank containing JP-8 were installed in 1995 to meet the technical standards for USTs as required by 40 CFR Part 280 and the State Administrative Code.

The Central Fueling Station #1 facility has three 95-gallon overpack drums with spill equipment and four oil-dri dispensing drums located on various islands for spill response. Central Fuel Station #1 also has two waste storage sheds with integral secondary containment. The sheds are used to store used oily absorbents, used oil and fuel treatment chemicals.

The following stormwater controls have been implemented at the Central Fuel Station #1 to reduce the likelihood of pollutants entering the stormwater discharge:

- Fueling areas have adequate spill cleanup equipment;
- Storage vessels of all hazardous materials (e.g., for used oil or oil filters, spent solvents, paint wastes, hydraulic fluids) are maintained in good condition and plainly labeled (e.g., "used oil," "spent solvents," etc.). Hazardous materials are stored indoors or outdoors in storage lockers with integral secondary containment;
- Tank truck loading and unloading procedures meet the minimum requirements and regulation established by the Department of Transportation; and
- Curbing and sloping of the entire facility directs all surface flow to a 30,000-gallon oil/water separator equipped with a diverter valve.

Surface drainage is directed to a curbed inlet located on the west side of the fuel station. Stormwater is directed to a piped Outfall 001 located at the southwest corner of the site. In the case of a spill, the diverter valve can be closed to prevent the contaminated flow from entering the stormwater drainage. **Figures B-1e and B-6** graphically illustrate the location and layout of the Vehicle Fueling Station #1 along with material storage areas, surface drainage patterns, and the location of the outfall.

### **3.2.6 Vehicle Fuel Station #2 and Vehicle Fuel Station #3**

Vehicle Fueling Station #2 (Building 1800) and Vehicle Fueling Station #3 (Building 2870) are military fueling points. At each fueling station vehicles are refueled on a concrete pad. The wheels of the vehicles are chocked prior to refueling. The driver of the vehicle remains with the vehicle during the refueling to prevent overfilling of the vehicle.

*Vehicle Fueling Station #2 (Building 1800):* Diesel fuel dispensing to military vehicles is conducted at Building 1800 from two 20,000-gallon USTs. The tanks were installed in 1992 to comply with the technical standards for USTs as required by 40 CFR Part 280 and the State Administrative Code. A 95-gallon spill kit is available at the bulk rack for any spills that might occur.

Surface drainage is sheet flow to the southwest of the facility, which ultimately discharges to Hurricane Branch. Currently, there is no piped outfall at this facility. **Figures B-1f and B-7**

graphically illustrate the location and layout of the Vehicle Fueling Station #2 along with material storage areas, surface drainage patterns, and the location of the outfall.

*Vehicle Fueling Station #3 (Building 2870):* JP-8 fuel dispensing to military vehicles is conducted at Building 2870 from two 15,000-gallon JP-8 USTs. The tanks were installed in 1992 to comply with the technical standards for USTs as required by 40 CFR Part 280 and the State Administrative Code. A 95-gallon spill kit is available between the retail pumps for any spills that might occur.

Surface drainage flows northwest to a roadside ditch which enters the subsurface storm sewer one block south along Garnett Avenue. Currently, there is no piped outfall at this facility. **Figures B-1g and B-8** graphically illustrate the location and layout of the Vehicle Fueling Station #3 along with material storage areas, surface drainage patterns, and the location of the outfall.

The following stormwater controls have been implemented at Vehicle Fuel Stations #2 and #3 to reduce the likelihood of pollutants entering the stormwater discharge:

- Fueling areas have adequate spill cleanup equipment;
- Tank truck loading and unloading procedures meet the minimum requirements and regulation established by the Department of Transportation; and
- Surface flow is directed toward two small concrete berm areas at Vehicle Fuel Station #2.

The US Army Corps of Engineers has completed concept drawings (dated November 2013) for various fueling system improvements for the Central Fuel Station #1 and Vehicle Fuel Stations #2 and #3 which would include the installation of piped outfalls at Fuel Stations #2 and #3 and improvements to the concrete berm areas at both locations. MTC-Fort Pickett is awaiting funding for this project to proceed.

<b>Table 3-1                      Shop-Specific Materials Handling, Spill Exposure Routes and Applicable BMPs                      Industrial Shops/Areas at Maneuver Training Center - Fort Pickett</b>						
<b>Organization                      (Building Nos.)</b>	<b>Area                      Description</b>	<b>Material(s)</b>	<b>Quantities Stored</b>	<b>Material                      Handling</b>	<b>Potential Spill Routes/                      Exposure</b>	<b>Applicable BMPs</b>
Recycling Center (Bldgs 2360 and 2361)	Recycling/90- Day Hazardous Waste Facility	<u>Stored Outdoors</u>				<b>Current BMPs:</b> - Environmental Plans - Most material stored indoors or in hazardous materials lockers with secondary containment - Sorbents and dry sweepers used to clean spills - Spill kits - Proper storage and labeling of hazardous materials - Good housekeeping - Accumulated wastes are stored in containers and removed regularly so large quantities do not accumulate - Covered rolloff containers for oil contaminated soil and absorbents - Routine visual inspections - Brass stored on concrete pad under roof  <b>Proposed BMPs:</b> - Properly contain oily/greasy material (currently stored in hoppers) - Stormwater bioretention filter
		Used Oil	1 - 2,000 gal AST	Double Walled Steel Tank w/Bollards	Potential for spills during fluid transfers.	
		Recyclable Gasoline	1- 300 gal AST	Double Walled Steel Tank	Potential for spills during fluid transfers	
		Used Oil (temporary outdoor storage during transfer only)	55 gal drums	None	Potential for spills during fluid transfers.	
		Used batteries (Dry-Gel Lead, Lead-Acid)	Various quantities	90-Day Accumulation Site (Metal Storage Locker w/Poly-Coated Sump)	None	
		Metal, Appliances		None	Stormwater can become contaminated after coming in contact with these materials.	

<b>Table 3-1                      Shop-Specific Materials Handling, Spill Exposure Routes and Applicable BMPs                      Industrial Shops/Areas at Maneuver Training Center - Fort Pickett</b>							
Organization (Building Nos.)	Area Description	Material(s)	Quantities Stored	Material Handling	Potential Spill Routes/ Exposure	Applicable BMPs	
		Brass	Various quantities	Concrete Pad/Under Roof	Stormwater can become contaminated after coming in contact with these materials if not stored under roof		
		POL Contaminated Soil/Absorbents		Lined rolloff container with secure cover.	Stormwater can become contaminated after coming in contact with these materials if cover is unsecured.		
Recycling Center (Bldgs 2360 and 2361)	Recycling/90-Day Hazardous Waste Facility	<b>Stored Indoors</b>					
		Used Oil Filters, Used Oil, Used Petroleum Absorbent, and Waste Paint/Solvent	Various quantities	90-Day Accumulation Site (Four HazMat Storage Lockers w/ Secondary Containment)	Potential for spills during material transfers.		
		Cardboard/Paper	Various quantities	Baled	None		
		Aluminum Cans		Plastic Bags			
		Furniture and Intact Sellable Items		None			
Central Fueling Station #1 (Building 2474)	Vehicle Fueling Area	<b>Stored Outdoors</b>					<b>Current BMPs:</b> - Environmental Plans - Sorbents and dry sweepers used to clean spills - Spill kits - Visual inspections. - Good housekeeping - Loading/unloading activities
		Diesel	4 – 20,000 gal UST	Secondary containment berm with curb inlet to OWS	Potential for spills during vehicle fueling and UST filling by vendor		
			2 – 15,000 gal UST				
		JP-8	1 – 30,000 gal UST				
			1 – 10,000 gal UST				
MOGAS	1 – 10,000 gal UST						

<b>Table 3-1                      Shop-Specific Materials Handling, Spill Exposure Routes and Applicable BMPs                      Industrial Shops/Areas at Maneuver Training Center - Fort Pickett</b>						
Organization (Building Nos.)	Area Description	Material(s)	Quantities Stored	Material Handling	Potential Spill Routes/Exposure	Applicable BMPs
		Oil/Water	1 – 30,000 gal OWS		Potential for spills during fluid transfers	
Vehicle Fueling Station #2 (Building 1800)	Vehicle Fueling Area	<b>Stored Outdoors</b>				<b>Current BMPs:</b> - Environmental Plans - Sorbents used to clean spills - Spill kits - Visual inspections - Loading/unloading activities
		Diesel	2 – 20,000 gal UST	Two small concrete berm areas	Potential for spills during vehicle fueling and UST filling by vendor	
Vehicle Fueling Station #3 (Building 2870)	Vehicle Fueling Area	<b>Stored Outdoors</b>				<b>Current BMPs:</b> - Environmental Plans - Sorbents used to clean spills - Spill kits - Visual inspections - Good housekeeping - Loading/unloading activities
		JP-8	2 – 15,000 gal UST	None	Potential for spills during vehicle fueling and UST filling by vendor	
MATES Fueling Station (Bldgs 134 and 143)	Vehicle Fueling Area	<b>Stored Outdoors</b>				<b>Current BMPs:</b> - Environmental Plans - Sorbents used to clean spills - Spill kits - Visual inspections - Good housekeeping - Loading/unloading activities - Stormwater management pond
		Diesel	2 – 8,000 gal UST	None	Potential for spills during vehicle fueling and UST filling by vendor	
DPW Quarry	Dewatering of granite-mining pit	<b>Stored Outdoors</b>				<b>Current BMPs:</b> - Environmental Plans - Sorbents and dry sweepers used to clean spills - Spill kits - Visual inspections - Good housekeeping - Loading/unloading activities
		Gasoline/Diesel	1 - 250 gal/ 1-500 gal	Steel Vaulted ASTs	Potential for spills during fluid transfers.	
		Calcium Chloride	1 – 5,000 gal AST	Concrete containment berm	Potential for spills during fluid transfers.	
		Diesel	1 – 2,500 gal capacity mobile refueler	Covered containment berm	Potential for spills during fluid transfers.	

<b>Table 3-1                      Shop-Specific Materials Handling, Spill Exposure Routes and Applicable BMPs                      Industrial Shops/Areas at Maneuver Training Center - Fort Pickett</b>							
Organization (Building Nos.)	Area Description	Material(s)	Quantities Stored	Material Handling	Potential Spill Routes/ Exposure	Applicable BMPs	
		POL Materials	Various quantities	POL Building w/Secondary Containment	Potential for spills during fluid transfers.	conducted under covered areas - Accumulated wastes stored in containers and removed regularly so large quantities do not accumulate  <u>Proposed BMPs:</u> None	
157 <sup>th</sup> Engineers' Quarry	Rock Quarry	<b>Stored Outdoors</b>					
		POL Materials	Various quantities	POL Building w/Secondary Containment, Portable Generators with Integral Fuel Tanks	Potential for spills during fluid transfers/generator use	<u>Current BMPs:</u> - Environmental Plans - Spill kits - Visual inspections - Good housekeeping - Loading/unloading activities conducted under covered areas - Stormwater management ponds for Outfall 001  <u>Proposed BMPs:</u> - Stormwater management pond for Outfall 002	

### 3.3 Risk Identification and Summary of Potential Pollutant Sources

**Section 3.2** identifies the potential industrial pollutant sources for stormwater located at MTC-Fort Pickett. **Table 3-2** includes a summary of the significant materials exposed within the industrial drainage areas and suggests that the following types of pollutants have a risk of entering stormwater due to outdoor use and/or storage.

<b>Table 3-2 Pollutants with Risk to Enter Stormwater</b>		
<b>Pollutant Materials</b>	<b>Pollutant Parameters</b>	<b>Pollutant Risk</b>
<ul style="list-style-type: none"> <li>• JP-8</li> <li>• Diesel fuel</li> <li>• MOGAS</li> <li>• Motor oil</li> <li>• Hydraulic Fluids</li> </ul>	<ul style="list-style-type: none"> <li>• Oil and grease and other petroleum hydrocarbons</li> </ul>	Used and Stored Outdoors
<ul style="list-style-type: none"> <li>• Antifreeze</li> </ul>	<ul style="list-style-type: none"> <li>• Ethylene glycol</li> </ul>	
<ul style="list-style-type: none"> <li>• Wastewater</li> </ul>	<ul style="list-style-type: none"> <li>• Oil and grease and other petroleum hydrocarbons</li> <li>• Volatile organic compounds and semi-volatile organic compounds</li> <li>• Metals</li> <li>• Biological oxygen demand and chemical oxygen demand</li> <li>• Total suspended solids</li> </ul>	
<ul style="list-style-type: none"> <li>• Cleaning solvents</li> <li>• Paints</li> </ul>	<ul style="list-style-type: none"> <li>• Volatile organic compounds and semi-volatile organic compounds</li> <li>• Metals</li> </ul>	
<ul style="list-style-type: none"> <li>• Fertilizers</li> <li>• Pesticides, herbicides and fungicides</li> </ul>	<ul style="list-style-type: none"> <li>• Volatile organic compounds and semi-volatile organic compounds</li> <li>• Metals</li> </ul>	Used Outdoors

### 3.4 Significant Spills and Leaks

Significant spills include petroleum spills in excess of 25 gallons and hazardous substances released within a 24-hour period in excess of reportable quantities under Section 311 of the Clean Water Act (CWA) and Section 102 of the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA). A summary of all significant spills that have occurred within three years prior to the submission of the registration statement for coverage under the VPDES general permit, as well as the significant spills that have occurred during the term of the permit are included in **Appendix C. Table C-1** outlines the date, the cause and the amount of each significant spill. All releases or spills greater than 10 gallons are documented and kept on file in the MTC-Environmental Office. All significant spills (>25 gallons or any release to a waterbody) are reported to the VDEQ Blue Ridge Regional Office - Lynchburg and the National Response Center as required.

### 3.5 Receiving Water Bodies

Stormwater runoff from the industrial activities at MTC-Fort Pickett may contain contaminants that impact receiving streams and other surface bodies (i.e., ponds, lakes, wetlands). Although none of the industrial activities addressed in the assessment are immediately adjacent to State or U.S. waters, several streams that are tributaries to the Nottoway River drain the areas where industrial activities are located. These surface waters are shown on **Figure B-1(a-g)** and are summarized in **Table 3-3**.

<b>Stormwater Outfall</b>	<b>Industrial Activity</b>	<b>Receiving Waters</b>
Birchen Creek/Birchen Lake	Recycling Center and Hazardous Waste Accumulation Area	Nottoway River
Hurricane Branch	DPW Quarry MATES Fuel Station Central Fuel Station #1 Vehicle Fuel Station #2 Vehicle Fuel Station #3	
Tommeheton Creek	157 <sup>th</sup> Engineers' Quarry	

### 3.6 Existing Stormwater Data

Stormwater monitoring is conducted to identify the amount and types of pollutants that could potentially travel off-site and reach receiving waters. Table 3-4 provides a summary of the sampling frequency for each facility. Quarterly visual sample results and inspection checklists must be retained with the SWPPP. Analytical results from quarterly and semi-annual monitoring must be submitted to VDEQ on Discharge Monitoring Reports (DMRs) in accordance with each facility's VPDES permit. Existing stormwater data from the previous permit term must be retained with this Plan.

If at any time monitoring results indicate that discharges from the facility exceed an effluent limitation or a TMDL wasteload allocation, or VDEQ determines that discharges from the facility are causing or contributing to an exceedance of a water quality standard, immediate steps shall be taken to eliminate the exceedances in accordance with the above Part I. Section A.6.b. Within 30 calendar days of implementing the relevant corrective action(s), an exceedance report shall be submitted to the Department.

<b>Stormwater Outfall</b>	<b>Quarterly Visual Inspection</b>	<b>Quarterly Visual Sample</b>	<b>Quarterly Analytical Sample</b>	<b>Semi- Annual TMDL Monitoring</b>	<b>Semi- Annual Benchmark Sample</b>
Recycling Center	X	X			X
DPW Quarry	X	X	X		
157 <sup>th</sup> Engineers' Quarry	X	X	X		
MATES Fuel Station	X	X		X	X
Central Fuel Station #1	X	X		X	X
Vehicle Fuel Station #2	X	X		X	X
Vehicle Fuel Station #3	X	X		X	X

### **3.6.1 Recycling Center**

Quarterly visual sampling of the storm water discharge must be completed for the Recycling Center Outfall in accordance with Part I, Section A.1.a of the General Permit. The permits specify that a grab sample of runoff water should be taken within the first 30 minutes of a storm event that results in an actual discharge from the site (defined as a "measurable storm event") during daylight hours, and that occurs at least 72 hours from the previous measurable storm event. If it is not practicable to take the sample during the first 30 minutes, the sample may be taken during the first three hours of the discharge, provided that the permittee explains why a grab sample during the first 30 minutes was impracticable. If no qualifying storm event results in runoff from the facility during a monitoring quarter, MTC-Fort Pickett is excused from sampling for that quarter provided that documentation that no runoff occurred is signed and certified in accordance with Part II, Section K of the permit.

Semi-annual benchmark monitoring must be completed at the Recycling Center outfall in accordance with Part I, Section A.1. of the General Permit for Sector N type industrial activities (Scrap Recycling Facilities). The permit requires semi-annual monitoring for total suspended solids, total aluminum, total cadmium, total chromium, total copper, total iron, total lead and total zinc. The Discharge Monitoring Reports (DMRs) are due to VDEQ by July 10<sup>th</sup> and January 10<sup>th</sup> each year.

### **3.6.2 DPW Quarry**

Quarterly effluent sampling must be completed at DPW Quarry Outfall 001 in accordance with Part I, Section A of the Nonmetallic Mineral Mining Permit. The permit requires quarterly monitoring for Total Suspended Solids, Flow (estimated) and pH for discharges of process wastewater (including mine pit dewatering) and commingled stormwater from outfalls. According to the Permit there shall be no discharge of floating solids or visible foam in other than trace amounts. The DMRs are due no later than the tenth day of April, July, October, and January. Quarterly visual examinations of stormwater must be completed and documented for the DPW Quarry in accordance with Part II, Section H of the Mining Permit.

### **3.6.3 157<sup>th</sup> Engineers' Quarry**

Quarterly effluent sampling must be completed at the 157<sup>th</sup> Engineers' Quarry Outfalls 001 and 002 in accordance with Part I, Section A of the Nonmetallic Mineral Mining Permit. The permit requires monitoring for Total Suspended Solids, Flow (estimated) and pH for discharges of process wastewater (including mine pit dewatering) and commingled stormwater from outfalls. According to the Permit there shall be no discharge of floating solids or visible foam in other than trace amounts. The quarterly DMRs are due no later than the tenth day of April, July, October, and January each year. Quarterly visual examinations of stormwater must also be completed and documented for the 157<sup>th</sup> Engineers' Quarry in accordance with Part II, Section H of the Mining Permit.

### **3.6.4 MATES Fuel Station, Central Fuel Station #1, Vehicle Fuel Stations #2 and #3**

Quarterly visual sampling of the storm water discharge must be completed for MATES Fuel Station, Central Fuel Station #1, Vehicle Fuel Stations #2, and Vehicle Fuel Station #3 in accordance with Part I, Section A.1.a of the General Permit. The permits specify that a grab sample of runoff water should be taken within the first 30 minutes (or as soon thereafter as practical, but not to exceed three hours) of a storm event that results in an actual discharge from the site (defined as a "measurable storm event") during daylight hours, and that occurs at least 72 hours from the previous measurable storm event. If no qualifying storm event results in runoff from the facility during a monitoring quarter, MTC-Fort Pickett is excused from sampling for that quarter provided that documentation that no runoff occurred is signed and certified in accordance with Part II, Section K of the permit.

Semi-annual benchmark monitoring must be completed at Outfall 001 for MATES Fuel Station, Central Fuel Station #1, Vehicle Fuel Station #2, and Vehicle Fuel Station #3 in accordance with Part I, Section A.1.b and Part IV, Section D of the General Permit for Sector P type industrial activities (Land Transportation and Warehousing). The permit requires semi-annual monitoring for total suspended solids (TSS) and total petroleum hydrocarbons (TPH). The Discharge Monitoring Reports (DMRs) are due by July 10<sup>th</sup> and January 10<sup>th</sup> each year.

Semi-annual TMDL Waste Load Allocation monitoring must also be completed at Outfall 001 for MATES Fueling Station, Central Fueling Station #1, Vehicle Fueling Station #2, and Vehicle Fueling Station #3 in accordance with Part I, Section A.1.c(3). The permit requires semi-annual monitoring for TSS. The TMDL monitoring periods are from January 1 to June 30 and July 1 to December 31. According to VDEQ, the TMDL wasteload allocation is 100 mg/l TSS. Therefore, for monitoring results that do not exceed 100 mg/l TSS, the DMR is due by January 10<sup>th</sup> or July 10<sup>th</sup> of each monitoring period. For monitoring results that exceed 100 mg/l TSS, the DMR is due by January 10<sup>th</sup> or July 10<sup>th</sup> of each monitoring period or no later than 30 days after the results are received by the facility, whichever date is earlier.

### **3.7 Non-Stormwater Discharge Assessment and Certification**

In accordance with the requirements of the MTC-Fort Pickett VPDES stormwater permits, the certification at the front of this SWPPP ensures that all industrial stormwater outfalls have been surveyed and that the survey data have been evaluated for the presence of non-stormwater discharges. The outfall locations are shown on **Figure B-1 (a-g)** and on individual activity maps (**Figures B2-B8**). A review of topographic, site and storm drainage maps of MTC-Fort Pickett, as well as site observations, confirm the installation has a limited storm drainage system comprised of a combination of storm sewer pipes, manholes, catch basins and inlets, concrete culverts and grass drainage ditches/swales. These structural features are primarily found in areas where impervious surfaces and development are located (i.e. roads and buildings).

#### **3.7.1 Assessment Procedures**

During the development of the initial SWPPP and subsequent annual inspections, test methods have been used to evaluate the presence of non-stormwater discharges in industrial stormwater outfalls. These methods include visual inspections and the review of as-built sewer drawings. Dry weather visual inspections of all industrial discharge points have been performed and documented annually since July 1999 as required by MTC-Fort Pickett's VPDES permits. All outfalls were inspected for any color, foam or odor that might indicate the presence of wastewater. See **Appendix D** for a copy of the checklist to be used during these visual inspections.

#### **3.7.2 Authorized Non-Stormwater Discharges**

MTC-Fort Pickett's permit allows for non-stormwater discharges from firefighting activities and other specified non-stormwater discharges. The SWPPP will ensure the implementation of appropriate pollution prevention measures for the non-stormwater components of the discharge. Examples of allowable non-stormwater discharges at MTC-Fort Pickett include:

- Fire hydrant flushing;
- Potable water sources, including waterline flushing;
- Uncontaminated compressor condensate (excluding air compressors);
- Lawn-watering;

- Routine external building washdown that does not use detergents or other compounds;
- Pavement wash waters, where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
- Air conditioning condensate;
- Uncontaminated springs;
- Uncontaminated groundwater infiltration or runoff; and
- Foundation or footing drains where flows are not contaminated with process materials.

## **4.0 STORMWATER MANAGEMENT CONTROLS**

### **4.1 Definition of Best Management Practices**

BMPs are measures used to prevent or reduce the potential for pollution from a specific activity. BMPs encompass a wide range of corrective and preventive measures, and may include structural controls, process alternatives, material storage and handling procedures, personnel training, schedules of activities, preventive maintenance, environmental documentation, prohibitions on practices, and other management practices to prevent or reduce stormwater pollution. The following section describes Post-wide and site-specific BMPs that are implemented through the stormwater pollution prevention program.

### **4.2 Post-Wide Best Management Practices and Programs**

Post-wide BMPs include spill prevention and response, personnel training programs, recordkeeping and internal reporting procedures, sedimentation and erosion control, materials inventory and tracking and facility security. General descriptions of these BMPs are outlined in **Sections 4.2.1** through **4.2.6**.

#### **4.2.1 Spill Prevention and Response Procedures**

USEPA Baseline General Permit Requirements establish that the permittees identify procedures for spill prevention and response. Spill prevention and response procedures should be developed for the facility based on the potential spill scenarios identified. These procedures should consider the potential magnitude of spills, the types of materials spilled and the variety of potential spill locations. Specific procedures may be needed to correspond to particular chemicals onsite. The spill response procedures should include the following:

- Identification of locations where spills have the greatest potential to occur;
- Identification of standard materials handling procedures;
- Identification of the spill response "team" responsible for implementing the spill response plan;
- Safety measures;
- Procedures to notify appropriate authorities providing assistance (police, fire, and hospital);

- Procedures for spill containment, diversion, isolation, and cleanup; and
- Spill response equipment including:
  1. Safety equipment such as respirators, eye guards, protective clothing and fire extinguishers.
  2. Cleanup equipment such as booms, barriers, sweeps, absorbents, containers, etc.

For MTC-Fort Pickett, these procedures are documented in the Integrated Contingency Plan (ICP). The ICP identifies resources, establishes responsibilities and provides procedures for containment and clean-up of accidental discharges of oil and hazardous substances. The ICP also includes a list of individuals and agencies that must be notified in the event of a spill. The ICP contains a summary table showing areas where spills have the greatest potential to occur and a list of the quantities of oil stored. All personnel involved in fuel handling operations are familiar with these plans and undergo annual SPCC training. The ICP also includes a brief one-page outline that describes the procedures to follow if a minor or major spill should occur. These sheets are posted in industrial areas throughout the facility.

#### **4.2.2 Personnel Training Programs**

Several types of training can be used to inform and train employees on stormwater pollution prevention. In-house training for proper equipment operation and maintenance, material and waste storage, and good housekeeping procedures, for example, can be excellent sources of pollution prevention information. Monthly safety meetings provide a good forum for disseminating information to fulfill stormwater training requirements. An employee training program is ongoing at MTC-Fort Pickett to inform personnel at all levels of responsibility regarding the components and goals of the SWPPP. Training addresses each component of the SWPPP, including how and why tasks are to be implemented. Annual SWPPP training is documented and maintained by the Fort Pickett Environmental Specialist. Training programs promote the goals of the SWPPP and promote public awareness of stormwater pollution through Power Point presentations and discussion.

##### **4.2.2.1 Good Housekeeping and Materials Management Training**

Good housekeeping includes regular vacuuming and/or sweeping, promptly cleaning up spilled materials to prevent polluted runoff, identifying areas where brooms, sorbents, foams and other good housekeeping and spill response equipment are located, displaying signs reminding employees of the importance and procedures of good housekeeping, discussing updated procedures and reporting on the progress of practicing good housekeeping at every meeting, providing instruction on securing drums and containers and frequently checking for leaks and spills. Materials management practices include neatly organizing materials for storage and identifying all toxic and hazardous substances stored, handled and produced onsite.

#### 4.2.2.2 Stormwater Pollution Prevention Training

Annual stormwater pollution prevention training is provided for appropriate MTC-Fort Pickett personnel, which are covered under the VPDES permits. In addition to good housekeeping, spill response and material management training, there are specific training requirements identified in Part IV of the VPDES Permits for the Recycling Center, MATES Fuel Station, Central Fuel Stations #1, and Vehicle Fuel Stations #2 and #3. These training requirements are identified in **Table 4-1**. SWPPP training consists of a Power Point presentation conducted by Fort Pickett personnel or a qualified contractor, along with discussion regarding current issues and upcoming projects.

<b>Industrial Activity</b>	<b>Training Requirements</b>
Scrap Recycling and Waste Recycling Facilities	<ul style="list-style-type: none"> <li>• Summary of SWPPP requirements</li> <li>• BMPs</li> <li>• Proper scrap inspection, handling and storage procedures</li> <li>• Procedures to follow in the event of a spill, leak or break in any structural BMP</li> </ul>
Land Transportation and Warehousing	<ul style="list-style-type: none"> <li>• Used Oil management</li> <li>• Fueling procedures</li> </ul>

#### 4.2.2.3 Spill Response Training

MTC-Fort Pickett provides annual SPCC training to all oil handling personnel. Spill response training includes: identifying the potential spill areas and drainage routes, discussing information on past spills and causes, reviewing the reporting requirements for spills, specifying material handling procedures and storage requirements, and discussing spill response procedures. SPCC training records are kept on-site for three years.

#### 4.2.2.4 Hazardous Waste Training

Annual hazardous waste training is provided for all personnel involved in the handling of hazardous waste on MTC-Fort Pickett. This training is generally a one day training session done concurrently with SPCC training. The training addresses topics included in the Fort Pickett SWPPP and pollution control laws and regulations. Additionally, personnel are given classroom instruction and on-the-job training (including being trained on the proper operation and maintenance of equipment to prevent discharges of oil) to ensure duties are performed in a way that maintains compliance with applicable environmental regulations.

#### 4.2.2.5 Training Schedule

Training at MTC-Fort Pickett occurs at two levels: the management level (activity directors and Good Housekeeping/Preventive Maintenance (GH/PM) coordinators and the industrial level (activity personnel). Upon receipt of the SWPPP, the activity directors and GH/PM coordinators meet with the Environmental Specialist to discuss the contents of the plan and to develop informal training methods and goals for personnel. This group meets annually or when any significant change is made to the plan. Following the meeting, the activity director and/or the GH/PM coordinator presents the plan to the personnel at individual industrial activities during a regular safety meeting. This meeting occurs within two months of receipt of the plan and is brief, informal, and referred to as "basic training." This basic training occurs annually, following the annual inspection. Deficiencies noted in the plan and changes to the plan are discussed at the safety meetings, on an as-needed basis.

#### 4.2.3 Recordkeeping and Internal Reporting Procedures

Records of employee training, inspection documentation, material inventory printouts, spills, and other important information are integral to the implementation of the SWPPP. Records of spills, inspections, maintenance, stormwater outfall sampling data and any other documentation relating to the SWPPP must be retained for at least three years. Spills, leaks, and other incidents that could potentially impact stormwater are documented and reported to the Environmental Office as soon as possible. Currently, the Environmental Office maintains a list of all reportable spills that have occurred on Fort Pickett, all stormwater outfall sampling data and any documentation associated with the annual CSCE. All equipment inspections and maintenance done at the shops is documented on equipment forms. Inspection records for the industrial areas, drum storage areas and other significant materials storage areas are kept at the specific sites. Specific recordkeeping requirements are listed in **Table 4-2**.

<b>Table 4-2 Recordkeeping and Internal Reporting Procedures</b>	
<b>Activity</b>	<b>Recordkeeping Requirements</b>
Spills, leaks, and other discharges	<ul style="list-style-type: none"> <li>• The date and time of the incident, weather conditions, duration, cause, environmental problems, response procedures, parties notified, recommended revisions of the BMP program, operating procedures, and/or equipment needed to prevent recurrence.</li> <li>• Formal written reports.</li> <li>• A list of procedures for notifying the appropriate installation/facility personnel, and the names and telephone numbers of the responsible employees.</li> </ul>
Inspections and maintenance activity logs	<ul style="list-style-type: none"> <li>• Field notebooks.</li> <li>• Timed and dated photographs.</li> <li>• Video tapes.</li> <li>• Drawings and maps.</li> </ul>
Keeping records updated	<ul style="list-style-type: none"> <li>• The correct name and address of facility.</li> <li>• The correct name and location of receiving waters.</li> <li>• The number and locations of discharge points.</li> <li>• Principal products and production rates (where appropriate).</li> </ul>

#### 4.2.4 Sediment and Erosion Control Practices

The VPDES permits require the identification of areas with a significant erosion potential, and identification of BMPs to limit erosion at the regulated industrial activities. Erosion is a process in which soil and rock material is loosened and removed by natural causes, such as precipitation. Sedimentation occurs when soil particles are suspended in surface runoff and deposited in streams and other water bodies. Areas subject to erosion include areas where plants cannot grow, which can include: soil stockpiles, stream banks, steep slopes and construction and demolition areas. Methods used to limit and control erosion include:

- Leaving as much vegetation onsite as possible
- Minimizing the time that soil is exposed or stabilizing the disturbed soils as soon as possible
- Preventing runoff from flowing across disturbed areas (diverting flow)
- Slowing down the runoff flowing across the site
- Providing vegetated drainage ways for the increased runoff (using grass swales rather than concrete drains)

It is standard operating procedure at MTC-Fort Pickett to develop project-specific sediment and erosion control plans for construction and other projects which have a potential to cause erosion. Therefore, the SWPPP only addresses sediment/erosion issues directly related to the regulated industrial activities. Due to the nature of the operations that occur at the regulated industrial

activities at MTC-Fort Pickett, the potential for erosion is minimal. However, as part of the visual inspection program, the GH/PM Coordinator will check the activity and surrounding areas for any potential erosion problems.

#### **4.2.5 Materials Inventory and Tracking**

Fort Pickett personnel address materials inventory and tracking through the following procedures that are implemented post-wide:

- Labeling of hazardous and non-hazardous materials;
- Securing access to hazardous and non-hazardous materials; and
- Conducting annual hazardous material inventory at industrial activity areas.

#### **4.2.6 Facility Security**

Access onto MTC-Fort Pickett is controlled. Security personnel are posted at each of the gates that allow access onto the installation. Access to significant material locations is limited. Many locations are secured behind locked fences and doors, making it impossible for unauthorized personnel to gain access. The MTC-Fort Pickett Police Department completes random security checks of all facilities.

### **4.3 Site-Specific Best Management Practices**

Site-specific BMPs are implemented at individual industrial shops/areas on Fort Pickett. They include good housekeeping, preventive maintenance, runoff management, spill prevention and response, visual inspections and recordkeeping and internal reporting procedures.

#### **4.3.1 Good Housekeeping/Preventive Maintenance**

The following sections detail the GH/PM program implemented at MTC-Fort Pickett facilities for those industrial activities covered by the stormwater regulations.

##### **4.3.1.1 Good Housekeeping**

Good housekeeping is comprised of practices designed to maintain a clean and orderly work environment, which reduces the possibility of accidental spills caused by mishandling or misplacement of chemicals and equipment. Good housekeeping practices are generally the most effective and least costly measures to prevent stormwater runoff contamination from areas engaged in industrial activities. The main goal of good housekeeping is to maintain a clean and orderly work environment. Each industrial shop/area implements good housekeeping by:

- Maintaining clean exposure areas;
- Minimizing the use of chemicals
- Routine cleanup operations;

- Minimizing runoff contamination; and
- Providing specific procedures for exposure areas and activities.

#### **4.3.1.2 Procedures to Maintain Clean Exposure Areas**

Personnel working in the industrial shops at Fort Pickett maintain clean exposure areas by performing the following activities:

- Maintaining dry and clean floors;
- Regularly disposing of waste material;
- Routinely inspecting material storage areas for leaks and spills;
- Storing significant materials correctly (providing proper containment, stacking material according to manufacturers' instructions, storing materials away from heavily trafficked routes, etc.); and
- Ensuring that all personnel understand spill cleanup procedures.

#### **4.3.1.3 Procedures to Minimize Chemical Usage**

The following practices are employed by Fort Pickett personnel to reduce chemical usage:

- Materials inventories; and
- Materials labeling.

#### **4.3.1.4 Specific Procedures for Exposure Areas and Activities**

Additional BMPs are used at site-specific areas due to the nature of the industrial activity. These BMPs are:

- Drip pans;
- Electrical grounding;
- Drum corrosion protection;
- Drum sheltering;
- Drum replacement;
- Container labeling;
- Transport of drums;
- Security;
- Transport of small quantities;
- Materials loading and unloading procedures;
- Refueling procedures; and
- Vehicle/equipment maintenance.

#### 4.3.1.5 Preventive Maintenance

A Preventive Maintenance Program includes the regular inspection and maintenance of not only stormwater management control structures (i.e., oil/water separators, retention basins), but also equipment and systems (i.e., containment berms and aboveground tanks) that can impact stormwater quality. Preventive maintenance procedures at MTC-Fort Pickett will focus primarily on the latter. The preventive maintenance program includes the following components:

- Vehicle/equipment maintenance, leak checks;
- Inspection of storage tanks, piping and equipment; and
- Inspection of drums.

Section 4.3.6 provides detailed descriptions of the above practices.

#### 4.3.1.6 Implementation of Good Housekeeping/Preventive Maintenance Program

GH/PM Coordinators have been identified for each regulated industrial activity at MTC-Fort Pickett. **Table 4-3** includes the name and contact information for each GH/PM Coordinator. The GH/PM Coordinator will be responsible for the implementation of GH/PM programs. The elements of the GH/PM program are shown in **Table 4-4**. A sample checklist for use in the periodic visual inspections of each facility is shown in **Appendix D**.

<b>Facility Name</b>	<b>GH/PM Contact</b>	<b>Telephone Number</b>
Recycling	Mr. Hunter Quarles	292-2800
DPW Quarry	Mr. David Dukes	292-2203
157 <sup>th</sup> Engineers' Quarry	SFC Clarence Craddock	298-2260
Central Fueling Station #1	SGT Anthony Smith	298-5531
Vehicle Fueling Station #2	SGT Anthony Smith	298-5531
Vehicle Fueling Station #3	SGT Anthony Smith	298-5531
MATES Fueling Station	SGT Marvin Saul	292-2403

<b>Table 4-4</b>	
<b>Elements of the Good Housekeeping/Preventive Maintenance Plan at Fort Pickett</b>	
<b>Item</b>	<b>Responsibility</b>
1	<p>Conducting weekly informal inspections of equipment, materials, and systems at the Recycling and Rock Quarry facilities that could result in leaks or spills. The weekly inspection should include an inspection of the following equipment:</p> <ul style="list-style-type: none"> <li>• Pipes</li> <li>• Storage tanks and secondary containment/berms</li> <li>• Process and material handling equipment</li> <li>• Stormwater management devices (oil/water separators; catch basins; and other structural BMPs)</li> <li>• Pumps</li> <li>• Pressure vessels</li> <li>• Vehicles</li> <li>• Equipment</li> <li>• Tanks</li> </ul>
2	Conducting formal quarterly inspections of each building/facility and surrounding areas using the checklists attached in <b>Appendix D</b> . These inspections will be documented on checklists and kept on file. These inspections may be conducted by a qualified contractor.
3	Conducting an annual inventory of chemical substances present in the building/facility. This inventory will meet the requirements of the OSHA-required inventory of chemicals and toxic substances.
4	Maintaining a current file of the Materials Safety Data Sheets (MSDS) and labeling each container of chemical substances in the building/facility with the proper label as designed by the U.S. Department of Transportation (DOT) regulations.
5	Labeling of chemical containers will be in accordance with OSHA, EPA, DOT, and other applicable Federal, State, or Local requirements. The housekeeping coordinators should have access to these documents as needed.
6	Preparing an inventory of each facility's systems and equipment that, upon failure, could result in discharges (leaks or spills) of potential stormwater pollutants.

#### **4.3.2 Procedures to Minimize Runoff Contamination**

Fort Pickett implements site-specific controls to manage stormwater runoff. These controls include reducing the use of chemicals exposed to stormwater, directing stormwater away from exposed materials areas and directing stormwater to natural (vegetative swales) and man-made treatment locations (oil/water separators). These controls include:

- Containment diking;
- Containment area draining procedures;
- Runoff treatment using oil/water separators prior to discharge to the storm sewer;
- Materials storage relocation;
- Runoff reduction from grounds watering;

- Runoff collection of aircraft, vehicle and equipment wash water;
- Collection of runoff during refueling; and
- Vehicle and equipment washing BMPs.

**Section 4.3.6** provides detailed descriptions of the above practices.

### **4.3.3 Spill Prevention and Response**

The following spill prevention and response measures are used by individual shops/areas at Fort Pickett:

- Spill kits;
- Spill response;
- Containment diking;
- Cathodic protection;
- Overflow protection devices;
- Leak detection;
- Refueling procedures; and
- Security.

**Section 4.3.6** provides detailed descriptions of the above practices.

### **4.3.4 Visual Inspections**

Preventing pollution of stormwater runoff from an industrial activity requires good housekeeping in areas where materials are handled, stored, or transferred, and preventive maintenance of process equipment and systems. Regular visual inspections are a means to ensure that all of the elements of the plan are in place and working properly. These involve informal and formal inspections of areas and equipment to ensure that housekeeping procedures, preventive maintenance, training, and other BMPs are followed. GH/PM Coordinators, or trained, designated personnel, should conduct weekly informal inspections of their respective work areas.

The MTC-Fort Pickett VPDES permits specify that quarterly visual inspections of the industrial areas must be accomplished. Formal inspections consist of a typical visual inspection along with written and/or photographic documentation of the inspection. Observations, such as failure to use drip pans during fluid drainage from vehicles, improperly stored materials or wastes and leaking valves or pipes associated with tanks, should be written on a dated inspection form or marked on a checklist (whichever is deemed appropriate). This documentation should be maintained as part of the SWPPP. Formal inspection checklists (**Appendix D**) will be used to document the inspection of all applicable potential stormwater pollution sources. The formal visual inspections will be performed by the Environmental Specialist or a qualified contractor.

Any deficiencies in the implementation of the SWPPP that are found shall be corrected as soon as practicable, but not later than within 30 days of the inspection, unless permission for a later

date is granted in writing by the VDEQ. Any corrective actions taken shall be documented and retained with the SWPPP. Reports of corrective actions shall be signed in accordance with Part II, Section K of the VPDES permit.

#### **4.3.5 Recordkeeping and Internal Reporting Procedures**

The GH/PM Coordinator for each activity area must retain all records of site-specific spill events, GH/PM inspections, reports or inventories for at least three years from the date of documentation. A master copy of all records will be retained by Facilities Management – Environmental.

#### **4.3.6 Descriptions of Site-Specific BMPs**

This section details site-specific BMPs used at Fort Pickett. Sections 3.2.1 through 3.2.6 also discuss specific stormwater controls that have been implemented at each permitted facility. They are presented in alphabetical order.

**Cathodic Protection:** Permanent tanks in contact with the ground (USTs and direct-contact ASTs) are cathodically protected to reduce the potential for corrosion.

**Containment Diking:** All areas holding significant bulk quantities of materials that are exposed to direct precipitation and/or potentially exposed to stormwater runoff will be diked. Diking of exposed drums or smaller containers is also recommended unless there is very low potential for release. The containment structure must be designed and installed in such a way that the exposure area is both isolated from adjacent stormwater runoff and will also contain any release of collected precipitation (i.e., contaminated stormwater). The contained and potentially contaminated stormwater must not be released to the storm drainage system, sanitary sewer, or base pre-treatment system prior to visual inspection or required chemical (i.e., pollutant) analysis.

**Drip Pans:** Temporary or permanent drip pans are used to catch drips from valves, pipes, hoses, drains, etc. so that the materials or chemicals can be easily cleaned up or recycled before they can contaminate stormwater. Drip pans should be used as preventive measures. Although drip pans are useful as temporary solutions for containing leaks, the necessary repairs should be performed immediately.

**Drum Management:** Measures used to manage drums include corrosion protection, inspections, drum replacement and drum sheltering. Each of these is discussed below:

- **Drum Corrosion Protection:** Drums are placed on elevated surfaces (e.g., PVC footings or other suitable materials) to keep the drums out of standing water, thereby reducing the potential for corrosion by preventing moisture contact with the drum bottoms. Drum covers are used to prevent standing water from accumulating on the tops of the drum.
- **Drum Inspection:** Drums are inspected daily to ensure proper storage conditions.

- **Drum Replacement:** New or refurbished drums are used to replace old drums as needed to ensure that materials/chemicals are adequately stored in reliable drums.
- **Drum Sheltering:** Drums are consolidated (i.e., placed on pallets) and covered with a roof to prevent stormwater contact with the drums, or are stored inside storage sheds or accumulation points with roofs, sides, and bermed concrete floors.

**Electrical Grounding:** Tanks and drums are grounded, as needed, to avoid sparks, potential explosions, and subsequent spills.

**Inspection of Materials Storage Areas:** Areas with raw materials, intermediate materials, and waste materials or products will be inspected weekly for conditions that could lead to direct contact of stormwater.

**Inspection of Piping, Tanks, and Equipment:** Weekly inspections of the piping, storage tanks, pumps, equipment, etc. will identify problems that need to be remedied. These problems, such as leaky joints and valves, deteriorated piping and tank walls, and insufficient or degenerated secondary containment, are corrected promptly after they have been identified.

**Labeling:** Drums, tanks, pipes, and equipment are clearly labeled. Labels on tanks and drums should indicate the container contents. Two effective labeling methods include color-coding and Department of Transportation (DOT) labeling. Accurate labeling can help Post personnel quickly identify the type of material released so that personnel can react accordingly.

**Materials Handling Practices:** Uniform materials handling policies, procedures, and responsibilities are used in accordance with Department of Defense (DoD) Directive 4145.19-R-1, Storage and Materials Handling.

**Materials Inventories:** The use of hazardous materials or otherwise-regulated materials is closely controlled through the maintenance of up-to-date hazardous materials inventories and labeling of all hazardous material containers in accordance with DoD Directive 4210.15, Hazardous Material Pollution Prevention Act of 1990, and the VAARNG Hazardous Waste Management Standard Operating Procedures. An overall listing of materials is updated on an annual basis. Tracking such materials reduces the risk of spills by limiting the quantity of materials stored.

**Materials Loading and Unloading Procedures:** Loading/unloading areas have the potential for stormwater runoff contamination because of spills or leaks or rainfall washing pollutants off equipment used to load/unload materials. The following measures will be employed to minimize stormwater contamination:

- Loading/unloading activities will be performed in areas where leaks can be contained in existing containment and flow diversion systems (i.e., within curbed or diked areas);
- Vehicles and equipment will be checked regularly (i.e., weekly) for leaks, and leaks will be fixed promptly; and

- Loading and unloading areas, such as loading docks, will be covered to reduce exposure of materials, vehicles, and equipment to rain.

**Materials Storage Practices:** Storage areas are maintained in accordance with the following storage techniques:

- Adequate aisle space is provided to facilitate material transfer and easy access for inspections;
- Containers, drums, and bags are stored away from direct traffic routes to prevent accidental spills;
- Containers are stacked according to manufacturers' instructions to avoid damaging the containers from improper weight distribution;
- Containers are stored on pallets or similar devices to prevent corrosion of the containers that can result when containers come in contact with moisture on the ground; and
- The responsibility for hazardous materials inventories is limited to a small number of people trained in the handling of hazardous materials.

**Materials Storage Relocation:** Materials currently stored outdoors will be relocated inside existing structures.

**Overflow Protection Devices:** High level alarms are installed on tank systems to warn the operator or to automatically shut down transfer pumps when a tank reaches 90 – 95 percent full.

**Refueling, Overflows:** Fuel transfers are monitored constantly to prevent overfilling and spilling. Unattended periods during fuel transfer are prohibited. Automatic overfill prevention equipment that shuts off flow, restricts flow, or sounds an alarm when a tank reaches 90 – 95 percent full.

**Refueling, Topping-Off Tanks:** Topping-off of tanks is discouraged by posting signs in visible locations to remind personnel.

**Runoff Collection for Vehicle and Equipment Wash Water:** Vehicle washing is allowed only at designated wash racks, each equipped with an oil/water separators (OWS). The vehicle wash racks are bermed to collect the wastewater and/or sloped to direct the wastewater through an OWS. Oil/water separators discharge to the sanitary sewers. (See also BMP for Runoff Treatment Using Oil/Water Separators.)

**Runoff Collection During Refueling:** Stormwater runoff is collected from runway aprons through the use of collection basins and stormwater conveyances. Spill response supplies are maintained by the refueling crews, and they are trained to effectively respond to spills either at the individual catch basins, within the conveyance, and/or at the conveyance discharge. Oil/water separators are installed where practical.

**Runoff Treatment Using Oil/Water Separators:** A number of oil/water separators, which also separate grit from water, are located around the Post. These devices are instrumental in

preventing the contamination of stormwater runoff because most of them are connected to the sanitary sewer system. GH/PM Coordinators conduct weekly informal inspections of the OWS.

**Salt Storage:** Storage piles of salt used for deicing are stored under a shed on Kemper Ave to prevent exposure to precipitation.

**Security, Bollards:** Bollards are installed around tanks and piping in high-traffic areas to prevent vehicle or forklift damage to tanks or drums.

**Security, Facility Restriction:** Access to a facility housing hazardous materials will be restricted to authorized personnel by keeping the facility locked. Locking is accomplished for a building at the doors and for a storage yard by chain link fencing and a gate lock.

**Security, Locked Containment Discharge Drain:** Containment discharge drains are locked to prevent access by personnel without the proper authorization. Rainwater collected in containment areas is visually inspected for contamination prior to draining.

**Security, Locked Funnels:** Lids on waste drum funnels are locked to prevent access by personnel without the proper authorization. By limiting access to materials, the chance for spills, mixing of materials or chemicals, and improper handling are reduced.

**Spill Kits:** Spill kits are provided at exposure areas and shops to provide timely response to accidental releases. Spill kits are sized and located according to need. Some areas require more than one spill kit and different locations may require different supplies in the spill kit.

**Spill Reporting:** Spill reporting will include the following information:

- Date of the spill;
- Location of the spill;
- Identification of the material spilled;
- Quantity of material spilled;
- Source of the spill;
- Cause of the spill;
- Response procedures taken;
- Amount of the spill recovered;
- Evidence of exposure to stormwater runoff; and
- Preventive measures taken.

**Spill Response:** If a spill occurs, the primary goal after the safety of personnel has been ensured is environmental protection through containing the spill material as close to the source as possible. Spill containment will be accomplished as individual events dictate with one or any combination of the following:

- Use of portable spill containment equipment;
- Blocking the flow at a stormwater manhole; or

- Constructing an earthen dam/berm in the path of or around a spill.

**Stormwater Management Ponds:** These ponds collect and retain stormwater and suspended sediments. The ponds function to contain the stormwater surge and release it slowly. MTC-Fort Pickett has constructed several stormwater management ponds to aid in stormwater pollution prevention. Stormwater management ponds are located at the following outfalls: MATES Fuel Station Outfall 001 and 157<sup>th</sup> Engineers Quarry Outfall 001. The Post has several additional stormwater management ponds throughout the site. Designs have been completed and approved by VDEQ for two additional stormwater management ponds, one bioretention filter to be located at the Recycling Center and one retention pond to be located at the 157<sup>th</sup> Engineers Quarry Outfall 002. MTC-Fort Pickett is awaiting funding for the construction of these two ponds.

**Transport of Drums:** Only sealed drums/containers will be transported. All drums should also be secured (i.e., banded together) and securely fastened to the transport vehicle to prevent spills during transportation.

**Transport of Small Quantities:** Securely closed buckets will be used to transport small quantities of new and waste materials between the building of use and the storage shed(s), storage areas(s), and/or accumulation point(s) for that building.

**Vehicle and Equipment Maintenance:** This includes inspections, testing, and, when necessary, repairs of equipment on a regular basis in order to detect leaks or other defects that could cause breakdowns or failures that could result in discharges of pollutants to stormwater.

- *Battery Replacement:* Batteries are recycled to minimize need for additional materials. Accumulation areas for spent battery fluids and for battery carcasses are diked.
- *Degreasing:* Non-toxic or low-toxicity detergents, solvents, and degreasers are used (i.e., non-caustic detergents, non-chlorinated solvents, etc.).
- *Leak Checks:* Vehicles and equipment are checked for leaks on a regular basis or as needed, and they employ the use of drip pans to contain leaks.
- *Coolant and Oil Changing:* Coolant and oils are drained and collected for recycling. Oil filters are drained, and waste oils are collected for recycling. Accumulation areas for spent coolant, oils, and filters have secondary containment or are located indoors.

**Vehicle and Equipment Washing:** Vehicles and equipment are routinely washed as part of normal maintenance and care, as well as to reduce the potential for spreading materials accumulated on the equipment. All vehicle and equipment washing is conducted at wash racks that drain via oil/water separators (see BMP for Runoff Collection for Aircraft, Vehicle, and Equipment Wash Water). Certain equipment needs to be washed at frequent intervals (e.g., off-road vehicles, earth-moving equipment, refuse trucks, pesticide application equipment, lawn care equipment, oil bowsers), while other equipment needs less frequent washing (e.g., on-road passenger vehicles).

**APPENDIX A**  
**SWPPP MODIFICATION LOG**

**Table A-1  
SWPPP Modification Log**

<b>Section/ Information</b>	<b>Change</b>	<b>Previous SWPPP Date</b>	<b>Revision SWPPP Date</b>
Appendix D, Inspection Checklists	Combined Inspection Checklists for Quarry and Recycling Center, added certification statement	July 2005	April 2006
Table 4-3	Deleted Safety Officer Col. Calambro due to change in job, position not refilled. Deleted Sgt. Price because Section 3.3 was deleted from report.	July 2005	April 2006
Throughout report	Changed Environmental "Manager" to Environmental "Office" or "Environmental Coordinator" as needed	July 2005	April 2006
Section 3.6	Updated monitoring requirements due to new quarry permit and added specific information on analytical monitoring for both permits	July 2005	April 2006
Section 3.4 and Table C-1	Updated spill information and deleted non-reportable spills from table	July 2005	April 2006
Section 3.2.1	Updated description of Recycling Center/Scrap yard	July 2005	April 2006
Introduction	Changed permit numbers	July 2005	April 2006
Table of Contents	Updated Section numbers and page numbers	July 2005	April 2006
Section 3.3	Deleted Non-regulated activities sections from report	March 2004	July 2005
Appendices	Inserted Appendix E for quick reference of permits and discharge monitoring reports	March 2004	July 2005
Table of Contents	Added Appendix E to table of contents	March 2004	July 2005
Introduction	Changed permit numbers due to renewal process.	March 2004	July 2005
Appendix C	Update Spill Information	March 2004	July 2005
Throughout Report	Dropped Vehicle Salvage Yard (Does not exist anymore)	March 2004	October 2004
Throughout Report	Modified Document (Changed from BEM to VAFM-E)	March 2004	October 2004
Throughout Report	Dropped Main Airfield	March 2004	October 2004
Throughout report	"Stormwater" is separated into two separate words.	March 2000	March 2004
Throughout report	"Recordkeeping" is one word.	March 2000	March 2004
Cover page	Added the month and year of update	March 2000	March 2004
Cover page	Added BEM information	March 2000	March 2004
Table of Contents	Updated Sections as necessary	March 2000	March 2004
Section 1.0	All text that had referenced the history of the Clean Water Act, Water Quality Act and National Pollution Discharge Elimination System (NPDES) permit has been deleted from the Introduction and moved to Section 1.3	March 2000	March 2004
Section 1.1	Changed title to "Purpose" and added information	March 2000	March 2004
Section 1.2	Added section labeled "Post Description"	March 2000	March 2004
Figure 1	Moved to Appendix B	March 2000	March 2004
Section 1.3	- Added section labeled "Regulatory Requirements" - Much of the text is new, however, some of it was formerly included in Section 1.0 of the 2000 SWPPP.	March 2000	March 2004

**Table A-1  
SWPPP Modification Log**

<b>Section/ Information</b>	<b>Change</b>	<b>Previous SWPPP Date</b>	<b>Revision SWPPP Date</b>
Sections 1.4 & 1.5 and Subsections	- Added new section labeled "Comprehensive Site Compliance Evaluation" and "SWPPP Modifications/Updates" to the plan - Incorporated information from Section 6.0 (2000 SWPPP) and added additional information	March 2000	March 2004
Section 2.1	- Revised section title to "Team Members and Responsibilities" - Updates have been made to reflect the current SWPPT.	March 2000	March 2004
Table 2.1	- Labeled "Stormwater Pollution Prevention Team Member Responsibilities" - This table combines information that was included in Table 2.1 and Table 2.2 of the 2000 SWPPP.	March 2000	March 2004
Table 2.2	Table 2.2 has been removed from the SWPPP since its information has been incorporated in Table 2-1.	March 2000	March 2004
Section 2.2	- Added section labeled "Consistency with Existing Environmental Management Plans" - Incorporated information from Section 3.7 (2000 SWPPP)	March 2000	March 2004
Section 3.1	Revised section title to "Industrial Activities and Exposed Materials Inventory"	March 2000	March 2004
Section 3.1.1	- Added section labeled "Industrial Activities" and incorporated applicable information from Section 3.1 - 1st paragraph was added - Removed "Maintenance Activities" Items 1-11 - Removed Vehicle Salvage Yard	March 2000	March 2004
Section 3.1.2	Added section labeled "Exposed Materials Inventory, Handling and Storage"	March 2000	March 2004
Table 3.1	Updated information and moved applicable information to Table 3-1	March 2000	March 2004
Section 3.2	- Changed title to "Potential Sources of Pollutants" and added information - Removed reference to MTC-Fort Pickett Site Map (this information was incorporated into Section 3.1.1)	March 2000	March 2004
Sections 3.2.1	Incorporated information from Section 3.8.12 (2000 SWPPP) into this section and Table 3-1	March 2000	March 2004
Sections 3.2.2	Incorporated information from Section 3.8.14 (2000 SWPPP) into this section and Table 3-1	March 2000	March 2004
Sections 3.2.3	Incorporated information from Addendum I (2000 SWPPP) into this section and Table 3-1	March 2000	March 2004
Sections 3.2.4	Incorporated information from Section 3.8.13 (2000 SWPPP) into this section and Table 3-1	March 2000	March 2004
Figures 2 through 11	Deleted Figures 3-2 through 3-11	March 2000	March 2004

**Table A-1  
SWPPP Modification Log**

<b>Section/ Information</b>	<b>Change</b>	<b>Previous SWPPP Date</b>	<b>Revision SWPPP Date</b>
Section 3.3	- Changed title to "Non-Regulated Activities" and added information - Removed reference to Storm Drainage System (this information was incorporated into Section 3.8)	March 2000	March 2004
Sections 3.3.1	Incorporated information from Section 3.9.1 (2000 SWPPP) into this section	March 2000	March 2004
Sections 3.3.2	Incorporated information from Section 3.9.2 (2000 SWPPP) into this section	March 2000	March 2004
Sections 3.3.3	Incorporated information from Section 3.9.3 (2000 SWPPP) into this section	March 2000	March 2004
Figures 12 through 18	- Figure 12 was updated and renamed Figure B-2 - Figures 13 through 16 were deleted - Figure 17 was updated and renamed Figure B-3 - Figure 18 was removed	March 2000	March 2004
Section 3.4	- Changed title to "Risk Identification and Summary of Potential Pollutant Sources" and added information - Removed reference to Structural Controls (this information was incorporated into Section 3.8)	March 2000	March 2004
Section 3.5	- Changed title to "Significant Spills and Leaks" - Removed reference to Water Bodies (this information was incorporated into Section 3.6)	March 2000	March 2004
Table 3.2	Updated information and moved to Table 3-3	March 2000	March 2004
Section 3.6	- Changed title to "Receiving Water Bodies" and incorporated information from Section 3.5 (2000 SWPPP) - Removed reference to Material Storage Areas (this information was incorporated into Table 3-1)	March 2000	March 2004
Table 3.3	Removed Table as information is contained and updated in other plans	March 2000	March 2004
Section 3.7	- Changed title to "Existing Stormwater Data" (This information is new) - Removed reference to Spill Prevention Plan (this information was incorporated into Section 2.2)	March 2000	March 2004
Section 3.8	- Changed title to "Non-Stormwater Discharge Assessment and Certification" - Removed reference to Potential Sources of Pollutants (this information was moved to Section 3.2)	March 2000	March 2004
Sections 3.8.1 - 3.8.15	- Removed sections 3.8.1-3.8.11, 3.8.15 IAW VDEQ letter - Section 3.8.12 moved to 3.2.1 and was updated - Section 3.8.13 moved to 3.2.4 and was updated - Section 3.8.14 moved to 3.2.2 and was updated	March 2000	March 2004
Section 3.9	Section 3.9 moved to 3.3 and was updated	March 2000	March 2004
Sections 3.9.1 - 3.9.3	- Section 3.9.1 moved to 3.3.1 and was updated - Section 3.9.2 moved to 3.3.2 and was updated - Section 3.9.3 moved to 3.3.3 and was updated	March 2000	March 2004

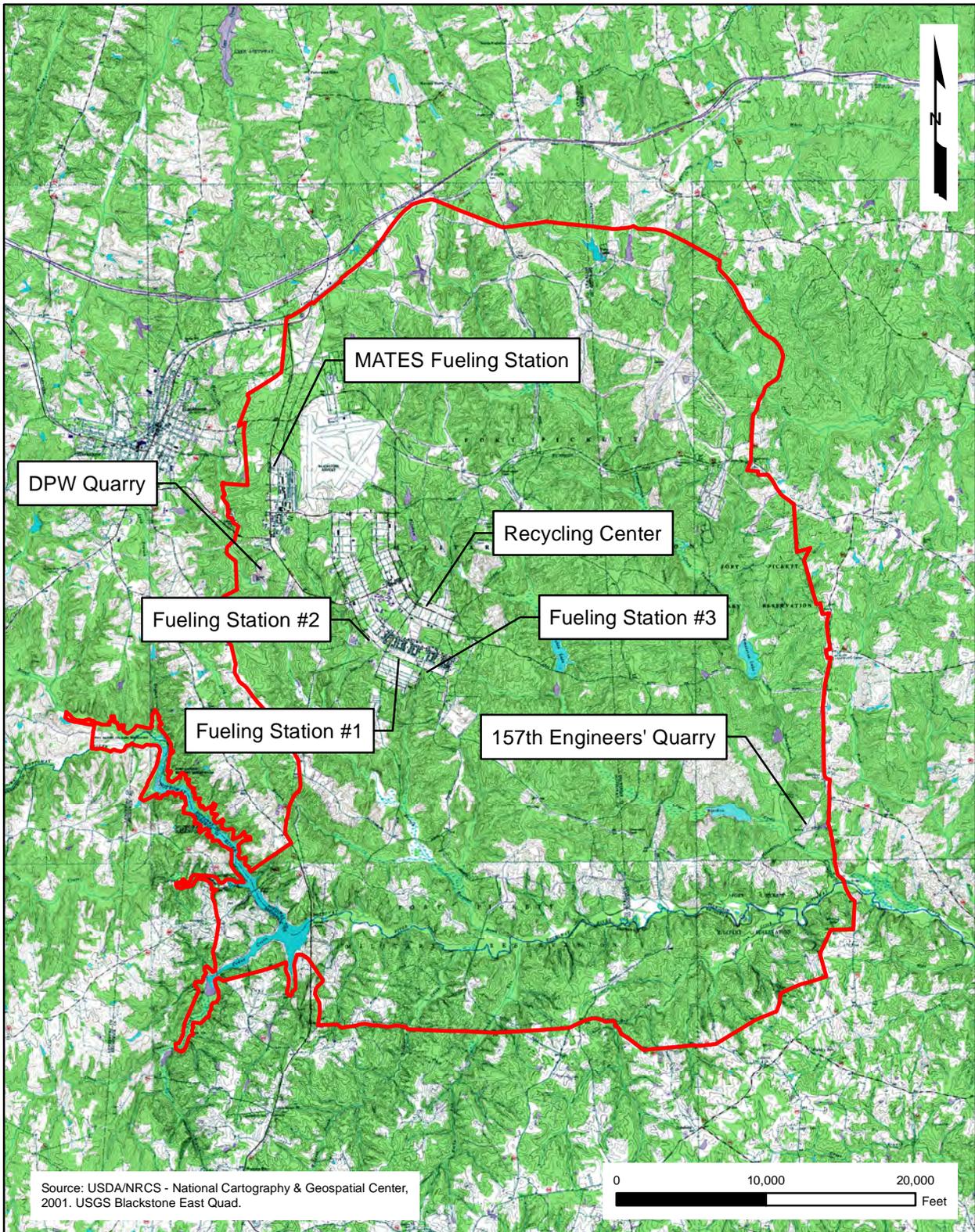
**Table A-1  
SWPPP Modification Log**

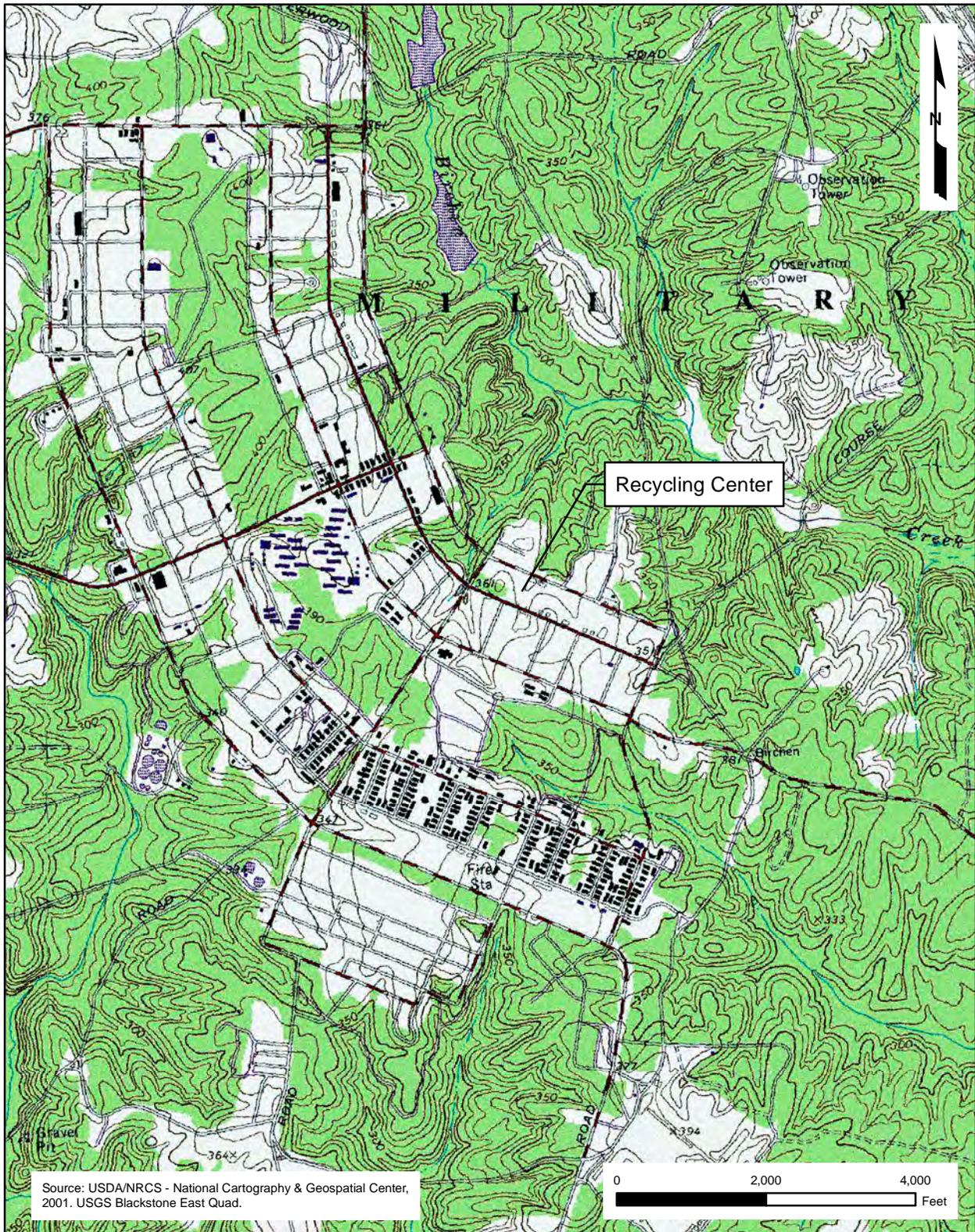
<b>Section/ Information</b>	<b>Change</b>	<b>Previous SWPPP Date</b>	<b>Revision SWPPP Date</b>
Section 4.0	Changed title to "Stormwater Management Controls"	March 2000	March 2004
Section 4.1	No Change	March 2000	March 2004
Sections 4.2 and 4.3 and their Subsections	These sections underwent a major re-write and incorporated applicable information from Sections 4.2 and 4.3 (2000 SWPPP)	March 2000	March 2004
Table 4.1	- Created Table 4-1 - Industrial Activity Specific Training Requirements - Information contained in Table 4.1 was incorporated into Table 3-1	March 2000	March 2004
Table 4.2	Information was updated and moved to Table 4-3	March 2000	March 2004
Table 4.3	Information was updated and moved to Table 4-4	March 2000	March 2004
Section 5.0	This section was deleted and the applicable information was incorporated into Section 4.2.2	March 2000	March 2004
Section 5.1	This section was deleted and the applicable information was incorporated into Section 4.2.2	March 2000	March 2004
Table 5.1	This table was deleted and the applicable information was incorporated into Table 4-1	March 2000	March 2004
Sections 6.0, 6.1, 6.2, 6.3, 6.4 and their Subsections	This section was deleted and the applicable information was incorporated into Section 1.4	March 2000	March 2004
Section 7.0	This section was deleted and the applicable information was incorporated into Section 3.7	March 2000	March 2004
Appendix A	- A new appendix was added and labeled "SWPPP Modifications" - Previous Appendix A information moved to Appendix B	March 2000	March 2004
Appendix B	- Appendix B now contains the site maps - Previous Appendix B information was moved to Appendix D	March 2000	March 2004
Appendix C	The information contained in Table 3.4 was updated and moved to this section	March 2000	March 2004
Appendix D	Contains checklists for the regulated activities and a Visual Inspection Worksheet	March 2000	March 2004
Addendum I	Removed from 2003 SWPPP; information was incorporated into other sections	March 2000	March 2004
Table 4-4	Changed "conducting monthly formal inspections" to "quarterly formal inspections" and removed language about weekly inspection log	March 2000	December 2007

**Table A-1  
SWPPP Modification Log**

<b>Section/ Information</b>	<b>Change</b>	<b>Previous SWPPP Date</b>	<b>Revision SWPPP Date</b>
Modify plan to conform with General Permit Regulations VAR05 and VAG84 Effective July 1, 2009	Major changes include requirement for quarterly sampling and at the quarry; was previously annual; due dates for DMRs. See Section 3.6.  Updated Table 3-1 with current materials and material locations.  Added site acreages and Outfall Lat/Long to Figures B-2 and B-3, and Outfall locations to Figures B-1A and B-1B	December 2007	November 2009
Entire report.	Updated Permit numbers and expiration dates and added 157 <sup>th</sup> Engineers' Quarry to the SWPPP.	November 2009	November 2010
Section 2.1 and Table 2-1	Added new SWPPT members and duties.	November 2009	November 2010
Appendix B	Added Figure B-1, showing MTC boundary and three regulated activities.	November 2009	November 2010
Table 4-2	Updated table with specific training topics for scrap recycling only.	November 2009	November 2010
Section 4.3.6	Added Stormwater Management Ponds as a BMP.	November 2009	November 2010
Entire report	Added Permit numbers and expiration dates and MATES, Central Fueling Station #1, Vehicle Fueling Station #2, and Vehicle Fueling Station #3 VPDES General Permits.	November 2010	October 2012
Section 2.1 and Table 2-1	Updated SWPPT members and duties.	November 2010	October 2012
Section 3.1 and Table 3-1	Updated industrial activities and exposed materials for fueling facilities.	November 2010	October 2012
Table 3-3	Updated table with stormwater outfalls for fueling facilities.	November 2010	October 2012
Section 3.6	Added analytical sampling parameters for fueling facilities.	November 2010	October 2012
Table 4-3	Updated GH/PM contacts for fueling facilities.	November 2010	October 2012
Appendix B	Added Figures B-1d, B-1e, B-1f, B-1g, B-5, B-6, B-7, and B-8 for the fueling facilities.	November 2010	October 2012
Table 2.1	Updated POC information.	October 2012	October 2014
Sections 3.2.1-3.2.6	Updated descriptions of each facility.	October 2012	October 2014
Table 3.1	Updated information.	October 2012	October 2014
Table 3.4	Added new table to summarize sampling requirements.	October 2012	October 2014
Sections 3.6.1-3.6.4	Updated new permit sampling requirements for each facility.	October 2012	October 2014
Table 4.3	Updated POC information.	October 2012	October 2014
All Figures	Updated all figures to reflect general changes.	October 2012	October 2014
Figure B-5	Added new stormwater management pond and relocated outfall	October 2012	October 2014
Figure B-2	Added proposed bioretention filter location	October 2012	October 2014

**APPENDIX B**  
**FIGURES**



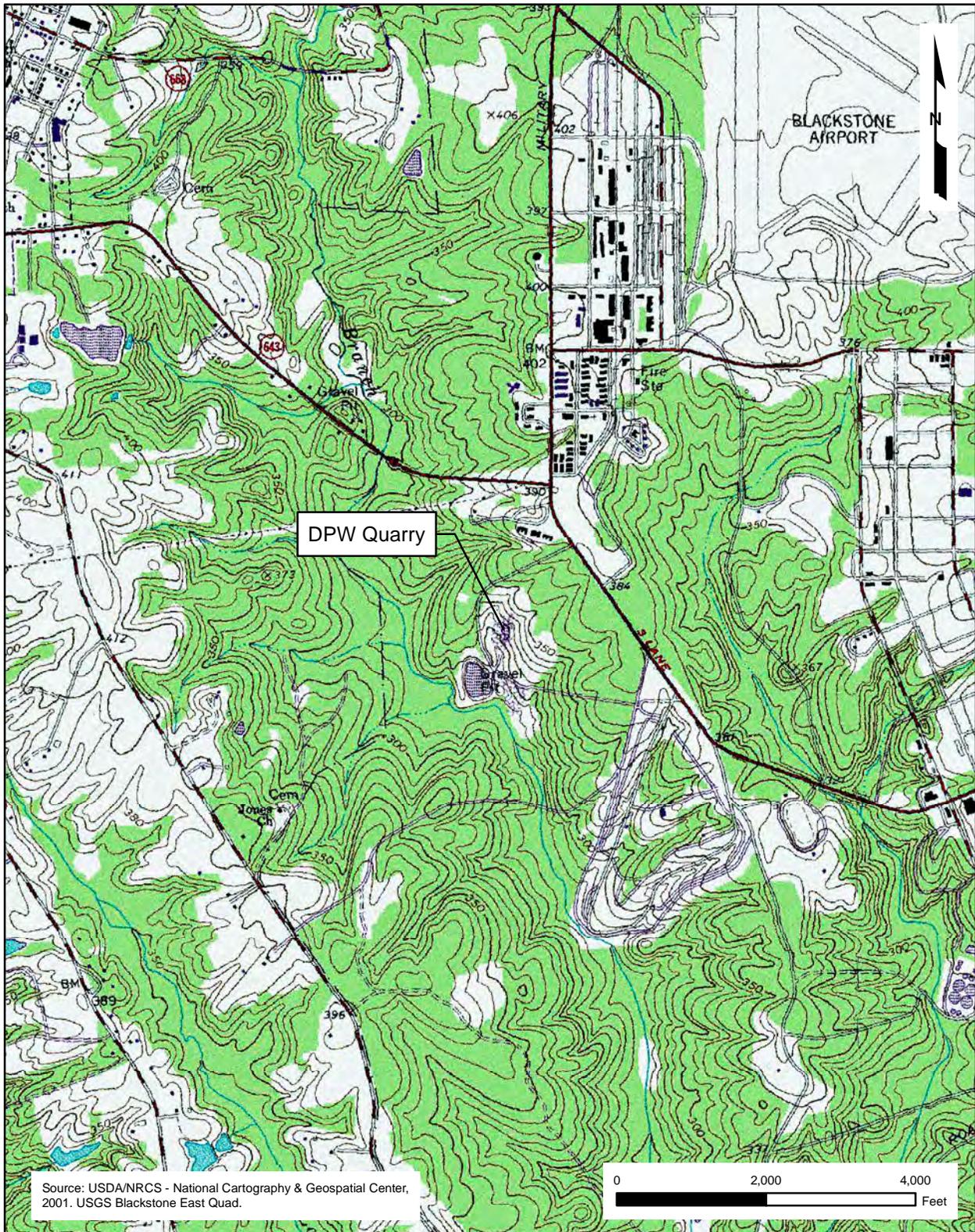


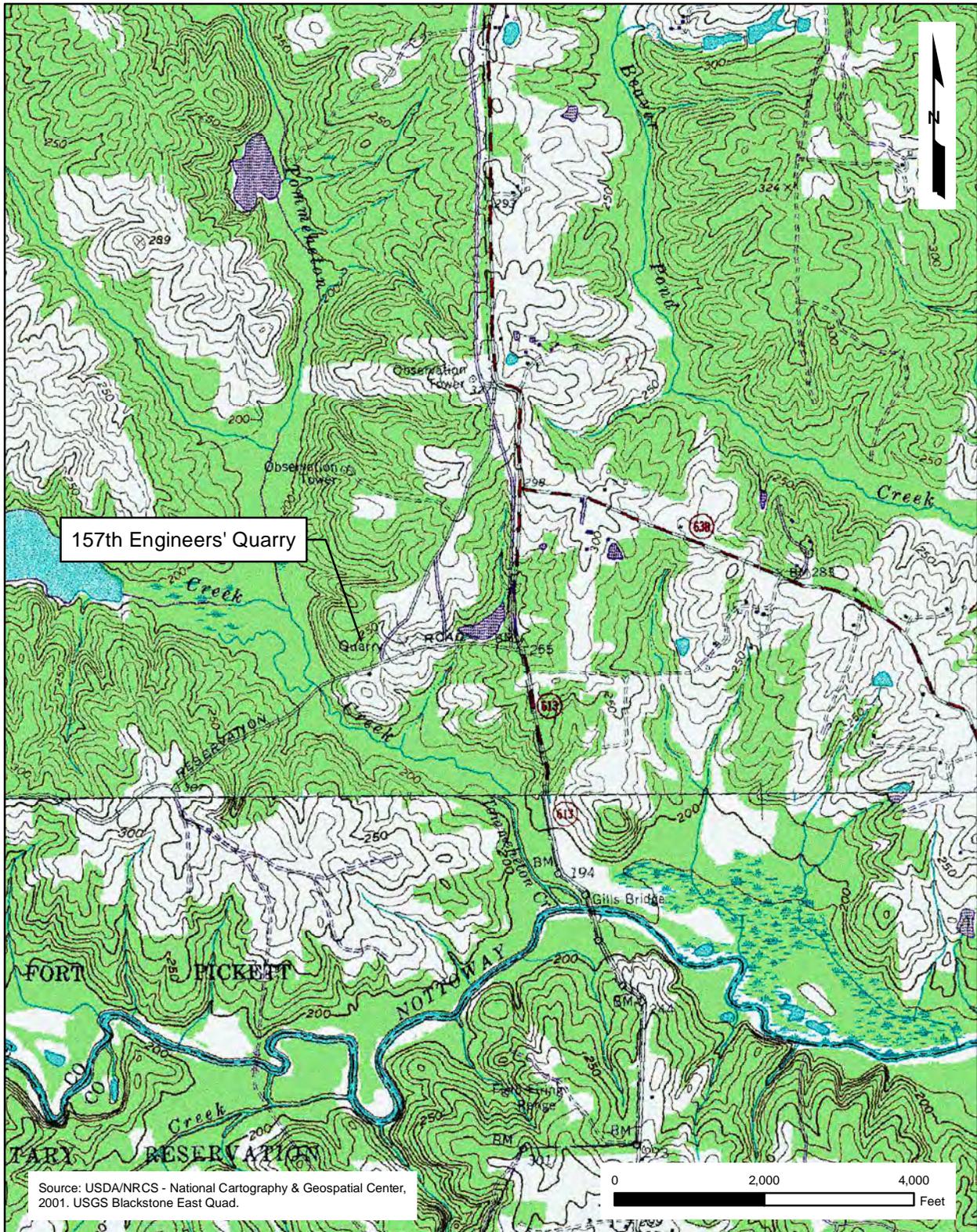
**EEE Consulting, Inc.**  
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14-060

**Figure B-1a**  
**Topographic Map**  
Fort Pickett Recycling Center  
Blackstone, Virginia

Oct. 2014



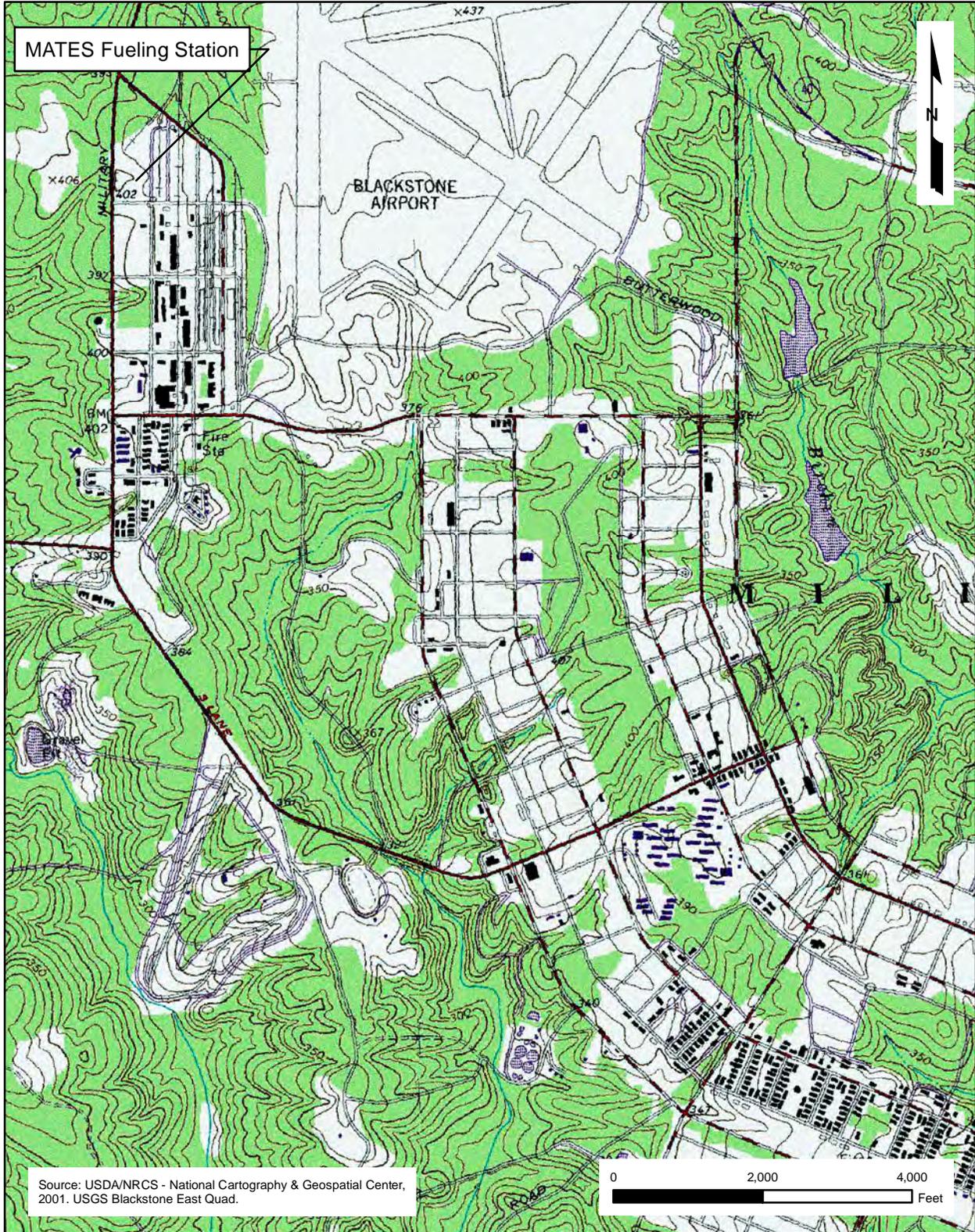


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14-060

**Figure B-1c**  
**Topographic Map**  
157th Engineers' Quarry  
Blackstone, Virginia

Oct. 2014

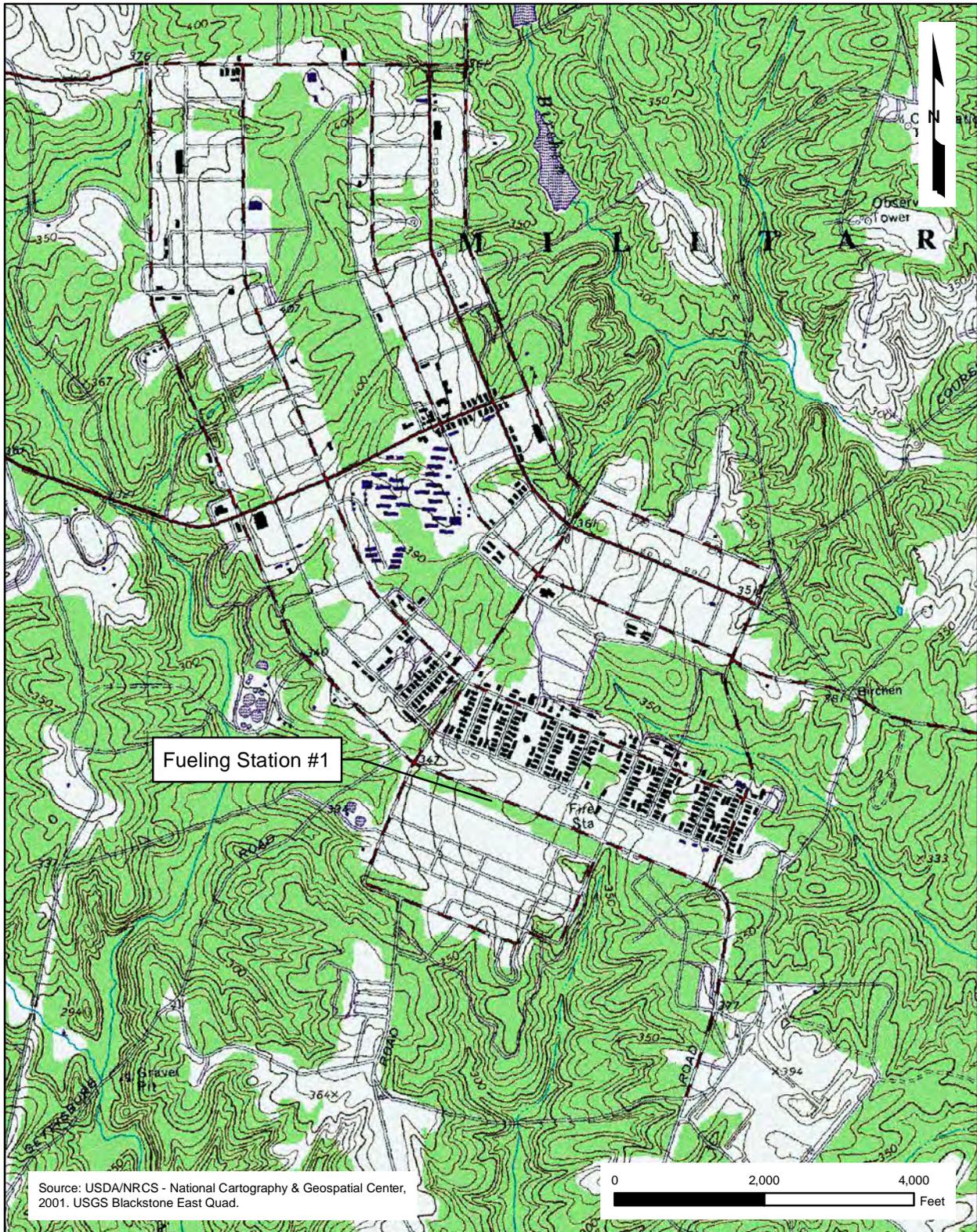


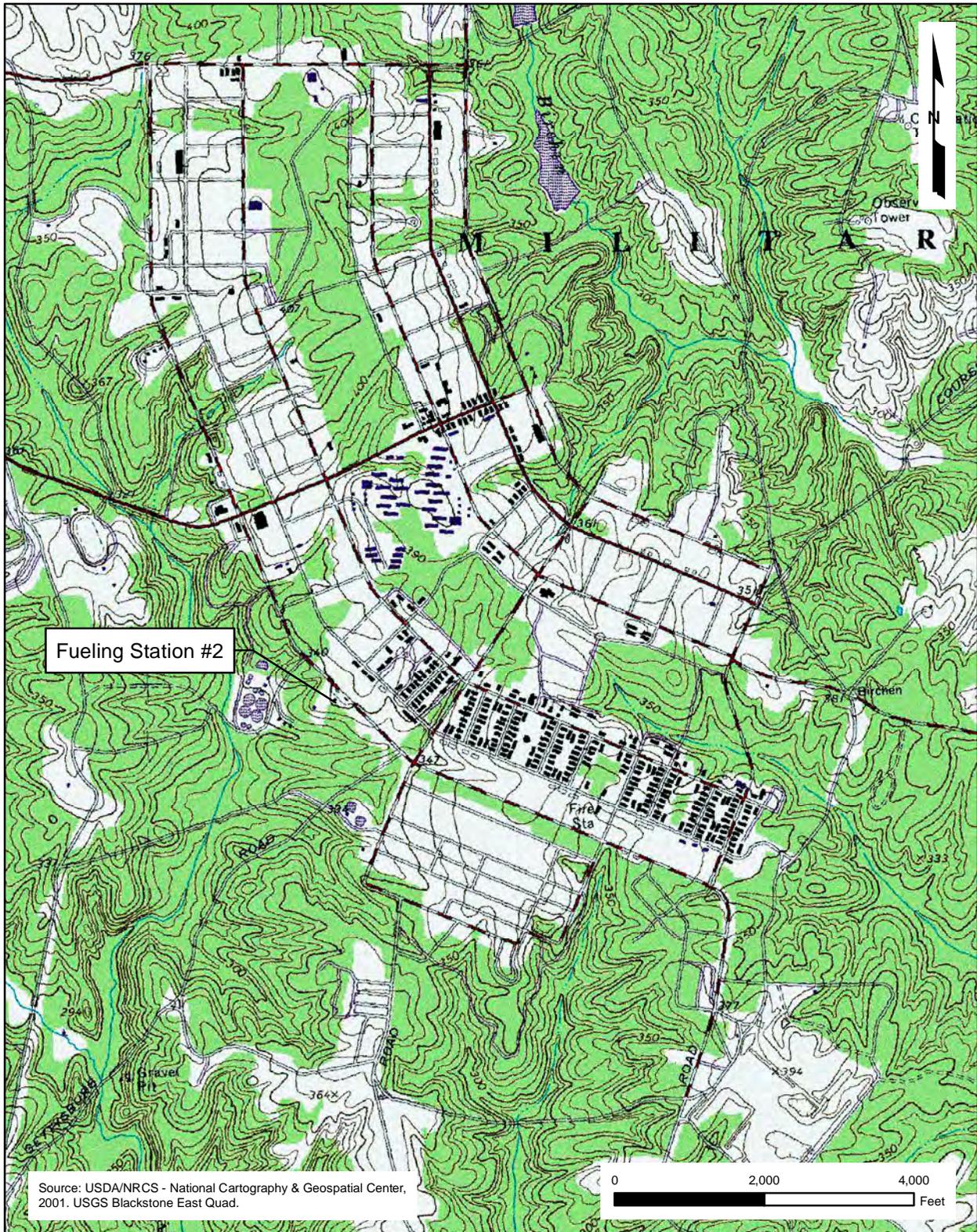
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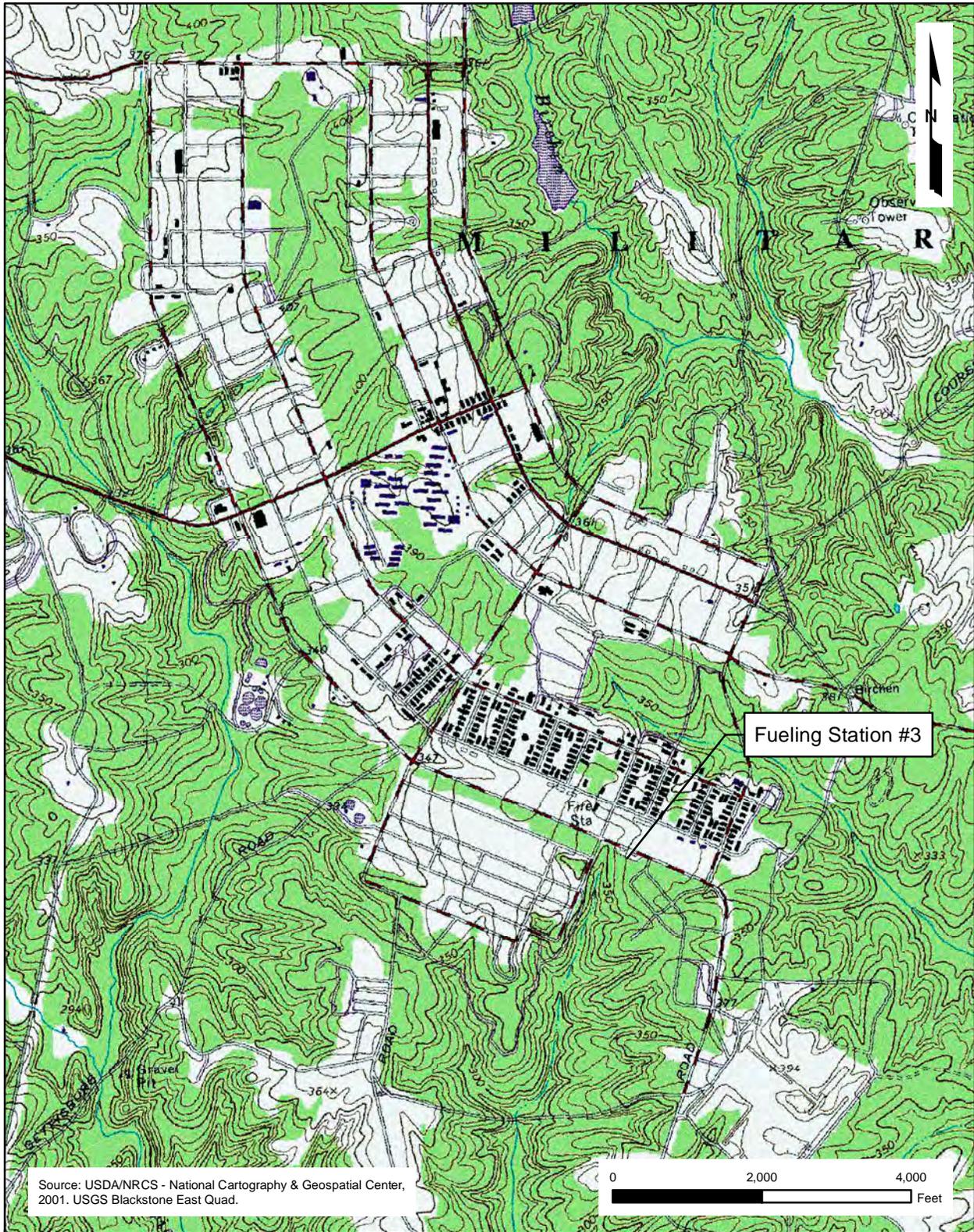
14-060

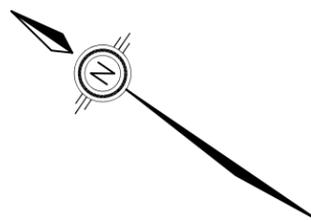
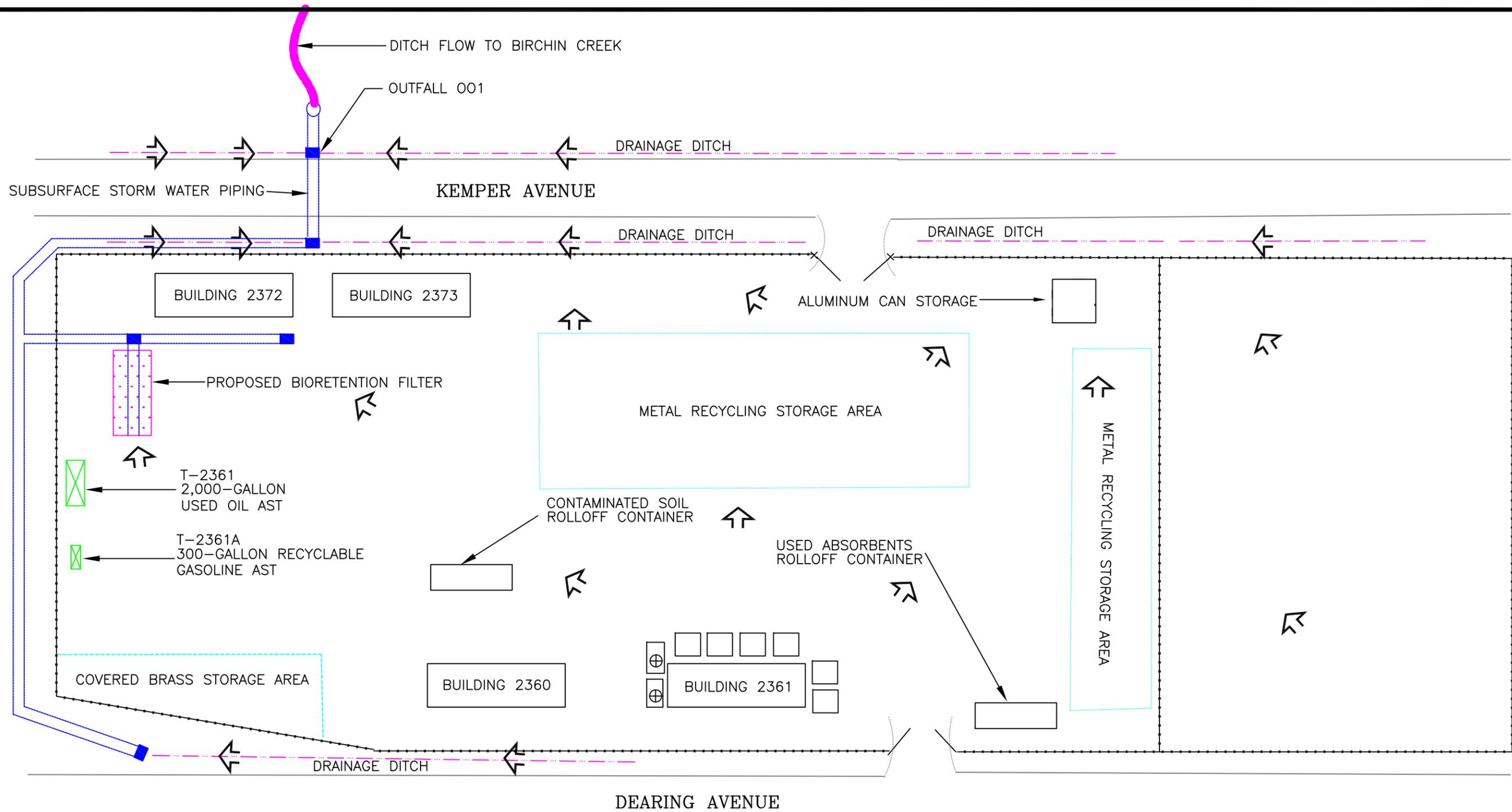
**Figure B-1d**  
**Topographic Map**  
MATES Fueling Station  
Blackstone, Virginia

Oct. 2014









Note: The location and dimensions of features on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

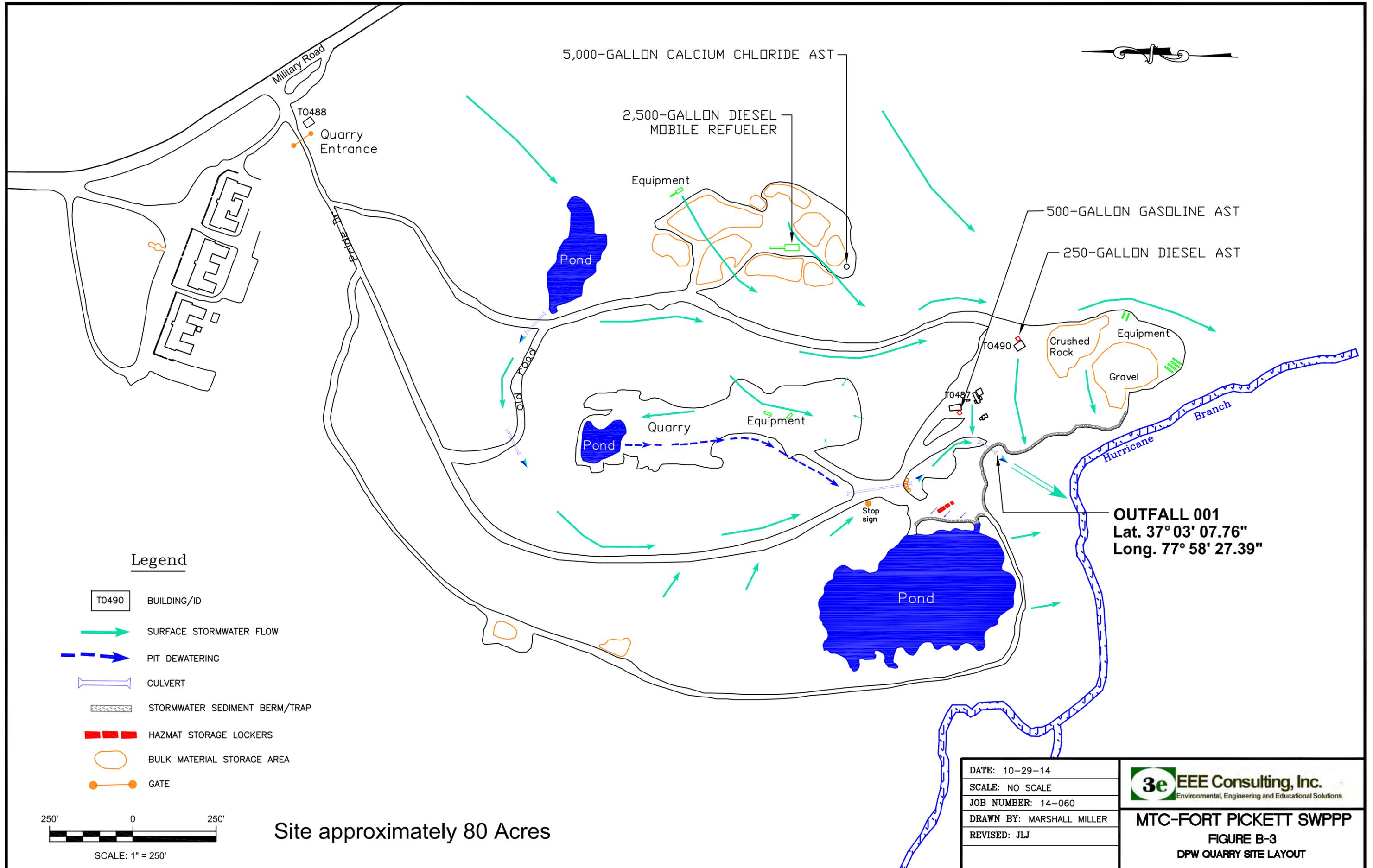
**LEGEND**

T-2364		AST LOCATION/TANK ID		SPILL KIT
-x-x-x-		FENCE LINE		STORM WATER CATCH BASIN
		SURFACE FLOW DIRECTION		

DATE: 10-29-14
SCALE: NO SCALE
JOB NUMBER: 14-060
DRAWN BY: RAW
REF:



**MTC-FORT PICKETT ICP**  
**FIGURE B-2**  
**RECYCLING CENTER SITE LAYOUT**



**Legend**

- T0490 BUILDING/ID
- SURFACE STORMWATER FLOW
- - - → PIT DEWATERING
- ||| CULVERT
- STORMWATER SEDIMENT BERM/TRAP
- HAZMAT STORAGE LOCKERS
- BULK MATERIAL STORAGE AREA
- GATE



Site approximately 80 Acres

DATE: 10-29-14
SCALE: NO SCALE
JOB NUMBER: 14-060
DRAWN BY: MARSHALL MILLER
REVISED: JLJ



**MTC-FORT PICKETT SWPPP**  
**FIGURE B-3**  
**DPW QUARRY SITE LAYOUT**

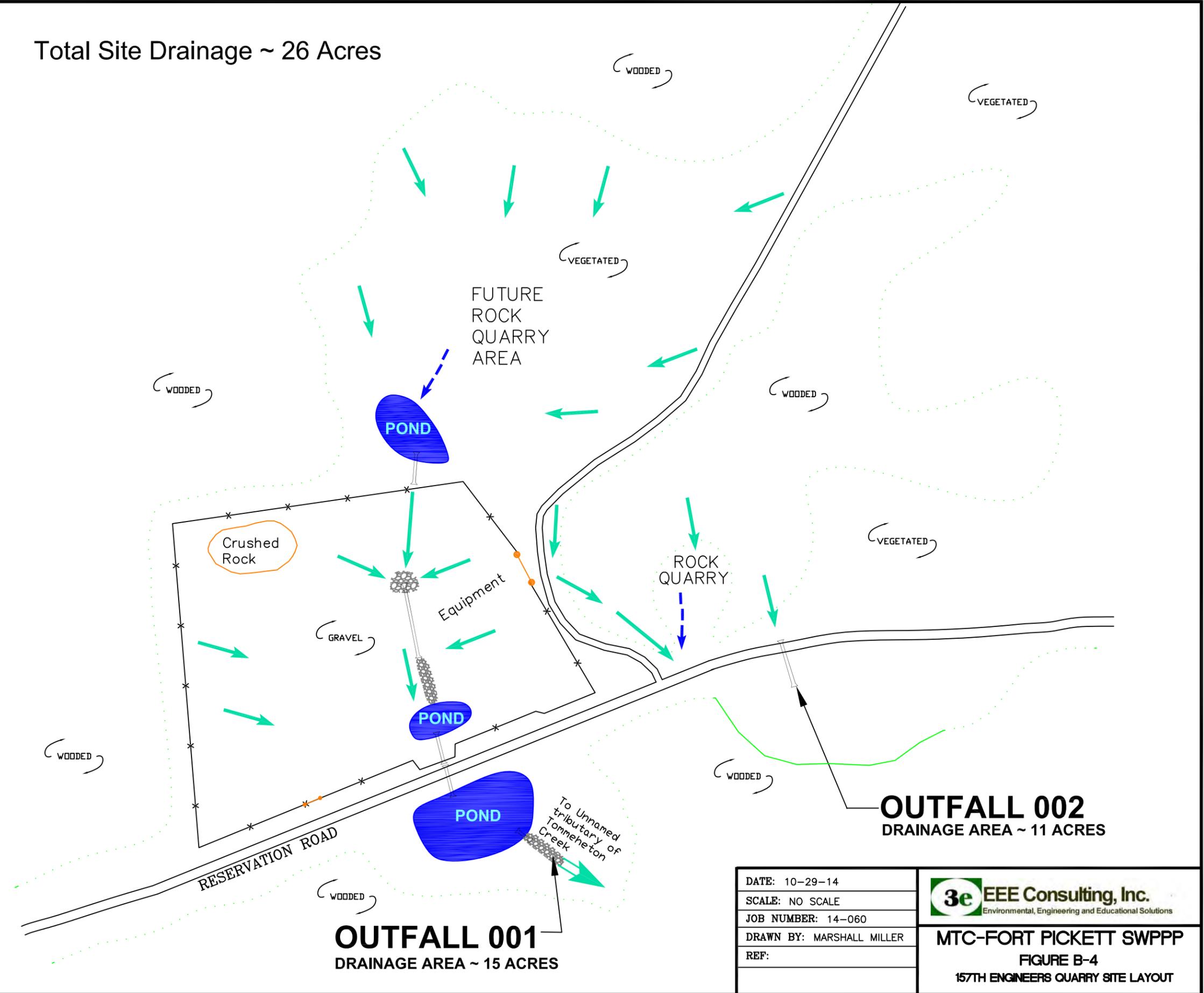
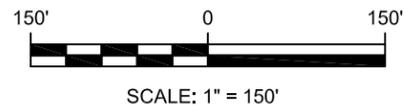
**OUTFALL 001**  
 Lat. 37° 03' 07.76"  
 Long. 77° 58' 27.39"

Total Site Drainage ~ 26 Acres



**Legend**

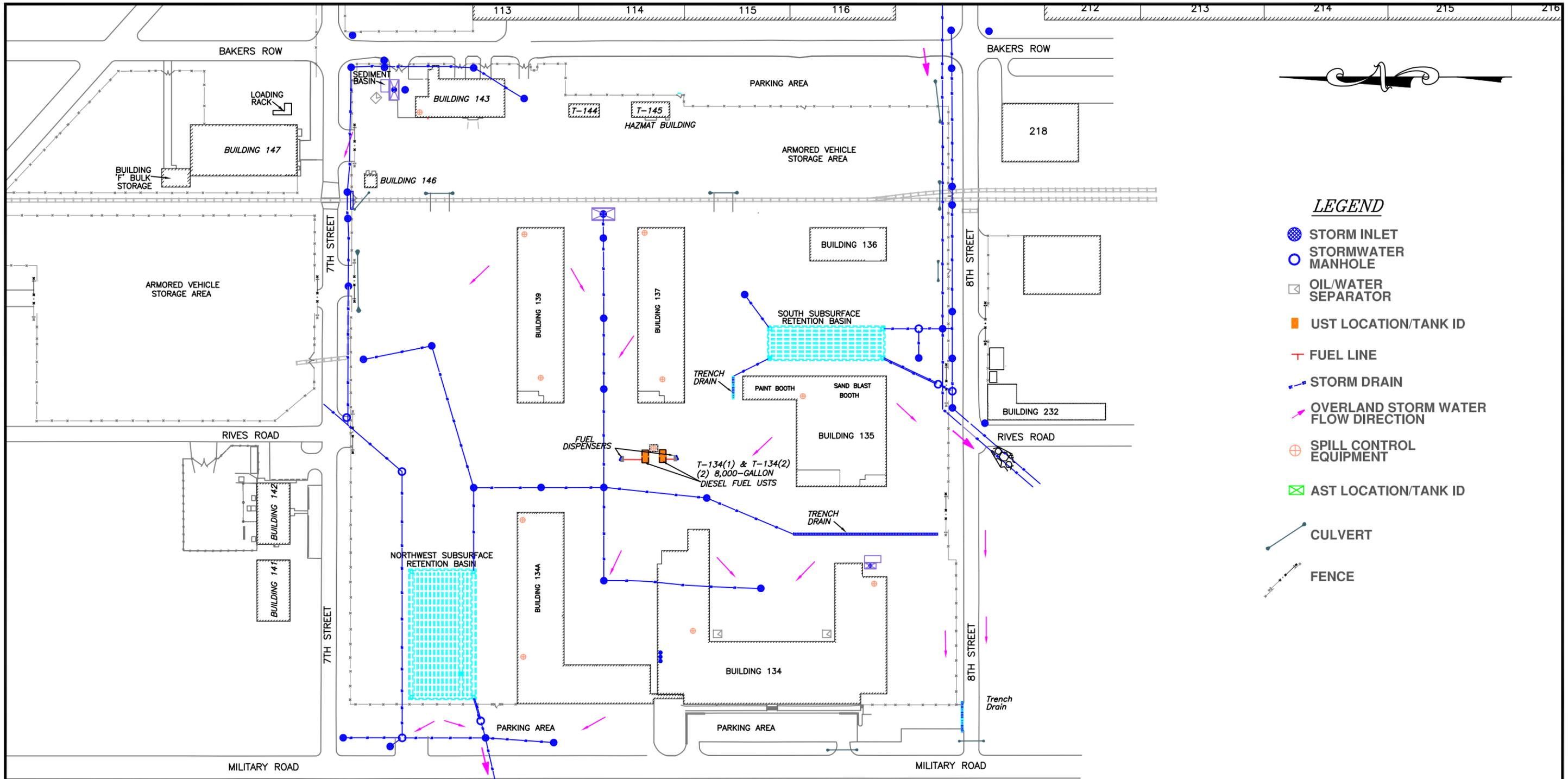
-  STORMWATER MANAGEMENT CATCH BASIN/POND
-  FENCE LINE
-  SURFACE STORMWATER FLOW
-  PIT DEWATERING
-  CULVERT
-  BULK MATERIAL STORAGE AREA
-  GATE
-  RIPRAP AREA
-  TREE LINE



DATE: 10-29-14
SCALE: NO SCALE
JOB NUMBER: 14-060
DRAWN BY: MARSHALL MILLER
REF:

**3e** EEE Consulting, Inc.  
Environmental, Engineering and Educational Solutions

**MTC-FORT PICKETT SWPPP**  
**FIGURE B-4**  
**157TH ENGINEERS QUARRY SITE LAYOUT**

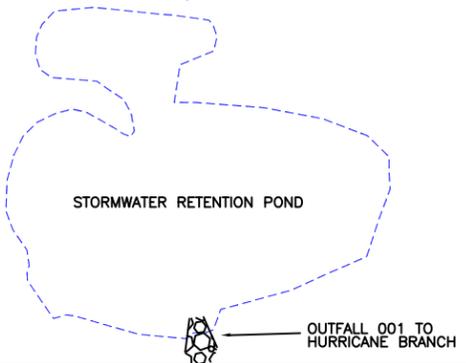


**LEGEND**

- STORM INLET
- STORMWATER MANHOLE
- OIL/WATER SEPARATOR
- UST LOCATION/TANK ID
- FUEL LINE
- STORM DRAIN
- OVERLAND STORM WATER FLOW DIRECTION
- SPILL CONTROL EQUIPMENT
- AST LOCATION/TANK ID
- CULVERT
- FENCE

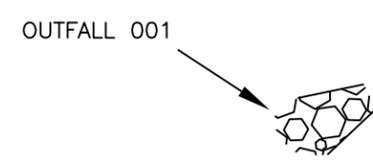
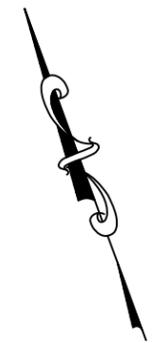
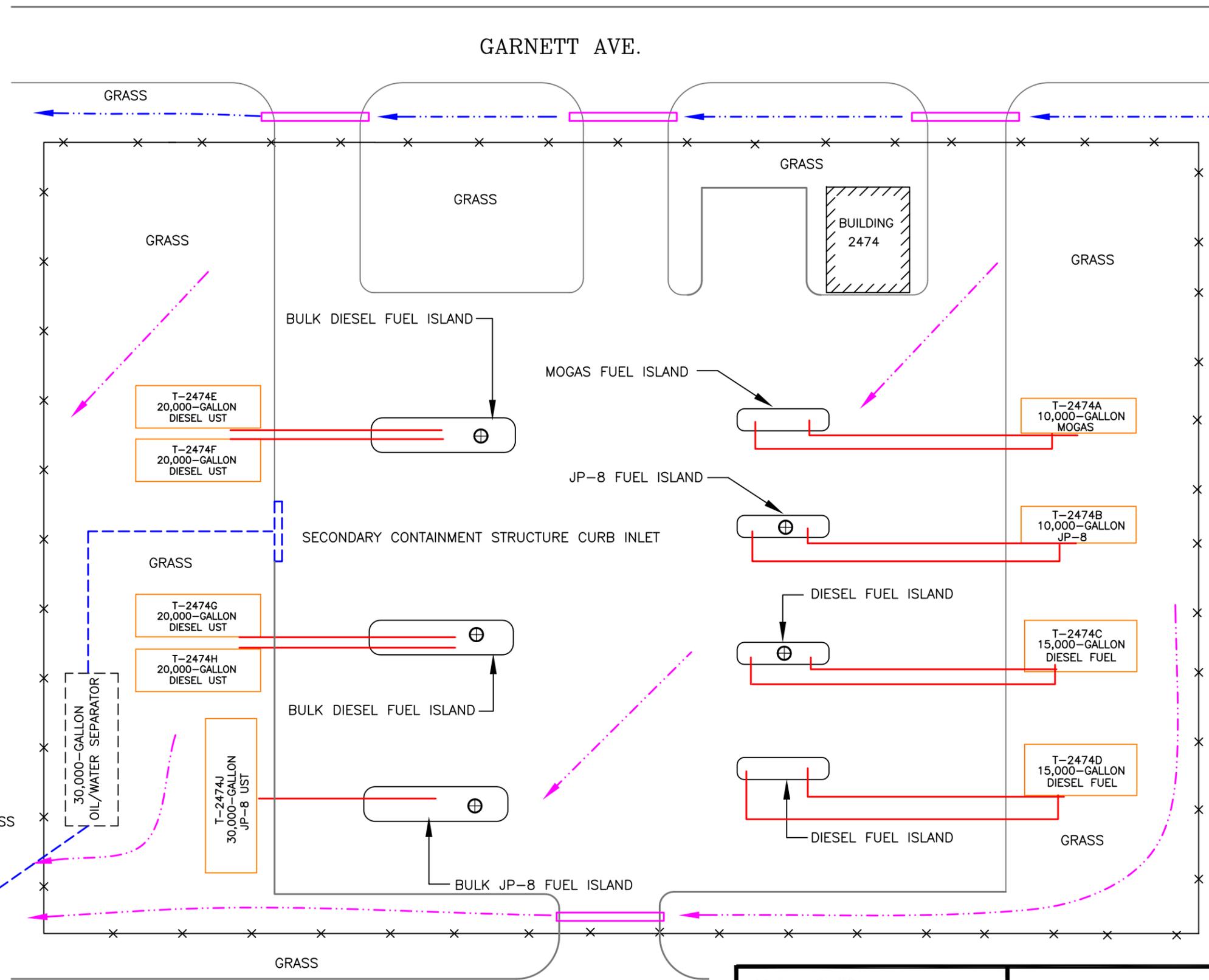
Note: The location and dimensions of features on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy

DATE: 10-29-14	 <b>MTC-FORT PICKETT SWPPP</b> <b>FIGURE B-5</b> <b>MATES FUEL STATION SITE LAYOUT</b>
SCALE: NO SCALE	
JOB NUMBER: 14-060	
DRAWN BY: RAW	
REF:	



**LEGEND**

- T-2474D UST LOCATION/TANK ID
- ⊗ FENCE LINE
- ⊕ SPILL EQUIPMENT
- ▭ DRAINAGE PIPING
- ⤴ OVERLAND STORM WATER DRAINAGE FLOW DIRECTION
- ⤵ ROADSIDE DRAINAGE DITCH FLOW DIRECTION



Note: The location and dimensions of features on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

DATE: 10-29-14
SCALE: NO SCALE
JOB NUMBER: 14-060
DRAWN BY: RAW
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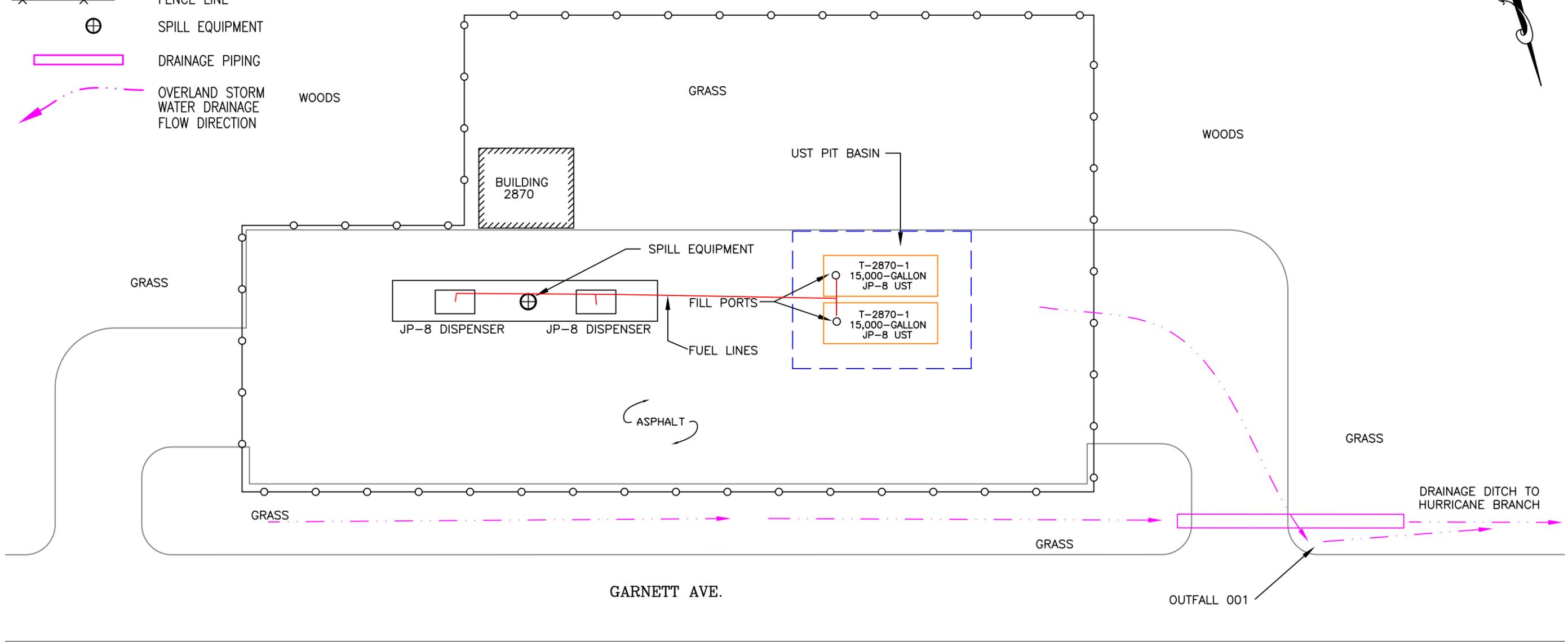
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**MTC-FORT PICKETT SWPPP**  
**FIGURE B-6**  
**CENTRAL FUEL FACILITY #1 SITE LAYOUT**



**LEGEND**

- T-2870-1      UST LOCATION/TANK ID
- x—x—      FENCE LINE
- ⊕      SPILL EQUIPMENT
- ▭      DRAINAGE PIPING
- (dashed)      OVERLAND STORM WATER DRAINAGE FLOW DIRECTION



Note: The location and dimensions of features on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

DATE: 10-29-14
SCALE: NO SCALE
JOB NUMBER: 14-060
DRAWN BY: RAW
REF:

**3e** **EEE Consulting, Inc.**  
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**MTC-FORT PICKETT SWPPP**  
**FIGURE B-8**  
**VEHICLE FUEL STATION #3 SITE LAYOUT**

**APPENDIX C**  
**SUMMARY OF SIGNIFICANT SPILLS AND LEAKS**

**Table C-1  
Spill List**

Date	Description of Spill	Estimated Volume of Release (gallons)
6-9-92	Release of JP-4 from overturned tanker truck	850
8-12-93	Release of diesel fuel due to a vehicle wreck near MRTC Road	60-70
2-17-94	Release of diesel fuel in MATES compound	100
5-19-94	Release of diesel fuel from a leaking M1 tank at Range 13	30-35
4-25-95	Release of diesel fuel at Building 564A due to improper operation of a fuel dispensing nozzle	65
01-15-97	Diesel fuel spill from a loose flange on a fuel filter at the fuel station on Dearing Avenue.	75
07-23-97	Diesel fuel spill from a ruptured fuel blivet in a AM109 Howitzer	30-50
12-02-97	Hydraulic line on a Bush Hog tractor broke and released hydraulic fluid.	40-50
04-01-98	Hemitt vehicle overturned that had two 55-gallon drums of diesel on it.	75-100
04-06-98	Overfill of heating oil during transfer of fuel from UST to AST.	25-40
07-14-98	Fuel tank was punctured by a stump during training maneuvers.	30
08-15-98	Overfill of diesel fuel during refueling operation.	75-85
08-21-98	Tactical vehicle fuel tank was punctured by a stump during training maneuvers.	20-25
09-08-98	Lawnmower severed the line connecting a kerosene tank to Building T-230 and the incident was unreported.	100-120
09-24-98	Unknown diesel release discovered during an inspection.	20-25
02-11-99	A mobile AST used for removing oil/water mixtures from USTs had a valve left open and the oil/water mixture was released.	200
02-18-99	Diesel fuel line on a bulldozer ruptured.	90
03-5-99	Faulty line between two 300-gallon mobile gasoline fuel tanks	40-50
03-31-00	Faulty fuel line for 5000 gallon HEMMIT Tanker	30
05-11-00	Broken fuel line for two 600 gallon fuel pods	96
09-14-00	992 FASV AMMO Hauler fuel line broke	55-65
01-30-01	275-gallon heating oil tank turned over at Building T-2304	250
02-27-01	Fuel tank hose on Bi-directional tractor	100
08-16-01	10W Hydraulic Fluid (Clearway)	70
09-26-01	Tar Tank (RC-250) VAFP-F	50
04-16-02	RC-250 Colony Construction	60
19-Mar-03	10W Hydraulic Oil Front Loader	30
20-Jun-03	5-Ton Dump Truck ruptured Fuel Tank	30
14-Jul-03	2- 20 Ton Dump Trucks leaked	25-30
03-Jun-05	113 A2 Armor Personnel Carrier	30
13-Dec-05	Hydraulic hose on Bucket truck ruptured	25-30
18-Jun-07	FSSP Site, hose became unattached during fueling operations	50-100
31-Jul-14	Release of JP-8 from Central Fuel Station #1	50

**APPENDIX D**  
**QUARTERLY SWPPP INSPECTION CHECKLIST**  
**AND**  
**QUARTERLY VISUAL SAMPLE WORKSHEET**

# MTC- Fort Pickett Quarterly SWPPP Inspection Checklist

GENERAL INFORMATION			
Location:	Date:		
Inspector:	Time:	<input type="checkbox"/> AM	<input type="checkbox"/> PM
Indicate comments and actions taken, if applicable.			
Are materials labeled properly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are materials stored properly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are wastes labeled properly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are hazardous wastes stored properly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do storage containers have bulges, dents or signs of deterioration?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are storage containers leaking?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are materials or hazardous wastes exposed to precipitation/runoff?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any drips/leaks/spills from equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any drips/leaks/spills from pipes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any drips/leaks/spills from storage tanks?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Is spill kit easily accessible?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Have there been any spills reported since the last inspection?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
If there was a reportable spill, was it cleaned up properly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Was spill kit restocked after spill?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are the stockpiles at least 50 feet from the outfall?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Is there any evidence of erosion in the area?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
<b>Comments:</b>			
<b>Actions Taken:</b>			
Refer to <i>Hazardous Waste Mgmt SOPs</i> for proper labeling and storage of hazardous materials/waste. Refer to <i>MTC-Fort Pickett Integrated Contingency Plan (ICP)</i> for spill reporting and cleanup procedures.			

# MTC- Fort Pickett Quarterly Visual Inspection Checklist

GENERAL INFORMATION	
Outfall#:	Date:
Location: Fuel Station	Air Temperature:
Outfall Flow Rate (estimate):	Total event rainfall:
Weather: <input type="checkbox"/> Sunny <input type="checkbox"/> Cloudy <input type="checkbox"/> Rainy <input type="checkbox"/> Snow <input type="checkbox"/> Ice	Industrial Activities in Drainage Area? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: vehicle fueling only
PHYSICAL OBSERVATIONS	
Odor:	<input type="checkbox"/> None <input type="checkbox"/> Sulfide <input type="checkbox"/> Petroleum <input type="checkbox"/> Sewage <input type="checkbox"/> Oil <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Other
Color:	<input type="checkbox"/> None <input type="checkbox"/> Yellow <input type="checkbox"/> Brown <input type="checkbox"/> Green <input type="checkbox"/> Gray <input type="checkbox"/> Other
Turbidity:	<input type="checkbox"/> None <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
Floatables:	<input type="checkbox"/> None <input type="checkbox"/> Petroleum Sheen <input type="checkbox"/> Sewage <input type="checkbox"/> Foam <input type="checkbox"/> Other
Deposits/Stains:	<input type="checkbox"/> None <input type="checkbox"/> Sediment <input type="checkbox"/> Oily
Vegetation Conditions:	<input type="checkbox"/> Normal <input type="checkbox"/> Excessive Growth <input type="checkbox"/> Inhibited Growth
Damage to Outfall Structures: Identify Structure: no piped outfall present, sheet flow only	<input type="checkbox"/> None <input type="checkbox"/> Concrete cracking <input type="checkbox"/> Corrosion <input type="checkbox"/> Concrete spalling <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Other Damage:
Extent of Damage:	<input type="checkbox"/> Minimal <input type="checkbox"/> Severe
Comments:	
SAMPLE INFORMATION	
Sample Taken:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Time Sample Collected:	<input type="checkbox"/> AM <input type="checkbox"/> PM

## Descriptions of Physical Observations

**Odor:** Discharge odors can vary widely. Some may indicate the source of contamination. Industrial discharges may smell like a particular spoiled product, oil, gasoline, a specific chemical, or a solvent. For example, the decomposition of organic wastes in a discharge will release sulfide compounds, creating an intense smell of rotten eggs. Significant sanitary wastewater contributions will also cause pronounced and distinctive odors.

**Color:** Color may indicate inappropriate discharges, especially from industrial sources. Industrial discharges may be any color. Wash water from cement and stone working plants can cause cloudy discharges. Contamination from industrial areas may come from process waters (slug or continuous discharges); from equipment and work area wash water discharged to floor drains; or from spills washed into storm drains.

**Turbidity:** Turbidity is often affected by the degree of gross contamination. Industrial flows can be cloudy (moderately turbid) or opaque (highly turbid). Undiluted industrial discharges, such as those coming from continual flow sources or intermittent spills, often have high turbidity. Sanitary wastewater is also often cloudy in nature.

**Floatable matter:** A contaminated flow may also contain floatable solids or liquids. Identifying floatables can aid in finding the source of the contamination, because these substances are usually direct products or byproducts of the manufacturing process or the sanitary system. Examples of floatables of industrial origin are animal fats, spoiled food products, oils, plant parts, solvents, sawdust, foams, packing materials, and fuel.

**Deposits and Stains:** Deposits and stains (residues) are any type of coating that remains after a non-stormwater discharge has ceased. Deposits or stains usually are of a dark color and usually cover the area surrounding the stormwater discharge. They often contain fragments of floatable substances, and, at times, take the form of a crystalline or amorphous powder. For example, contamination from leather tanneries often produces grayish-black deposits containing fragments of animal flesh and hair. Another characteristic example is the coating of white crystalline powder formed on sewer outfalls by nitrogenous fertilizer wastes.

**Vegetation:** Stormwater discharges often affect surrounding vegetation. Industrial pollutants often cause a substantial alteration in the chemical composition and pH of the discharge water, which can affect plant growth even when the source of contamination is intermittent. In order to accurately judge if the vegetation surrounding a discharge is normal, the observer must take into account recent weather conditions, as well as the time of year. Increased or inhibited plant growth near stormwater discharges, as well as dead and decaying plants, is often a sign of pollution. However, it is important to distinguish whether plant damage is caused by contamination or by the physical effects of increased flows, such as scour. This can be done by chemically analyzing the flow or by confirming its source through additional visual inspections.

**Structural Damage:** Cracked or deteriorated concrete or peeling surface paint at an outfall usually indicates the presence of severely contaminated discharges. Contaminants causing this type of damage are usually very acidic or basic and usually of industrial origin.

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Type or Print the following information:

Name: \_\_\_\_\_ Telephone No.: (\_\_\_\_) \_\_\_\_\_

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

Signature: \_\_\_\_\_ Date Signed: \_\_\_\_\_

**APPENDIX E**

**VPDES PERMITS VAR050726, VAG840168,  
VAG840211, VAR052098, VAR052099,  
VAR052100, VAR052101 AND  
DISCHARGE MONITORING REPORTS**