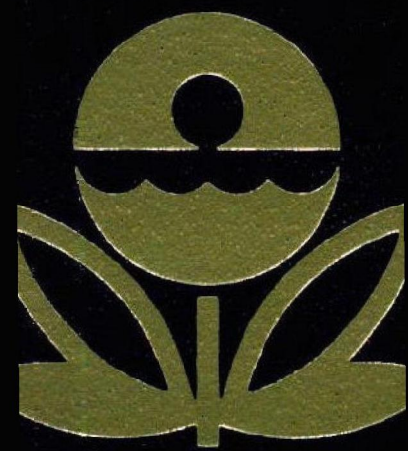


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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

MULTI-MEDIA INSPECTION REPORT
U.S. MARINE CORPS
QUANTICO MARINE BASE

AUGUST 11-15, 1997

MAIN REPORT



Regional Center for Environmental Information
US EPA Region III
1650 Arch St.
Philadelphia, PA 19103

U.S. EPA Region III
Regional Center for Environmental
Information
1650 Arch Street (3PM52)
Philadelphia, PA 19103

FACILITY INSPECTION PROGRAM
ANNAPOLIS, MARYLAND

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Background

A Level D Multi-Media Compliance Inspection was conducted at the U. S. Marine Corps, Quantico Marine Base located in Quantico, Virginia from August 11, 1997 through August 15, 1997.

The inspection was conducted as a joint effort between EPA, Region III and the Virginia State Department of Environmental Quality.

A number of factors were considered when selecting Quantico Marine Base as a target for a multi-media inspection. These considerations include, but are not limited to: 1) geographic diversity (it is a federal facility in Virginia not too far from the District of Columbia); 2) it is the only U.S. Marine Corps base in Region III; 3) it is part of a regional geographic initiative (this facility is located in the Chesapeake Bay watershed and could impact the area around the bay); 4) size (the facility covers approximately 60,000 acres and is a unique facility in that there are several sites on the facility that are part of the CERCLA cleanup process); 5) potential problem areas (as of August, 1994, facility had identified some 47 suspected leaking underground storage tanks and had approximately 50 PCB and PCB contaminated transformers on the base, although a contract was awarded for the complete removal of all 50 transformers); and 6) recent spill history (history of significant spills reported to NRC in the past year, e.g. 10/7/96, 100 gallon release of jet fuel).

All of these factors, plus the input of the various EPA Region III media programs made this facility a good candidate for a multi-media inspection.

The objectives of the inspection were to determine the facility's compliance with a number of environmental statutes regulated by both the Environmental Protection Agency and the State of Virginia's Department of Environmental Quality. Specifically, the inspection focused on the facility's compliance with the following regulations:

- Hazardous waste management regulations under the Resource Conservation and Recovery Act (RCRA), including regulations regarding underground storage tanks
- Water pollution control regulations under the Clean Water Act (CWA), including regulations regarding underground injection control
- Air pollution control regulations under the Clean Air Act (CAA)

- PCB regulations under the Toxic Substances Control Act (TSCA)
- Form R reporting requirements under the Emergency Planning and Community Right-To-Know Act (EPCRA)

In addition to the aforementioned regulations, the inspection also included a review of the facility's procedures with respect to solid waste management.

Introduction/Facility Description

The Marine Corps Combat Development Command (MCCDC - Quantico), located in Quantico, Virginia, consists of approximately 60,000 acres situated in Prince William, Fauquier, and Stafford Counties, Virginia. The installation has been in operation since 1917 and is currently bordered by residential, park, farmland, and commercial properties. MCCDC - Quantico, approximately 35 miles south of Washington, D.C. is divided by Interstate 95 into two areas: Mainside (east of I-95) and Gaudalcanal (west of I-95). The primary mission of MCCDC-Quantico is to develop, assess, and promulgate U.S. Marine Corps concepts, plans, and doctrine; to identify and assess changes to doctrine, training, Marine Air/Ground Task Force (MAGTF) force structure and material; to develop and implement policy and programs for the training and education of all regular and reserve Marine Corps personnel and units; to exercise cognizance of manual and automated war gaming; and, to provide support for the Combat Development Command, Operating Forces, Reserve Establishment, Supporting Establishment, and HQMC (Marine Corps Headquarters).

In addition, Quantico is host to a number of tenant organizations including, Drug Enforcement Administration, the FBI Academy, and Marine Corps Air Facility. There is a population of approximately 13,000 at Quantico.

Participating Personnel

Quantico Marine Base Representatives:

Brigadier General Edwin Kelley, Jr.....	Base Commander
Major Fred Mock.....	Deputy, Natural Resources and Environmental Affairs Branch (NREA)
Ralph Phipps.....	Chief, Environmental Affairs Section
Kristine Stein.....	Environmental Affairs Section
Nicole Bennett.....	Environmental Affairs Section

Cpl. Sean Jensen..... Environmental Affairs Section
Richard Gleason..... Environmental Affairs Section
William Fennell.....Chief, Environmental Engineering Section
Mark Branca.....Environmental Engineering Section

EPA Representatives:

Gerard Crutchley.....Team Leader, TSCA, Annapolis Office
George Houghton.....RCRA, Annapolis Office
Gerard Donovan.....UST, Annapolis Office
Charles Hufnagel.....NPDES, Annapolis Office
Humberto Monsalvo.....CAA, Philadelphia Office
Abraham Reich.....EPCRA, Philadelphia Office
Clark Conover.....UIC, Philadelphia Office
Lisa Bradford.....Superfund, Fed. Fac. Branch, Philadelphia Office
Jeffrey Pike.....RCRA, Philadelphia Office
Thomas Tandoc.....Federal Facilities Enf. Office, EPA Hdqtrs.
Kelly Conrad.....Federal Facilities Enf. Office, EPA Hdqtrs.
Gene Miller.....Federal Facilities Enf. Office, EPA Hdqtrs.

Virginia Department of Environmental Quality Representatives:

John Ely.....State Team Leader
Alice Nelson.....CAA
Charles Williamson..... NPDES
Stephen Turner.....UST
Jon Terry.....RCRA
Tammy Gumbita.....Solid Waste

Opening Conference

An opening conference was held on Monday, August 11, 1997 with the facility's command staff and lead environmental personnel. The facility's command staff emphasized their commitment to overseeing base operations to ensure that the facility complies with all applicable federal and state environmental regulations. The lead personnel from EPA and the State of Virginia discussed with the facility personnel the reason for the inspection and what we expected to accomplish during the inspection.

The facility's Public Affairs Officer provided a brief overview of the base operations for the entire inspection team and the EPA team leader then discussed with the facility personnel and the inspection team the logistics for inspection activities.

Summary of Findings

RCRA

1. Weapons Training (27241) - This facility has in storage kerosene and lead-acid batteries. These types of waste are not generated as part of this activity. This material was apparently dumped at the facility. Facility personnel did state they were in the process of having the waste removed.
2. The EPA inspector recommended that the contingency plans for all of the <90 sites be reviewed and updated as necessary to reflect current activities. The plans presently contain out of date phone numbers and emergency contacts.
3. In the emergency/contingency plans for the generators, phone numbers listed are seven digit numbers; however, the operators at various locations stated that they would call 911 in the event of an emergency. If this is their procedure, it should be reflected in their emergency plans.
4. The contingency plan must include the relevant capabilities for the emergency equipment listed in the plan.
5. After testing the drain valves in the <90 day storage sites, facility personnel should ensure that the valves are completely closed. The EPA inspector observed two valves that were slightly open during the inspection.
6. FBI - gun cleaning room - cleaning pads (hazardous waste - D008) were observed in the trash instead of in the hazardous waste accumulation drum. The operator indicated that this was a constant battle and he routinely rummages through the trash and retrieves the pads. Retrieving pads from the trash should be listed on the SOP for this area.
7. FBI - HRT - The EPA inspector observed one full 55 gallon drum of gun cleaning waste in a satellite accumulation area. This drum should be dated and removed within 72 hours.
8. FBI - Forensic Research Lab - The EPA inspector observed a one gallon container of an unknown liquid in a laboratory hood. According to the lab operator, this container has been in the hood for some time (several months). The contents should be determined and either used or disposed of accordingly.
9. TBS Armory - The EPA inspector observed used cleaning pads (D008) in a trash can. The operator is aware of this situation and does remove them. The facility personnel should update the SOP to include checking the trash cans for the cleaning pads.

10. HMX-1 - The EPA inspector observed a 30 gallon accumulation drum in a mixing room. The sides of the drum were covered with paint which had apparently spilled when adding waste paint to the drum. Facility personnel need to clean up this material and ensure that it does not occur in the future.
11. Facilities Maintenance - Batteries, emptied of their contents (D008), were disposed of as a non hazardous waste through Interstate Battery. Any battery no longer intact or empty is considered a hazardous waste and must be handled as a hazardous waste. This operation also had a 30 gallon container of battery acid. The Environmental Affairs personnel were not aware of this practice.
12. Building 2008 - This satellite storage held a 30 gallon container of hazardous waste. It was located next to a drain. The EPA inspector recommended placing this container into secondary containment.
13. Hazardous waste storage - 27401 - The epoxy sealant and floor should be repaired. The facility is aware of this situation and a work-order has been submitted.
14. The facility needs to conduct and maintain records of daily inspections for the loading and unloading area at the hazardous waste storage building (27401).

UST

The facility currently has nine regulated tanks. The EPA and state inspector observed all nine tanks as well as reviewed the leak detection methods for those tanks. They also reviewed the closure records for the underground tanks removed from the facility. No apparent problems were found.

Clean Air Act

Combustion Emissions

1. The initial performance test results were not submitted to the EPA, and the quarterly excess emissions reports are not being provided to the EPA as required by the NSPS Subparts Db and Dc, codified at 40 CFR §60.49b, and 40 CFR §60.48c, respectively.
2. With regard to the notification of installation and construction for the boilers, it was discovered that the initial performance test conducted for Boiler #3 was done on January 3, 1995. Boiler #3 failed the performance test relative to NO_x and opacity emission limits. The second

performance test for Boiler #3 was conducted on June 5, 1997 in which the boiler's operations passed for NO_x and opacity emission limits. NSPS Subpart Db, cited in 40 CFR §60.44b(f), allows for a facility to take up to 180 days to conduct an initial performance test to establish compliance relative to NO_x and opacity emissions. The Marine Corps Combat Development Command (MCCDC) was in violation of 40 CFR §60.44b(f) since it exceeded the allowable time frame for the initial performance test.

3. A minor issue concerned the submittal of a proposal for NO_x Reasonably Available Control Technology (RACT). The Base did not submit a proposal to the EPA due to guidance provided by the State in an internal VADEQ memorandum dated May 10, 1993. The memo cited Appendix T of the VA DEQ regulations in which exemptions are provided to combustion units less than 100,000,000 Btu/hr. This matter needs to be reported to EPA as soon as it is convenient.

Although the aforementioned violations were noted during the inspection, the Base should be commended for the outstanding air emissions reduction initiative undertaken since 1993 during its overhaul of all the boilers and combustion units that also included conversion/retrofitting capability to use natural gas. The estimated air emission reduction exceeded 150 tons for SO_x, NO_x, PM10, and CO.

VOC Emissions

SPRAY BOOTHS

1. With regard to the surface coating operations at the Base, i.e., spray painting, verification of the total annual usages was not provided in order to determine the applicability of the VADEQ Surface Coating Regulation. A complete material mass balance (or usage assessment) is needed to certify that the Base falls under the limit in the State regulation. However, based on the testimony of the different area supervisors, the Base seems to fall under the usage limit and is probably not subject to the VADEQ surface coating regulation. Nonetheless, the Base should incorporate the use of a database program that can easily track the use of each type of paint at each affected facility and/or area.
2. The majority of the paints inspected consisted of VOC content greater than 3.0 lbs/gal.. The EPA encourages facilities to use paints that contain VOC contents less than 3.0 lbs/gal. in order to fall under the limit in the State regulation. Although the use of these paints at the Base does not trigger the State regulation, the Base should make a strong effort to switch to paints that contain less than 3.0 lb/gal. of VOCs.

This is typically known as conversion from high solvent-base paints to low-solvent, high solids paints. Also, current and appropriate Material Safety Data Sheet (MSDS) must be present in the different affected areas of operation to facilitate inspections.

3. The Base should improve and better monitor its preventive maintenance (PM) program in the different spray booths by increasing the frequency of replacing the spray booth filter, and keeping logs of such periodic replacements and any periodic cleaning that would improve the capture efficiency of the spray booth. Although this is not required by any regulation, EPA makes this recommendation in order to improve work practices.

GASOLINE DISPENSING STATIONS

1. The Base gasoline dispensing station at the Marine Exchange Service Facility, with an approximate daily throughput of 8,000 gals. had the proper Stage II vapor recovery equipment. The required recordkeeping and reporting was adequate and made available. However, the daily checklist should include a column for crimped hoses and flattened areas of hoses which may restrict the vapor recovery capability of the Stage system. The Base should begin to replace the Huskey nozzles that are currently in place with the new improved nozzles that can service brand new vehicles. This problem originates with smaller orifices made in new cars in which the old Huskey nozzles do not fit. This is not a requirement by the Stage II State regulation, but it is merely a recommendation.

The Base should be commended for the initiative it took to install Stage II Vapor Recovery Systems at low-volume gasoline dispensing stations that did not require such air pollution control equipment.

GASOLINE AND FUEL STORAGE TANKS

1. The fuel storage areas were in proper working condition, but the State and the facility should incorporate the use of VOC detecting equipment, i.e., Portable flame ionization detectors should be used to ensure that the seal around the gasoline storage tanks are not leaking gasoline vapors into the atmosphere. Stage I is not required at the area because the maximum storage of the tanks is below 40,000 gallons.

CFC Emissions

MOTOR VEHICLE REPAIR SHOPS

1. While most motor vehicle repair shops had certified technicians who were instructed in the proper use of the refrigerant recovery and recycling equipment, certification of such equipment showing proper notification to the EPA was never done. Also, such notification of the purchase of such equipment would determine whether or not it is EPA-approved equipment. This is a violation of 40 CFR §82.42(a)(1).
2. Although most of the motor vehicle repair shops had refrigerant recovery and recycling equipment, such equipment was approximately a year old, or the activities could not provide purchase invoices. The lack of such documents does not allow for the verification of purchase dates and implies that the Base may be in violation of servicing motor vehicles between the effective date of the regulation, November 15, 1992, and the estimated purchase date in 1996. This is a violation of 40 CFR §82.34 and 40 CFR §82.42.

PROCESS REFRIGERATION AND REFRIGERATION DISPOSAL

1. While most of the chiller station and process refrigeration repair shops had refrigerant recovery and recycling equipment, such equipment was approximately a year old, or the activities could not provide purchase invoices. The lack of such documents does not allow for the verification of purchase dates and implies that the Base was in violation of servicing motor vehicles between the effective date of the regulation, November 15, 1992, and the estimated purchase date in 1996. This is a violation of 40 CFR §82.154 and 40 CFR §82.162.
2. Although some process refrigeration technicians had been certified, certifications of all technicians could not be verified. Copies of the certifications for all technicians is needed to show compliance with 40 CFR §82.161. This requirement became effective November 14, 1994.
3. While most of the affected areas maintained some degree of documentation, the recordkeeping was deficient and did not comply with the recordkeeping and reporting requirements cited in 40 CFR §82.166. This is a violation of 40 CFR §82.166.
4. Throughout the Base, there were several activities, i.e., Facilities Maintenance and Defense Reutilization & Marketing Office Annex (DRMO), that were involved in the disposal process of refrigerant-containing equipment. However, the proper verification of refrigerant recovery and accountability was not done. Each time a refrigerant-containing piece of equipment was put forth in waste stream, it yielded a violation of 40 CFR §82.156(f).

5. Throughout the Base, there were numerous process chillers that were constantly serviced due to frequent leaks. Although Facilities Maintenance keeps documentation of all leak repairs, the high rates of repair of the same units resulted in the following amounts of refrigerants released to the atmosphere due to leaks:

<u>Year</u>	<u>R-12 (lbs.)</u>	<u>R-22 (lbs.)</u>
1995	2,730	3,348
1996	1,600	2,090
1997	610	2,770 < (a/o 8/97)

While the Base has fixed leaks in all types of chiller equipment in prompt fashion, the current service documentation does not permit verification of compliance with 40 CFR §82.156(I)(1)-(4). To decrease such large amounts of refrigerants from being released into the atmosphere in the future, the EPA strongly encourages the Base to invest in a chiller retrofitting program as cited in 40 CFR §82.156(I)(3).

6. A Navy study, dated September 3, 1996, was conducted at the Base, for the replacement of ozone depletion substances. The Base should begin to implement the findings and intentions of this study in conjunction with an effective retrofitting program of the chillers.

Clean Water Act

The NPDES component included inspections of the Mainside STP, Camp Upshur plant and the industrial/stormwater outfalls. The Mainside plant appeared to be operating well despite all of the construction associated with the plant upgrade. The inspector even commented on the clarity of the final discharge from the plant.

1. Although no discrepancies were found in the DMR records reviewed for either the Mainside STP (VA0028363) or Camp Upshur STP (VA0028371), a misunderstanding in the DMR reporting procedure was clarified. It was pointed out that all weekly averages during a month that exceeded the maximum weekly average limit are to be reported as excursions rather than just reporting 1 excursion for only the maximum weekly average.
2. The Camp Upshur STP (VA0028371) effluent samples have not been refrigerated or kept on ice from the time of collection and during transit to the Mainside STP nor have the $\text{NH}_3\text{-N}$ samples been preserved (w/ H_2SO_4) upon collection. Also, the $\text{NH}_3\text{-N}$ method (number) has not been indicated in the analytical

records (eg. on bench sheet).

3. The Camp Upshur STP treatment units' gratings which were generally rusted and warped, presented a structural safety hazard.
4. Industrial Discharges (VA0002151) sample preservation should be documented (eg. on chain of custody).
5. Essentially, Quantico's continuing wastewater compliance problems which have been well documented with DEQ are as follows:

- failure to meet the TSS effluent limits at Outfalls 071 (Guad Maintenance Shop Vehicle Wash) and 005 (Camp Barrett Tank Wash) which are included in Quantico's Industrial Discharges permit (VA0002151). The high clay content of the soil in the wash water hasn't readily been removed at these facilities.

- overflows in their sewer systems. These are generally frequent, minor spills which are attributed to incidental blockages that occur in flat, remote residential areas where the sewers accumulate grease, etc. The sewer system rehabilitation is not expected to significantly correct these blockages, most of which occur in the Aquia Wastewater Treatment Plant's (Stafford County) service area on base. Quantico has been reporting all of the overflow incidents to DEQ although there was some question as to whether Stafford County should report the incidents in their respective service area.

UIC

This component of the inspection included visits to eleven areas at the facility to observe sixteen Class V wells. All were identified as septic systems. There were no endangering discharges to any of the wells which might effect public water systems on the base and surrounding communities.

Two other observations made by the inspector, not related to UIC, were (1) the facilities tank farm and the potential for a fuel spill to the stormwater system and (2) a fuel oil spill from a tank at the Quadalcanal Maintenance facility which occurred over a year ago, but has not yet been cleaned up (as stated by a facility employee).

TSCA/PCB

1. The annual records for 1991 - 1994 do not contain the total numbers and the total weights for PCB Articles, PCB Article Containers and PCB Containers.
2. For PCBs and PCB Items remaining in service at the end of the calendar year, the annual records do not contain the total number of PCB Transformers and the total weight of the PCBs in the transformers, the total number of large high and low voltage PCB Capacitors, and the total weight of PCB Items in PCB Containers.
3. There was no confirmation of receipt from a TSD facility for two PCB waste shipments by an independent transporter in 1995 (manifest nos. 50565 & 50154).
4. The manifest (50565) for a PCB waste shipment in August 1995 indicated 130 kg. This figure was changed to 450 kg. by the TSD facility. This is not a problem, as long as the discrepancy is resolved within 15 days after the waste was received at the TSD facility. If the discrepancy is not resolved, a letter must be sent to EPA regarding the situation.
5. Documentation regarding the contaminated soil removed from the old DRMO scrapyard needs to be maintained as part of the annual records including total weights for the amount of contaminated soil removed from the site.
6. Thirty large capacitors observed during the inspection were later identified by facility personnel as non-PCB, according to nameplate information.

Although these discrepancies regarding the annual records are after the fact, these same discrepancies were addressed in a Notice of Noncompliance issued to the facility in Dec. 1990 and they were not corrected subsequent to receiving the NON.

EPCRA, Section 313

The Quantico Marine Base has submitted Form R's under Section 313 of SARA Title III for the reporting years, 1994, 1995, and 1996. The records show that the facility had greater than 10 employees and is a Federal Facility. In addition, the records showed that the facility exceeded the threshold for the following listed Section 313 chemical:

<u>Chemical</u>	<u>Reporting Year</u>	<u>Amount Manufactured (M) Processed (P) Otherwise Used (O)</u>	<u>Form R Due</u>
Chlorine	94	61,255 (O)	Y
Chlorine	95	41,184 (O)	Y
Chlorine	96	44,962 (O)	Y

All uses and releases were well documented.

In addition, a determination should be made as to whether the amount of lead from bullets which are periodically dug up and disposed of and copper from the casings of used shells are reportable under section 313.

Material Safety Data Sheets should be updated. The one obtained from the Main Side Waste Water treatment Plant, Attachment B9, lists caustic (NaOH) as being a Section 313 reportable chemical, it is not.

Technical Reports

Resource Conservation and Recovery Act

Permit Status

Quantico is a large quantity generator and an interim status storage facility, storing for greater than 90 days. A Part B permit application, originally submitted about ten years ago, was resubmitted by Quantico in July of 1997 at the request of the Virginia Department of Environmental Quality. The permit application is for storage of waste for greater than 90 days. Treatment or disposal are not part of the application. In addition, the facility has ten <90 day accumulation sites and numerous satellite accumulation locations.

Inspection Observations

General

Quantico has a number of tenants that generate hazardous waste. Some of these tenants are small generators and only have a satellite accumulation site while others have a less than 90 day accumulation area in addition to satellite accumulation. The number of satellite and less than 90 day facilities are decreasing through waste minimization and the changing mission for Quantico. Storage is in containers up to 55 gallons in size. In all cases the waste is transported to the Quantico hazardous waste >90 day storage building (Building number 27401) by the generator. Since all the waste is generated on site and no waste travels over publicly owned roads, none of the waste is manifested to the storage facility. No additional storage devices, treatment methods or disposal of hazardous waste were observed during this inspection.

All waste must be pre-approved through the Environmental Affairs office before being accepted at the greater than 90 day storage facility. Typically, waste remains at the <90 day accumulation sites for 45 to 60 days before transfer to Bldg. 27401 by the generator. The waste is identified through the generator knowledge and MSDS information. The 1997 waste profile list is provided as an attachment to this report. If there is any doubt as to whether a particular waste is hazardous or non-hazardous, Quantico arranges for a chemical analysis. The staff at the generator locations are trained by the Environmental Affairs office in the proper documentation, inspection and handling of the waste generated, as well as Quantico's own procedures for waste handling and disposal.

As part of the inspection all of the <90 day accumulation sites and a number of satellite generation facilities were observed for compliance with those regulations. Some of the latter coincided with the less than 90 day accumulation locations.

In addition to the satellite and the <90 day accumulation areas, Quantico has 106 Safety-Kleen parts washing stations on the base. Safety-Kleen collects the used solvents from these locations, prepares the manifests and transports them off-site. This waste does not pass through Bldg. 27401. The sites were not specifically inspected but some were observed if located in or near a satellite generation location or a less than 90 day location. No item of concern was observed at any of the Safety-Kleen wash stations.

Generators (less than 90 day and satellite accumulation areas)

Facility Support Branch-Motor T Maintenance (Bldg. 2013)

As the name suggests this facility is for vehicle maintenance. Hazardous waste generation consists of a waste paint related material. At the spray booth (satellite), this inspector observed a closed 5-gallon container labeled flammable waste. Filters from the paint spray booth are disposed at the Quantico landfill as non hazardous. The operator should check these filters for hazardous constituents if not already accomplished. Other waste includes waste petroleum products that are not regulated by RCRA. Only non-regulated waste was observed in the <90 day storage structure at the time of the inspection. A review of the training and inspection records revealed no problems. The emergency plan for this facility is currently undergoing revision because of changes at this location.

Communication Officer School (Bldg. 3185)

Waste generated at this location includes fuel which is not regulated by RCRA and batteries that are regulated by RCRA as universal waste. Two batteries were observed, both were closed and intact. In addition, the facility uses and disposes of lithium batteries. According to facility personnel, after the "pin" is removed, the battery is allowed to discharge for a 2 to 3 day period. The discharge area, outside the main building, is marked to alert others in the area. While discharging, the batteries are covered to keep them dry. A temporary discharge area has been established (photo 8). The old discharge facility has been retired (photo 9). Photo 10 is a view inside the old discharge structure, (note the batteries on the shelf). During the discharge phase, the battery emits hydrogen gas. After discharge, the battery is disposed of as a non-hazardous waste. This building does have a <90 day accumulation area, but no RCRA waste was observed in that structure during this inspection. The drain valve for the

structure was observed to be partially open. The weekly (Tuesday) inspections are documented; however, the inspection form has no line item for the drain valve.

Building 2118 - OCS Armory

This satellite facility has two containers, one inside and one outside (photo 11) used to hold "Q-tips" and patches from gun cleaning. The hazard class is D008 for lead. Both were closed and labeled.

Building 2043 - Security Battalion

This location has a satellite drum used to hold "Q-tips" and patches from gun cleaning. According to the operator, filling the drum takes about six months. A Safety-Kleen wash station is also located here. No RCRA related issues were noted.

Federal Bureau of Investigation

The FBI is perhaps the largest single hazardous waste generator at Quantico. The majority of their waste is derived from gun cleaning, shooting range and laboratory analysis.

The gun-cleaning room (satellite) had one drum that held waste from the gun cleaning procedure. It was labeled as a hazardous waste and the hazard constituent was lead (D008). The facility had modified the container lid (photo 12) to help prevent non-regulated waste from entering the container. According to the operator of this location, the hazardous waste originates not from the cleaning solvent, but from the "Q-tips" and patches that contain residual lead from the gun powder. The Bureau, as well as Quantico, had previously changed from a gun cleaning solvent that was regulated by RCRA when disposed to a non-regulated solvent. According to the operator, ensuring that all the patches and "Q-tips" are placed in the waste container requires constant vigilance. The operator removes the contents of the container about once per week although this varies depending on use.

The gunsmith shop (satellite) has a similar operation in that it generates, as part of the gun cleaning procedure, "Q-tips" and patches that fail TCLP for lead. The gun-cleaning residuals are placed in plastic lined red metal cans with a foot treadle to operate the lid. This inspector counted six cans in the shop (photo 13 & 14). Each night the cans are emptied into the container located in the gun cleaning room. This shop is restricted to the gunsmiths and not open to others in the building.

The HRT building held one 55 gallon container in a cage area. This container was closed and labeled as containing a hazardous

waste. The container was almost full (photo 15). The operator of this area indicated that the container had been there for about one and a half years. It contained waste similar to that observed in the gun-cleaning room. Some patches were observed in a trash can in this same area. Whether these patches resulted from a gun cleaning operation is unknown. The facility was told to remove the drum and replace it with a new empty drum.

The forensic lab also generated waste from its analytical procedures. It is the policy of the lab to remove hazardous waste streams to a storage room (Room 117) at the end of each shift. This room is equipped with storage cabinets and dry sumps to capture spills. Inspections are documented weekly. No RCRA issues were noted. In addition to Room 117, four additional generation points were observed. The amount of waste was minimal and consisted of one gallon and smaller containers. The containers were closed and labeled with their contents. Photo 16 shows a typical laboratory accumulation point (Room 306). In Room 310 a container of unknown material was observed. The facility is in the process of identifying its contents.

HMX-1

This area repairs and maintains the presidential helicopter fleet. Its hazardous waste generation results from painting. The less than 90 day storage area building (photo 17) is typical of the hazardous waste storage buildings used at Quantico. The building has three sides with a fence and lockable gates on the fourth side. The floor is sloped to the rear of the structure and there is a drain valve leading to the ground surface to remove liquid. This valve was closed at the time of the inspection. One drum of waste paint related material was observed and it was properly labeled, dated and closed. In another area, the paint booth filters were reported to be non hazardous and, as a result, disposal is through municipal trash. In the paint mix room (satellite) one container, approximately 30 gallons in size, was observed. It was closed, labeled (ignitable & toxic) and not leaking. The drum was observed to be contaminated on the outside with a substantial amount of spilled paint. Facility personnel should ensure that waste paint is not spilled while adding it to this container. The EPA inspector recommended that the existing contamination be cleaned from the side of the container.

All hazardous waste inspection records for HMX-1 are maintained on a computer with disk backup, there is no paper copy. The computer is pass-word protected. The recorded information was appropriate for the facility.

Facility Maintenance (Bldg. 3252)

This operation maintains buildings and grounds at Quantico. One 30 gallon drum was observed in the <90 day storage building. It was used to hold waste sulfuric acid from batteries. The exact reason why the battery acid was drained to the container was not explained (photo 18). According to facility personnel at the scene, batteries are typically shipped off site intact with the acid remaining in the battery. Interstate Battery recycles old batteries and supplies new ones, a one for one exchange. Reportedly, batteries removed by Interstate, were drained of acid (source of the waste acid). Both the batteries that have been drained of acid and the acid itself must be stored, labeled and transported as a hazardous waste. The environmental office was unaware that some batteries were handled in this manner. Five additional containers were observed in the storage building. They were properly marked and closed. The acid container was not dated.

Records Branch (Bldg. 2008)

This operation generated a waste ammonium hydroxide and waste petroleum distillate. No storage problems were observed in this area. Inspection records are documented and available for review. In a satellite area, one 30 gallon container was observed. It contained a petroleum distillate with a hazard waste label stating D001. This container was stored in the vicinity of a floor drain. The facility representative was advised to provide secondary containment to ensure that none of the waste, if spilled or leaked, could enter the floor drain.

Museum (Bldg. 2112)

This operation generates waste paint related material. One 30 gallon container was observed in a satellite area. Its storage procedures were consistent with the regulations. No hazardous waste was stored in the <90 days storage building.

Hobby Shop (Bldg. 4)

Private vehicles are maintained, rebuilt and repaired by their owners in this area. Wastes are limited to used motor oil, oil filters, etc. There is a paint booth but the vehicle owner is responsible for the waste paint and solvents. The Hobby Shop's <90 day storage shed did not contain any hazardous waste.

Naval Clinic (Bldg. 2200)

According to the Clinic's representative, the facility generates lab chemicals, paint waste and solvents. The storage building (photo 19) held three containers of waste, all were dated, closed, labeled and not leaking. Inspections records were

satisfactory.

Weapons Training Battalion (Bldg. 27241)

This facility trains the soldiers on how to repair their weapons. The less than 90 day storage building held a container (approximately 30 gallons) that was labeled nitric/phosphoric acid. It was full, labeled and dated. No leaks were observed. Another container was labeled kerosene. It was also labeled as a hazardous waste. According to the facility representative, this container was left by person or persons unknown and it is in the process of having the waste removed. The satellite area for this building held two containers. Each was properly labeled and closed.

Storage (>90 day storage building 27401)

The storage building was constructed as a waste storage building and was first used in 1989. In general, this inspector observed that the building was in good condition and did not note any regulatory concerns. The building is located across the road from the base fire department (**photo 20**). There are no occupied buildings in close proximity other than the fire department.

The storage building is surrounded by a fence with a lockable gate (**photo 21**) and appropriate signage on the gate. The garage door is used for the waste deliveries and pickups with an office to the side (**photo 22**). Around the inside perimeter, seven bays hold the different types of hazardous waste (**photos 23 to 34**). Each bay has a separate dry sump used to capture any spillage. The center area is below grade and is used to store waste and stage waste. Additional photographs with narrative are attached to this report. No drains were observed in the building. The floor was coated with an epoxy material. No floor cracks were observed, although the facility is looking into recoating the floor. The building is equipped with explosion proof electric, fire call station, fire sensors and telephone. There is no air-conditioning although there is ventilation and some of the ventilation runs continuously. The drums and other containers observed were in good condition. No odors, leaks or deteriorated containers were observed. Labels on the containers stated the contents and that it was a hazardous waste. Based on the dates observed, no containers were stored for greater than 90 days. This inspector did not find any incident where storage of incompatible materials had occurred.

Inspections are documented weekly and monthly. Waste is received about twice per week. The inspector did not observe any inspection records for the load-in or load-out area of the facility for days it was in use.

During the inspection, the EPA inspector did review a number of the records related to the facility's hazardous waste management program. The findings of the record review are documented in the inspection checklists included as part of this report.

TSD CHECKLIST - VA FACILITIES

Name of Facility: QUANTICO MARINE BASE

Address of Facility: MARINE CORPSE COMBAT DEVELOPMENT COMMAND

QUANTICO, VA

I. General

1. Does the facility generate hazardous waste? YES
2. Does the facility manage (i.e. treat, store or dispose) any hazardous waste that is:
 - a. generated on-site? YES
 - b. generated off-site at facility(s) having different ownership? NO
 - c. generated off-site by facility(s) having common ownership? NO
3. Does the facility perform the following on-site:
 - a. storage of hazardous waste? YES
 - b. treatment of hazardous waste? NO
 - c. disposal of hazardous waste? NO
4. Is the facility subject to any exclusions for its hazardous waste? NO
5. Does the facility contemplate any changes in its operation insofar as the management of hazardous waste is concerned? NO
6. Does the facility transport hazardous waste off-site for further management? YES THE ANNUAL DOCUMENT DATED 28JAN97 LISTS THE OFF-SITE FACILITIES (BY RCRA ID NUMBER) THAT RECEIVE WASTE FROM QUANTICO. ALL SHIPMENTS ARE COORDINATED BY DRMO.

7. Has the facility submitted:

a. Part A permit application? YES

If yes, approximately when? RESUBMITTED 7/25/97

b. Part B permit application? YES VA DEQ REQUESTED AND WAS PROVIDED AN UPDATED COPY IN JULY 1997 OF THE PART B APPLICATION

II. General Facility Standards

9.1.D.1

1. Has the facility obtained a detailed chemical and physical analysis of a representative sample of each waste it receives prior to its treatment, storage or disposal? YES - ATTACHED IS A LIST OF THE WASTE CURRENTLY GENERATED AND SELECTED WASTE PROFILE INFORMATION

9.1.D.3

2. Is the analysis repeated as necessary to ensure that it is accurate and up to date? YES A PROCEDURE IS IN PLACE TO ENSURE ALL THE WASTE IS PROPERLY IDENTIFIED

9.1.D.4

3. If the facility receives off-site shipments of hazardous waste, does it adequately inspect and, if necessary analyze each shipment to determine whether it matches the identity specified on the accompanying manifest? NO OFF-SITE WASTE RECEIVED

9.1.D.5

4. Has the facility developed a written waste analysis plan and, if so, is the plan kept at the facility? YES AND YES; ALSO USES GENERATOR KNOWLEDGE TO IDENTIFY WASTE THE PLAN IS IN THE PART B APPLICATION. THE PLAN IS ATTACHED

If yes, does the waste analysis plan contain the following:

a. List of wastes to be sampled? YES

b. Location of sampling? TYPICALLY ANALYSIS IS AVOIDED DUE TO COST THE PRIMARY METHOD OF WASTE CHARACTERIZATION IS BY THE GENERATOR KNOWLEDGE AND THE MSDS. THE QUANTITIES OF UNKNOWNNS THAT NEED ANALYSIS ARE SMALL.

9.1.D.5.a

c. List of parameters and why they were selected? YES BY REFERENCE OF SECTIONS IN VA REGULATIONS

9.1.D.5.b

d. Test methods? YES ALTHOUGH NO SPECIFIC PARAMETERS ARE LISTED, THE PLAN DOES REFERENCE SW-846

9.1.D.5.c

e. Sampling method to ensure collection of a representative sample? YES BUT THE PLAN IS GENERAL AND DOES NOT HAVE SPECIFICS FOR THE ACTUAL SAMPLING. THE PLAN USES STATEMENTS SUCH AS: "CARE MUST BE TAKEN TO OBTAIN A REPRESENTATIVE SAMPLE, ENSURE SAMPLING DEVICE IS CLEAN, FILL SAMPLE CONTAINER". THE PLAN SHOULD REFLECT CONDITIONS AT QUANTICO AND BE MORE SPECIFIC ON HOW TO COLLECT THE SAMPLE. SEE ATTACHMENT 11 PAGE 8

9.1.D.5.d

f. Frequency of sampling? YES

9.1.D.5.e

g. Waste analyses that off-site generators have agreed to supply? N/A

9.1.D.5.f

h. Additional waste analysis requirements associated with specific waste management methods? N/A

265.13(b)(6) & 268.7 (40 CFR)

i. Required updates for LDR (see LDR checklists for more details)? YES LDR IS MENTIONED IN THE PART B

261.24 (40 CFR)

j. Replacement of EP Tox with TCLP? TC IS IN THE PLAN

265.13(b)(7) (40 CFR)

k. The testing of contents/residues from LDR exempted surface impoundments (268.4(a)) and the procedures for the annual removal of those residues which do not meet applicable treatment standards? N/A NO SURFACE IMPOUNDMENTS

9.1.D.6

l. Procedures that will be used by off-site facilities to inspect and, if necessary, sample and analyze each shipment of hazardous waste to ensure that it matches its identity on the accompanying manifest? N/A OFFSITE WASTE NOT ACCEPTED BY QUANTICO

The inspector should obtain a copy of the waste analysis plan

if any problems are found. COPY IS ATTACHED

9.1.D.5

5. Does it appear that the facility follows its waste analysis plan? YES BASED ON CONVERSATIONS WITH THE FACILITY REPRESENTATIVES, THE FACILITY IS ABLE TO CHARACTER THEIR WASTE PRIOR TO DISPOSAL. THE FACILITY MANAGES THE ORDERING OF MATERIAL IN ORDER TO MINIMIZE THE NECESSITY FOR WASTE ANALYSIS.

9.1.E.2.a

6. Does the facility have a 24 hour surveillance system which continually monitors and controls entry to the active portion of the facility? YES THROUGH ROAMING PATROLS

If no:

9.1.E.2.a.(1)

a. Does the facility have an artificial or natural boundary which completely surrounds the active portion of the facility? YES A FENCE WITH A LOCKABLE GATE

9.1.E.2.a.(2)

b. Does the facility have a means to control entry at all times, i.e., attendants, locked entrances, gates, television monitors, controlled roadway access, etc. YES THE FACILITY IS LOCKED EXCEPT WHEN ENVIRONMENTAL IS PRESENT TO ACCEPT, INSPECT, SHIP, ETC. WASTE

9.1.E.3

7. Does the facility have a restricted access sign posted at each entrance to the active portion of the facility, i.e., "Danger - Unauthorized Personnel Keep Out"? YES

9.1.F.2.a & b

8. Does the facility have a written inspection schedule and, if so, is it kept at the facility? YES BOTH WEEKLY AND MONTHLY DOCUMENTED INSPECTIONS

If yes, does it address inspecting: ATTACHED

9.1.F.2.a

a. Monitoring equipment? YES

b. A written job description for each position? YES

9.1.G.4.c

c. A written description of the type and amount of training that will be given to each person? YES

9.1.G.4.d

d. Records that document that the training or job experience required by facility personnel to effectively respond to emergencies and otherwise manage hazardous waste in a proper manner has been successfully completed? YES

9.1.G.2

14. Have facility personnel successfully completed the required training or job experience within six months after occupying the position? YES

9.1.G.3

15. Do facility personnel take part in an annual review of the initial training requirements and update them as necessary? YES

Answer the following questions if the facility manages either ignitable or reactive waste.

9.1.H.1

16. Are ignitable or reactive wastes separated and protected from sources of ignition or reaction? YES STORAGE BLDG HAS EXPLOSION PROOF FIXTURES

17. Are there "No Smoking" signs posted wherever a hazard from ignitable or reactive waste exists? YES

9.1.H.2

18. Are ignitable or reactive wastes managed in what appears to be a safe manner (i.e. no generation of extreme heat, pressure, fire or explosion, violent reactions, toxic fumes, etc. or damage to devices holding such wastes)? YES

Answer the following question if the facility manages incompatible wastes. NO INCOMPATIBILITY PROBLEMS WERE OBSERVED DURING THIS INSPECTION. THE FACILITY DOES MANAGE WASTE, IF COMMINGLED, WOULD CAUSE A PROBLEM BUT THESE WASTE ARE KEPT APART

9.1.H.2

19. Is the mixture or commingling of incompatible wastes, or

incompatible wastes and materials conducted in a safe manner?
YES

III. Preparedness and Prevention

1. Does the facility have the following equipment:

9.2.B.1

a. Internal communications or alarm system? YES

9.2.B.2

b. Telephone or hand-held two-way radio? YES CELL PHONE

9.2.B.3

c. Portable fire extinguishers or other fire control equipment, spill control equipment and decontamination equipment? YES FIRE STATION IS ACROSS THE STREET

9.2.B.4

d. Adequate volume of water? YES

9.2.C

2. Does the facility test and maintain the above equipment to assure its proper operation? YES

9.2.E

3. Is there sufficient aisle space to allow the unobstructed movement of personnel and equipment to areas where hazardous waste are located in the event of an emergency? YES

9.2.F.1.a

4. Has the facility made arrangements with local authorities to familiarize them with the layout of the facility and the nature/hazards of the hazardous waste handled at the facility? YES THE FACILITY HAS ITS OWN FIRE DEPARTMENT AND THE COMMANDER HAS AGREED WITH THE PART B WHERE IT TALKS ABOUT THE FIRE DEPARTMENT AND EMERGENCY RESPONSE. ARRANGEMENTS, IN WRITING, WITH THE SURROUNDING FIRE DEPARTMENTS

IV. Contingency Plan

9.3.A.1 & C.1

1. Has the facility prepared a contingency plan and is it maintained at the facility? YES THERE IS ONE MANUAL WITH 9 ADDITIONAL SECTIONS-ONE FOR EACH OF THE <90 GENERATORS LOCATED AT QUANTICO

If yes, does it contain the following:

2. Does the facility note any significant discrepancies in the manifest (significant discrepancies in quantity are variations greater than 10 % for bulk waste or any variation in piece count for batch waste)? N/A

5.5.C.2.e

3. Does the facility send a copy of the manifest back to the generator within 30 days after the waste was received? N/A

5.5.C.2.f

4. Does the facility retain a copy of the manifest for at least 3 years? N/A

5.6.B

5. Does the facility attempt to reconcile any significant discrepancies in the manifest when they are discovered?
N/A

6. If the discrepancy is not resolved within 15 days after receiving the waste, does the facility notify the appropriate state agency in writing? N/A

9.4.B.1

7. Does the facility keep a written operating record?
YES

If yes, does it contain the following:

9.4.B.2.a

a. Description and quantity of each hazardous waste received? YES

b. Method(s) and date(s) of treatment, storage or disposal? YES NO TREATMENT AT THIS FACILITY

9.4.B.2.b

c. Location of each hazardous waste within the facility and the quantity at each location? YES A LIST IS FAXED TO THE FIRE CHIEF ROUTINELY DESCRIBING THE WASTE AND ITS LOCATION (SAMPLE ATTACHED) AND A COMPLETE INVENTORY IS MAINTAINED (ATTACHED)

9.4.B.2.c

d. Records and results of waste analysis? IF THERE IS AN ANALYSIS, IT IS ON RECORD OTHERWISE THE FACILITY USES MSDS AND GENERATOR KNOWLEDGE

9.4.B.2.d

e. Details of all incidents that require implementing the

contingency plan? N/A

9.4.B.2.e

f. Records and results of inspections? YES

9.4.B.2.f

g. Monitoring, testing or analytical data? YES

9.4.B.2.g

h. Closure/post-closure cost estimates? YES

265.73(b)(8) (40 CFR)

i. Records of quantities and dates of placement of hazardous waste into land disposal units? N/A NO LAND DISPOSAL UNITS FOR HAZARDOUS WASTE AT QUANTICO THE MANIFESTS INCLUDE THE LDR NOTIFICATIONS FOR DISPOSED WASTES

265.73(b)(9) - (14) (40 CFR)

j. Copies of notifications, certifications and demonstrations, if applicable, required by the LDR program? N/A

9.4.D

8. Does the facility prepare, and submit to the appropriate state agency by March 1 of each even numbered year, a annual report using the correct form (Form 8700-13)? YES COVER PAGE ATTACHED

If yes, does it contain the following:

9.4.D.1

a. EPA I.D. number, name and address of the facility?
YES

9.4.D.2

b. Calendar year covered by the report? YES

9.4.D.3

c. EPA I.D. number of each generator from which the facility received a hazardous waste shipment during the year? YES

9.4.D.4

d. Description and the quantity of each hazardous waste received during the year (for off-site facilities, this information must be listed by EPA I.D. number of each

generator)? YES

9.4.D.5

e. Method of treatment, storage or disposal of each hazardous waste? NO

9.4.D.6

f. Required monitoring data? N/A

9.4.D.7

g. Most recent closure/post-closure cost estimates?
N/A

9.4.E

9. Has the facility received any hazardous waste from an off-site generator without an accompanying manifest? OFF-SITE WASTE NOT RECEIVED

VI. Ground Water Monitoring

N/A THE FACILITY HAS NO ACTIVE NO GROUND DISPOSAL UNITS CONSEQUENTLY THERE ARE NO GROUND WATER MONITORING

VII. Closure/Post-Closure/Financial Assurance

9.6.C.1

1. Does the facility have a written closure plan? YES

If yes, answer the following:

a. Has the plan been approved by the State? UNDER REVIEW AS A SECTION OF THE PART B PERMIT APPLICATION

9.6.C.3

b. Has the closure plan been amended as necessary in order to keep it up-to-date? PLAN FINALIZED IN JULY 1997

9.7.B.1

c. Is there a detailed and up-to-date written estimate of closure cost? US GOV EXEMPT FROM FINANCIAL ASSURANCE

9.7.B.4

d. Is the latest closure cost estimate kept at the facility? YES

9.6.I.1

2. Does the facility have a written post-closure plan? IT IS THE FACILITY'S OPINION THAT POST-CLOSURE WILL NOT BE NEEDED SINCE THE BLDG 27401 WILL DECONTAMINATED WHEN RETIRED.

If yes, answer the following:

a. Has the plan been approved by the State? UNDER REVIEW AS A SECTION IN THE PART B

9.6.I.4

b. Has the post-closure plan been amended as necessary in order to keep it up-to-date? N/A

9.7.D.1

c. Is there a detailed and up-to-date written estimate of post-closure cost? FINANCIAL ASSURANCE EXEMPT US GOV 264.140(c)

9.7.D.4

d. Is the latest post-closure cost estimate kept at the facility? N/A

9.7.C & 9.7.E

3. Does the facility have a means to satisfy its financial assurance requirements? EXEMPT US GOV

VIII. Containers

Answer the following questions if the facility stores hazardous waste in containers.

9.8.B

1. Are container(s) in good condition? YES

9.8.C

2. Are container(s) made of or lined with materials which will not react with or be incompatible with the waste they are storing? YES

9.8.D.1

3. Are container(s) kept closed? YES

9.8.B

4. Are any container(s) leaking? NO

9.8.E

5. Are container storage area(s) inspected at least weekly and

is an adequate inspection record/log maintained? YES SAMPLE
INSPECTION FORM ATTACHED

9.8.F

6. Are container(s) holding ignitable or reactive waste located at least 15 meters (50 feet) from the facility's property line? YES

7. Are incompatible wastes placed in the same container(s)?
NO NONE OBSERVED

9.8.G.1

a. Is there any evidence that conditions of extreme heat or pressure, fire or explosion, violent reactions or toxic emissions occurred? NO

9.8.G.3

8. Are container(s) holding incompatible hazardous waste properly separated or protected from one another while in storage? YES SEPARATE STORAGE BAYS ARE PROVIDED SEE PHOTOS

GENERATOR CHECKLIST - VA FACILITIES

(12-92)

Date of Inspection AUG 1997

Name of Facility: QUANTICO MARINE BASE

Address of Facility: MARINE CORPS COMBAT DEVELOPMENT COMMAND

EPA I.D. Number: VA1170024722

I. General THE FACILITY HAS SUBMITTED A PART B PERMIT APPLICATION FOR THE HAZARDOUS WASTE STORAGE BUILDING AND THE FACILITY IS USING BUILDING 27401 FOR >90 DAY STORAGE. THE FACILITY MAINTAINS 10 <90 DAY ACCUMULATION SITES AND SATELLITE STORAGE LOCATIONS (SEE ATTACHED LISTS).

1. Provide a brief description of the type of operation(s) that produces hazardous waste at this facility:

US MARINE BASE FOR TRAINING AND ADMINISTRATIVE ACTIVITIES, FBI ACADEMY, AIRCRAFT MAINTENANCE, SHOOTING RANGES

2. Does the facility perform the following on-site:

a. storage (>90 day or >180 day for SQG) of hazardous waste? YES

b. treatment of hazardous waste? NO

c. disposal of hazardous waste? NO

(if yes, complete appropriate TSD checklists)

3.1

3. Is the facility subject to any exclusions for its hazardous waste? NO

6.1.C

4. Has the facility properly determined whether all of its waste exhibits any of the characteristics of hazardous waste? YES THROUGH TESTING, USER KNOWLEDGE AND MSDS INFORMATION

5. Has the facility failed to notify the State of any of its hazardous waste management activities, including locations of all hazardous waste accumulation areas? NONE OBSERVED

II. Manifest

Complete this section only if facility ships hazardous waste off-site.

5.2.A

1. Does the facility use the Uniform Hazardous Waste Manifest whenever transporting hazardous waste? YES

If yes, review a representative number of manifests and indicate whether they contain: THREE MANIFESTS ARE ATTACHED FOR YOUR INFORMATION

5.3.B

a. Generator's name, mailing address, telephone number and EPA ID number? YES

b. Unique five digit manifest number? YES

c. Total number of pages used to complete this manifest? YES

d. Transporter's name and EPA ID number? YES

e. DOT waste description, including proper shipping name, hazardous waste class and I.D. Number as identified in Va Regulations? YES

f. Number and type of containers (if applicable)? YES

g. Quantity of each waste transported? YES SAFETY KLEEN MANIFEST HAVE STAND WEIGHTS FOR THE WASTE COLLECTED. THE NUMBERS ON THE MANIFEST DO NOT ALWAYS REFLECT THE EXACT AMOUNT OF WASTE BEING TRANSPORTED (TWO MANIFESTS ARE ATTACHED).

h. Name, EPA ID number and site address of facility designated to receive the waste? YES

5.3.C

i. The following certification? YES

"I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste

generated to a degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford."

2. Did the generator:

5.4.A

a. Sign and date the manifest? YES

5.4.B

b. Obtain the handwritten signature and date of acceptance from the initial transporter? YES

5.4.D

c. Ensure that return copies of the manifest from the designated TSD facility were properly signed and dated?
YES

5.4.E

d. Retain a copy of the signed manifest for at least three years? YES

The inspector should obtain copies of any manifests that are found to have problems.

III. Pre-Transport Requirements

Complete this section only if the facility ships hazardous waste off site.

1. Is there any indication that the facility is:

6.4.A

a. Not packaging its waste in accordance with Va Regulations Governing Transportation of Hazardous Materials? NO

6.4.B

b. Not labelling each package in accordance with Va Regulations Governing Transportation of Hazardous Materials? NO

6.4.C.2

c. Not marking each container of 110 gallons or less with the words "Hazardous Waste"--Federal Law Prohibits Improper Disposal? NO

6.4.D

2. Does the facility placard or offer the transporter placards for its hazardous waste shipments? QUESTION NOT ASKED.

IV. Waste Accumulation

1. Does the facility utilize the following types of hazardous waste accumulation:

a. Satellite accumulation? YES

b. Less than 90 day storage? YES

Answer the following questions if the generator has satellite accumulation area(s).

6.4.E.4.a

2. Is satellite accumulation area(s) near the point of waste generation and under the control of the operator of the process actually generating the waste? YES

6.4.E.4.a

3. Are there multiple satellite accumulation areas for any one process that generates hazardous waste? YES

If yes, describe: SEE REPORT FOR THE FBI GUNSMITH SHOP

6.4.E.4.a

4. Is the waste stored in container(s)? YES

9.8.B

5. Are container(s) in good condition? YES

6.4.E.4.a.(2)

6. Are container(s) marked with the words "hazardous waste" or the actual contents of the container(s)? YES

9.8.D.1

7. Are container(s) kept closed? YES

9.8.B

8. Are any container(s) leaking? NO

6.4.E.4.a

9. Has the facility accumulated more than 55 gallons of hazardous waste or more than 1 quart of acutely hazardous waste in a satellite accumulation area? ONE CONTAINER AT THE FBI/HRT WAS ALL BUT FULL OF Q-TIPS AND PATCHES RESULTING FROM GUN CLEANING

6.4.E.4.b

a. Are the container(s) holding excess waste dated as to when accumulation began? N/A

b. Does the excess waste comply with the less than 90 day storage requirements (6.4.E.2) within three days of the time when accumulation of such excess waste began? N/A

Answer the following questions if the facility has less than 90 day storage.

6.4.E.2.d

10. Does the facility record inspections of its storage area in an inspection log or summary? YES

If yes, describe what information is shown on the log or summary: SAMPLE COPY ATTACHED TO REPORT; OPERATOR DOES A WEEKLY AND A MONTHLY INSPECTION WHILE ENVIRONMENTAL OFFICE DOES A QUARTERLY INSPECTION

6.4.E.2.d

11. Does the facility maintain personnel training and other records required in 9.1.G? YES

If yes, do these records include:

9.1.G.4.a

a. Job title for each position related to hazardous waste management and the employee filling each job? YES

9.1.G.4.b

b. A written job description for each position? YES

9.1.G.4.c

c. A written description of the type and amount of training that will be given to each person? YES

9.1.G.4.d

d. Records that document that the training or job experience required by facility personnel to effectively respond to emergencies and otherwise manage hazardous waste in a proper manner has been successfully completed?

YES

9.1.G.2

12. Have facility personnel successfully completed the required training or job experience within six months after occupying the position? YES

9.1.G.3

13. Do facility personnel take part in an annual review of the initial training requirements and update them as necessary? YES

6.4.E.2.d

14. Does the facility maintain an adequate preparedness and prevention program as required in 9.2? YES

Is the facility equipped with:

9.2.B.1

a. Internal communications or alarm system? YES

9.2.B.2

b. Telephone or hand-held two-way radio? YES TYPICALLY THERE ARE NO PHONES AT THE <90 DAY STORAGE AREAS BUT ADJACENT BUILDINGS DO HAVE PHONES

9.2.B.3

c. Portable fire extinguishers or other fire control equipment, spill control equipment and decontamination equipment? YES THE FACILITY ALSO HAS ITS OWN FIRE DEPARTMENT

9.2.B.4

d. Adequate volume of water? YES PUBLIC HYDRANT SYSTEM

9.2.C

15. Does the facility test and maintain the above equipment to assure its proper operation? YES FIRE DEPARTMENT ACTIVITY

9.2.E

16. Is there sufficient aisle space to allow the unobstructed movement of personnel and equipment to areas where hazardous waste are located in the event of an emergency? YES

9.2.F.1.a

17. Has the facility made arrangements with local authorities to familiarize them with the layout of the facility and the nature/hazards of the hazardous waste handled at the facility?

YES FACILITY HAS OWN FIRE DEPARTMENT ALSO THERE IS AN AGREEMENT WITH OTHER FIRE DEPARTMENTS IN THE AREA, AGREEMENTS IS DOCUMENTED IN PART B APPLICATION.

6.4.E.2.d

18. Has the facility prepared a contingency plan and is it maintained at the facility? YES

If yes, does it contain the following:

9.3.B.1

a. Description of the actions that are to be taken in case of an emergency (all potential types of emergencies should be identified)? YES

9.3.B.3

b. Description of arrangements made with local authorities? YES COPIES ARE IN THE PART B APPLICATION

9.3.B.4

c. Current list of emergency coordinators' names, addresses and phone numbers (office and home)?
YES SOME UPDATES FOR PHONE NUMBERS AND PERSONS NEEDED BUT THESE CHANGES ARE MINIMAL AND ARE BEING CHANGED.

9.3.B.5

d. List of all emergency equipment at the facility, including locations, descriptions and relevant capabilities? YES ALTHOUGH THE RELEVANT CAPABILITIES ARE NOT DESCRIBED

9.3.B.6

e. evacuation plan for facility personnel? YES

The inspector should obtain a copy of the facility's contingency plan if any problems are found.

9.3.C.2

19. Were copies of the contingency plan submitted to local authorities that may provide emergency services? YES

20. Has the facility's contingency plan ever failed in an emergency? N/A

9.3.F.10

21. If the contingency plan is implemented, does the facility record the incident in its operating log and submit a written report of the incident to the appropriate state agency within

15 days? N/A

6.4.E.2.a

22. What is the method of waste storage:

Containers? YES

Tanks? NO

Containment Buildings? NO

Other? NO

Answer the following questions if the facility uses container storage.

6.4.E.2.b & c

23. Are the container(s) marked with the words "Hazardous Waste" and the date that waste accumulation in that container begins? YES

6.4.E.2

24. Based upon accumulation dates, have any container(s) been in storage for more than 90 days? NONE OBSERVED BUT THE FACILITY DOES HAVE A SEPARATE >90 STORAGE FACILITY

If yes, the inspector should complete the appropriate TSD checklists. INCLUDED WITH REPORT

9.8.B

**** 25. Are container(s) in good condition? YES ALTHOUGH THE MIX ROOM AT HMX-1 HAD WASTE PAINT SPILL ON THE CONTAINER AND FLOOR.

9.8.C

26. Are container(s) made of or lined with materials which will not react with or be incompatible with the waste they are storing? YES

9.8.D.1

27. Are container(s) kept closed? YES

9.8.B

28. Are any container(s) leaking? NO

9.8.E

29. Are container storage area(s) inspected at least weekly? YES AND THESE INSPECTIONS ARE DOCUMENTED

9.8.F

30. Are container(s) holding ignitable or reactive waste located at least 15 meters (50 feet) from the facility's property line? YES

31. Are incompatible wastes placed in the same container(s)?
NONE OBSERVED

9.8.G.1

a. Is there any evidence that conditions of extreme heat or pressure, fire or explosion, violent reactions or toxic emissions occurred? NO

9.8.G.3

32. Are container(s) holding incompatible hazardous waste properly separated or protected from one another while in storage? YES

TANKS ARE NOT USED BY QUANTICO FOR STORAGE OF HAZARDOUS WASTE

CONTAINMENT BUILDINGS ARE NOT USED BY QUANTICO FOR THE STORAGE OF HAZARDOUS WASTE

V. Recordkeeping and Reports

6.5.C.2

65. Does the facility prepare an Exception Report and submit it to the state regulatory agency if a signed copy of the manifest is not received within 45 days of the date the waste was accepted by the initial transporter? N/A NO EXCEPTION REPORTS WERE NOTED IN THE FACILITY FILES

6.5.B.1

66. If the facility ships any hazardous waste off-site, does it prepare a Annual Report using the required forms and submit it to the state regulatory agency by March 1 for the preceding calendar year? YES BIENNIAL REPORTS ARE NOW REQUIRED BY VEDEQ, COVER PAGE TO THE REPORT IS ATTACHED, THE FACILITY ALSO SUBMITS GENERATION REPORTS TO DOD IN A DOD FORMAT

6.5.A.2 & 3/9.1.F.4

67. Does the facility retain copies of Annual (biennial) Reports, Exception Reports and test results/waste analyses for a minimum of 3 years from the date that the waste was last

sent to on-site or off-site treatment, storage or disposal and inspection records for at least 3 years after the inspection?
YES

Underground Storage Tanks

Quantico Marine Base has implemented the following leak detection procedures for its underground storage tanks:

1. Tank tightness tests are performed annually on all tanks.
2. The facility utilizes inventory control procedures for all tanks.
3. Ground water monitoring is in place as a back up on all tanks.

In addition, the facility has installed an interstitial monitoring system on the following tanks:

2056D, 2056E, 2056F, 24142A, 26156A, & 27002C

The facility has also installed automatic tank gauging systems on the following tanks:

3500B, 3500C, & 3500D

During the subject inspection, the EPA inspector completed leak detection inspection checklists for all of the facility's regulated tanks. The completed checklists are provided as part of this report.

Also included as attachments to this report are a number of documents requested by the EPA inspector at the time of the inspection. These documents are as follows:

Attachment No. UST-1	Site characterization report for tank no. 27940C, FBI Service Station
Attachment No. UST-2	Underground tank system characteristic reports
Attachment No. UST-3	Example of tank leak detection reports

Leak Detection Inspection Checklist

I. Ownership of Tank(s)

MARINE CORPS COMBAT DEVELOPMENT COMMAND

Owner Name (Corporation, Individual, Public Agency or other entity):

3040 McCawley Avenue

Street Address

QUANTICO

VIRGINIA

22134-5053

City

State

Zip Code

703 784 4030

Area Code Phone Number

CAMILO K. COBILE

Contact Person At UST Location

II. Location of Tank(s)

Facility Name or Company Site Identifier, if different from left

Street Address or State Road, as applicable

City (nearest)

State

Zip Code

Area Code Phone Number

Number of Tanks at This Location: 9

III. Tank Information Complete for each tank. If facility has more than 4 tanks, photocopy page and complete information for additional tanks.

Tank presently in use (circle)	Tank 2056D	Tank 2056E	Tank 2056F	Tank 24142A
If not, date last used				
If emptied, verify 1" or less of product in tank				
Month and Year Tank Installed	08/01/91	08/01/91	08/01/91	09/01/91
Material of Construction	FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS
Capacity of Tank (in gallons)	10,000	10,000	6,000	4,000
Substance Stored	GASOLINE	GASOLINE	DIESEL	GASOLINE

IV.A. Release Detection For Tanks

Check the release detection method(s) used for each tank or N/A if none required.

Manual Tank Gauging (tanks under 1,000 gal.)				
Manual Tank Gauging and Tank Tightness Testing (tanks under 2,000 gal.)				
Tank Tightness Testing and Inventory Control	✓	✓	✓	✓
Automatic Tank Gauging	✓	✓	✓	✓
Vapor, Groundwater or Interstitial Monitoring	✓	✓	✓	✓
Other approved method				

IV.B. Release Detection For Piping

Check the release detection method(s) used for piping.

Check Pressurized (P) or Suction (S) Piping for each tank	S	S	S	S
Automatic Line Leak Detectors, and check one				
Vapor or Groundwater Monitoring	✓	✓	✓	✓
Secondary Containment with Monitoring	✓	✓	✓	✓
Line Tightness Testing	✓	✓	✓	✓

I, Gerard R. Donovan, Jr. certify that I have inspected the above named facility on 08/11/97
(print name) month/day/year

Inspector's Signature: Date: 08/11/97

Leak Detection Inspection Checklist

I. Ownership of Tank(s)

MARINE CORPS COMBAT DEVELOPMENT COMMAND
 Owner Name (Corporation, Individual, Public Agency or other entity):
3040 McCawley Avenue
 Street Address
QUANTICO VIRGINIA 22134-5053
 City State Zip Code
703 784 4030
 Area Code Phone Number
CAMILO K. COBILE
 Contact Person At UST Location

II. Location of Tank(s)

Facility Name or Company Site Identifier, if different from left
 Street Address or State Road, as applicable
 City (nearest) State Zip Code
 Area Code Phone Number
 Number of Tanks at This Location: 9

III. Tank Information

Complete for each tank. If facility has more than 4 tanks, photocopy page and complete information for additional tanks.

Tank presently in use (circle)	Tank 26156A	Tank 27002C	Tank 3500B	Tank 3500C
If not, date last used				
If emptied, verify 1" or less of product in tank				
Month and Year Tank Installed	01/01/92	01/01/91	01/01/86	01/01/86
Material of Construction	FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS
Capacity of Tank (in gallons)	4,000	10,000	12,000	12,000
Substance Stored	DIESEL	DIESEL	GASOLINE	GASOLINE

IV.A. Release Detection For Tanks

Check the release detection method(s) used for each tank or N/A if none required.

Manual Tank Gauging (tanks under 1,000 gal.)				
Manual Tank Gauging and Tank Tightness Testing (tanks under 2,000 gal.)				
Tank Tightness Testing and Inventory Control	✓	✓	✓	✓
Automatic Tank Gauging	✓	✓	✓	✓
Vapor, Groundwater or Interstitial Monitoring	✓	✓	✓	✓
Other approved method				

IV.B. Release Detection For Piping

Check the release detection method(s) used for piping.

Check Pressurized (P) or Suction (S) Piping for each tank	S	S	S	S
Automatic Line Leak Detectors, <u>and</u> check one				
Vapor or Groundwater Monitoring	✓	✓	✓	✓
Secondary Containment with Monitoring	✓	✓	✓	✓
Line Tightness Testing	✓	✓	✓	✓

I, Gerard R. Donovan, Jr. certify that I have inspected the above named facility on 08/11.12/97
 (print name) month/day/year

Inspector's Signature: _____ Date: 08/11.12/97

Leak Detection Inspection Checklist

I. Ownership of Tank(s)

MARINE CORPS COMBAT DEVELOPMENT COMMAND

Owner Name (Corporation, Individual, Public Agency or other entity):

3040 McCawley Avenue

Street Address

QUANTICO

VIRGINIA

22134-5053

City

State

Zip Code

703 784 4030

Area Code Phone Number

CAMILO K. COBILE

Contact Person At UST Location

II. Location of Tank(s)

Facility Name or Company Site Identifier, if different from left

Street Address or State Road, as applicable

City (nearest)

State

Zip Code

Area Code Phone Number

Number of Tanks at This Location: 9

III. Tank Information Complete for each tank. If facility has more than 4 tanks, photocopy page and complete information for additional tanks.

Tank presently in use (circle)	Tank 3500D	Tank	Tank	Tank
If not, date last used				
If emptied, verify 1" or less of product in tank				
Month and Year Tank Installed	01/01/86			
Material of Construction	FIBERGLASS			
Capacity of Tank (in gallons)	12,000			
Substance Stored	GASOLINE			

IV.A. Release Detection For Tanks

Check the release detection method(s) used for each tank or N/A if none required.

Manual Tank Gauging (tanks under 1,000 gal.)				
Manual Tank Gauging and Tank Tightness Testing (tanks under 2,000 gal.)				
Tank Tightness Testing and Inventory Control	✓			
Automatic Tank Gauging	✓			
Vapor, Groundwater or Interstitial Monitoring	✓			
Other approved method				

IV.B. Release Detection For Piping

Check the release detection method(s) used for piping.

Check Pressurized (P) or Suction (S) Piping for each tank	S			
Automatic Line Leak Detectors, and check one				
Vapor or Groundwater Monitoring	✓			
Secondary Containment with Monitoring	✓			
Line Tightness Testing	✓			

I, Gerard R. Donovan, Jr. certify that I have inspected the above named facility on 08/11/97
(print name) month/day/year

Inspector's Signature: Date: 08/11/97

Leak Detection for Piping

Pressurized Piping

A method must be selected from each set. Where applicable indicate date of last test. If this facility has more than 4 tanks, please photocopy this page and complete information for all additional piping.

Set 1	Tank 2056D	Tank 2056E	Tank 2056F	Tank 24142A
Automatic Flow Restrictor				
Automatic Shut-off Device				
Continuous Alarm System				
and				
Set 2				
Annual Line Tightness Testing				
Interstitial Monitoring				
If Interstitial Monitoring, documentation of monthly monitoring is available				
Ground-Water or Vapor Monitoring				
If Ground-Water or Vapor Monitoring, documentation of monthly monitoring is available				
Other Approved Method (specify in comments section)				

Suction Piping . indicate date of most recent test.

	YEARLY	YEARLY	YEARLY	YEARLY
Line Tightness Testing (required every 3 years)				
Secondary Containment with Interstitial Monitoring	✓	✓	✓	✓
Ground-Water or Vapor Monitoring	BACK UP	BACK UP	BACK UP	BACK UP
Other Approved Method (specify in comments section)				

No Leak Detection Required (must answer yes to all of the following questions)

Operates at less than atmospheric pressure				
Has only one check valve, which is located directly under pump				
Slope of piping allows product to drain back into tank when suction released				
All above information on suction piping is verifiable				

On the back of this sheet, please sketch the site, noting all piping runs, tanks (including size and substances stored) and location of wells and their distance from tanks and piping.

Comments:

Inspector's Signature: _____ Date: 08/11.12/97

Leak Detection for Piping

Pressurized Piping

A method must be selected from each set. Where applicable indicate date of last test. If this facility has more than 4 tanks, please photocopy this page and complete information for all additional piping.

Set 1	Tank26156A	Tank27002C	Tank3500B	Tank3500C
Automatic Flow Restrictor			✓	✓
Automatic Shut-off Device			✓	✓
Continuous Alarm System			✓	✓
and				
Set 2				
Annual Line Tightness Testing			✓	✓
Interstitial Monitoring				
If Interstitial Monitoring, documentation of monthly monitoring is available				
Ground-Water or Vapor Monitoring			BACK UP	BACK UP
If Ground-Water or Vapor Monitoring, documentation of monthly monitoring is available				
Other Approved Method (specify in comments section)				

Suction Piping . Indicate date of most recent test.

Line Tightness Testing (required every 3 years)	YEARLY	YEARLY		
Secondary Containment with Interstitial Monitoring	✓	✓		
Ground-Water or Vapor Monitoring	BACK UP	BACK UP		
Other Approved Method (specify in comments section)				

No Leak Detection Required (must answer yes to all of the following questions)

Operates at less than atmospheric pressure				
Has only one check valve, which is located directly under pump				
Slope of piping allows product to drain back into tank when suction released				
All above information on suction piping is verifiable				

On the back of this sheet, please sketch the site, noting all piping runs, tanks (including size and substances stored) and location of wells and their distance from tanks and piping.

Comments: _____

Inspector's Signature: _____ Date: 08/11/97

Leak Detection for Piping

Pressurized Piping

A method must be selected from each set. Where applicable indicate date of last test. If this facility has more than 4 tanks, please photocopy this page and complete information for all additional piping.

Set 1	Tank 3500D	Tank	Tank	Tank
Automatic Flow Restrictor	✓			
Automatic Shut-off Device	✓			
Continuous Alarm System	✓			
and				
Set 2				
Annual Line Tightness Testing	✓			
Interstitial Monitoring				
If Interstitial Monitoring, documentation of monthly monitoring is available				
Ground-Water or Vapor Monitoring				
If Ground-Water or Vapor Monitoring, documentation of monthly monitoring is available				
Other Approved Method (specify in comments section)				

Suction Piping . Indicate date of most recent test.

Line Tightness Testing (required every 3 years)				
Secondary Containment with Interstitial Monitoring				
Ground-Water or Vapor Monitoring				
Other Approved Method (specify in comments section)				

No Leak Detection Required (must answer yes to all of the following questions)

Operates at less than atmospheric pressure				
Has only one check valve, which is located directly under pump				
Slope of piping allows product to drain back into tank when suction released				
All above information on suction piping is verifiable				

On the back of this sheet, please sketch the site, noting all piping runs, tanks (including size and substances stored) and location of wells and their distance from tanks and piping.

Comments: _____

Inspector's Signature: _____

Date: 08/11/97

Inventory Control and Tank Tightness Testing

 Method of tank tightness testing: VACUTECT

 Name and address of tank tightness tester: TANKNOLOGY ENVIRONMENTAL, INC. 201 NORTH FAIRFAX STREET, ALEX. Va

Please complete all information for each tank

If this facility has more than 4 tanks, please photocopy this page and complete the information for all additional tanks.

	Tank 2056D	Tank 2056E	Tank 2056F	Tank 24142A
Date of last tank tightness test. <u>YEARLY</u>	07/31/96	07/31/96	07/31/96	07/31/96
Did tank pass test? Indicate yes or no. If no, specify in comments section below the status of the tank or what actions have been taken (e.g., has state been notified?)	YES	YES	YES	YES
Documentation of deliveries and sales balances with daily measurements of liquid volume in tank are maintained and available.	YES	YES	YES	YES
Overages or shortages are less than 1% + 130 gals of tank's flow-through volume.	YES	YES	YES	YES
If no, which months were not?				

Please answer yes or no for each question

Owner/operator can explain inventory control methods and figures used and recorded.	Yes ✓	No
Records include monthly water monitoring.	Yes ✓	No
Tank inventory reconciled before and after fuel delivery.	Yes ✓	No
Books are reconciled monthly.	Yes ✓	No
Appropriate calibration chart is used for calculating volume.	Yes ✓	No
Dispenser pumps are calibrated to within 6 cubic inches per five gallons.	Yes ✓	No
The drop tube in the fill pipe extends to within one foot of tank bottom.	Yes ✓	No
Owner can demonstrate consistency in dipsticking techniques.	Yes ✓	No
The dipstick is long enough to reach the bottom of the tank.	Yes ✓	No
The ends of the gauge stick are flat and not worn down.	Yes ✓	No
The dipstick is marked legibly & the product level can be determined to the nearest 1/8th inch.	Yes ✓	No
The tank has been tested within the year & has passed the tightness test (if necessary).	Yes ✓	No
A third-party certification of the tank tightness test method is available.	Yes ✓	No
Tank tester complied with all certification requirements.	Yes ✓	No
Monitoring and testing are maintained and available for the past 12 months.	Yes ✓	No

Comments:

Inspector's Signature:

 Date: 08/11, 12/97

Inventory Control and Tank Tightness Testing

Method of tank tightness testing: VACUTECT

Name and address of tank tightness tester: TANKNOLOGY ENVIRONMENTAL, INC. 201 NORTH FAIRFAX STREET, ALEX, Va

Please complete all information for each tank **If this facility has more than 4 tanks, please photocopy this page and complete the information for all additional tanks.**

	Tank 26156A	Tank 27002C	Tank 3500B	Tank 3500C
Date of last tank tightness test. YEARLY	07/31/96	07/31/96	07/31/96	07/31/96
Did tank pass test? Indicate yes or no. If no, specify in comments section below the status of the tank or what actions have been taken (e.g., has state been notified?)	YES	YES	YES	YES
Documentation of deliveries and sales balances with daily measurements of liquid volume in tank are maintained and available.	YES	YES	YES	YES
Overages or shortages are less than 1% + 130 gals of tank's flow-through volume.	YES	YES	YES	YES
If no, which months were not?				

Please answer yes or no for each question

Owner/operator can explain inventory control methods and figures used and recorded.	Yes ✓	No
Records include monthly water monitoring.	Yes ✓	No
Tank inventory reconciled before and after fuel delivery.	Yes ✓	No
Books are reconciled monthly.	Yes ✓	No
Appropriate calibration chart is used for calculating volume.	Yes ✓	No
Dispenser pumps are calibrated to within 6 cubic inches per five gallons.	Yes ✓	No
The drop tube in the fill pipe extends to within one foot of tank bottom.	Yes ✓	No
Owner can demonstrate consistency in dipsticking techniques.	Yes ✓	No
The dipstick is long enough to reach the bottom of the tank.	Yes ✓	No
The ends of the gauge stick are flat and not worn down.	Yes ✓	No
The dipstick is marked legibly & the product level can be determined to the nearest 1/8th inch.	Yes ✓	No
The tank has been tested within the year & has passed the tightness test (if necessary).	Yes ✓	No
A third-party certification of the tank tightness test method is available.	Yes ✓	No
Tank tester complied with all certification requirements.	Yes ✓	No
Monitoring and testing are maintained and available for the past 12 months.	Yes ✓	No

Comments: _____

Inspector's Signature: _____

Date: 08/11/12/97

Inventory Control and Tank Tightness Testing

Method of tank tightness testing: VACUTECT

Name and address of tank tightness tester: TANKNOLOGY ENVIRONMENTAL, INC. 201 NORTH FAIRFAX STREET, ALEX. Va

Please complete all information for each tank

If this facility has more than 4 tanks, please photocopy this page and complete the information for all additional tanks.

	Tank 3500D	Tank	Tank	Tank
Date of last tank tightness test. YEARLY	07/31/96			
Did tank pass test? Indicate yes or no. If no, specify in comments section below the status of the tank or what actions have been taken (e.g., has state been notified?)	YES			
Documentation of deliveries and sales balances with daily measurements of liquid volume in tank are maintained and available.	YES			
Overages or shortages are less than 1% + 130 gals of tank's flow-through volume.	YES			
If no, which months were not?				

Please answer yes or no for each question

Owner/operator can explain inventory control methods and figures used and recorded.	Yes ✓	No
Records include monthly water monitoring.	Yes ✓	No
Tank inventory reconciled before and after fuel delivery.	Yes ✓	No
Books are reconciled monthly.	Yes ✓	No
Appropriate calibration chart is used for calculating volume.	Yes ✓	No
Dispenser pumps are calibrated to within 6 cubic inches per five gallons.	Yes ✓	No
The drop tube in the fill pipe extends to within one foot of tank bottom.	Yes ✓	No
Owner can demonstrate consistency in dipsticking techniques.	Yes ✓	No
The dipstick is long enough to reach the bottom of the tank.	Yes ✓	No
The ends of the gauge stick are flat and not worn down.	Yes ✓	No
The dipstick is marked legibly & the product level can be determined to the nearest 1/8th inch.	Yes ✓	No
The tank has been tested within the year & has passed the tightness test (if necessary).	Yes ✓	No
A third-party certification of the tank tightness test method is available.	Yes ✓	No
Tank tester complied with all certification requirements.	Yes ✓	No
Monitoring and testing are maintained and available for the past 12 months.	Yes ✓	No

Comments: _____

Inspector's Signature: _____

Date: 08/11,12/97

Vapor Monitoring

Name of monitoring device: _____

Date system installed _____ Number of monitoring wells _____

Distance of monitoring well(s) from tank(s) (1) _____ (2) _____ (3) _____ (4) _____

Site assessment was conducted by: _____

Location of site assessment documentation: _____

Please indicate yes or no for each tank Please complete all information for each tank. If facility has more than 4 tanks, please photocopy this page and complete the information for additional tanks.

	Tank 1	Tank 2	Tank 3	Tank 4
Well is clearly marked and secured.				
Well caps are tight.				
Well is constructed so that monitoring device is not rendered inoperative by moisture or other interferences.				
Well is free of debris or has other indications that it has been recently checked.				

Please answer yes or no for each question

UST excavation zone was assessed prior to vapor monitoring system installation.	Yes	No	
One or more USTs is/are included in system.	Yes	No	

If the system is automatic, check the following:

Power box is accessible and power light is on.	Yes	No	
Documentation of monthly readings is available for last 12 months.	Yes	No	
Equipment used to take readings is accessible and functional.	Yes	No	
Vapor monitoring equipment has been calibrated within the last year.	Yes	No	

If the system is manual, check the following:

Documentation of monthly readings is available for last 12 months.	Yes	No	
Equipment used to take readings is accessible and functional.	Yes	No	
Vapor monitoring equipment has been calibrated within the last year.	Yes	No	
Porous material was used for backfill.	Yes	No	
Wells are placed within the excavation zone.	Yes	No	
Level of background contamination is known. If so -- what is level? _____	Yes	No	

On the back of this sheet, please sketch the site, noting all piping runs, tanks (including size and substances stored) and location of wells and their distance from tanks and piping.

Comments: _____ NOT USED FOR TANK TIGHTNESS IS A BACKUP CHECK

Inspector's Signature: _____ Date: 08/11/12/97

Manual Tank Gauging

Manual tank gauging may be used as the sole method of leak detection only for tanks of 1,000 gal. or fewer or in combination with tank tightness testing for tanks of up to 2,000 gal.

Please indicate the number of the tank or tanks for which manual tank gauging is used as the main leak detection method (e.g., tanks 1 & 4): _____

Please answer yes or no for each question

Records show liquid level measurements are taken at beginning and end of period of at least ([Circle one] 36, 44, 58) hours during which no liquid is added to or removed from the tank.	Yes	No
Level measurements are based on average of two consecutive stick readings at both beginning and end of period.	Yes	No
Monthly average of variation between beginning and end measurements is less than standard shown below for corresponding size and dimensions of tank and waiting time.	Yes	No
Gauge stick is long enough to reach bottom of the tank. Ends of gauge stick are flat and not worn down.	Yes	No
Gauge stick is marked legibly and product level can be determined to the nearest one-eighth of an inch.	Yes	No
M T G is used as sole method of leak detection for tank.	Yes	No
M T G is used in conjunction with tank tightness testing.	Yes	No
Are all tanks for which MTG is used under 2,000 gallons in capacity?	Yes	No
Are monitoring records available for the last 12 month period?	Yes	No

Check One:	Nominal Tank Capacity (in gallons)	Tank Dimensions	Monthly Standard (in gallons)	Minimum Test Duration
()	550	N/A	5	36 hours
()	551 - 1,000	N/A	7	36 hours
()	1,000	64" diameter x 73" length	4	44 hours
()	1,000	48" diameter x 128" length	6	58 hours
()	1,001 - 2,000*	N/A	13	36 hours

* Manual tank gauging must be used in combination with tank tightness testing for tanks over 1,000 gal. and less than 2,000 gal.

Comments: N O N E

Inspector's Signature: _____ Date: 08/11/12/97

Ground Water Monitoring

Date System Installed: _____

Distance of well from tank(s) (1) _____ (2) _____ (3) _____ (4) _____

Distance of well from piping (1) _____ (2) _____ (3) _____ (4) _____

Site assessment was conducted by: _____

Location of site assessment documentation: _____

Please answer each question of each well

If there are more than 4 wells, please photocopy this page and complete the information for all additional wells.

	Well 1	Well 2	Well 3	Well 4
Well is clearly marked and secured to avoid unauthorized access or tampering.				
Well was opened and presence of water was observed in well at depth of _____ ft.				

Please answer yes or no for each question

Wells are used to monitor piping.	Yes	No
Site assessment was performed prior to installation of wells.	Yes	No
Documentation of monthly readings is available.	Yes	No
Specific gravity of product is less than one.	Yes	No
Hydraulic conductivity of soil between UST system and monitoring wells is not less than 0.01 cm/sec. According to:	Yes	No
Groundwater is not more than 20 feet from ground surface.	Yes	No
Wells are sealed from the ground surface to top of filter pack.	Yes	No
Continuous monitoring device or manual bailing method used can detect the presence of at least one-eighth of an inch of the product on top of groundwater in well.	Yes	No
Groundwater is monitored: () Manually on a monthly basis. () Automatically (continuously or monthly basis [Circle one]).		
Check the following if groundwater is monitored <u>manually</u> : Bailer used is accessible and functional.	Yes	No
Check the following if groundwater is monitored <u>automatically</u> : Monitoring box is operational.	Yes	No
Checked for presence of sensor in monitoring well.	Yes	No

On the back of this sheet, please sketch the site, noting all piping runs, tanks (including size and substances stored) and location of wells and their distance from tanks and piping.

Comments: NOT USED FOR TANK TIGHTNESS IS A BACKUP CHECK

Inspector's Signature: _____ Date: 08/11/12/97

Interstitial Monitoring

Manufacturer and name of system: RED JACKET 1401

Date system installed: 1991, & 1997

Materials used for secondary barrier: FIBERGLASS

Materials used for internal lining: FIBERGLASS

Interstitial space is monitored (Circle one): automatically, continuously, monthly basis.

Please answer yes or no for each question

All tanks in system are fitted with secondary containment and interstitial monitoring.	Yes ✓	No	N/A
System is designed to detect release from any portion of UST system that routinely contains product.	Yes ✓	No	N/A
Monitoring method is documented as capable of detecting a leak as small as .1 gal./hr. with at least a 95% probability of detection and a probability of false alarm of no more than 5%.	Yes ✓	No	N/A
Documentation of monthly readings is available for last 12 months.	Yes ✓	No	N/A
Maintenance and calibration documents and records are available and indicate appropriate maintenance procedures for system have been implemented.	Yes ✓	No	N/A
Monitoring box, if present, is operational.	Yes ✓	No	N/A
If monitoring wells are part of leak detection system, monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.	Yes	No	N/A ✓
Interstitial space is monitored manually on monthly basis (answer the following question).	Yes	No	N/A
Equipment used to take readings is accessible and functional.	Yes	No	N/A
Tank is double-walled	Yes	No	N/A
Tank is fitted with internal bladder to achieve secondary containment (answer the following question).	Yes	No	N/A
Bladder is compatible with substance stored and will not deteriorate in the presence of that substance.	Yes	No	N/A
Excavation is lined with impervious artificial material to achieve secondary containment (answer the following questions).	Yes	No	N/A
Secondary barrier is always above groundwater.	Yes	No	N/A
If secondary barrier is not always above groundwater, secondary barrier and monitoring designs are for use under such conditions.	Yes	No	N/A
Secondary barrier is constructed from artificially constructed material, with permeability to substance < 10 ⁶ cm/sec.	Yes	No	N/A
Secondary barrier is compatible with the regulated substances stored and will not deteriorate in presence of that substance.	Yes	No	N/A
Secondary barrier does not interfere with operation of cathodic protection system.	Yes	No	N/A

Comments: _____

Inspector's Signature: _____ Date: 08/11.12/97

Automatic Tank Gauging

Manufacturer, name and model number of system: VEEDER ROOT 250

Tank # 3500B, 3500C & 3500D

Please answer yes or no for each question

Device documentation is available at site (e.g., manufacturer's brochures, owner's manual).	Yes ✓	No
Device can measure height of product to nearest one-eighth of an inch.	Yes ✓	No
Documentation shows that water in bottom of tank is checked monthly to nearest one-eighth of an inch.	Yes ✓	No
Documentation is available that the ATG was in test mode a minimum of once a month.	Yes ✓	No
Checked for presence of gauge in tanks.	Yes ✓	No
Checked for presence of monitoring box and evidence that device is working (i.e., device is equipped with roll of paper for results documentation).	Yes ✓	No
Owner/operator has documentation on file verifying method meets minimum performance standards of .20 gph with probability of detection of 95% and probability of false alarm of 5% for automatic tank gauging (e.g., results sheets under EPA's "Standard Test Procedures for Evaluating Leak Detection Methods").	Yes ✓	No
Checked documentation that system was installed, calibrated, and maintained according to manufacturer's instructions.	Yes ✓	No
Maintenance records are available upon request.	Yes ✓	No
Monthly testing records are available for the past 12 months.	Yes ✓	No
Daily monitoring records are available for the past 12 months (if applicable).	Yes ✓	No

Comments: _____

Inspector's Signature: _____

Date: 08/11/12/97

Statistical Inventory Reconciliation

Please complete all information for each tank

If this facility has more than 4 tanks, please photocopy this page and complete the information for all additional tanks.

Documentation of deliveries and sales balances with daily measurements of liquid volume in tank are maintained and available.

Please answer yes or no for each question

Records include monthly water monitoring.

Yes

No

Tank inventory reconciled before and after fuel delivery.

Yes

No

Appropriate calibration chart is used for calculating volume.

Yes

No

Dispenser pumps are calibrated to within 6 cubic inches per five gallons.

Yes

No

The drop tube in the fill pipe extends to within one foot of tank bottom.

Yes

No

Answer one of the following three:

1) Owner can demonstrate consistency in dipsticking techniques.

Yes

No

a) The dipstick is long enough to reach the bottom of the tank.

Yes

No

b) The end of the gauge stick is flat and not worn down.

Yes

No

c) The dipstick is legible & the product level can be determined to the nearest 1/8th inch.

Yes

No

OR

2) Automatic tank gauge is used for readings.

Yes

No

OR

3) Other method is used for readings (explain in comment section below).

Yes

No

A third-party certification of the SIR method is available.

Yes

No

Monitoring and testing records are maintained and available for the past 12 months.

Yes

No

Comments: NOT USED

Inspector's Signature: _____

Date: 08/11/12/97

Spill/Overfill Prevention

	Tank 2056D	Tank 2056E	Tank 2056F	Tank 24142A
Are all tank transfers less than 25 gallons?	Yes No ☒	Yes No ☒	Yes No ☒	Yes No ☒
Spill Prevention				
Is there a spill bucket (at least 5 gallons) or another device that will prevent release of product to the environment (such as a dry disconnect coupling)?	Yes ☒ No	Yes ☒ No	Yes ☒ No	Yes ☒ No
Overfill Prevention				
What device is used to prevent tank from being overfilled?				
Ball float valve	Yes No	Yes No	Yes No	Yes No
Butterfly valve (in fill pipe)	Yes ☒ No	Yes ☒ No	Yes ☒ No	Yes ☒ No
Automatic alarm monitoring is used	Yes No	Yes No	Yes No	Yes No
Other alarm system	Yes No	Yes No	Yes No	Yes No

Cathodic Protection

	Tank 1	Tank 2	Tank 3	Tank 4
Sacrificial Anode System				
Test results show a negative voltage of at least 0.85 Volts (using the tank and a copper/copper sulfate cell)?	Yes No	Yes No	Yes No	Yes No
The last two test results are available. (Tests are required every three years.)	Yes No	Yes No	Yes No	Yes No
Impressed Current				
Rectifier is on 24 hours a day?	Yes No	Yes No	Yes No	Yes No
The last two test results are available? (Tests are required every 60 days.)	Yes No	Yes No	Yes No	Yes No
Test results show a negative voltage of at least 0.85 Volts (using the tank and a copper/copper sulfate cell)?	Yes No	Yes No	Yes No	Yes No
Comments: _____				

Inspector's Signature: _____ Date: 08/11/12/97				

Spill/Overfill Prevention

	Tank 26156A	Tank 27002C	Tank 3500B	Tank 3500C
Are all tank transfers less than 25 gallons?	Yes No ☒	Yes No ☒	Yes No ☒	Yes No ☒
Spill Prevention				
Is there a spill bucket (at least 5 gallons) or another device that will prevent release of product to the environment (such as a dry disconnect coupling)?	Yes ☒ No	Yes ☒ No	Yes ☒ No	Yes ☒ No
Overfill Prevention				
What device is used to prevent tank from being overfilled?				
Ball float valve	Yes No	Yes No	Yes No	Yes No
Butterfly valve (in fill pipe)	Yes ☒ No	Yes ☒ No	Yes ☒ No	Yes ☒ No
Automatic alarm monitoring is used	Yes No	Yes No	Yes No	Yes No
Other alarm system	Yes No	Yes No	Yes No	Yes No

Cathodic Protection

	Tank 1	Tank 2	Tank 3	Tank 4
Sacrificial Anode System				
Test results show a negative voltage of at least 0.85 Volts (using the tank and a copper/copper sulfate cell)?	Yes No	Yes No	Yes No	Yes No
The last two test results are available. (Tests are required every three years.)	Yes No	Yes No	Yes No	Yes No
Impressed Current				
Rectifier is on 24 hours a day?	Yes No	Yes No	Yes No	Yes No
The last two test results are available? (Tests are required every 60 days.)	Yes No	Yes No	Yes No	Yes No
Test results show a negative voltage of at least 0.85 Volts (using the tank and a copper/copper sulfate cell)?	Yes No	Yes No	Yes No	Yes No
Comments: _____				

Inspector's Signature: _____ Date: 08/11, 12/97				

Spill/Overfill Prevention

	Tank 3500D	Tank	Tank	Tank
Are all tank transfers less than 25 gallons?	Yes No ☒	Yes No	Yes No	Yes No
Spill Prevention				
Is there a spill bucket (at least 5 gallons) or another device that will prevent release of product to the environment (such as a dry disconnect coupling)?	Yes ☒ No	Yes No	Yes No	Yes No
Overfill Prevention				
What device is used to prevent tank from being overfilled?				
Ball float valve	Yes No	Yes No	Yes No	Yes No
Butterfly valve (in fill pipe)	Yes ☒ No	Yes No	Yes No	Yes No
Automatic alarm monitoring is used	Yes No	Yes No	Yes No	Yes No
Other alarm system	Yes No	Yes No	Yes No	Yes No

Cathodic Protection

	Tank 1	Tank 2	Tank 3	Tank 4
Sacrificial Anode System				
Test results show a negative voltage of at least 0.85 Volts (using the tank and a copper/copper sulfate cell)?	Yes No	Yes No	Yes No	Yes No
The last two test results are available. (Tests are required every three years.)	Yes No	Yes No	Yes No	Yes No
Impressed Current				
Rectifier is on 24 hours a day?	Yes No	Yes No	Yes No	Yes No
The last two test results are available? (Tests are required every 60 days.)	Yes No	Yes No	Yes No	Yes No
Test results show a negative voltage of at least 0.85 Volts (using the tank and a copper/copper sulfate cell)?	Yes No	Yes No	Yes No	Yes No
Comments: _____				

Inspector's Signature: _____ Date: 08/11.12/97				

Clean Air Act

The purpose of this was to determine the facility's compliance with standards for VOC air contaminants and standards for visible and fugitive emissions. The Virginia SIP codified at §120-04-0403, §120-04-0404, §120-04-0409, and §120-04-0410, the federal requirements under New Source Performance Standards (NSPS), cited in 40 CFR §§ 60.1 - 60.759, and Prevention of Significant Deterioration and New Source Review, cited in 40 CFR §52.21 and 40 CFR §52.10.

Additional attention was given to NOx and SO2 emissions particularly from combustion operations as cited in the Virginia SIP in §120-04-0408 and §120-04-0405. VOC emissions from coating operations and from petroleum storage operations were also targeted as cited in the Virginia SIP in §120-04-0407 and §120-04-3703.

A detailed review of the facility's operating permits as a stationary source was conducted as cited in the Virginia SIP in §120-08-01. Solvent metal cleaning operations were also inspected as cited in the Virginia SIP in §120-04-2401.

Furthermore, operations that handled and/or used chlorofluorocarbons (CFCs) were specifically targeted because of the size of the facility (covering over 60,000 acres) as cited in 40 CFR §82.34, §82.154. As a federal facility, the Marine Corps Combat Development Command (The Base) is required to adopt procurement regulations which conform to the policies and requirements of Title VI of the Clean Air Act as cited in 40 CFR §82.80.

At the outset of the inspection, the EPA inspector, Humberto Monsalvo met with the facility representative, Mark Branca, Air Compliance Manager and a representative from the FBI Academy. Mr. Branca described different areas of the Base such as the central heating plant and the locations of spray booths and some of the tenant organizations such as the FBI Academy, The Marine Corps Basic School, and Camp Barrett.

Mr. Branca, also stated that he was completing the Title V application for the Base to submit shortly thereafter to the VADEQ pursuant to the Clean Air Act Amendment requirements of 1990.

He stated that there were 6 spray booths throughout the base and 2 spray booths at the FBI Academy. The EPA inspector requested a description of boilers at the base's central heating plant and Camp Barrett to which Mr. Branca provided the following list:

a) Boiler #1 had a design capacity of 61 MMBtu/hr and was fired with distillate oil (fuel oil with a maximum sulfur content of 0.5%

by wt.)

b) Boiler #2 had a design capacity of 61 MMBtu/hr and was fired with distillate oil (fuel oil with a maximum sulfur content of 0.5% by wt.)

c) Boiler #3 had a design capacity of 84 MMBtu/hr and was fired with distillate oil (fuel oil with a maximum sulfur content of 0.5% by wt.)

d) Boiler #4 had a design capacity of 114 MMBtu/hr and was fired with distillate oil (fuel oil with a maximum sulfur content of 0.5% by wt.)

E) Boiler #5 had a capacity of 114 MMBtu/hr and was fired with natural gas with the a back-up capability of using distillate oil (fuel oil with a maximum sulfur content of 0.5% by wt.)

F) Boiler #6 had a capacity of 114 MMBtu/hr and was fired with natural gas with the back-up capability of using distillate oil (fuel oil with a maximum sulfur content of 0.5% by wt.)

The Base also has thirteen distillate oil-fired and four residual oil-fired boilers with design capacities under 25 MMBtu/hr. These boilers are as follows:

- a) two 22 MMBtu/hr residual oil-fired boilers
- b) one 6 MMBtu/hr distillate oil-fired boiler
- c) one 5 MMBtu/hr distillate oil-fired boiler
- d) two 3 MMBtu/hr distillate oil-fired boilers
- e) three 2 MMBtu/hr distillate oil-fired boilers
- f) three 1 MMBtu/hr distillate oil-fired boilers
- g) one 825 kw diesel-fired standby generator

Additional sources of emissions were those for VOCs which will be described later in this section.

At the FBI Academy, there were seven boilers that used distillate oil (fuel oil with a maximum sulfur content of 0.5% by wt.) all of which ranged from 11.6 MMBtu/hr to 2.6 MMBtu/hr, and four diesel-fired stand-by generators that ranged in capacity from 1,500 kw to 425 kw. These boilers are as follows:

- a) three 11.6 MMBtu/hr distillate oil-fired boilers
- b) three 8.4 MMBtu/hr distillate oil-fired boilers

- c) one 2.6 MMBtu/hr distillate oil-fired boiler
- d) two 1,500 kw diesel-fired standby generators
- e) one 800 kw diesel-fired standby generator
- f) one 425 kw diesel fired- standby generator

In addition, there were other sources of air emissions at the FBI Academy that included: a) a paint booth; b) an underground storage tank (UST) balanced submerged filling station; c) UST breathing losses; and d) gasoline dispensing without containment.

Following the initial interview, the EPA inspector accompanied by Mr. Branca went to the Environmental Affairs Office to review the facility's files for the aforementioned sources of emissions. At the office, the EPA inspector also met with Mr. William Fennell, Director of Environmental Engineering Section.

The first set of files reviewed were those for the Central Heating Plant (CHP). According to the files provided, the Central Heating Plant had a maximum capacity of 455.66 MMBtu/hr. Mr. Branca provided a copy of the CHP air permit which indicated that all the boilers, #1, #2, #3, #4, and #5 were subject to the New Sources Performance Standards (NSPS). This permit indicated that these boilers were modified and/or constructed in 1993. In particular, this NSPS permit specified that the equipment that was constructed in 1993 were Boilers #3, #4, #5, and the equipment modified in 1993 were Boilers #1, and #2.

The permit contained several conditions that included the following:

- a) the approved types of fuel for all boilers along with the definition of distillate oil to meet the specifications of fuel oil #1 & #2;
- b) combined (Tons/yr) and individual (lb/hr) emissions from each boiler (using fuel oil, distillate oil, & natural gas) that consisted of rates of total suspended particulate matter (TSP), particulate matter less than 10 microns (PM-10), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), beryllium, copper, formaldehyde, and vanadium;
- c) the type of control for SO₂ to exist in the maximum sulfur content (0.5%) of fuel and/or distillate oil for each boiler;
- d) the applicability of 40 CFR §60 Subpart Dc for boilers #1, #2, #3 along with the applicability of 40 CFR §60 Subpart Db for Boilers #4 & #5;

e) the type of control for NO_x for Boilers #3, #4, & #5 to be in the use of low NO_x burners and flue gas re-circulation;

f) visible emissions limit of 10% for all normal operation;

g) an initial performance test, concurrent with a Method 9 visible emission test, for each boiler stack to be conducted no later than 180 days after the start-up of each boiler and test results to be submitted to the VADEQ and EPA;

h) the installation of continuous emissions monitors (CEMs) for each boiler to measure and record opacity and such CEMs to be installed and operated prior to the initial performance tests;

i) the maximum sulfur content of 0.5% by weight of each boiler's fuel oil shipment along with certificates of analyses with each shipment of distillate oil;

j) each boiler's emissions are to be controlled by the proper maintenance and operation with the appropriate boiler training for all operators;

k) written notification to VADEQ and EPA of the actual date of construction and modification of each boiler within 10 days after such date, the anticipated start-up date of the boilers no more than 60 days, nor less than 30 days prior to such date, the actual start-up date of the boilers within 10 days after such date, and the anticipated date of visible emissions evaluation and performance tests of each boiler at least 30 days prior to such date;

l) the maintenance of records for all emission data and operating parameters necessary to demonstrate compliance with this permit which includes the throughput of natural gas and fuel oil for each boiler and their respective fuel certifications;

m) the submission of fuel quality reports to VADEQ within 30 days after the end of each calendar quarter;

n) revocation of this permit based on violation(s) of any permit condition with the requirement of prior notice of all changes;

o) notification to VADEQ of any malfunctions of more than one hour.

The facility's air permit for the Central Heating Plant contains fuel consumption limits for each of the boilers. According to the permit boilers #1 & #2 each have a maximum fuel consumption limit of 1.814×10^6 gallons of distillate oil per year. Boiler #3 has a fuel consumption limit of 387.2×10^6 cubic feet of natural gas, and 1.10×10^6 gallons of distillate oil per year, and boilers #4 & #5 have a combined maximum fuel consumption limit of 572.1×10^6 cubic feet of natural gas per year. In

addition, boilers #1, #2, #4, & #5 have a maximum fuel consumption limit of 2.842×10^6 gallons of distillate oil per year.

Mr. Branca provided a copy of a fuel consumption table for each boiler. The EPA inspector reviewed this table and found that the fuel consumption limits had not been exceeded for any of the boilers.

The following profile shows the fuel consumption for each boiler:

<u>Boiler #</u>	<u>1996 Fuel Consumption</u> (gals.)	<u>Fuel Type</u>
1	191,659	distillate oil
2	245,922	█
3	140,253	█
4	72,112	█
5	64,064	█

After completing a thorough review of the fuel consumption records for 1995 and 1996, the EPA inspector concluded that the air permit's fuel consumptions limits had not been exceeded for either natural gas or fuel oil. Therefore, the emission limits dictated by the air permit for SO_2 , NO_x , CO, VOC, beryllium, copper, formaldehyde, and vanadium were apparently not exceeded; however, it should be noted that only a stack test would satisfy any EPA suspicion that the limits for TSP, PM-10, SO_2 , and NO_x were exceeded. Notwithstanding, a thorough review of the CEMs data and records was conducted and yielded no problems with respect to exceedances and/or calibration of the CEMs equipment.

Following the record review, the EPA inspector asked Mr. Branca to describe the other types of operations at the Base such as the VOC surface coating operations in spray booths and metal degreasing tanks. Mr. Branca explained that the base had surface coating operations in spray booths at several locations and that there were some degreasing tanks at some of these locations. The degreasing tanks were mainly used for degreasing brake parts for automobiles.

The EPA inspector also asked about the operations that handled refrigerants and all areas that contained refrigerants. According to Mr. Branca, the base had 2 refrigerant recovery machines that serviced a 600 vehicle fleet. Apparently, 10-15% of the vehicles used refrigerant R134 and the rest (about 500 vehicles) used refrigerant R12. There were 10 technicians that were authorized to service refrigerant systems in motor vehicles.

The EPA inspector, accompanied by Mr. Branca, visited a nearby building that contained the two (2) refrigerant recovery machines. At the building, the inspector met with one of the technicians, Gunnery Sgt. Darren Coulombe, maintenance bay, that serviced refrigeration systems in motor vehicles (MVACs). The EPA inspector

interviewed Sgt. Coulombe and asked to see his MVAC pocket certification card. The card indicated that Sgt. Coulombe had been certified by MACS (Mobile Air Conditioning Society, (215) 541-4500) and the certificate number was 89228.

The EPA inspector next observed the two recycle/recovery machines. The machines were manufactured by RTI Refrigerant Management, Inc.. The units had both, recycle and recovery capabilities. The EPA inspector asked Sgt. Coulombe to demonstrate his experience with the machines by conducting a mock servicing job. Sgt. Coulombe performed a mock service job which demonstrated that he was familiar with the proper use of the machines.

The EPA inspector questioned Mr. Branca and Sgt. Coulombe regarding the certification of the machines with the EPA. Sgt. Coulombe stated that he did not know if a certification was made with the EPA. The EPA inspector also asked about the purchase date of the machines, to which Mr. Branca replied that he would have to check with another individual at the base that would know the purchase dates. The inspector explained to Mr. Branca that this information was important for determining compliance with equipment certification regulations.

In another area of the same building, the EPA inspector observed a number of degreasing tanks. Mr. Branca and Sgt. Coulombe showed the inspector a bio-degradable degreasing tank that contained filters which were changed every six weeks. All together, there were a total of five degreasing tanks in the building.

In the same building, the inspector observed a third recycle/recovery machine; Model - RRC 750 with a maximum capacity of 10 lb., which Sgt. Coulombe indicated was strictly used for refrigerant R12.

The EPA inspector, accompanied by Mr. Branca and Sgt. Coulombe visited building #2013 to observe a spray booth in the building. The spray booth filters were not changed on a regular basis. They were only changed on an as-needed basis determined by the booth's operators. The EPA inspector climbed on top of the spray booth, but did not observe any detectable VOC emissions or odors from the operation. At the time of the inspection, a spray had recently been completed, but there were no operators in the booth.

There was an old spray booth that, according to Mr. Branca, had not been in service for over five years. The operations in this building included the complete servicing of the base motor vehicles. According to Mr. Branca, used oil filters from this operation were picked up once a month by Safety Kleen Corp.

While at the spray booth, the EPA inspector observed that the typical paint was a DuPont black paint; i.e., 1 gallon (3.785

liters) 99A pitch black. The EPA inspector reviewed the MSDS (Material Safety Data Sheet) for this paint and it described the paint as a Centari Acrylic Enamel with a VOC content of, 32-84% by volume. This information is important because most State VOC surface coating regulations require VOC contents to be below 3.0 lb(solids)/gal(paint) by weight. The indicator that would reveal the actual VOC emissions from these spray coating operations would be the usage volume of such a coating.

Outside of this building there is a gasoline pumping station that serviced all motor vehicles for the base. This gasoline pumping station contained Stage II Vapor Recovery equipment. This system was a retrofitted vacuum-assist system with OPW nozzles which appeared in good shape and did not have any tears nor any holes. This gasoline station's throughput was approximately 180,000 gallons.

According to Mr. Branca, an annual pressure to K test for all Stage II Vapor Recovery systems at the base was scheduled for the near future.

Adjacent to this gasoline pumping station, there was a compressor station for natural gas. This compressor station was manufactured by Kraus Refueling Technologies of Winnipeg, Canada and was about 2 to 2.5 years old. The compressor was a 1994 Model 3304, manufactured by Caterpillar with a 102 KW or equivalent generator. According to Mr. Branca, this natural gas compressor station was operated by the local gas company, Commonwealth Gas, who contracted with Air Technologies to come in and service this station. The maximum pressure on the compressor's plate was 3000 psia; @ 100 O F = 4125 psi.

The inspect and facility personnel next went to building # 2101 to inspect the surface coating operations. This facility was called the maintenance bay operations. The supervisor of this area, Sgt. Coulombe and an assistant, Corporal Dash described the operation.

The surface coating operations in this facility were strictly for aircraft. The EPA inspector observed that the spray booth was green inside, indicating the color of the previous job. According to Cpl. Dash, the booth's filters were changed once per week. The booth had an exhaust stack which formed an elbow prior to exiting through the side of the building. I observed that the manufacturer of the green paint was U.S. Paint Manufacturing Co. of St. Louis, MO. The MSDS sheet for the paint indicated it had a VOC content of 3.96 - 4.69 lb/gallon. The EPA inspector also inspected the spray guns used in the booth. The spray guns were manufactured by GEO Manufacturing Co. and had an efficiency rating of 77%.

In another area of the building, the EPA inspector observed a sandblasting operation which used a blasting medium that was

comprised of plastic (70%) and glass (30%). The EPA inspector did not observe any particulate matter fugitive emissions while sandblasting occurred. The sandblasting system contained a recycle hose that dumped all material back to a 55-gallon drum. The EPA inspector observed another 55-gallon drum that contained sandblasting medium fines and chromium waste. The EPA inspector questioned Corporal Dash about this drum and he explained that they were in the process of disposing of the drum via a disposal contractor.

The EPA inspector observed another spray booth in building 2103 which was one year old. This spray booth was white inside and was equipped with infra-red curing capability that typically operated at 90°F. The booth's paint usage was approximately 1 gallon per month. The booth was only used to paint small parts/pieces. According to Corporal Dash, the booth's filters, both fiberglass and paper were changed on a weekly basis.

Adjacent to this spray booth was a mixing room that contained cleaning solvents (from Safety Kleen) that were used to clean painting equipment such as spray guns. Inside the mixing room, the inspector observed two drums containing waste paint. Neither of the drums was marked with any form of identification. Corporal Dash stated that Safety Kleen typically came in to pick up such a drum and properly dispose of it. The EPA inspector did not observe any visible emissions from this spray booth's stack; this spray booth was apparently constructed of sheet metal.

Near the booth, the EPA inspector observed a fire extinguisher that contained 150 lb. of Halon 1211, fire-suppressing agent (bromochlorodifluoromethane). Another fire extinguishing tank, #121, was not used in testing, according to Cpl. Dash. He also informed me that the CO₂ fire extinguishers were used in mock fire drills for firefighting testing.

The last items observed in this building were two refrigerant recycle/recovery machines, Robinair -134s, that were purchased two months prior to the inspection. One of machines, which was the series 34700, was for handling R-134a refrigerant. The other Robinair-134 was for handling refrigerant R-12. Corporal Dash indicated that the machines may not have been certified with the EPA at the time of the inspection. He also stated that there were four to five MVAC certified technicians that were authorized to service motor vehicle air conditioning (MVAC) systems in this building, but was not sure whether the technicians' certificates were available in their personnel files.

August 12, 1997

The EPA inspector, accompanied by Mr. Branca, went to building # 3300 in which the first item observed was a 825 KW generator. Mr. Branca indicated that he came in every six months to check the

number of operating hours on the generator. The name plate of this generator revealed the following information:

- a) manufacturer - Caterpillar;
- b) generator set - 3512;
- c) rating - 1031, cos ϕ = 0.8;
- d) KVA - 825, 60 Hertz;
- e) Standby mode;
- f) maximum temperature by resistance = 130°C;
- g) the current operation hours = 78 (2 years old).

According to Mr. Branca, the generator was permitted in 1994 after its installation in the same year. Testing for this generator was done every month by service contractors and such testing is called, fire mop.

In building # 3300, the EPA inspector observed a 2.4 MMBtu/hr (Input) steam boiler that was not operating. It was a small package boiler that ran on natural gas. The inspector reviewed the boiler's operating log of daily checks for pressure and temperature. All the information in the log was dated, signed and legible. Most of the pressures and the temperatures were in the same range indicating that operation of the boiler was consistent without any upsets. Aside from this boiler, the inspector observed another boiler which was a hot water boiler with a design maximum capacity of 0.7 MMBtu/hr. The EPA inspector reviewed the operating log for pressure and temperature checks. No opacity (visible emissions) were observed from the stacks of these boilers.

The EPA inspector and Mr. Branca next visited the largest gasoline station on the base. This gasoline station had a throughput of 2.6 million gallons in 1996.

According to the stations manager, Ms. Vickie Thacker, an independent contractor (Omega-Goode), came in on a weekly basis to check each gasoline dispensing pump for cracks, leaks in hoses, boots, holes and also lubricated each pump handle to make sure that they operated properly. Omega-Goode also checked for adjustments, vapor caps, and fill caps to ensure that everything was operating properly. The inspector reviewed a copy of a daily checklist for the gas station's equipment in addition to obtaining a blank copy of the checklist. **The most recent copies of the checklist were #1 and #3.**

The EPA inspector reviewed the Stage II Facility Registration

and Compliance Form provided by Omega-Goode as of 3/31/94. The inspector requested from Ms. Thacker, a photocopy of a typical form for the week of the inspection. The form indicated that the gas station used Healy 400 nozzles which Ms. Thacker indicated did not function properly and were going to be changed. Ms. Thacker also showed me the Site Stage II Vapor Recovery Training Certificate from Precision Testing Company. Ms. Thacker indicated that the gas station received 8,200 gallons of gasoline every day, seven days per week.

The EPA inspector then walked outside to inspect each pumping island. At each island the inspector reviewed service tags that indicated that a representative (B. Minthorne) from Virginia's Department of Agriculture, Measure Consumer Services had last inspected the entire gasoline station on 8/4/97.

The EPA inspector also reviewed the MSDS sheets for all liquid products sold and dispensed. These MSDS sheets were on-site and looked complete.

With regard to all the underground storage tanks (USTs), the inspector reviewed the Veeder-Root Sensor receipts which indicated gallons of fuel used as well as inches of water in the tanks and the temperature of the gasoline. According to Ms. Thacker, these checks are done every night. As an example, the EPA inspector reviewed the fuel usage figures for 8/8/97 which indicated that 7,793 gallons of fuel was pumped on that day. The gas station also had on-site procedures for proper operations of the Stage I & II vapor recovery systems. These instructions required that a station operator be outside with each tank truck shipment to ensure that Stage I & II vapor recovery controls were being used properly. The EPA inspector observed several signs that stated, "No Topping Off nor Over spillage." These signs also had instructions on how to prevent topping off and over spillage and provided a telephone number for the VADEQ (703) 583-3900.

The EPA inspector also observed a motorist in the process of pumping gasoline. The inspector heard the clicking sound which indicated that the Stage II Vapor Recovery system had been activated, and the inspector did not detect any gasoline fumes emanating from the car's gas tank. Following this, the inspector walked around the station and inspected each island and its equipment. The inspector observed that all hoses and nozzles were in good shape without any cracks, slits, or any flattened portions.

The EPA inspector and Mr. Branca next visited building # 3252. The inspector observed a spray painting operation in this building which consisted of one spray booth that was only used one or two times per week. According to Mr. Branca, approximately 95% of spray painting is sent off-site to be done.

A typical paint used in this booth had a VOC content of 1.74

lb./gallon. This spray booth was mainly used for painting small cabinets. The spray booth was not operating at the time of the inspection.

The booth has a waterfall curtain and the water is changed every three to four months. Water removed from this operation is sent off-site for proper disposal. The inspector took several photographs of the spray booth area. The inspector requested that facility personnel turn on the water curtain so the inspector could observe the flow and circulation of the water. The spray booth did not have a plastic curtain in front of it similar to the ones used in other spray booth operations to increase the booth's capture efficiency. The spray booth had a blower on top that was used to pull the air to the booth's stack located building's roof. The EPA inspector did not observe any opacity (visible emissions) or any odors from the stack. According to Mr. Branca, by having 95% of the spray painting done off-site, the base has reduced its VOC emissions from bulk spray painting by 8 tons per year. The Base was also in the process changing from solvent-base paints to latex paints which they hoped to accomplish by the end of 1997.

In the spray booth itself, the actual paint usage was approximately 2 gallons per month. New paint that was recently purchased included: Duron acrylic; Sherwin-Williams semi-gloss; and Sampson Coatings. The spray guns used in the booth were Binks Devil guns, model 8155 with an estimated transfer efficiency of about 60-70%.

This facility also paints the traffic lines on the roadways throughout the base. This painting typically occurs between April and November. The typical VOC content of the traffic line paint was 0%, but contained about 60-70% volatility by volume.

The EPA inspector observed a paint spray in one of the buildings at the FBI Academy. According to the spray painting supervisor, paint usage varied from one to three gallons per month in this booth. Similar to the spray painting operations at building 3252 on the base, about 90-95% of the bulk spray painting occurs off-site.

This booth's filters are changed on an as-needed basis according to a monthly P/M schedule. The typical paint used in the booth is Sherwin-Williams vinyl sealer (T67F3) which contains about 24% solids and most of the clear paint used in the booth is lacquer.

The spray guns used at this booth were the same type as the ones used in building #3252; Binks Devil, model 8155 with an estimated transfer efficiency of about 60-70%.

This facility also paints traffic lines on roadways within the FBI Academy compound and the paint most commonly used contains

3.51% VOC content by weight. The EPA inspector photographed the spray booth.

The EPA inspector questioned facility personnel about refrigerant servicing at the Academy and was informed that there are no R-134a recycle/recovery machines in the automobile service garage at the Academy. In the car garage, there is an R-12 refrigerant recycle/recovery machine(serial # 0993A0437) that was purchased three years prior to the inspection. This machine is a Snap-On ACT 4100 recycle/recovery refrigerant system with a 30 lb. cylinder used to recover old refrigerant from MVACs and recycle virgin refrigerant back into them. In addition to this recycle/recovery machine, there was another machine that is brand new and has never been used. This other recycle/recovery machine is a Robinair model 17700 with serial # 11220 and date code of, 0493. This machine was purchased as a back-up refrigerant recovery and recycling and re-charging station. According to the garage manager, the Academy was trying to get someone from Robinair to come in to show them how to use the machine.

The EPA inspector interviewed a technician, Mr. D.C. Mills, that was authorized to service MVACs. The EPA inspector reviewed Mr. Mill's refrigerant servicing certification card which indicated that Mr. Mills' technician certification had been provided by IMACA (the International Mobile Air Conditioning Association) and the certification number on the card was the technician's social security number. Mr. Mills had certification for Type I & II refrigerant servicing, in addition to confined space certification.

The EPA inspector requested information regarding the certification and purchase invoices of the recycle/recovery machines at the FBI Academy and was informed that it would be provided before the end of the inspection. This information is necessary for determining compliance with the equipment certification requirements.

The EPA inspector next visited the FBI Academy's gasoline storage tank area which was not operating at the time of the inspection. Although it is not required, the FBI Academy had voluntarily decided to have a Stage II Vapor Recovery System installed at this station. The gasoline storage tank area's throughput was 105,000 gallon in 1996. The EPA inspector photographed the storage area.

The EPA inspector next inspected the FBI Academy's heating plant which contained boilers and chillers. There was a refrigerant recycle/recovery machine that was Robinair system with serial #04290 and had a 45 lb. cylinder used only for servicing the chillers in the heating plant. The first chillers inspected were two 1100 ton chillers that were pulling 79% of their maximum design capacity. The chillers' evaporator temperature was 38°F with a

head pressure of 9.5 psi and an evaporator pressure of 18 psi. The chillers' heads are pulled every year and cleaned.

The EPA inspector next inspected the facility's boilers. Each boiler had a separate stack (~3 ft. height). The boilers were installed on July 28, 1970 which made them grand fathered with respect to the NSPS (New Source Performance Standards). For Boiler #1 (I.D. #L415145), it was off and not running. Boiler #2 was also not running because it was getting P/M (preventive maintenance). According to the Maintenance Supervisor, the Boilers cycled on and off on an as-needed demand basis. This maintenance department uses a portable emissions analyzer once a month to check for CO₂ and Particulate Matter (PM). The Academy changed fuels usage from fuel oil #6 to fuel oil #2. At the time of the inspection, the FBI Academy was burning approximately 600,000 gallons of fuel oil #2. The boilers alternated every week, as far as operation.

Outside this area, the EPA inspector observed the water cooling towers for the FBI Academy. According to the maintenance supervisor, two pumps needed to be on whenever both chillers were on. The pumps had variable speed motors on fans. The water tower was treated with caustic alkali liquids using two 55-gallon drums that contain sodium hydroxide. The inspector did not detect any odors on top of the cooling tower; however, there was algae growth visible around the fans on all four of the cooling towers.

Adjacent to the cooling towers, there were two small chillers manufactured by Trane Manufacturing Company which used R-22 refrigerant with a volume capacity of 105 lbs. These small chillers, model no. CG50C, had a capacity of 400 lbs./in.² on the high side and 300 lbs./in.² on the low side.

In an adjacent building, there was a 800 KW Emergency Generator made by Caterpillar that was fueled with #2 fuel oil and not diesel fuel. According to the Academy maintenance supervisor, #2 fuel oil contained more sulfur than diesel oil. This generator was tested every week.

In the same building, there was a portable refrigerant recovery/recycle machine, ThermoFlo OZ Saver 4000, model 4000, serial no.9330152. The EPA inspector requested the purchase invoice for this machine and inquired if the machine was certified with EPA. The supervisor believed that it was certified but stated that he would provide documentation prior the end of the inspection. The inspector also inquired as to the number of technicians that performed refrigerant work at the FBI Academy and whether or not they were certified to do such work. The supervisor said that he would provide documentation of the technician's certification prior to the end of the inspection.

The EPA inspector then went to the FBI Academy's Engineering Research Building to inspect the chillers. There were four

Carrier, model 19DK73313CM, chillers with a refrigerant charge capacity of 1010 lbs in this building. These chillers used R-11 refrigerant. At the time of the inspection, three of the chillers were running, each with a chilling design capacity of 370 tons. Within the same building, there was a sizeable refrigerant recovery/recycle machine whose model and serial numbers were, 19QA040-104 and 2592J04714, respectively. This machine's had a volume capacity of 40.6 ft.³ and used refrigerant R-11 with a maximum charge capacity of 3,300 lbs.. Its maximum operating and design pressures were 10 psi. and 15 psi., respectively. The inspector requested the purchase invoice for this machine and asked if the machine had been certified with the EPA. The area supervisor was not sure, but indicated that he would provide that information before the end of the inspection.

Outside the chiller room, there were two small emergency 1500 KW generators. The generators, manufactured by Caterpillar, model no. 3500. The operating meters indicated 1,376 hours of operation. According to the Academy maintenance supervisor, these generators were tested under load conditions once per week.

The EPA inspector accompanied by Mr. Branca returned to building no. 2013 and met with Mr. George Caswell, maintenance department supervisor, to review CFC documents. Mr. Caswell provided a copy of the CFC technician certificates and a list of their refrigerant recycle/recovery machines. This department had three refrigerant recycle/recovery machines that serviced two shops. There were nine (9) certified technicians. The EPA inspector obtained photocopies of the certification cards for seven of the technicians. The other two technicians were on vacation at the time of the inspection. The inspector interviewed one of the technicians, Tim Dickerson, who explained the standard procedure for conducting a recovery/recycle job on a refrigerant-containing unit. Mr. Dickerson properly explained the procedure, indicating each component of the machine. The machine had a 50 lb. (22.7 kg.) tank that used Arcton 12 (refrigerant R-12).

The EPA inspector next visited building no. 2112, Larson Gymnasium, and met with Mr. Garner, Safety and Environmental Coordinator. The EPA inspector observed a paint room that contained mainly interior latex semi-gloss paint (Pro-Mart 400 and Enamel Pure White, Base X). The inspector noted that all the paint containers were closed and no VOC odors were detected. In the adjacent paint shop, paint usage was 10 gal./month, but varied a bit depending on the jobs. The MSDS sheet for a typical paint used by this shop did not contain a % VOC amount. The EPA inspector suggested to the paint shop's supervisor that the MSDS sheet should be updated.

The EPA inspector visited the refrigeration room where the facility stored refrigerant. The inspector observed that the department used R-502, type Genetron MP 39, and Genetron AZ-50 (a mixture of HFC 125/1439 refrigerants). The MWR Department owned

approximately 12 ice machines, 12 refrigerators, 15 window units, 6 walk-in refrigerators, and 6 freezers. MWR had retrofitted most of these units from R-12 to R-502s and other refrigerants. The inspector requested a list of all the units that still used R-12 and was told that a list would be provided.

The MWR Department had two (2) refrigerant recycle/recovery machines, a PreCooler by Copeland Co., model PC-1, purchased in 1994, and a Sercan 5000 Recovery System, model 5000A, purchased in 1992. Both machines were used for R-12, R-22, R-500 and R-502. The inspector inquired as to the total number of technicians that were authorized to service refrigerant-containing units and requested copies of their certification cards as well as photocopies of the purchase invoice for all the recovery/recycle machines used at the MWR Department. Mr. Garner promised to provide this information at the end of the inspection.

The inspector spoke to one of the certified technicians, Mr. William H. Noel. Mr. Noel's certification was from The Refrigeration Service Engineers Society and it was good for Type I & II as of 10/13/94. The EPA inspector photographed the two recycle/recovery machines.

In this same area, the inspector also observed several window units to be disposed of. The inspector did not see any identification tags on the units to indicate the removal of refrigerant. Depicted in photo no. 4 is a unit that was not identified and had a tap in its line. The EPA inspector inquired as to the procedures for disposing of such units. Mr. Garner stated that his department would first set a unit out after removing it from service and assess whether such units are repairable. Afterward, the units would be shipped to another facility (Defense Re-utilization Marketing Office (DRMO)) on the base for disposal.

The EPA inspector next visited building no. 3252 and met with Mr. Gary Cooper, Facilities Maintenance (FM) supervisor. Facilities Maintenance serviced over 240 separate air conditioning systems throughout the base. Mr. Cooper stated that FM had recently purchased a new recycle/recovery machine. He also indicated that aside from servicing air conditioning /refrigerant-containing systems, they also disposed of them. According to Mr. Cooper, the technicians would recover all refrigerants from the units to be disposed of and store the refrigerant in 50 lb. cylinders that would be picked up by a contractor, EMS Consultants, Crofton, MD, for reclamation. The last pick-up, prior to this inspection, totaled 270.6 lbs. of recovered refrigerant for reclamation. Mr. Cooper stated that FM had four portable recycle/recovery machines that were older ones. They also had three larger capacity ones and had recently purchased four portable machines and two larger capacities ones (2000 series). Air conditioning units that were to be disposed of were sent to the DRMO facility on the base. Mr.

Cooper stated that there was no paperwork that accompanied the units to be disposed of. The EPA inspector suggested to Mr. Cooper that they might want to start maintaining a log of all activities related to the units that were allocated for disposal.

Mr. Cooper informed the inspector that there were 14 certified technicians. The inspector questioned Mr. Cooper about the EPA CFC regulations to which he replied that he was not aware of the requirements. He also stated that they had not sent any certification notices to the EPA for the recycle/recovery machines that were used. The inspector requested copies of the purchase invoices for all the refrigerant recycle/recovery machines at FM and photographed some of the units that were set aside for disposal by DRMO.

The inspector next asked Mr. Cooper for any operations log that would indicate the amounts of refrigerant recovered and the number of units that were set aside for disposal. While searching for these records, Mr. Cooper came across a loose-leaf binder from the Department of the Navy that contained a complete and detailed report of the CFC regulations promulgated in 1992 and took effect in 1993. This report explained the tasks the base should implement to comply with the CFC regulations and covered all aspects of CFC-containing systems which included everything from refrigerant servicing to disposal. Both Mr. Cooper and Mr. Branca were surprised to find this document and that no one had ever implemented a CFC program at FM or anywhere else in the base. Mr. Cooper provided the inspector with the operations records that contained the amounts of refrigerant recovered and the type of service for each job.

Following the records review, the inspector observed the new portable machines that had been recently purchased. These units, manufactured by Therma Flo Corp. were type OZ Saver models 600 and 2000a; there were four type 600 and two type 2000a. Apparently, FM had sent several other recycle/recovery machines back for repair. The EPA inspector next observed the air conditioning units that had been set aside for disposal by DRMO. One unit inspected was a comfort cooling system made by Carrier Manufacturing Co. And marked with the with the following data: model # 38EN060530; manufacture date, 9/87; serial # 4087E-13998; UL tested; and a design maximum charge capacity of 12.70 lbs.(5.76 kg.) of R-22. Mr. Cooper confirmed that FM did recover refrigerant, for eventual reclamation, from all the refrigeration systems designated for disposal.

The EPA inspector walked around the outside of this building and observed empty cylinders that had punctures and cut lines indicating that the refrigerant once contained in these cylinders was presumably released into the atmosphere. The inspector asked Mr. Cooper who had punctured the cylinders to which he replied that he was not sure, but he could confirm the origin of the cylinders.

He did say that some were probably from FM and its operations.

The EPA inspector next went to another building where a 150 ton chiller was being repaired. According to the service records for this repair, the chiller had 50 lbs. of R-22 added to it two days prior to the inspection, and 80 lbs. of R-22 added to it one month prior to inspection. According to the technician on the job, these amounts were necessary because of leaks in the system. The EPA inspector requested information regarding the leak rates for this chiller and Mr. Cooper said that he would provide the information prior to the end of the inspection.

The auto hobby shop contained a paint spray booth and some refrigerant recycle/recovery equipment. There was one refrigerant recycle/recovery machine in this shop. The machine, a one-month Robin Air, Type - Enviro Charge, was designed to handle only R134a with a capacity for recovery, recycling and recharging. The machine was a model no. 34700, serial number 18170, manufactured in July 1996 and was UL-tested.

The EPA inspector also observed the spray booth in the shop. This spray booth had a stack which exited through the side of the building and according to the shop supervisor, the booth's filters were changed only once per year. According to the shop supervisor, the next scheduled change was coming up soon. All types of spray painting take place in this spray booth. According to the shop supervisor, the average paint usage is about two gallons per month. The shop supervisor provided copies of the MSDS sheets for the typical paints used in the booth. After reviewing these MSDS sheets, the inspector noted that they did not contain the % VOC content of the paint. The EPA inspector recommended that they contact the paint manufacturer and obtain updated MSDS sheets for the paint (e.g. ones listing the % VOC content). The shop supervisor stated that he would obtain updated MSDS sheets for the paint. The typical paint used in the spray booth is a Deltron Acrylic 2000 Basecoat manufactured by PPG, with a % solid by weight of 14-66 (as of 5/18/93). The EPA inspector observed that the interior walls of the booth were quite dirty and the filters were clogged. The inspector asked the shop supervisor why the dirty filters had not been changed and he said that they were waiting for new filters to be delivered, but the shipment had been delayed because of a UPS strike.

The inspector checked capture efficiency in the spray booth by taking a small piece of writing paper and throwing it against the filters to see if it would stick to the filters. The inspector conducted this test on several areas of the filters and the results indicated a poor capture efficiency in the booth. Thorough capture efficiency on all levels of filters is necessary for adequate emissions capture and control. The inspector photographed the outside of the booth, still within the building and the stack on the outside of the building. No painting was being done at the

time of the inspection, so no opacity was observed emanating from the stack.

The EPA inspector and Mr. Branca returned to building no. 3252 and met with the Facilities Management and met with Mr. Gary Cooper to review all of the refrigerant purchase records since 1995. The following is a profile of the refrigerant purchases:

<u>YEAR</u>	<u>REFRIGERANT TYPE</u>	<u>AMOUNT(lbs.) PURCHASED</u>
1995	R-12	2,730
1995	R-22	3,348
1996	R-12	1,600
1996	R-22	2,090
1997	R-12	610 (up to August '97)
1997	R-22	2,770 (up to August '97)

Following the record review, the Facilities Management Supervisor, Gary Cooper, discussed plans that the base has for replacing all R-12 refrigeration units and improving the preventive maintenance (P/M) program for the units. The plans include removing the old refrigeration units that were installed before 1960 and run mostly on R-12 and replacing these with new units that use alternate refrigerants.

While discussing this replacement program, the facility personnel said that there was a chiller job that was being done in building no. 2085 adjacent to the Marine Corps University. The EPA inspector accompanied by Mr. Branca went to this building to observe the job. At the site of the repair job, the EPA inspector observed that a 75-ton Carrier (model 5H60-200) chiller was being repaired. According to the technician doing the job, only 5 lb. of refrigerant R-12 was recovered before starting the repair job. Unfortunately, the rest of the charge had leaked out. The problem with this chiller was a crack on the low pressure side for lubricating one of two compressors. Both of the chiller compressors were running off a double shaft. The inspector requested the leak rate of the chiller and all the operations data that was available to review the repair history. Mr. Branca said that he would provide this information prior to the end of the inspection.

The inspector asked to see the refrigeration certification card of the technician on the repair job. The technician produced his card and Mr. Cooper said that he could provide copies of certifications for all the technicians that worked on the base. The technician explained to the inspector that the chiller needed to be charged with about 75-100 lbs. of R-12 using the portable refrigerant recycling/recovery machine on site with vacuum of 35 lb. at about 34-36°F (the chiller operating temperature). The

portable refrigerant recycling/recovery machine that was being used on this job was a green-colored, Therma-Flo, Model OZ Saver Light -#600. The EPA inspector requested from Mr. Cooper and Mr. Branca the purchase invoices for that machine, and all the other refrigerant recycle/recovery machines that were used on the base. Mr. Cooper said that he would provide this information prior to the end of the inspection. The technician further explained that the 5 lbs. of R-12 that were recovered were put in a 25 lb. compressed cylinder for storage and subsequent recycling back into the chiller.

The EPA inspector accompanied by Mr. Branca next visited building no. 2012, the central heating plant (CHP) for the base. Mr. Branca explained that the three operable boilers(#3, #4, & #5) in the CHP were retrofitted in 1994 and that the retrofit project cost more than 50% of the original cost of the boilers. These boilers are subject to the NSPS. The inspector requested copies of all the correspondence and information related to the retrofitting project for the boilers at the CHP. Mr. Branca said that he would obtain this information before the end of the inspection.

Mr. Branca asked the CHP supervisor on duty for a tour of the plant. The supervisor explained that the continuous emission monitor (CEM) manufacturer(Rosemount) came in that day to check out the CEM equipment and to conduct a RATA (relative accuracy test analysis) for all gaseous CEMS at the heating plant. According to the supervisor, there were gaseous CEMS for NO_x, CO₂, and O₂ on Boilers #3, #4, & #5.

Inside the plant control room, the inspector observed the control readings. They are as follows:

- a) CO₂ = 7.9%
- b) O₂ =6.04%(this was raw # and was corrected an equivalent of n 5.55%)
- c) NO_x =34.1 ppm(corrected to equivalent = 35ppm)
- d) opacity =0.3 - 0.4%

According to Mr. Branca, the last six months' average opacity was 0.3%. The EPA inspector noted that these readings were all below the CHP's operating air permit limits. The only boiler operating was boiler #5 which was burning natural gas. According to the CHP's air permit, boiler #5 is subject to the NSPS, Subpart Db and its NO_x limit is 0.1 lb./MMBtu. In the quality control manual, the limit was seen as, 0.1 lb./MMBtu. According to Mr. Branca, the typical NO_x reading for boiler #5 is 0.067 lb./MMBtu with natural gas on low summer loads. Similarly, the NO_x reading for boiler #5 is 0.095 lb./MMBtu for natural gas during high winter

loads all day.

According to the supervisor's explanation, these boilers did not operate consecutively for days. Also, the CO limit on the DEQ permit for boiler #3 (for burning distillate fuel oil) was 13.48 lbs./hr (11.2 tpy), and the limit for burning natural gas was 14.19 lbs./hr (31.5 tpy). All boilers were stack tested in January 1995 for most criteria pollutants, and all the boilers passed except for CO. According to Mr. Branca, the initial stack test CO failed in 1994. Another stack test was conducted in September 1995 for CO and NO_x to obtain mass emission rates. The EPA inspector requested all information relative to these initial performance tests that were conducted for all the boilers in 1994 and 1995; in particular, all stack test results. Mr. Branca indicated that he would provide this information upon returning to his office.

The inspector explained to Mr. Branca that there is a 180-day limit in which EPA requires a facility to conduct and pass initial performance tests for fossil fuel-burning boilers. The CHP's supervisor stated that the last time that VADEQ had been there was in July 1997 represented by inspector, James McFadden. Also, Mr. Branca indicated that the base had never stack tested for PM-10 or formaldehyde. The inspector asked why the CHP air permit had limits for such pollutants as formaldehyde. Neither Mr. Branca or the plant supervisor could answer the question and suggested that the inspector ask the State of Virginia. They also did not know how the CHP could show compliance with the other pollutants such as VOCs, formaldehyde, copper, vanadium, and beryllium.

Mr. Branca stated that the in-house combustion engineer uses a portable analyzer to check all operable boilers annually for CO and NO_x. Mr. Branca demonstrated a sample calibration for CO by using Boiler #4. Mr. Branca stated that CHP usually experiences approximately twelve hourly exceedances and that they were trying to decrease these exceedances by learning more about the equipment and adjusting the controls. They burn 80% natural gas and 20% no.2 fuel oil.

The EPA Inspector asked Mr. Branca to provide copies of the quarterly excess emission reports for 1995, 1996, & 1997. The inspector explained that he needed to see the percentage of time that exceedances occurred. Mr. Branca provided the reports and the inspector explained that there were instances in the reports which would have to be referred to the EPA Region III CEM expert, Angela McFadden for evaluation.

From the on-site review, the inspector documented the following information: For the last quarter (Sept. - Dec.) for 1996 and the first quarter for 1997 (Jan. - Mar.), the down time of the CEM was about 0.5%. The inspector explained to Mr. Branca that typically, the EPA focuses on sources whose down time is greater than 10%. Mr. Branca stated that the CHP voluntarily Q/Cs the fuel

used in the boilers either in the fuel loop (in operation) or straight from the trucks to ensure that the sulfur content is less than 0.5%. The inspector noticed that a typical sulfur content was 0.103 %S as indicated in a certificate of analysis provided by Mr. Branca. The inspector asked Mr. Branca if the results from the RATAs were sent to the EPA. Mr. Branca replied that the results are sent to VaDEQ, but he was not sure if they forwarded them to EPA. The inspector explained to Mr. Branca that the NSPS required that the RATA results be sent to the EPA for all subject sources.

The EPA inspector and Mr. Branca went to the facility's sewage treatment plant (STP) and met with the plant supervisor. According to the supervisor, the plant was undergoing a \$20 million renovation that would increase plant capacity by 10%.

The plant currently uses anaerobic digestion to treat the sludge which produces methane gas. There is no meter at the plant to monitor production of the gas. The facility burns the methane gas and at the time of the inspection, the burner was operating; however, the EPA inspector did not observe any opacity from the burner or any fugitive emissions at the STP.

The EPA inspector and Mr. Branca returned to the central heating plant to inspect the boilers and to conduct spot checks of the boiler controls.

The readings on boiler no. 5, rated at 114 MMBtu/hr., were as follows: O₂ =5.3%; CO =9.2%; and NO_x =35.2 ppm. Boiler no. 5 had low NO_x burners installed as part of the retrofitting program. Boilers no.3 & no. 4, each rated at 84 MMBtu/hr. (NSPS Subpart Dc boilers), were both off at the time of the inspection.

Boilers no.1 & no.2, retrofitted from residual oil to distillate oil and rated at 64 MMBtu/hr. each, were not operating.

The EPA inspector went up to the roof to observe the stack on boiler no. 5; however, no opacity was observed from the stack.

The EPA inspector accompanied by Mr. Branca visited the fuel farm located on the west side of the base. There was a total of ten tanks at the fuel farm.

Two tanks on the left side of the fuel farm, with a combined capacity of 250,000 gallons, are used for storing no. 2 heating oil. According to the fuel farm supervisor, one of these tanks was full (95,000 gallons) and the other was almost empty (4.5" of fuel). In the center of the fuel farm, there were two horizontal tanks; one with a capacity of 12,500 gallons, was empty. This tank is used to hold kerosene. The other tank contained road diesel fuel and had a capacity of 25,000 gallons.

Of the six other tanks on-site, two were 25,000 gallon tanks used storing reformulated gasoline (one tank was empty and the other was full); two 75,000 gallon tanks were used for storing JP5 aviation fuel (both tanks were almost full); and the last two were 75,000 gallon tanks used for storing reformulated gasoline (both of these were empty). These two tanks had not been used to store gasoline in almost 5-6 years.

According to the supervisor, the fuel farm has a throughput of 140,000 gallons and he indicated that the empty tanks were going to be renovated within the next 18 months. Gasoline would be moved to a 25,000 gallon fixed-roof tank with a 12,500 gallon tank as a back-up.

The fuel farm did not have Stage I & II Vapor Recovery based on the minimal annual throughput, which was under the State regulation that required such controls.

The EPA inspector climbed on top of the tank (D tank) that contained 25,000 gallons of reformulated gasoline. The temperature of the tank was 72OF. The inspector did not observe any visible or fugitive emissions. The inspector did detect odors from the roof vents. These vents allow air from inside the tank to escape into the atmosphere. This air lies between the floating cap and the roof of the tank. All the tanks in the fuel farm had fixed metal roofs and internal floating caps. The inspector opened the vents and immediately detected odors emanating from them. This tank was grounded. The inspector did not detect any odors from the valve at the bottom of the tank.

A tank truck adjacent to this tank did not have Stage I Vapor Recovery Controls. According to the fuel farm supervisor, the lack of Stage I is based on the minimal annual throughput. This truck, used for gasoline, had a capacity of 2,400 gallons. Gasoline vapors are vented directly into the atmosphere due to the fuel farm falling under the vapor recovery controls limits in the State regulations. The gasoline in the tanks is purchased from Citgo or Crown Petroleum Companies.

The EPA inspector next inspected the Defense Reutilization Marketing Office's (DRMO) surplus yard, which is a tenant activity at the base. The yard, managed by Mr. Tony Webb, is used to store refrigerant containing equipment that is to be either sold to the public or disposed of by scrap metal recyclers.

The yard is separated into areas that contained ~~white goods~~ and ~~brown goods~~. White goods were primarily equipment that contained refrigerant such as refrigerator, window and roof-top air conditioners, and commercial and industrial freezers. Brown goods consisted primarily of stove ranges, laundry washers & driers, and other household items that normally do not contain refrigerants. Also, there was equipment in separate piles and refrigerant

containers.

The inspector questioned Mr. Webb about the internal procedures for receiving materials at the yard, regardless of whether or not they contained refrigerant. Mr. Webb explained that all equipment coming into the yard was by appointment only and everyone entering the yard had to sign in at the office. Mr. Webb would then visually inspect the incoming equipment for leaks of refrigerant and oil. If he did not detect any leaks, then he would place the shipment in its respective area in the storage yard.

DRMO conducts their sales using sealed bids at public auctions; the minimum bid is \$20.00 for a whole lot. Wherever possible, Mr. Webb explained that whole lots of like items were sold together instead of individual items. The sales contract is the only paperwork that is generated from the office of this DRMO surplus yard.

Initially, Mr. Webb could not locate any written procedures for tracking the accountability of refrigerants in the white goods; however, later during the inspection, Mr. Webb did locate a Department of Defense document (#60.50.1) which described these procedures.

All refrigerant-containing equipment is sold as CFC-containing equipment. The surplus yard personnel assume that the refrigerant is still in these units. This DRMO surplus yard did not have a refrigerant recycle/recovery machine and does not recover refrigerant from any of the refrigerant-containing goods.

During the inspection, the EPA inspector also met with Mr. Webb's supervisor, Mr. Thomas Esker. Mr. Esker, Store Manager for the Mid-Atlantic Zone, is stationed at Fort Belvoir. Mr. Esker explained that if no refrigerants were found in the white goods, they required a certificate from vendor that states that the unit did not contain refrigerant. At this DRMO surplus yard, these statements are internally referred to as **clear take statements**. According to Mr. Esker, the yard does not keep copies of these statements. The copies are sent to the accounting people for DRMO at a separate location on the base.

The yard accepts goods from other military bases and other federal government facilities. The EPA inspector went out to the back portion of the facility to observe the scrap piles. While observing the scrap piles, the EPA inspector found several refrigerant cylinders that had been punctured and their flow valves had been snapped off. Mr. Webb and Mr. Esker did not know who had punctured the cylinders or why they had been punctured. The inspector explained that the overall intent of the CFC regulations was to maintain accountability of refrigerants throughout the disposal chain; particularly at the tail end. Mr. Esker asked if

there would be any correspondence sent to this DRMO surplus yard regarding to the inspection. The inspector explained to him that an inspection report would be generated and provided to the base. Subsequent correspondence would be dictated by the need to pursue enforcement based on violations found.

In the pile of punctured refrigerant cylinders, the EPA inspector also observed water fire extinguishers.

The EPA inspector next visited the base landfill to inspect for goods containing CFCs. Upon arriving at the landfill, the inspector met with the landfill supervisor who explained that they had a very strict policy of not accepting any goods at the landfill that contained CFCs. If CFC-containing goods were found in the landfill, they would be returned to its originator. The supervisor pointed out the large sign at the entrance that was conspicuously displayed informing everyone that, no CFC-containing goods were accepted in the landfill. The EPA inspector did not observe anything of concern at the landfill.

Following the visit to the landfill, the EPA inspector went to Camp Barrett which is a training facility for new recruits. At Camp Barrett, there is a gasoline dispensing station with a throughput of 25,000 - 40,000 gallons per year. This falls under under the VADEQ regulation limit that calls for a minimum throughput of 100,000 gallons per year. Nonetheless, the station had installed Stage II Vapor Recovery Controls.

The EPA inspector next went to Camp Barrett's heating plant which contained two 22 MMBtu/hr boilers (boilers #1 & #2). The maintenance supervisor explained that they send out for S_2 analysis of their #6 fuel oil. A typical analysis of S_2 = 1%. These boilers feed the chillers at Camp Barrett to supply heat and hot water. At the time of the inspection, boiler #1 was operating and boiler #2 was shut down. These boilers were installed in 1988/89 and contained new burners for more efficient combustion and better emissions controls. The EPA inspector did not observe any visible emissions from the stack on boiler #1. The heating plant has a continuous opacity emission monitor, but it was not certified and was only calibrated annually. This monitor was not required by any regulation; it was simply an internal compliance indicator for Camp Barrett's maintenance department. There was one such monitor for each of the two boilers. Upon calibration, the monitor read the opacity at 3%. Typically, the opacity was well under 10%, according to the heating plant's supervisor.

The inspector's record review focused on the installation of these boilers which replaced the old ones. The heating plant's supervisor indicated the contract for the replacement took place around October, 1987 (on 10/5/87, the actual work bid was made to the base). In early 1980's, the boilers' burners were replaced.

There was a combustion efficiency test that was conducted annually as required by the ASME boiler certification. Additionally, boiler inspectors check for: a) safety operation parameters; b) opacity with density unit for operating and safety limits; c) for stains; d) and all internal burners, tubes, etc... This testing was done for the heating plant's boilers and all other satellite units. The heating plant maintains a daily log of opacity readings; i.e., 10% for 8/15/97. There was a separate log for all operational parameters.

The inspector then went over to boiler #2 to check the name plate. The name plate revealed the following information: a) model TJWC-20; b) serial number, L-277; c) order number, W-20025; d) year of construction, 1988; e) rate capacity = 22 MMBtu/hr.; f) heating surface = 1767 ft²; g) rated flow, 452 GPM; and h) the manufacturer, The International Boiler Works, Co. Of East Stroudsburg, PA - a subsidiary of Volcano, Inc.. Likewise for Boiler #1, the name plate indicated the following: a) model - TJWC-20; b) order number, W20025; c) design operating pressure, 340 psia; d) serial number, L276; e) maximum water pressure, 300 psi.; f) heating surface, 1676 ft²; rate capacity = 22 MMBtu/hr.; g) rated flow, 452 GPM; h) year of construction, 1988; and i) the manufacturer, The International Boiler Works, Co. Of East Stroudsburg, PA - a subsidiary of Volcano, Inc.. Looking at boiler #1's controls, the inspector noticed that the opacity reading was 15% for which the supervisor explained was erroneous; it was just that the calibrating contractor could only zero up to the 15% mark which in reality represented a 0% opacity. The EPA inspector again observed that the opacity from Boiler #1's stack, whose stack length was 10 ft., was 5-10%.

At the conclusion of the inspection, the EPA inspector met with facility personnel and explained that he would provide a brief analysis of the initial findings and observations. The inspector also explained that a complete review of all information requested during the inspection would be required prior to providing an initial air compliance assessment. Mr. Branca then explained the entire chronology of the problem with the initial stack test in 1994 and 1995 for Boilers #3, #4, & #5 and indicated that he would provide the inspector with all information regarding this problem as well as all other information requested during the inspection.

Clean Water Act

Mainside STP (VA0028363)

Facility Description

The Mainside STP serves the base area east of I-95 or the main portion of the base (Mainside) and the Town of Quantico. At the time of the subject inspection, the plant was being upgraded from a 2.0 mgd trickling filter/nitrification plant to a 2.2 mgd biological nutrient removal (BNR) plant. Sketches of the old and proposed plant are included with the subject report (Attachments CWA-1 and CWA-2, respectively).

With construction having been underway for almost 2 years, the plant is presently operating with the following treatment units: head works-2 barminutors, 2 grit removal swirl separators, 1-300,000 gal. aerated equalization basin, 4 primary settling tanks, 2 nitrification basins, 1 denitrification basin, 2 final clarifiers, 2 dual media polishing filters and 1 chlorine contact tank. For phosphorus removal, alum is normally added at the nitrification basin effluent and the primary settling tanks but at the time of the inspection, alum was only being added at the nitrification basin effluent due to repairs to the alum feed line at the primary settling tanks. Operable sludge processing units included: 1 floatation thickener, 1 anaerobic digester and 2 centrifuges.

Plant effluent discharges to the Potomac River via outfall 001. Sludge is land applied on base by a contractor.

The plant essentially treats domestic wastewater as there are no known significant industrial type wastes discharged to its sewer system. The plant's sewer system, also being upgraded, included 3 main pump stations and 18 lift stations at this time. Except for the remote Camp Upshur, the remaining portion of the base is served by a municipal facility, Stafford County's Aquia Wastewater Treatment Plant. The Quantico base discharges no known industrial wastewater to the Aquia system.

Permit Status

Quantico is operating under an expired permit (6/18/86 - 6/18/91) for its Mainside STP until VA DEQ establishes their Potomac Embayment Standards. Interim effluent limits from Appendix D of a Special Order Amendment (12/7/88) applied at this time.

As a result of a Consent Order (3/91-9/93) with the Natural Resources Defense Council (NRDC), Quantico has undertaken a list of improvements which essentially include the ongoing plant and sewer system upgrades. Plant construction began 11/95 and was originally

scheduled for completion by 2/99 but has been several months behind schedule with completion now expected 10/1/99. Quantico has no compliance schedule for these improvements.

Construction Status

At the time of the subject inspection, some of the plant improvements had been completed, and were on line. Reference may be made to the Consent Order fact sheet (Attachment CWA-3) which lists the required improvements. Their status, at the time of the subject inspection, was noted as follows:

Liquids Processes

- The pump stations' work had not yet begun. There will be no new pump stations. One of the 3 existing main pump stations will be demolished and another will be upgraded.
- The flow equalization tank modification had not yet begun.
- The second nitrification tank had been completed and had been in operation for over a month.
- The trickling filters had essentially been demolished as would soon be the secondary settling tanks.
- The construction of a third secondary clarifier was underway and associated sludge pumping system work would follow its completion.
- A new post aeration tank has been completed but pipeline work remained. The chlorine contact tank will also be converted to a post aeration tank.
- Other effluent related construction which was ongoing included installation of an ultraviolet disinfection system, a Parshall flume and a hydropneumatic process water pump.

Solids Processes

- Two centrifuges replaced the vacuum filters in 1995. A third centrifuge will be installed.
- A new digester will be built and the existing digester will be refurbished.

The sewer system rehabilitation was nearing completion at this time. Only sections of sewer near Lejeune Hall and the town of Quantico remained but were expected to meet the scheduled completion date (2/99).

Operation and Maintenance

Mr. Sinclair, the plant supervisor, is responsible for its operation and maintenance program. The plant is Class II and manned 24 hours per day/7 days per week. All operators have at least a Class II license including 10 (out of 18 operators) Class I licenses. Although the upgrade construction activities were ongoing, the plant appeared to be operating adequately at this time. All necessary treatment units were in operation and the effluent was clear.

The plant staff includes a preventive maintenance mechanic who coordinates all maintenance activities and performs the routine maintenance duties. The maintenance management system uses a computer program (Operator 10) to identify each piece of equipment and its preventive maintenance frequency. Generally, plant equipment appeared to be operable and adequately maintained. Spare parts availability can sometimes be a problem due to delays, inherent of the base's requisition process, but equipment redundancy has usually prevented any major problems. Also, the base's maintenance trade shops are readily available to the plant for various repairs and services.

Sewer Overflows

Although the plant has essentially been in compliance with the interim effluent limits, Quantico has a chronic problem with overflows in their sewer systems. Some are due to electrical problems at pump stations but most are the result of incidental blockages, particularly in the Aquia WWTP's (Stafford County) service area on base. Generally, the spills are minor and occur in flat, remote residential areas where the sewers accumulate grease, etc. The sewer system rehabilitation is not expected to significantly correct these blockages.

Quantico has been reporting all of the overflow incidents to DEQ although there was some question as to whether Stafford County should report the incidents in their respective service area.

Self-Monitoring

Plant personnel collect all samples except for Fecal Coliform which is collected by the contract lab at the time when the samples are picked up for delivery. Until upgraded, the samples are collected at the chlorine contact tank's rectangular weir either as grab or composite samples. A monitoring shed here includes a Sigma 900 refrigerated automatic sampler which is connected for flow proportioning to a Honeywell Truline flow recorder which senses the flow level at the weir. Operators measure pH, DO and Cl₂ residual on site using, respectively, the following instruments: Orion SA 520, YSI 50B and Hach DR/2000 DPD and record these results on daily log sheets. Universal Laboratories, the contract lab, initially faxes the lab results to the plant within 24 hours of analysis, in addition to submitting the lab report about 10-12 days later. These

analyses include BOD₅, TSS, TKN, TP and Fecal Coliform.

Recordkeeping and DMR reporting procedures were reviewed during the subject inspection. A computer program (Operator 10) performs the DMR calculations which were checked for the month of July 1997 and found to be correct. Although no discrepancies were noted for the records reviewed, a misunderstanding in reporting procedures was clarified. It was pointed out that all weekly averages during a month that exceeded the maximum weekly average limit are to be reported as excursions rather than just reporting 1 excursion for only the maximum weekly average. Otherwise, the reporting procedures were correct and no data inconsistencies were noted. Also, daily calibration records were maintained for the pH and DO meters. It should also be noted that the July 1997 DMR submittal also included copies of letters to DEQ addressing accidental or unauthorized discharges resulting from 2 separate overflow incidents at one of the plant's main pump stations and at a pump station on base in the collection system which discharges to the Aquia WWTP. As noted below, Quantico often reports sewer system overflows to DEQ.

EPA Form 3560-3, NPDES Compliance Inspection Report, is included as part of the subject inspection report.

Camp Upshur STP (VA0028371)

Facility Description

The Camp Upshur STP is a minor NPDES facility, located in a remote area in the northwest portion of the base, roughly 20 miles from the Mainside area of the base. It had a 3 tier design system of .04, .07 and .140 mgd but is now only operated at the .04 mgd tier since daily tenant activities generate influent flow well below design and occasional flow increases from Reserve training and Boy Scout activities remain below .04 mgd. As a result, the plant normally operates by discharging an intermittent effluent by holding or accumulating the wastewater within the plant over a few days before finally treating. In past years, increased activity at Camp Upshur generated more flow which necessitated operating at the higher tiers. Only domestic wastewater is generated at Camp Upshur.

Essentially, the plant operates as an activated sludge plant with a sand filter followed by chlorination/dechlorination before discharging to Cedar Run via outfall 001. It has chemical treatment capabilities which are not normally used or needed. The minimal amount of generated sludge is aerobically digested, dewatered on sludge drying beds and land applied on base by a contractor. A sketch of the plant is included with the subject report (Attachment CWA-4).

Permit Status

Quantico is operating under a current permit (2/26/95 - 2/26/00) for its Camp Upshur STP. In addition to the conventional parameters, the permit requires the outfall 001 effluent to be monitored for metals (every 6 months) and cyanide (annually), effective as of March 1997.

The permit also includes Compliance Schedules for Dissolved Oxygen and Ammonia-Nitrogen. Essentially, the plant can meet the DO limit (5.0 mg/l) which became effective June 1996. Pending further monitoring, the plant may not be capable of meeting the final $\text{NH}_3\text{-N}$ limits (2.90 mg/l / .44 kg/day) which become effective 2/26/99. A new plant may be required.

At this time, it was noted that a feasibility study to replace the plant with a constructed wetlands type facility had been completed.

Operation and Maintenance

As with the Mainside STP, Mr. Sinclair, the plant supervisor, is responsible for the Camp Upshur STP's operation and maintenance. The plant is Class III and manned 8 hours per day/7 days per week by 1 operator on a rotational basis from the Mainside STP staff,

each of whom have at least a Class II license. At the time of the subject inspection, the plant was not in full operation as there was no effluent being discharged that day. Although some redundant units were not operable (secondary clarifier) or permanently removed from service (sand filter), all necessary treatment units were operable for adequately treating the minimal wastewater flow normally received.

The plant's maintenance program is essentially the same as noted above for the Mainside STP. Generally, the plant equipment appeared to be old but maintained as necessary to provide adequate treatment. Structurally, however, the treatment units' gratings which were rusted and warped presented a safety hazard, particularly, since only 1 operator is normally onsite.

Self-Monitoring

The operator collects the effluent samples at the dechlorination chamber which discharges to outfall 001. All samples are grab samples as required by the permit. The operator measures pH, DO and Cl_2 residual on site using, respectively, the following instruments: Orion SA 250, YSI 57 and Hach DR100 Colorimeter and records these results on daily log sheets. Daily calibrations were logged on separate sheets for each instrument.

The samples for lab analyses are delivered by the operator to the Mainside STP for $\text{NH}_3\text{-N}$ analysis and contract lab pickup for BOD₅ and TSS analyses. The samples, however, have not normally been refrigerated or kept on ice from the time of collection and during transit to the Mainside STP. Also, the $\text{NH}_3\text{-N}$ sample has not been preserved (w/ H_2SO_4) upon collection.

Flow is measured at the chlorine contact tank's V-notch weir by an ultrasonic level detector which signals a recorder (Quality Control Equipment Co.) located inside the plant's building.

Recordkeeping and DMR reporting procedures were essentially the same as those reviewed for the Mainside STP. As was noted for the Mainside STP analyses, Universal Laboratories, the contract lab, similarly reports the Camp Upshur STP lab results to Quantico. Again, the month of July 1997 was checked for DMR calculations and found to be correct with no data inconsistencies. Although the correct method of analysis for $\text{NH}_3\text{-N}$ is performed, the method (number) has not been indicated in the analytical records (eg. on bench sheet).

As an example of the low flow from Camp Upshur, there were only 8 days that the plant discharged during July 1997. The Monthly Average flow was ~ 3500 gpd for 31 days and ~13,000 gpd if only the 8 days of actual discharge were averaged.

EPA Form 3560-3, NPDES Compliance Inspection Report, is included as part of the subject inspection report.

Industrial Discharge (VA0002151)
Quantico Marine Base

Facility Description

Quantico has 31 outfalls on their existing industrial permit. These discharges include: process wastewater from water treatment plants; vehicle maintenance and washing activities; steam heating and air conditioning condensate; swimming pool filter backwash and stormwater runoff from industrial type facilities. Six of the outfalls have been eliminated since the permit was issued, 2 of which were associated with the power plant's coal pile runoff lagoons (066-treated effluent and 067- leachate).

Most of the existing discharges are untreated but some require at least sedimentation basins (lagoons, etc.) and/or oil water separators. Reference may be made to the discharge description copied from the DEQ's Permit Program Fact Sheet which includes each outfall's discharge source, treatment and flow estimate (Attachment CWA-5).

Permit Status

Quantico is operating under a current permit (12/19/94 12/19/99) for its industrial discharges. In addition to the routine monitoring requirements at each outfall, the permit requires bio and chemical monitoring at certain outfalls.

The permit also included a compliance schedule for total residual chlorine (TRC) at Outfalls 001, 002, 003 and 004 (water treatment plant filter backwash) and Outfalls 009, 012, and 040 (swimming pool filter backwash) which has been met.

Inspection Observations

The following outfalls were toured during the subject inspection: 001, 002, 003, 004, 005, 009, 010, 013, 014, 015, 016, 022, 027, 030, 035, 071, 072, 073, 074. Since the weather was essentially dry, there was generally little or no flow being discharged at this time from most of the observed outfalls. For effluent observations, reference may be made to page 4 of EPA Form 3560-3, the NPDES inspection checklist completed for this permit. Other inspection comments are as follows:

The HMX-1 Hangars & Maintenance facility, which discharges

stormwater as well as non-contact cooling water and steam condensate through outfall 014, uses deicer on only the helicopter apron, not the rest of the runway, in the winter. Since the outfall discharges to an unnamed tributary close to the river, sampling is actually performed on the facility site at the nearest upstream manhole, in an effort to lessen the tidal effects on representative sampling. The storm sewer within the facility is also tidally influenced.

Outfalls 010 and 016 are the 2 major stormwater outfalls which serve the base's Mainside north and south drainage areas, respectively. Both outfalls are tidally influenced as they discharge to unnamed tributaries near the river. Sampling for outfall 010 is actually performed at a nearby upstream manhole, generally, not affected by the tide as the river level partially submerges the outfall. At this time, the water level submerged about 2/3 of the pipe. Outfall 016 is not as significantly affected by the tide. At this time, the water level submerged about 1/3 of the pipe and a slow flow discharging from it was noticeable. (Ref. Photographs 36, 37 (010); 38, 39 (016)).

Outfall 015 which discharges stormwater from the Airfield Refueling Area's holding lagoon is a submerged outfall. Sampling is conducted at the lagoon when it is discharging.

Although not affected at this time, other outfalls observed that can be subject to submergence during high river levels included minimal flow outfalls 013 and 022 associated with the MWR Hobby Shop.

The Mainside Water Treatment Plant's (WTP) filter backwash is normally pumped to the Mainside STP from holding tanks to avoid dechlorination of its sedimentation lagoon's effluent which discharges to outfall 003 (Ref. Photographs 40 (003), 41 (lagoon)). Excess backwash flows to the lagoon which will discharge if the level is high enough. The most recent discharge, at this time, had been in June 1997 during an emergency which occurred about a year after the previous discharge.

The Camp Upshur WTP's filter backwash lagoons had not discharged to outfall 001 in over 2 1/2 years due to Camp Barrett's minimal water usage.

The Camp Barrett WTP's filter backwash lagoons which are operated in parallel discharge through outfalls 002 and 004. There is generally no flow through outfall 002. Outfall 004 normally requires dechlorination before discharging.

Outfalls 073 and 074 serve as the Quantico landfill's south and north stormwater runoff discharges, respectively. Outfall 073 discharges from a pond whereas outfall 074 discharges from a marsh (Ref. Photographs 42 (073); 43 (074)). There was no apparent stream

in the immediate vicinity of either outfall as each discharge essentially forms an unnamed tributary when there is stormwater runoff. At this time, the landfill was expected to be closed within a year.

Outfall 072 is an oil/water separator discharge which serves Quantico's Fuel Farm. Onsite drains flow to the o/w separator which can be bypassed. (Ref. Photographs 44 (072-far swale, bypass-near swale), 45 (drain within berm))

Generally, Quantico has been in compliance with the effluent limits at all outfalls except outfalls 071 (Guad Maintenance Shop Vehicle Wash) and 005 (Camp Barrett Tank Wash) which have chronically exceeded TSS limits. Essentially, the high clay content of the soil washed from trucks, track vehicles, etc. hasn't readily been removed from the wash water before discharge. Outfall 071's wash rack drains to a holding tank followed by an o/w separator before discharging. Outfall 005's wash area drains to concrete sedimentation basins followed by an o/w separator before discharging. Although not totally successful up to this time, Quantico has been making efforts to eliminate the TSS violations which have included installation of filter cloth at each outfall and reducing the flow volume (high pressure, low flow) used in the washing operations. (Ref. Photographs 46, 47 (071); 48 (005), 49 (005, o/w separator beyond 005 in hill, sedimentation basins beyond fence))

Self-Monitoring

The Natural Resources and Environmental Affairs Branch (NREAB) staff collect the effluent samples at the outfalls. Samples are collected as required by the permit. All are grab samples except for the 24-hr biomonitoring composite samples. As noted above, some outfall sampling is performed slightly upstream from the outfall discharge to collect better representative samples due to tidal effects on submerged outfalls.

NREAB measures pH, temperature and Cl_2 residual at the required outfalls using, respectively, the following instruments: Orion 230A, Fisher Scientific Digital Thermometer (NIST) and Hach Pocket Colorimeter. NREAB also performs some lab analyses for TSS and O&G at the Mainside WTP lab and were planning to begin TPH analysis. Otherwise, their contract lab, Central Virginia Laboratories & Consultants, Inc., does most of the lab analyses which include TSS, O&G, Metals, PCB, TOC and TPH.

Again reviewing the month of July 1997, the DMR reporting procedures and DMR calculations were found to be correct with no data inconsistencies noted. Otherwise, calibration records were logged on separate sheets for the various analytical equipment including the pH meter, analytical balance and various thermometer (pH meter, drying oven, water bath, refrigerators) temperature

checks using the NIST thermometer as the standard. There was, however, no documentation of sample preservation which could be indicated on the chain of custody forms.

EPA Form 3560-3, NPDES Compliance Inspection Report, is included as part of the subject inspection.



United States Environmental Protection Agency
Washington, D.C. 20460

NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

Transaction Code W 25 NPDES 3 VIA 002 83 63 11 12 97 10 8 11 17 Inspection Type 18C Inspector 19J Fac Type 204

Remarks

Reserved Facility Evaluation Rating BI OA Reserved
67 69 70 71 72 73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected

Mainside STP
USMC, MCCDC
Quantico, VA 22134

Entry Time ☒ AM ☐ PM
1100

Permit Effective Date

6/18/86

Exit Time Date
1200 8/12/97

Permit Expiration Date

6/18/91

Name(s) of On-Site Representative(s)

Ed Sinclair
Rick Allen
Mike Roberson

Title(s)

Supervisor
Assistant
Lab Technician

Phone No(s)

703-784-4667
"
"

Name, Address of Responsible Official

R.T. Fretz

Title

Head, Utilities Section

Phone No.

703-784-5102

Contacted

☐ Yes ☒ No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

<u>S</u> Permit	<u>S</u> Flow Measurement	<u>N/A</u> Pretreatment	<u>S</u> Operations & Maintenance
<u>S</u> Records/Reports	<u>S</u> Laboratory	<u>N/A</u> Compliance Schedules	<u>S</u> Sludge Disposal
<u>N</u> Facility Site Review	<u>N</u> Effluent/Receiving Waters	<u>S</u> Self-Monitoring Program	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Name(s) and Signature(s) of Inspector(s)

Charles Hufnagel

Agency/Office/Telephone

EPA/FIP/410-573-2775

Date

8/12/97

Signature of Reviewer

[Signature]

Agency/Office

EPA/FIP

Date

4/6/98

Regulatory Office Use Only

Action Taken

Date

Compliance Status

☐ Noncompliance
☐ Compliance

Sections F thru L: Complete on all inspections, as appropriate. N/A = Not Applicable

PERMIT NO.

VAC028363

SECTION F - Facility and Permit Background

ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY
(Including City, County and ZIP code)

DATE OF LAST PREVIOUS INVESTIGATION BY EPA/STATE

1/17/97

FINDINGS

Satisfactory
- Cl₂ Room fan needs to run continuously

SECTION G - Records and Reports

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT:

☒ YES☐ NO☐ N/A (Further explanation attached☒)

DETAILS:

(a) ADEQUATE RECORDS MAINTAINED OF:

(i) SAMPLING DATE, TIME, EXACT LOCATION

☒ YES☐ NO☐ N/A

(ii) ANALYSES DATES/TIMES

☒ YES☐ NO☐ N/A

(iii) INDIVIDUAL PERFORMING ANALYSIS

☒ YES☐ NO☐ N/A

(iv) ANALYTICAL METHODS/TECHNIQUES USED

☒ YES☐ NO☐ N/A

(v) ANALYTICAL RESULTS (e.g., consistent with self-monitoring report data)

☒ YES☐ NO☐ N/A

(b) MONITORING RECORDS (e.g., flow, pH, D.O., etc.) MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS (e.g., continuous monitoring instrumentation, calibration and maintenance records).

☒ YES☐ NO☐ N/A

(c) LAB EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS KEPT.

on site

☒ YES☐ NO☐ N/A

(d) FACILITY OPERATING RECORDS KEPT INCLUDING OPERATING LOGS FOR EACH TREATMENT UNIT.

☒ YES☐ NO☐ N/A

(e) QUALITY ASSURANCE RECORDS KEPT.

Contract Lab

☒ YES☒ NO☐ N/A

(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUSTRIES (and their compliance status) USING PUBLICLY OWNED TREATMENT WORKS.

☐ YES☐ NO☒ N/A

SECTION H - Permit Verification

INSPECTION OBSERVATIONS VERIFY THE PERMIT.

☒ YES☐ NO☐ N/A (Further explanation attached☒)

DETAILS:

(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.

☒ YES☐ NO☐ N/A

(b) FACILITY IS AS DESCRIBED IN PERMIT.

☒ YES☐ NO☐ N/A

(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONFORM WITH THOSE SET FORTH IN PERMIT APPLICATION.

☐ YES☐ NO☒ N/A

(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION.

☒ YES☐ NO☐ N/A

(e) NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES.

☐ YES☐ NO☒ N/A

(f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED.

city water

☒ YES☐ NO☐ N/A

(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT.

☒ YES☐ NO☐ N/A

(h) CORRECT NAME AND LOCATION OF RECEIVING WATERS.

☒ YES☐ NO☐ N/A

(i) ALL DISCHARGES ARE PERMITTED.

☒ YES☐ NO☐ N/A

SECTION I - Operation and Maintenance

* Plant upgrade changes

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED.

☒ YES☐ NO☐ N/A (Further explanation attached☒)

DETAILS:

(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS PROVIDED.

☒ YES☐ NO☐ N/A

(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.

☒ YES☐ NO☐ N/A

(c) REPORTS ON ALTERNATE SOURCE OF POWER SENT TO EPA/STATE AS REQUIRED BY PERMIT.

☐ YES☐ NO☒ N/A

(d) SLUDGES AND SOLIDS ADEQUATELY DISPOSED.

☒ YES☐ NO☐ N/A

(e) ALL TREATMENT UNITS IN SERVICE.

plant upgrade construction related

☐ YES☒ NO☐ N/A

(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATION AND MAINTENANCE PROBLEMS.

☐ YES☒ NO☐ N/A

(g) QUALIFIED OPERATING STAFF PROVIDED.

☒ YES☐ NO☐ N/A

(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING NEW OPERATORS.

no recent hiring

☒ YES☐ NO☐ N/A

(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJOR EQUIPMENT SPECIFICATIONS, AND PARTS AND EQUIPMENT SUPPLIERS.

☒ YES☐ NO☐ N/A

(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINTENANCE OF EACH ITEM OF MAJOR EQUIPMENT.

☒ YES☐ NO☐ N/A

(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED.

not yet for new plant

☒ YES☐ NO☐ N/A

(l) SPCC PLAN AVAILABLE.

☒ YES☐ NO☐ N/A

(m) REGULATORY AGENCY NOTIFIED OF BY PASSING. (Dates _____)

☐ YES☐ NO☒ N/A(n) ANY BY-PASSING SINCE LAST INSPECTION: can no longer bypass (previously only Cl₂ tank)☒ YES☒ NO☐ N/A

(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED.

☒ YES☐ NO☐ N/A

EPA FORM 3560-3 (9-77)

I/I has improved w/ upgraded sewer system

PERMIT NO
VA0028363

SECTION J - Compliance Schedules

PERMITTEE IS MEETING COMPLIANCE SCHEDULE. ☐ YES ☐ NO ☒ N/A (Further explanation attached)

CHECK APPROPRIATE PHASE(S):

- ☐ (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE AUTHORITIES TO BEGIN CONSTRUCTION.
- ☐ (b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants, etc.).
- ☐ (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED.
- ☐ (d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED.
- ☐ (e) CONSTRUCTION HAS COMMENCED.
- ☐ (f) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE.
- ☐ (g) CONSTRUCTION HAS BEEN COMPLETED.
- ☐ (h) START-UP HAS COMMENCED.
- ☐ (i) THE PERMITTEE HAS REQUESTED AN EXTENSION OF TIME.

SECTION K - Self-Monitoring Program

Part 1 - Flow measurement (Further explanation attached ☒)PERMITTEE FLOW MEASUREMENT MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. ☒ YES ☐ NO ☐ N/A

DETAILS: * new meter to be installed

(a) PRIMARY MEASURING DEVICE PROPERLY INSTALLED. ☒ YES ☐ NO ☐ N/ATYPE OF DEVICE: ☒ WEIR ☐ PARSHALL FLUME ☐ MAGMETER ☐ VENTURI METER ☐ OTHER (Specify _____)(b) CALIBRATION FREQUENCY ADEQUATE. (Date of last calibration annually) ☒ YES ☐ NO ☐ N/A(c) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED. ☒ YES ☐ NO ☐ N/A(d) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED. ☒ YES ☐ NO ☐ N/A(e) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES. ☐ YES ☒ NO ☐ N/APart 2 - Sampling (Further explanation attached ☒)PERMITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. ☒ YES ☐ NO ☐ N/A

DETAILS:

(a) LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES. ☒ YES ☐ NO ☐ N/A(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT. ☒ YES ☐ NO ☐ N/A(c) PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT. ☒ YES ☐ NO ☐ N/A
IF NO, ☐ GRAB ☐ MANUAL COMPOSITE ☐ AUTOMATIC COMPOSITE FREQUENCY(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE. ☒ YES ☐ NO ☐ N/A(i) SAMPLES REFRIGERATED DURING COMPOSITING ☒ YES ☐ NO ☐ N/A(ii) PROPER PRESERVATION TECHNIQUES USED ☒ YES ☐ NO ☐ N/A(iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT Flow proportional ☒ YES ☐ NO ☒ N/A(iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40 CFR 136.3 ☒ YES ☐ NO ☐ N/A(e) MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT. ☐ YES ☒ NO ☐ N/A(f) IF (e) IS YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT. ☐ YES ☐ NO ☒ N/APart 3 - Laboratory (Further explanation attached ☒)PERMITTEE LABORATORY PROCEDURES MEET THE REQUIREMENTS AND INTENT OF THE PERMIT. ☒ YES ☐ NO ☐ N/A

DETAILS:

(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.3) ☒ YES ☐ NO ☐ N/A(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED. ☐ YES ☐ NO ☒ N/A(c) PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED. NO ☒ YES ☐ NO ☐ N/A(d) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. ☒ YES ☐ NO ☐ N/A(e) QUALITY CONTROL PROCEDURES USED. ☒ YES ☐ NO ☐ N/A(f) DUPLICATE SAMPLES ARE ANALYZED. 50 % OF TIME BOD, TSS, TP daily ☒ YES ☐ NO ☐ N/A(g) SPIKED SAMPLES ARE USED. TP daily ☒ YES ☐ NO ☐ N/A(h) COMMERCIAL LABORATORY USED. ☒ YES ☐ NO ☐ N/A(i) COMMERCIAL LABORATORY STATE CERTIFIED. ☐ YES ☐ NO ☒ N/ALAB NAME Universal LaboratoriesLAB ADDRESS 20 Research Drive Hampton, VA 23666757-865-0880

PERMIT NO.

VA 0028363

SECTION L - Effluent/Receiving Water Observations (Further explanation attached _____)

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOL	COLOR	OTHER
001			clear				

(Sections M and N: Complete as appropriate for sampling inspections)

SECTION M - Sampling Inspection Procedures and Observations (Further explanation attached _____)

- ☐ GRAB SAMPLES OBTAINED
- ☐ COMPOSITE OBTAINED
- ☐ FLOW PROPORTIONED SAMPLE
- ☐ AUTOMATIC SAMPLER USED
- ☐ SAMPLE SPLIT WITH PERMITTEE
- ☐ CHAIN OF CUSTODY EMPLOYED
- ☐ SAMPLE OBTAINED FROM FACILITY SAMPLING DEVICE

N/A

COMPOSITING FREQUENCY _____

PRESERVATION _____

SAMPLE REFRIGERATED DURING COMPOSITING: ☐ YES ☐ NO

SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE _____

SECTION N - Analytical Results (Attach report if necessary)

N/A



United States Environmental Protection Agency
Washington, D. C. 20460

NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

Transaction Code W 25 NPDES 3VA0020371 11 yr/mo/day 12 9 7 0 8 1 2 17 Inspection Type 18C Inspector 19J Fac Type 20A

Remarks

MINOR

Reserved Facility Evaluation Rating BI OA Reserved
67 69 70 71 72 73 74 75 76 77 78 79 80

Section B: Facility Data

Name and Location of Facility Inspected

Camp Upshur STP
USMC MCCDC
Quantico, VA 22134

Entry Time ☐ AM ☒ PM
1300

Permit Effective Date
2/26/95

Exit Time: Date
8/13/97 1500

Permit Expiration Date
2/26/00

Name(s) of On-Site Representative(s)

Ed Sinclair
Rick Allen
Mike Robertson

Title(s)

Supervisor
Assistant "
Lab Technician

Phone No(s)

703-784-4667
"
"

Name, Address of Responsible Official

R. T. Fretz

Title

Head, Utilities Section

Phone No.

703-784-5102

Contacted

☐ Yes ☒ No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

<u>S</u> Permit	<u>S</u> Flow Measurement	<u>NA</u> Pretreatment	<u>S</u> Operations & Maintenance
<u>S</u> Records/Reports	<u>S</u> Laboratory	<u>N</u> Compliance Schedules	<u>S</u> Sludge Disposal
<u>N</u> Facility Site Review	<u>N</u> Effluent/Receiving Waters	<u>S</u> Self-Monitoring Program	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Name(s) and Signature(s) of Inspector(s)

Charles Hufnagle

Agency/Office/Telephone

EPA/FIP/410-573-2775

Date

8/13/97

Signature of Reviewer

[Signature]

Agency/Office

EPA/FIP

Date

4/6/98

Regulatory Office Use Only

Action Taken

Date

Compliance Status

☐ Noncompliance
☐ Compliance

Sections F thru L: Complete on all inspections, as appropriate. N/A = Not Applicable

PERMIT NO.
VAC028371

SECTION F - Facility and Permit Background

ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY
(Including City, County and ZIP code)

DATE OF LAST PREVIOUS INVESTIGATION BY EPA/STATE

8/28/92

DEC

FINDINGS 5 yr. inspection cycle for minors

SECTION G - Records and Reports

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT.

☒ YES☐ NO☐ N/A (Further explanation attached)☒

DETAILS:

(a) ADEQUATE RECORDS MAINTAINED OF:

(i) SAMPLING DATE, TIME, EXACT LOCATION

☒ YES☐ NO☐ N/A

(ii) ANALYSES DATES, TIMES

☒ YES☐ NO☐ N/A

(iii) INDIVIDUAL PERFORMING ANALYSIS

☒ YES☐ NO☐ N/A(iv) ANALYTICAL METHODS/TECHNIQUES USED *except NH₃-N not indicated*☒ YES☐ NO☐ N/A

(v) ANALYTICAL RESULTS (e.g., consistent with self-monitoring report data)

☒ YES☐ NO☐ N/A

(b) MONITORING RECORDS (e.g., flow, pH, D.O., etc.) MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS (e.g., continuous, monitoring instrumentation, calibration and maintenance records).

☒ YES☐ NO☐ N/A

(c) LAB EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS KEPT.

☒ YES☐ NO☐ N/A

(d) FACILITY OPERATING RECORDS KEPT INCLUDING OPERATING LOGS FOR EACH TREATMENT UNIT.

☒ YES☐ NO☐ N/A

(e) QUALITY ASSURANCE RECORDS KEPT.

☒ YES☐ NO☐ N/A

(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUSTRIES (and their compliance status) USING PUBLICLY OWNED TREATMENT WORKS.

☐ YES☐ NO☒ N/A

SECTION H - Permit Verification

INSPECTION OBSERVATIONS VERIFY THE PERMIT.

☒ YES☐ NO☐ N/A (Further explanation attached)☒

DETAILS:

(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.

☒ YES☐ NO☐ N/A

(b) FACILITY IS AS DESCRIBED IN PERMIT.

☒ YES☐ NO☐ N/A

(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONFORM WITH THOSE SET FORTH IN PERMIT APPLICATION.

☐ YES☐ NO☒ N/A

(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION.

☒ YES☐ NO☐ N/A

(e) NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES.

☐ YES☐ NO☒ N/A(f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED. *estimate by calculation*☒ YES☐ NO☐ N/A

(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT.

☒ YES☐ NO☐ N/A

(h) CORRECT NAME AND LOCATION OF RECEIVING WATERS.

☒ YES☐ NO☐ N/A

(i) ALL DISCHARGES ARE PERMITTED.

☒ YES☐ NO☐ N/A

SECTION I - Operation and Maintenance

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED.

☒ YES☐ NO☐ N/A (Further explanation attached)☒DETAILS: ** operator on site 8 hrs/day*

(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS PROVIDED.

☒ YES☐ NO☐ N/A

(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.

☐ YES☒ NO☐ N/A

(c) REPORTS ON ALTERNATE SOURCE OF POWER SENT TO EPA/STATE AS REQUIRED BY PERMIT.

☐ YES☐ NO☒ N/A

(d) SLUDGES AND SOLIDS ADEQUATELY DISPOSED.

☒ YES☐ NO☐ N/A

(e) ALL TREATMENT UNITS IN SERVICE.

☐ YES☒ NO☐ N/A

(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATION AND MAINTENANCE PROBLEMS.

☐ YES☒ NO☐ N/A

(g) QUALIFIED OPERATING STAFF PROVIDED.

☒ YES☐ NO☐ N/A

(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING NEW OPERATORS.

☒ YES☐ NO☐ N/A

(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJOR EQUIPMENT SPECIFICATIONS, AND PARTS AND EQUIPMENT SUPPLIERS.

☒ YES☐ NO☐ N/A

(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINTENANCE OF EACH ITEM OF MAJOR EQUIPMENT.

☒ YES☐ NO☐ N/A

(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED.

☒ YES☐ NO☐ N/A

(l) SPCC PLAN AVAILABLE.

☒ YES☐ NO☐ N/A

(m) REGULATORY AGENCY NOTIFIED OF BY PASSING. (Dates)

☐ YES☐ NO☒ N/A

(n) ANY BY-PASSING SINCE LAST INSPECTION.

☐ YES☐ NO☒ N/A(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED. *although significant C/I*☐ YES☒ NO☐ N/A

PERMIT NO.

VA0028371

SECTION J - Compliance Schedules

PERMITTEE IS MEETING COMPLIANCE SCHEDULE.

☐ YES ☐ NO ☒ N/A(Further explanation attached ☒)

CHECK APPROPRIATE PHASE(S):

☐ (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE AUTHORITIES TO BEGIN CONSTRUCTION.☐ (b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants, etc.).☐ (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED.☐ (d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED.☐ (e) CONSTRUCTION HAS COMMENCED.☐ (f) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE.☐ (g) CONSTRUCTION HAS BEEN COMPLETED.☐ (h) START-UP HAS COMMENCED.☐ (i) THE PERMITTEE HAS REQUESTED AN EXTENSION OF TIME.

SECTION K - Self-Monitoring Program

Part 1 - Flow measurement (Further explanation attached ☒)

PERMITTEE FLOW MEASUREMENT MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES☐ NO☐ N/A

DETAILS:

(a) PRIMARY MEASURING DEVICE PROPERLY INSTALLED. *w/ultrasonic level detection* ☒ YES ☐ NO ☐ N/ATYPE OF DEVICE: ☒ WEIR ☐ PARSHALL FLUME ☐ MAGMETER ☐ VENTURI METER ☐ OTHER (Specify _____)(b) CALIBRATION FREQUENCY ADEQUATE. (Date of last calibration *annually*) ☒ YES ☐ NO ☐ N/A(c) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED. ☒ YES ☐ NO ☐ N/A(d) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED. ☒ YES ☐ NO ☐ N/A(e) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES. ☒ YES ☐ NO ☐ N/APart 2 - Sampling (Further explanation attached ☒)

PERMITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES☐ NO☐ N/A

DETAILS:

(a) LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES. ☒ YES ☐ NO ☐ N/A(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT. ☒ YES ☐ NO ☐ N/A(c) PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT.
IF NO, ☐ GRAB ☐ MANUAL COMPOSITE ☐ AUTOMATIC COMPOSITE FREQUENCY(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE. ☒ YES ☐ NO ☐ N/A(i) SAMPLES REFRIGERATED DURING COMPOSITING *grab samples only* ☐ YES ☐ NO ☒ N/A(ii) PROPER PRESERVATION TECHNIQUES USED *noticed upon collection: NH₃-N not preserved* ☐ YES ☒ NO ☐ N/A(iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT *preserved* ☐ YES ☐ NO ☒ N/A(iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40 CFR 136.3 ☒ YES ☐ NO ☐ N/A(e) MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT. *occasionally* ☒ YES ☐ NO ☐ N/A(f) IF (e) IS YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT. ☒ YES ☐ NO ☐ N/APart 3 - Laboratory (Further explanation attached ☒)

PERMITTEE LABORATORY PROCEDURES MEET THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES☐ NO☐ N/ADETAILS: *Quantico analyzes NH₃-N @ Mainline STP Lab*(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.3) ☒ YES ☐ NO ☐ N/A(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED. ☐ YES ☐ NO ☒ N/A(c) PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED. ☐ YES ☒ NO ☐ N/A(d) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. ☒ YES ☐ NO ☐ N/A(e) QUALITY CONTROL PROCEDURES USED. ☒ YES ☐ NO ☐ N/A(f) DUPLICATE SAMPLES ARE ANALYZED. *either/or 100% OF TIME* ☒ YES ☐ NO ☐ N/A(g) SPIKED SAMPLES ARE USED. *NH₃-N* ☒ YES ☐ NO ☐ N/A(h) COMMERCIAL LABORATORY USED. *BOD₅, TSS* ☒ YES ☐ NO ☐ N/A(i) COMMERCIAL LABORATORY STATE CERTIFIED. ☐ YES ☐ NO ☒ N/A

LAB NAME

Universal Laboratories

LAB ADDRESS

20 Research Drive Hampton, VA 23666

757-865-0880

PERMIT NO.
VA0028371

SECTION L - Effluent/Receiving Water Observations (Further explanation attached _____)

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOL	COLOR	OTHER
001	No flow at time of inspection.						

(Sections M and N: Complete as appropriate for sampling inspections)

SECTION M - Sampling Inspection Procedures and Observations (Further explanation attached _____)

- ☐ GRAB SAMPLES OBTAINED
- ☐ COMPOSITE OBTAINED
- ☐ FLOW PROPORTIONED SAMPLE
- ☐ AUTOMATIC SAMPLER USED
- ☐ SAMPLE SPLIT WITH PERMITTEE
- ☐ CHAIN OF CUSTODY EMPLOYED
- ☐ SAMPLE OBTAINED FROM FACILITY SAMPLING DEVICE

N/A

COMPOSITING FREQUENCY _____ PRESERVATION _____

SAMPLE REFRIGERATED DURING COMPOSITING: ☐ YES ☐ NO

SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE _____

SECTION N - Analytical Results (Attach report if necessary)

N/A



United States Environmental Protection Agency
Washington, D. C. 20460

NPDES Compliance Inspection Report

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

Section A: National Data System Coding

Transaction Code: **W 25** NPDES: **3VA0002151** yr./mo./day: **11 12 97 08 13** Inspection Type: **18C** Inspector: **19J** Fac Type: **20A**

Remarks

INDUSTRIAL DISCHARGES

Reserved: **67** Facility Evaluation Rating: **70** BI: **71** QA: **72** Reserved: **73** **74** **75** **80**

Section B: Facility Data

Name and Location of Facility Inspected:
USMC, MCC DC Quantico Marine Base
Quantico, VA 22134

Entry Time: ☒ AM ☐ PM

0900

Permit Effective Date

12/19/94

Exit Time: Date

1630 8/14/97

Permit Expiration Date

12/19/99

Name(s) of On-Site Representative(s):

Ralph Phipps
Kristine Stein
Nicole Bennett

Title(s):

Head, Environmental Affairs Section
Chemist
Environmental Protection Specialist

Phone No(s):

703-784-4030

Name, Address of Responsible Official:

Bruce Frizzell

Title:

Head, NREA Branch

Phone No:

703-784-4030

Contacted

☐ Yes ☒ No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S Permit	S Flow Measurement	N/A Pretreatment	S Operations & Maintenance
S Records/Reports	S Laboratory	S Compliance Schedules	S Sludge Disposal
N Facility Site Review	N Effluent/Receiving Waters	S Self-Monitoring Program	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Name(s) and Signature(s) of Inspector(s): Charles Hufnagel	Agency/Office/Telephone: EPA/FIP/410-573-2775	Date: 8/14/97
Signature of Reviewer: [Signature]	Agency/Office: EPA/FIP	Date: 4/6/98
Regulatory Office Use Only		
Action Taken:	Date:	Compliance Status: ☐ Noncompliance ☐ Compliance

Sections F thru L: Complete on all inspections, as appropriate. N/A = Not Applicable

PERMIT NO.

VA0002151

SECTION F - Facility and Permit Background

ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY
(Including City, County and ZIP code)

DATE OF LAST PREVIOUS INVESTIGATION BY EPA/STATE

8/8/96

FINDINGS

Continuing TSS problems @ 005,071

SECTION G - Records and Reports

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT.

☒ YES☐ NO☐ N/A (Further explanation attached☒)

DETAILS:

(a) ADEQUATE RECORDS MAINTAINED OF:

(i) SAMPLING DATE, TIME, EXACT LOCATION

☒ YES☐ NO☐ N/A

(ii) ANALYSES DATES TIMES

☒ YES☐ NO☐ N/A

(iii) INDIVIDUAL PERFORMING ANALYSIS

☒ YES☐ NO☐ N/A

(iv) ANALYTICAL METHODS/TECHNIQUES USED

☒ YES☐ NO☐ N/A

(v) ANALYTICAL RESULTS (e.g., consistent with self-monitoring report data)

☒ YES☐ NO☐ N/A

(b) MONITORING RECORDS (e.g., flow, pH, D.O., etc.) MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS (e.g., continuous monitoring instrumentation, calibration and maintenance records).

☒ YES☐ NO☐ N/A

(c) LAB EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS KEPT.

☒ YES☐ NO☐ N/A

(d) FACILITY OPERATING RECORDS KEPT INCLUDING OPERATING LOGS FOR EACH TREATMENT UNIT.

☐ YES☐ NO☒ N/A

(e) QUALITY ASSURANCE RECORDS KEPT.

☒ YES☐ NO☐ N/A

(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUSTRIES (and their compliance status) USING PUBLICLY OWNED TREATMENT WORKS.

☐ YES☐ NO☒ N/A

SECTION H - Permit Verification

INSPECTION OBSERVATIONS VERIFY THE PERMIT.

☒ YES☐ NO☐ N/A (Further explanation attached☒)

DETAILS:

(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.

☒ YES☐ NO☐ N/A

(b) FACILITY IS AS DESCRIBED IN PERMIT.

☒ YES☐ NO☐ N/A

(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONFORM WITH THOSE SET FORTH IN PERMIT APPLICATION.

☐ YES☐ NO☒ N/A

(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION.

☒ YES☐ NO☐ N/A

(e) NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES.

☒ YES☐ NO☐ N/A

(f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED.

☐ YES☐ NO☒ N/A

(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT.

☒ YES☐ NO☐ N/A

(h) CORRECT NAME AND LOCATION OF RECEIVING WATERS.

☒ YES☐ NO☐ N/A

(i) ALL DISCHARGES ARE PERMITTED.

☒ YES☐ NO☐ N/A

SECTION I - Operation and Maintenance

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED.

☒ YES☐ NO☐ N/A (Further explanation attached☐)

DETAILS: * No wastewater treatment plants. Some outfalls have sedimentation (lagoons, etc.) and some outfalls are separate.

(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS PROVIDED.

☐ YES☐ NO☒ N/A

(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.

☐ YES☐ NO☒ N/A

(c) REPORTS ON ALTERNATE SOURCE OF POWER SENT TO EPA/STATE AS REQUIRED BY PERMIT.

☐ YES☐ NO☒ N/A

(d) SLUDGES AND SOLIDS ADEQUATELY DISPOSED.

☒ YES☐ NO☐ N/A

(e) ALL TREATMENT UNITS IN SERVICE.

☒ YES☐ NO☐ N/A

(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATION AND MAINTENANCE PROBLEMS.

☐ YES☒ NO☐ N/A

(g) QUALIFIED OPERATING STAFF PROVIDED.

☐ YES☐ NO☒ N/A

(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING NEW OPERATORS.

☐ YES☐ NO☒ N/A

(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJOR EQUIPMENT SPECIFICATIONS, AND PARTS AND EQUIPMENT SUPPLIERS.

☐ YES☐ NO☒ N/A

(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINTENANCE OF EACH ITEM OF MAJOR EQUIPMENT.

☐ YES☐ NO☒ N/A

(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED.

☒ YES☐ NO☒ N/A

(l) SPCC PLAN AVAILABLE.

☒ YES☐ NO☐ N/A

(m) REGULATORY AGENCY NOTIFIED OF BY PASSING. (Dates _____)

☐ YES☐ NO☒ N/A

(n) ANY BY-PASSING SINCE LAST INSPECTION.

☐ YES☒ NO☒ N/A

(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED.

☐ YES☒ NO☐ N/A

PERMIT NO.
VA 0002151

SECTION J - Compliance Schedules

PERMITTEE IS MEETING COMPLIANCE SCHEDULE.

☒ YES ☐ NO ☐ N/A (Further explanation attached ☒)

CHECK APPROPRIATE PHASE(S):

Met TRC

- ☐ (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE AUTHORITIES TO BEGIN CONSTRUCTION.
- ☐ (b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants, etc.).
- ☐ (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED.
- ☐ (d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED.
- ☐ (e) CONSTRUCTION HAS COMMENCED.
- ☐ (f) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE.
- ☐ (g) CONSTRUCTION HAS BEEN COMPLETED.
- ☐ (h) START-UP HAS COMMENCED.
- ☐ (i) THE PERMITTEE HAS REQUESTED AN EXTENSION OF TIME.

SECTION K - Self-Monitoring Program

Part 1 - Flow measurement (Further explanation attached _____)

PERMITTEE FLOW MEASUREMENT MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES ☐ NO ☐ N/A

DETAILS: all flows estimated (bucket & stopwatch, etc.)

(a) PRIMARY MEASURING DEVICE PROPERLY INSTALLED.

☐ YES ☐ NO ☒ N/ATYPE OF DEVICE: ☐ WEIR ☐ PARSHALL FLUMÉ ☐ MAGMETER ☐ VENTURI METER ☐ OTHER (Specify _____)

(b) CALIBRATION FREQUENCY ADEQUATE. (Date of last calibration _____)

☐ YES ☐ NO ☒ N/A

(c) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED.

☐ YES ☐ NO ☒ N/A

(d) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED.

☐ YES ☐ NO ☒ N/A

(e) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES.

☐ YES ☐ NO ☒ N/APart 2 - Sampling (Further explanation attached ☒)

PERMITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES ☐ NO ☐ N/A

DETAILS:

(a) LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.

☒ YES ☐ NO ☐ N/A

(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT.

☒ YES ☐ NO ☐ N/A

(c) PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT.

☒ YES ☐ NO ☐ N/AIF NO, ☐ GRAB ☐ MANUAL COMPOSITE ☐ AUTOMATIC COMPOSITE FREQUENCY

(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE.

☒ YES ☐ NO ☐ N/A

(i) SAMPLES REFRIGERATED DURING COMPOSITING

☒ YES ☐ NO ☐ N/A

(ii) PROPER PRESERVATION TECHNIQUES USED

☒ YES ☐ NO ☐ N/A

(iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT

☒ YES ☐ NO ☐ N/A

(iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40 CFR 136.3

☒ YES ☐ NO ☐ N/A

(e) MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT.

☒ YES ☐ NO ☐ N/A

(f) IF (e) IS YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT.

☒ YES ☐ NO ☐ N/APart 3 - Laboratory (Further explanation attached ☒)

PERMITTEE LABORATORY PROCEDURES MEET THE REQUIREMENTS AND INTENT OF THE PERMIT.

☒ YES ☐ NO ☐ N/A

DETAILS: Quantico (NREAB) performs some TSS and O&G analyses @ Mainville WTP

(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.3)

☒ YES ☐ NO ☐ N/A

(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED.

☐ YES ☐ NO ☒ N/A

(c) PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED.

☐ YES ☒ NO ☐ N/A

(d) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT.

☒ YES ☐ NO ☐ N/A

(e) QUALITY CONTROL PROCEDURES USED.

☒ YES ☐ NO ☐ N/A

(f) DUPLICATE SAMPLES ARE ANALYZED. 10 % OF TIME. NREAB(TSS), CVLC

☒ YES ☐ NO ☐ N/A

(g) SPIKED SAMPLES ARE USED. 10 % OF TIME. CVLC

☒ YES ☐ NO ☐ N/A

(h) COMMERCIAL LABORATORY USED.

☒ YES ☐ NO ☐ N/A

(i) COMMERCIAL LABORATORY STATE CERTIFIED.

☐ YES ☐ NO ☒ N/A

LAB NAME

Central Virginia Laboratories & Consultants, Inc.

LAB ADDRESS

3109 Old Fellows Road (P.O. Box 10938) Lynchburg, VA 24506
804-847-2852 800-246-1470 FAX 804-847-2830

Ref. Discharge Description (Attachment CWA-5)						PERMIT NO. VA0002151	
SECTION L - Effluent/Receiving Water Observations (Further explanation attached _____)							
OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOL	COLOR	OTHER
009, 013, 027 030, 035			clear				slight flow
010	slight flow (probably groundwater) noted in upstream manhole. No flow noticeable @ outfall which was ~2/3 submerged due to tide.						
016	Slow flow noticeable @ outfall, affected by tide (~1/3 submerged). Turbid or silty appearance. Some petroleum type odor. Slightly sheens visible downstream.						
005, 071	essentially no flow, dripping only						
004	outfall not observed, lagoon only						
014	could not observe, if flow, due to tidal influence						
001, 002, 003 015, 022, 072, 073, 074	No flow						
(Sections M and N: Complete as appropriate for sampling inspections)							
SECTION M - Sampling Inspection Procedures and Observations (Further explanation attached _____)							
☐ GRAB SAMPLES OBTAINED ☐ COMPOSITE OBTAINED ☐ FLOW PROPORTIONED SAMPLE ☐ AUTOMATIC SAMPLER USED ☐ SAMPLE SPLIT WITH PERMITTEE ☐ CHAIN OF CUSTODY EMPLOYED ☐ SAMPLE OBTAINED FROM FACILITY SAMPLING DEVICE							
COMPOSITING FREQUENCY _____				PRESERVATION _____			
SAMPLE REFRIGERATED DURING COMPOSITING: ☐ YES ☐ NO							
SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE _____							
SECTION N - Analytical Results (Attach report if necessary)							
N/A							

Underground Injection Control

There are eleven facilities utilizing a total of 16 Class V Wells. All Class V Wells were identified as septic systems. All facilities are connected to Public Water Systems located both on base and in surrounding communities. There were no obvious endangering discharges taking place to any of the Class V Wells. The only potential endangering discharges were at the fire station (floor drains) and the two water plants (chemical sinks). Non-UIC concerns include the potential for a fuel spill to the base storm water system at the Fuel Farm and a fuel oil spill which occurred one year ago at the Guadalcanal Maintenance Facility and has not yet been remediated.

MAIN SIDE WATER PLANT

Utilities Section B041-7

Three bathrooms discharge to a Class V Well (septic system). One chemical sink also discharges to the septic system. The chemicals being discharged are those associated with drinking water analysis and are believed to be in such small concentrations as to not pose an endangerment to the ground water. There are no other non-domestic discharges to the septic tank. A chemical drain under a chemical hood is present for the discharge of endangering chemicals. This drain discharges to a self-contained chemical tank which is pumped out by the Marine Corps (USMC) and disposed of by the Hazardous Waste Storage Facility (HWSF). There was a remediation project approximately two years ago involving the removal of oil contaminated soil. The source of the original contamination was a leaking, oil storage tank utilized in past operations. Oil is no longer utilized as a power source at the plant.

Hazardous waste storage facility (HWSF)

This facility has no bathrooms and no injection wells are believed to exist at this facility. Hazardous wastes are disposed of through a DRMO contract. There were no environmental problems observed at the facility.

QUANTICO SECURITY BATTALION FIRE DEPARTMENT

This typical firehouse facility consists of several truck bays and living facilities for the firemen. It also has two bathrooms and kitchen facilities which discharge to a Class V Well (septic tank). The facility has at least two floor drains (1' x 1') which are believed to discharge to the septic tank. Both drains are subject to automotive wastewater discharge in the event of a contaminant spill. No automotive service, other than basic automotive fluid additions, is conducted at the facility. The

facility appears clean and the drains do not exhibit any endangering contaminant discharge. The EPA inspector recommended that an emergency response plan be prepared to deal with any inadvertent contaminant (oil/anti-freeze) discharge to the floor drains.

NATURAL RESOURCE SATELLITE OFFICE

The administration facility has two bathrooms and a kitchen sink discharging to a Class V Well (septic system). The Game Office has a single bathroom discharging to a separate (2nd) septic system. No floor drains or other potentially endangering discharges were observed at this site. The inspection did reveal that monitoring wells are present in this area as a result of a pesticide dump (55 gallon drums).

AMMUNITION SUPPLY POINT (ASP)

The old administration facility has one bathroom discharging to a (Class V Well) septic system. No endangering discharges were observed. This facility is to be permanently abandoned in the near future. The new administration facility is reported to have two bathrooms discharging to a separate (2nd) septic system. There is one floor drain in each of the bathrooms and no other floor drains were reported anywhere else within the new facility. No personal inspection was made of new facility because of security reasons. No endangering discharges are believed to exist in either facility.

The EPA inspector recommended that the septic system serving the old administration facility be pumped out and permanently abandoned when it is no longer required.

QUANTICO SUPPLY POINT

The facility consists of a small office building which has one bathroom discharging to a Class V Well (septic system). There is also one floor drain discharging to the septic system in both the bathroom and the fire house. Neither floor drain is believed to represent an endangerment.

An inspection of the facility revealed that all fuel tanks are enclosed in containment ponds that have storm water drains which are only opened to discharge storm water from the containment pond. These drains discharge to what was described as a fuel water separator, which has the ability to completely eliminate fuel from storm water discharged. The facility recently had a fuel spill when line containment failed. The spill required removal of some soil. The area of the spill also had cutoff storm drains discharging to the fuel separator system. In areas below the above ground fuel piping leading to the distribution point there are multiple storm drains which cannot be closed and discharge directly

to the storm sewer system. In the event that a pipe's integrity fails in this area, a large quantity of fuel could be discharged directly to the storm water sewer system. The present system has no type of alarm which would warn the operators in the event a pipe were to fail.

DEFENSE UTILIZATION MARKETING OFFICE (DRMO)

This facility is utilized for the storage of previously used appliances etc., so that they can be reutilized. The facility has one bathroom discharging to a Class V Well (septic system). This facility does not generate any hazardous wastes and the septic system is being utilized for domestic waste only.

EXPLOSIVE ORDNANCE DISPOSAL (EOD)

The upper facility has one bathroom and a shower which discharge to a Class V Well (septic system). The lower facility has four bathrooms and one shower discharging to a second septic system. There are three floor drains in the duty hut and no other potentially endangering discharges. They use small amounts of petroleum products and solvents which are disposed of by NREA Disposal.

GUADALCANAL MAINTENANCE FACILITY

The facility has two bathrooms which were reported to discharge to two separate septic systems. This facility probably has no septic systems and is probably connected to the municipal sewer system. The facility had a fuel oil containment tank fail approximately one year ago. The tank was enclosed in containment wall which was unable to prevent some spillage onto the surrounding soil. This soil has not been excavated or properly evaluated for remediation.

The EPA inspector recommended that the site of the oil spill be evaluated.

CAMP UPSHUR WATER PLANT

This small water treatment plant has one bathroom discharging to a Class V Well (septic system). One chemical sink also discharges to the septic system. The chemicals being discharged are those associated with drinking water analysis and are believed to be in such small concentrations as to not pose an endangerment to the ground water. There are no other non-domestic discharges to the septic tank. The facility has floor drains in a pump room which discharges to the on-site water storage ponds.

ENGINEER SUPPORT AREA

This facility consists of two compounds. The upper and lower compounds have been utilized for many different types of operations throughout the years but mainly as a research & development site for different types of military equipment. Presently, that facility is almost entirely shut down but plans are in the works to re-open the facility for use by reserve nits. There is one bathroom in each of the two compounds discharging to separate septic tanks. The septic system in the upper building has been backing up for the past few months. There is one wash bay that discharges to an oil/water separator then to an unknown location. The oil/water separator was installed approximately two years ago. There were no floor drains observed in any of the buildings. There was evidence of some dumping in the woods surrounding the lower compound. Information was gathered that indicates that contamination may be present on this site. Information further indicates that the ground in the forest below the lower compound leaches a **red substance** during periods of high ground water. Base environmental management is supposed to be aware of the contamination, but military personnel on site were very reluctant to talk about any problem which might exist.

The EPA inspector recommended that the potential contamination on the site be investigated to determine an appropriate course of action.

CONSTRUCTION EQUIPMENT REPAIR FACILITY

This facility is utilized for the maintenance of heavy equipment and has several floor drains and a wash rack which discharge to an oil/water separator then to a municipal sewer system. Several monitoring wells were observed on site. These wells were reportedly a result of a battery disposal site which has been remediated. There are no UIC discharges at this site.

MEDAL OF HONOR GOLF COURSE

Typical golf course facility with four bathrooms discharging to a Class V Well (septic system). There were no floor drains in any maintenance area. Used batteries are disposed of by Quantico HWS.

Toxic Substances Control Act

Quantico Marine Base owns and operates an electrical distribution system to supply electric power to the base. The facility does not have electrical generation capability, but purchases electricity from the Virginia Power Co. The distribution system contains equipment common to the distribution of electrical power, such as transformers and capacitors.

EPA conducted a TSCA/PCB inspection at the Quantico Marine Base in March, 1990. At that time, the facility had sixteen PCB Transformers in their distribution system. During that inspection, a number of discrepancies were noted involving the PCB equipment at the facility, including, but not limited to leaks on PCB Transformers, missing quarterly inspections, and recordkeeping deficiencies. As a result of that inspection, EPA issued a Notice of Violation to the facility in December, 1990 addressing all of the deficiencies noted during the inspection.

Subsequent to that, the facility hired a contractor to identify and test for PCB content, all oil filled transformers in the facility's distribution system. This was accomplished during the 1991/1992 time frame. At the same time, the facility also awarded a contract to begin removal and disposal of all PCB equipment in the distribution system.

From 1991 to 1995, all known PCB and PCB Contaminated Transformers were removed from service and shipped off-site for disposal. All of this equipment was replaced with non-PCB equipment.

During 1995, the facility began another program to identify all other oil filled equipment located at the facility (e.g. forklifts, hydraulic machinery, etc;). Once identified, the oil in this equipment was sampled and tested for PCB content. Part of this program included the testing of hydraulically operated machine shop equipment at various locations throughout the base. The results of this testing identified one piece of equipment which was contaminated with PCBs. This equipment, a Milwaukee milling machine located in the facility's central heating plant, was contaminated with PCBs at a concentration of 1950 PPM (see attachment no. PCB-15). This piece of equipment was subsequently removed from service and shipped off site for disposal.

At the time of the subject inspection, there were no known PCB or PCB Contaminated Transformers at the facility either in service or in storage for re-use or disposal.

There are thirty large power capacitors in use at the facility; however, at the time of the subject inspection the facility personnel did not know if the capacitors contained PCB

fluids.

There are several areas at the facility which either had previously or are currently undergoing remediation for PCB contamination. These sites are as follows:

- An old eight acre landfill located along the Potomac River where, among other hazardous materials, 120 gallons of PCB transformer oil was disposed of (See Photo Nos. 1, 2, & 3).
- DRMO-Scrapyard, although it is located on the old landfill site, it is considered a separate site because it was a fenced in area used to store electrical transformers. About 10 PCB contaminated transformers were stored there for a period of time and before they were removed, the oil in six of the transformers leaked onto the ground (See Photo Nos. 1, 2, & 3).
- Old Batch Plant - this site was used for about six to nine years for the open storage of unserviceable electrical transformers. Of the 34 transformers stored at this site, two contained PCB fluids at concentrations greater than 500 PPM and twelve contained fluids with PCB concentrations between 3 and 240 PPM. Some of the fluids leaked from these transformers while in storage.

A more detailed description of these sites was obtained from the facility's site management plan (see attachment no. PCB-1).

Facility Tour

During the subject inspection, the EPA inspector accompanied by facility personnel, visited two locations at the facility that were previously used by the facility's contractor to stage PCB and PCB contaminated transformers prior to shipment of site. The facility did not have a designated PCB storage area. These areas, one near the base fire station and the other behind the base's headquarters building are both asphalt paved areas. The EPA inspector observed both areas during the inspection and there was no evidence of leaks or spills (e.g. visible stains) from PCB equipment which had been stored there in the past.

The other areas visited during the inspection, were two electrical substations that contained the thirty, in service capacitors previously mentioned in this report.

The stadium substation, located on McCawley Avenue near the base environmental office contained a bank of twenty-one capacitors (see photo no. 4). Each of the capacitors was marked with a manufacturer's nameplate, but there were no markings to indicate if the capacitors were PCB or non-PCB. The capacitors were mounted on

a metal rack and the information on the nameplates was too small to be read from ground level. The EPA inspector noted that two of the capacitors were stained (see photo nos. 5 & 6) indicating that they may have leaked at some time; however, there were no stains on the ground under the capacitor bank. According to the electrical shop supervisor, Dale Triplett, the capacitors were included in a survey of oil filled equipment to identify PCB containing equipment. He said that the information from the capacitor nameplates might be contained in files maintained at the public works office. The EPA inspector accompanied by the facility representative, Ralph Phipps, went to the public works office to check on this information; however, the person who might have the information was not in the office the week of the inspection. Ralph Phipps stated that he would check with this person the following week.

The other substation containing capacitors is located in the Camp Barrett area of the base. This substation contained nine large capacitors mounted in a metal rack (see photo no. 7). These capacitors also were marked with manufacturer's nameplates, but there were no markings to indicate if they were PCB or non-PCB. There were no visible stains or leaks on these capacitors.

Subsequent to the inspection, Ralph Phipps, stated that they checked the information on the capacitor nameplates and each of the thirty capacitors was marked as containing non-PCB fluid.

Recordkeeping

All of the records regarding PCBs and PCB Items are maintained in the facility's environmental office. During the subject inspection, the EPA inspector reviewed all of the records dating from 1991 to the present. These records included the facility's annual document logs (electrical equipment inventories), PCB shipment manifests and attached documents (e.g. continuation sheets and certificates of disposal) and records regarding the removal of contaminated PCB soils from an old landfill site.

From 1991 to 1994, the facility's annual documents consisted of electrical equipment inventories for each calendar year as well as manifest and associated documents for any PCB shipments made during the calendar year. Although these documents listed each piece of electrical equipment (transformers) including serial numbers, gallons of oil, weight of oil and PCB concentrations, the documents did not contain the total number and total weights in kilograms for PCB Articles, PCB Article Containers and PCB Containers removed from service and shipped off site (See Attachment No. PCB-2). These documents also did not contain the following information: for items remaining in service at the end of the calendar year, the total number of PCB Transformers and the total weight of the PCBs in the transformers, the total number of large high and low voltage PCB Capacitors, and the total weight of PCB Items in PCB Containers.

Beginning in 1995, the facility personnel utilized a different format for their annual documents (See Attachment No. PCB-7). The 1995 annual document contained only four items (three transformers and one hydraulically operated milling machine). The three transformers were removed from service and disposed of in 1995 and the hydraulic milling machine was placed into storage for disposal in 1995.

The 1996 annual document contained only the hydraulically operated milling machine and the document indicated that the machine, contaminated with PCBs, was shipped off-site for disposal in 1996. The facility had tested all of the hydraulically operated machinery at the base and the milling machine was the only piece of equipment which contained any concentration of PCBs (See Attachment No. PCB-15)

While reviewing the manifest for shipments of PCBs off-site, the EPA inspector noted that for two shipments of PCBs in 1995 by independent transporters (See Attachment Nos. PCB-8 & PCB-9), the facility had no confirmation of receipt of the PCB shipments by the TSD facility (e.g. phone log).

The EPA inspector told facility personnel that their annual documents also needed to include documentation of all the PCB contaminated materials (soils) removed from the old landfill site.

During the subject inspection, the EPA inspector completed copies of two inspection checklists, Recordkeeping Checklist and Subpart K - PCB Waste Disposal Records and Reports Checklist. The completed checklists are included as part of this report

**Recordkeeping
Checklist
(40 CFR 761.180)**

Facility Name Quantico Marine Base Inspection Date: 8/97

761.180(a)

1. Does the facility have in use, or in storage for future use or disposal, the following:

a. 99.4 lbs. (45 kg.) or more of PCBs in PCB Container(s)?
 Yes X No

b. One or more PCB Transformers? Yes X No

c. 50 or more large high or low voltage PCB capacitors?
 Yes X No

2. Has the facility developed and maintained all annual records and the annual document log as of July 1, 1991 and each year thereafter? X Yes No

a. Are the annual records and the annual document log prepared on a calendar year basis?
 X Yes No

b. Has the facility retained the annual records and the annual document logs for at least three (3) years after it no longer used or stored PCBs or PCB Items?
 X Yes No

3. Where are the records maintained? NREA Branch office,
Building no. 3040

a. How are the records compiled and by whom? records are
compiled from inventories and manifest files.
Records were prepared by Nicki Bennett in 1995
& 1996, prior to 1995, records were prepared by
various other persons.

761.180(a)(1)(i) & (ii)

4. Does the facility's annual records contain the following:
- a. All signed manifests generated by the facility during the calendar year? ☒ Yes ☐ No
 - b. All Certificates of Disposal that have been received by the facility during the calendar year? ☒ Yes ☐ No

761.180(a)(2)(i) & (ii)

5. Does the written annual document log contain the following:
- a. The name, address, and EPA identification number of the facility? ☒ Yes ☐ No
 - b. The calendar year covered by the annual document log? ☒ Yes ☐ No
 - c. The unique manifest number of every manifest generated by the facility during the calendar year? ☒ Yes ☐ No

761.180(a)(2)(ii)(A)

6. Does the written annual document log contain the following information from each manifest and for unmanifested waste that may be stored at the facility:

Bulk PCB waste (e.g. in a tanker or truck)

- a. Its weight in kilograms? ☒ Yes ☐ No
- b. The first date it was removed from service for disposal? ☒ Yes ☐ No
- c. The date it was placed into transport for off-site storage or disposal? ☒ Yes ☐ No
- d. The date of disposal, if known? ☒ Yes ☐ No
w/ the exception of the contaminated soils removed from the site in 1996.

761.180(a)(2)(ii)(B)

PCB Articles (e.g. transformer or capacitor)

- a. The serial number (if available) or other means of identifying each PCB Article? ☒ Yes ☐ No
- b. The weight in kilograms of the PCB waste in each PCB Article? ☒ Yes ☐ No
- c. The date it was removed from service for disposal? ☒ Yes ☐ No
- d. The date it was placed in transport for off-site storage or disposal? ☒ Yes ☐ No
- e. The date of disposal, if known? ☒ Yes ☐ No

761.180(a)(2)(ii)(C)

PCB Containers

- a. A unique number identifying each PCB Container? ☒ Yes ☐ No
- b. A description of the contents of each PCB Container? ☒ Yes ☐ No
- c. The total weight in kilograms of the material in each PCB Container? ☒ Yes ☐ No
- d. The first date material was placed in each PCB Container? ☒ Yes ☐ No
- e. The date each container was placed in transport for off-site storage or disposal? ☒ Yes ☐ No
- f. The date of disposal, if known? ☒ Yes ☐ No

761.180(a)(2)(ii)(D)

PCB Article Containers

- a. A unique number identifying each PCB Article Container? ☒ Yes ☐ No

- b. A description of the contents of each PCB Article Container? X Yes No
- c. The total weight in kilograms of the contents of each PCB Article Container? X Yes No
- d. The first date a PCB Article was placed into each container? X Yes No
- e. The date the container was placed in transport for off-site storage or disposal? X Yes No
- f. The date of disposal, if known? X Yes No

761.180(a)(2)(iii)

7. Does the facility's annual document log contain the total numbers and total weights (kg.) for the following items:
- a. Total number of PCB Articles (by specific type)?
 Yes X No
- b. Total weight of PCBs in PCB Articles?
 Yes X No
- c. Total number of PCB Article Containers?
 Yes X No
- d. Total weight of contents of PCB Article Containers?
 Yes X No
- e. Total number of PCB Containers?
 Yes X No
- f. Total weight of contents of PCB Containers?
 Yes X No
- g. Total weight of bulk PCB waste that was placed into storage for disposal or disposed during the calendar year?
 Yes X No

761.180(a)(2)(iv), (v) & (vi)

8. For PCBs and PCB Items remaining in service at the end of the calendar year, do records indicate the following:
- a. Total number of PCB Transformers?
 Yes X No
- b. Total weight (kg) of PCBs in transformers?
 Yes X No

SUBPART K - PCB WASTE DISPOSAL RECORDS AND REPORTS CHECKLIST

(40 CFR Part 761.202 thru 761.218)

Note: This checklist should be used starting February 5, 1990 at any facility which generates, stores, transports or disposes of PCB waste. This would normally exclude only those facilities which have all of their PCB articles/items either in service or in storage for reuse. PCB wastes are regulated herein if they contain greater than 50 ppm PCB or if they contain less than 50 ppm PCB as a result of dilution.

Name of Facility: Quantico Marine Base

Type: ☒ Gen ☐ Transporter ☐ Comm. Storer ☐ Disposer

1. Is the facility exempt from the EPA notification requirements because it is only a generator of PCB waste through its use, owning, servicing or processing of PCBs or PCB items but does not own or operate a designated storage for disposal area subject to the requirements of S761.65(b) or S761.65(c)(7)?

☒ yes ☐ no (761.205(c)(2))

If yes, skip to question 5c

2. Has the facility engaged in PCB waste handling activities on or prior to February 5, 1990? ☐ yes ☐ no (761.202(c))

3. Has the facility applied for an EPA identification number?
☐ yes ☐ no (761.202)

If yes, what was the date of the application and has the ID number been officially issued?

If no, does the facility already have a RCRA identification number?
☐ yes ☐ no

If the facility has a RCRA ID number, did it notify EPA of its PCB waste activities by April 4, 1990? ☒ yes ☐ no
(761.205(b))

*facility did notify EPA in March, 1990
(See attachment No. PCB-B)*

4. Has the generator submitted separate notifications to EPA for each PCB storage area it owns or operates on different sites or properties? ☐yes ☐no ☐N/A (761.205(c)(2)(iii))

5. If the facility did not engage in PCB waste activities until after February 5, 1990 and has not yet received an EPA identification number or if the facility engaged in PCB waste activities on or before February 5, 1990 but has not applied for an EPA identification number have any of the following occurred

a) The facility is a generator of PCB waste and processed, stored, transported or offered for transport or disposed of such PCB waste after June 4, 1990? ☐yes ☐no
(761.202(b)(c)&(d))

b) The facility is not a generator of PCB waste but has engaged in transporting, commercial storage or disposal of such PCB waste after June 4, 1990? ☐yes ☐no
(761.202(b)(c)&(d))

c) The facility is a generator that offered PCB waste to transporters, commercial storers, or disposers who have not received an EPA identification number? ☐yes ☒no
(761.202(b)(c)&(d))

d) The facility is not a generator of PCB waste but has delivered such waste to a transporter, commercial storer or a disposer that have not received an EPA identification number?
☐yes ☒no (761.202(b)(c)&(d))

6. Has the generator prepared a manifest whenever it ships PCB waste off-site? ☒yes ☐no ☐N/A (761.207(a))

If no or N/A skip to question 13

7. Was the manifest prepared on EPA Form 8700-22 with a continuation sheet if necessary? ☒yes ☐no (761.207(a))

If no, describe what manifest was used.

8. Was the following information specified on the manifest

a) For each bulk load of PCBs, its identification, the earliest date of removal from service for disposal and its weight in kilograms? ☒ yes ☐ no (761.207(a)(1))

b) For each PCB container or article container, an identification number, type of PCB waste, earliest date of removal from service for disposal and its weight in kilograms? ☒ yes ☐ no (761.207(a)(2))

c) For each PCB article, its serial number or other identification, date of removal from service for disposal and weight in kilograms of its PCB waste? ☒ yes ☐ no (761.207(a)(3))

d) An approved off-site commercial storage or disposal facility for PCB waste? ☒ yes ☐ no (761.207(g))

9. Did the generator of PCB waste, transporter or the storage or disposal facility retain on file copies of the appropriate manifests? ☒ yes ☐ no (761.209(a))

10. Were the manifests properly signed? ☒ yes ☐ no (761.209(a))

11. Did the generator receive the hand signed manifest within 35 days after the PCB waste was accepted by the transporter? ☒ yes ☐ no ☐ N/A (761.208(a)(4))

If yes, did the generator confirm by telephone or other means (if shipped by an independent transporter) within a day after receiving the hand-signed manifest that the commercial storer or disposer actually received the manifested waste? ☐ yes ☒ no ☐ N/A (761.208(a)(4))

no confirmation for two shipments in 1995.

If no, did the generator telephone or communicate by other means first with the commercial storer or disposer and then, if necessary, with the transporter to determine the status of the PCB waste? ☐ yes ☒ no ☐ N/A (761.208(a)(4))

12. If the generator has not received a hand-signed manifest from an EPA approved facility within 10 days from the date of the telephone call to the transporter, did it submit an exception report to the EPA Regional Administrator? ☐ yes ☐ no ☒ N/A (761.208(a)(4))

13. Is there evidence to indicate that either a transporter or a commercial storer or disposer accepted a shipment of PCB waste after April 4, 1990 without a properly signed manifest?
_____yes ☒ no _____ N/A (761.211(a))

If yes, describe and state whether an "Unmanifested Waste Report" was submitted to the EPA Regional Administrator within 15 days after the unmanifested PCB waste was received (761.211(c))

N/A

14. Is there evidence to indicate that a significant discrepancy regarding the amount of PCB waste stated on the manifest occurred?
☒ yes _____ no _____ N/A (761.210(a))

If yes, describe the discrepancy and attempts to reconcile it, and state whether a letter was submitted to the EPA Regional Administrator if it is was not resolved within 15 days after the PCB waste was received (761.210(b))

Manifest No. 50565 (attachment No. PCB-8) facility had recorded wrong weight on the shipment manifest. TSD facility found the mistake and corrected it within fifteen days.

Answer questions 15. and 16. if the facility is a disposer of PCB waste

15. Does the disposer submit to the EPA Regional Administer a One-year Exception Report if it receives PCB or PCB items more than 9 months after they were removed from service for disposal and, it could not dispose of the affected PCBs or PCB items within 1 year of the date of removal from service for disposal?
_____yes _____no (761.215(c)(1)&(2)) N/A

16. Does the disposer prepare a Certificate of Disposal for each shipment of PCB waste that it accepts and does it send a copy to the generator identified on the manifest within 30 days of the date that disposal of the PCB waste was completed?
_____yes _____no (761.218(a)&(b)) N/A

Emergency Planning and Community Right-To-Know Act

This inspection was conducted to inspect, document, and verify the facility's compliance with the reporting requirements stated in 40 C.F.R. Part 372 under Section 313 of SARA Title III.

SARA Title III

The Emergency Planning and Community Right-to-Know Act (EPCRA) was enacted as part of Title III of the Superfund Amendments and Reauthorization Act of 1986. Executive order 12856 of October, 1993 brought federal facilities under the requirements of this act for the first time effective reporting year 1994. The Executive order defines a **covered facility** coming under the provisions of Section 313 as one that meets all three of the following criteria;

1. If its a Federal facility. And
2. It has 10 or more full-time employees (or the equivalent 20,000 hours per year). And
3. It manufactures (including imports), or processes, or otherwise uses a listed toxic chemical during any calendar year in amounts greater than the threshold quantities specified below.

Thresholds are specific amounts of toxic chemicals used during the calendar year that triggers reporting requirements.

1. If a listed toxic chemical is manufactured, imported or processed, the threshold quantity is 25,000 pounds per toxic chemical or category over the calendar year.
2. If a listed toxic chemical is otherwise used (without incorporating it into any product or producing it at the facility), the threshold quantity is 10,000 pounds per toxic chemical or category over the calendar year.

Inspection Procedures and General Information

On August 11 & 12, 1997, a Section 313 inspection was conducted at the Quantico Marine Base in Quantico Virginia. The inspection was conducted as part of a multi-media inspection and was limited to Section 313. The EPA inspector met with facility personnel from the Natural Resources and Environmental Affairs (NREA) Branch to review documentation and calculations for compliance with Section 313. A tour of the water and waste water treatment plants was also provided.

Section 313 was the primary focus of the inspection. The inspection involved determining if the Base manufactured, processed, or otherwise used any one of the listed toxic chemicals in excess of the thresholds in calendar years 1994, and 1995. Since the facility had filed its 1996 Form R report, that year was also included in the review.

In 1994, the Department of Defense (DoD) sent a list of chemicals to the Marine Corp Base (MCB) Quantico which were present on the facility. A contractor was hired to determine which chemicals on the list were present at the 75% of threshold level. Those chemicals are listed below. As the MCB does manufacture, process, or import chemicals, the **otherwise use** threshold of 10,000 pounds was the guide line.

Summaries of usages of Section 313 chemicals for the years being reviewed are as follows:

CAS No.	Chemical Name	Usage in Pounds		
		1994	1995	1996
7782-50-5	chlorine	61,255	41,184	44,962
91-20-3	naphthalene	253	135	142
127-18-4	tetra chloroethylene	3,488	2,633	0
108-88-3	toluene	524	524	524
1330-20-7	xylene	1,913	204	204

Chlorine was the only chemical used in quantities above the EPCRA reporting threshold. It is used for disinfection purposes at three swimming pools, two waste water treatment plants, and three water treatment plants. The amounts of chlorine reported as released on EPA Form R by the U. S. Marine Base Quantico are as follows:

	Release in pounds		
	<u>1994</u>	<u>1995</u>	<u>1996</u>
Chlorine (includes both air & water)	42	42	42

The methodology used to determine the quantities of chlorine used were obtained from the **Standard Methods for the Examination of Water and Wastewater**, 17th Edition, 1989 and **Chemistry For**

Environmental engineering, Fourth Edition. A description of the methodology can be found in Attachment B3, Release Calculations. To facilitate the calculations, a Microsoft Excel spreadsheet has been designed to perform the use calculations after the necessary input of information is accomplished. Major Mock, Environmental Engineer, and Branch Head of the NREA Branch, periodically checks the calculations.

Appropriate documents were requested by the EPA inspector, (Attachments A & B) and the SARA Title III Section 313 investigation was concluded. A list of the documents taken was provided to the NREA Branch representative completed (attachment B) at the conclusion of all inspection activities.

Quantico Sanitary Landfill Permit #411

A representative from the Virginia Department of Environmental Quality conducted an inspection of the Quantico Sanitary Landfill Solid Waste Permit #411. The following are the issues and status of the issues that were discussed during the inspection:

Unpermitted Operations

During an inspection conducted on March 24, 1997, the VaDEQ inspector observed that the facility was not managing their wood and metal piles, located outside the waste footprint, in accordance with the VSWMR. A separate letter from the quarterly inspection report was written to distinguish these issues from the landfill issues. The metal/debris pile was being managed as an unpermitted Materials Recovery Facility. The facility ceased the management of the metal/debris recovery site before a June 24, 1997 VaDEQ inspection.

The wood/debris site contained clean wood, contaminated wood, construction/demolition debris and other solid wastes. During the time period between the March 24 and June 24 inspections the facility mulched all the wood in this pile, including the contaminated wood. During the June 24 inspection, the VaDEQ inspector explained to the facility that since the contaminated wood was mulched with the clean wood then the whole mulch pile was contaminated and should be disposed of in a landfill. The facility had used some of the contaminated mulch as alternate daily cover on the landfill. Contaminated wood mulch has not been approved as an alternate daily cover for landfills. The contaminated mulch that was used on the landfill, has now been covered with a minimum six inch daily cover of soil as required.

During the EPA Multi-Media inspection on August 11, 1997, the VaDEQ inspector discovered that the facility had not yet begun to dispose of the contaminated mulch. In addition, they had also started a size reducing operation at the same location that was very similar to the metal/debris recovery site. A large pile of furniture was being sized reduced on the ground, and then placed in a truck to be hauled to the Prince William County Landfill. The VaDEQ inspector expressed again that this operation was not in accordance with the VSWMR.

A week later, on August 18, 1997, VaDEQ representatives (John Ely & Terry Gumbita) accompanied by Major Mock, of the Natural Resources and Environmental Affairs Branch, and several of his staff reinspected the facility. The size reducing operation was cleaned up at that time.

In a letter dated September 8, 1997, Quantico proposed that they planned to remove all of the contaminated mulch by December 1, 1997 and the only wood that would be stored is clean wood. VaDEQ expressed that this proposal is satisfactory in a September 15, 1997 response letter to Colonel Costa as well as during the quarterly inspection conducted on September 17, 1997.

Additional intermediate cover

The northern and western side slopes of the landfill lacked adequate intermediate cover. At the time of the multi-media inspection, waste was exposed and rill erosion was present. The facility proposed to have the additional cover on these slopes finished by December 1, 1997. The VaDEQ inspector recommended that the additional cover be finished by the end of September, 1997 and seeding be performed by the second week in October, 1997. This will allow some vegetation to begin growing before the winter and will help prevent erosion during these months.

This recommendation was suggested in the September 15th letter to Colonel Costa. By the September 17th quarterly inspection, the facility had the additional cover almost completed and proposed to have the areas hydro-seeded in the next several weeks. In addition, during the August 18, 1997 inspection with Major Mock, the VaDEQ representatives questioned the depth of intermediate cover on the eastern slope. During the September 17, 1997 inspection the facility had bore holes open to demonstrate that the intermediate cover was adequate.

Groundwater

The facility has now implemented a final detection groundwater monitoring background schedule. During the review of the facility's annual groundwater report by Mr. Larry Syverson, (VaDEQ's Groundwater Corrective Action staff), a few deficiencies including a contaminated upgradient well and either an inadequate monitoring system or an inaccurate potentiometric map were described. The facility is investigating these deficiencies and has requested a reply extension to October 1, 1997. Communications with Mr. Syverson indicate that the extension will be granted.

Other Issues

During the September 17, 1997 quarterly inspection, gas monitoring was discussed at the facility. The Quantico landfill does not have a gas monitoring system. Therefore, the quarterly inspection report will reflect this violation. The facility staff expressed that they would begin the process of designing the required gas monitoring system. This issue was not discussed with the facility prior to the September 17, 1997 inspection.