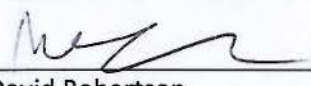
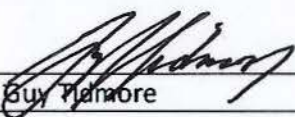


**Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT**

Inspection Date(s):	July 31, 2017 to August 4, 2017		
Media:	RCRA		
Regulatory Program(s)	Hazardous Waste		
Company Name:	US Department of the Army		
Facility Name:	Fort Hood Headquarters III Corps		
Facility Physical Location:	Headquarters III Corps and Fort Hood		
(city, state, zip code)	Fort Hood, Texas 76544		
Mailing address:	Building 1348 North Avenue		
(city, state, zip code)	Fort Hood, Texas 76544		
County/Parish:	Bell County		
Facility Contact:	Jerry Mora	Waste Services Program	
	gerardo.mora2.civ@mail.mil		
FRS Number:			
Identification/Permit Number:	TX8214020424		
Media Number:	SW ID # 66005		
NAICS:	928110		
SIC:			
Personnel participating in inspection:			
David Robertson	6EN-H1	Environmental Scientist	214 665 7363
Angela Hays	6EN-H1	Life Scientist	214 665 2285
Joyce Johnson	6EN-H1	Environmental Scientist	214 665 8548
EPA Lead Inspector Signature/Date		10-18-17	
	David Robertson	Date	
Supervisor Signature/Date			10/19/2017
	Guy Plamore		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors David Robertson, Angela Hays, and Joyce Johnson arrived at the Fort Hood Army Base on July 31, 2017 for an announced inspection. We met with Jerry Mora, David Morgan, Riki Young, Alyssa Gregor all of the DPW-ENV department. I presented my credentials to the Fort Hood representatives and informed him that this was an EPA inspection to determine compliance with the Resource Conservation and Recovery Act. The scope of the inspection is a compliance evaluation inspection (CEI).

FACILITY DESCRIPTION

LOCATION

Fort Hood is the largest active duty armored post in the United States Armed Services. It covers a total of 339-square miles and is the only post in the United States that supports two full armored divisions. Fort Hood rests in central Texas between Killeen and Copperas Cove.

Population

The Army Stationing and Installation Plan (ASIP) projected population data for Fort Hood. At the time of this plan, the installation supported a population over [REDACTED] which included about [REDACTED] active military personnel, [REDACTED] department of Army civilians, and [REDACTED] on post family members. The total "daytime" population exceeds [REDACTED], to include soldiers, civilians, contractors, and family members living on post.

Organizationally, Fort Hood is composed of the III Corps, Garrison Offices, 1st Cavalry Division, 4th Infantry Division, 13th COSCOM, Operational Test Command, and a host of tenant units. There are [REDACTED] battalions stationed at Fort Hood. The installation includes; [REDACTED] acres of maneuver training area, [REDACTED] acres of impact area and [REDACTED] acres of maneuver/air training area on West Fort Hood area. Fort Hood has approximately [REDACTED] small arms ranges, [REDACTED] armored (tank/ Bradley/Stryker) multipurpose ranges, [REDACTED] tanks, [REDACTED] Strykers, [REDACTED] Bradleys, [REDACTED] aircraft and [REDACTED] Air Defense Artillery (ADA) Patriots. There are approximately [REDACTED] motor pools to service vehicles and tanks. Fort Hood has about [REDACTED] buildings and [REDACTED] family quarters. The installation's primary mission is to train, house, and support III Corps units. Fort Hood also plays a key role in Army modernization by testing new equipment and systems. Fort Hood supports other assigned and tenant organizations; the U.S. Army Reserve, the National Guard, the Reserve Officer Training Corps, and reservists from other military services.

Major Tenants

The following organizations are housed at Fort Hood:

- Criminal Investigation Department (CID) Battalion (BN)
- Carl R. Darnall Army Medical Center (CR DA MC)
- Network Enterprise Center
- 407th Army Field Support Brigade (AFSB)
- 418th Contracting Support Brigade (CSB)
- Central Technical Support Facility (CTSF)

Current Land Use

Fort Hood consists of North Fort Hood (N FH), West Fort Hood (WFH), Belton Lake Outdoor Recreation Area (BLORA), and the east and west range training areas. These areas inhabit [REDACTED] acres of the installation's footprint. Another [REDACTED] acres are used for maneuver training and live fire ranges, and another [REDACTED] acres are used for family quarters. In addition, the garrison serves [REDACTED] on-post personnel, and supports many thousands more through daily operations.

Section II - OBSERVATIONS

SOLID WASTE GENERATION

Fort Hood operates under the belief that a solid waste is not generated until a material is brought to the <90-day storage area from the place where the product became discarded. Under this interpretation, "used product" is stored at many sites throughout the facility outside the requirements of RCRA. Fort Hood bases this belief on a letter from the Texas Natural Resource Conservation Commission dated May 8, 1996 (Appendix 2; TNRCC letter). The letter was signed by Juan D. Rodriguez, Supervisor Industrial and Hazardous Waste Team II, Waste Section, Enforcement Division. The letter appears to be issued in response to a letter from Fort Hood dated October 23, 1995 (Appendix 2), which in turn was issued in response to an enforcement action regarding the Fort Hood Classification Unit (or <90-day storage unit; Appendix 3). The Fort Hood letter to the TNRCC describes non-hazardous waste being accumulated in labeled containers within secondary containment as well as potentially hazardous products that "they turn-in directly to the DPW Classification Unit upon generation". The letter goes on to state the "This practice allows hazardous waste to be quickly and properly managed as hazardous waste at a centralized location thereby dramatically reducing accumulation location, multiple handling, and potential spills and compliance problems." (Appendix 2 Page 2).

The TNRCC letter states that it was issued in response to settlement meetings between the TNRCC and Fort Hood. The letter further states that the enforcement action was at least partially in response to Fort Hood operating the Waste Classification Yard (WCY) as a satellite accumulation area. The letter notes that the parties agreed that the WCY was not at or near the point of generation of any hazardous waste generated at Fort Hood and "therefore, the WCY should not be managed, in any part, as a satellite

accumulation area but only as a 90-day or less storage area.” The letter further states that containers in satellite accumulation areas are to be labeled with the words “hazardous waste” and containers holding any hazardous waste in excess of 55-gallons must be marked with the date the excess amount began accumulating. Nothing in the either letter states that spent materials generated outside the WCU are not solid wastes. Personnel at Fort Hood now generally refer to the WCU as the “classification yard” or CU. The <90-day storage area (WCU) will be referred to as the Classification Yard (CU) in this report.

The TNRCC resolution of enforcement from 1996 (Appendix 3, Page 2, Item 5) clearly states:

Fort Hood is complying with 30 TAC 335.69 for labeling hazardous waste containers, annotating dates, keeping containers closed, and complying with satellite accumulation regulations. Fort Hood is complying with 40 CFR 265.16 regarding personnel training requirements.

The inspection team did not observe Fort Hood complying with the above noted requirements at the initial waste generation points.

Initial Waste Generation Points

Fort Hood considers spent material, discarded material, and material accumulated for recycling as “used product” and not solid waste subject to waste determination until that material is transferred to the Waste Classification Unit (CU). Spent or discarded material accumulated outside the CU at Fort Hood is accumulated in either “daily used product storage” (Photo 484) which is moved from the active work location to a “Used Product Reclamation Point” (UPRP) (Photo 574). Under RCRA the “daily used product storage” is similar to “satellite accumulation” and the “Used Product Reclamation Points” are similar to < 90-day storage areas.

The UPRPs are generally steel containment buildings located away from the initial generation point. The buildings are generally closed but not locked. Fort Hood has a standard for the number of containers and container labeling. Based upon the inspection team’s findings, compliance with those standards is variable. The facility provided turn in guidance and a UPRP description (Appendix 4). The UPRP description notes that all UPRPs should have six required containers:

- Used aerosol cans (35-gallon plastic container)
- Used oil filters (55-gallon metal drum)
- Used fuel filters (55-gallon grounded metal drum)
- Used grease (55-gallon metal drum)
- Sweepable absorbents (55-gallon metal drum)
- Absorbent pads (55-gallon metal drum)

The UPRP guidance also included a description of how to manage used batteries. None of the guidance requires dating any container with the initial accumulation date or labeling with the words “hazardous waste” or “universal waste”. Finally, the UPRP guidance notes that the units should be visually inspected daily with a documented inspection done monthly. The inspection team could not locate any

documentation of weekly inspections. The turn in guidance (Appendix 4) lists procedures for specific items including:

- Aerosol cans (potentially D001 or D003)
- Alcohols and solvents (presumably containerized, since absorbents are managed separately; potentially D001)
- Adhesives/sealing compounds (the inspection team observed some of these at the CU in a cardboard box labeled “non-aerosol adhesive non-hazardous”).
- Batteries (the inspection team observed universal waste batteries accumulated in multiple locations without an initial accumulation date and without being marked as universal waste)
- Contaminated dirt (to be turned in to the bio-treatment facility)
- Fluorescent Bulbs
- Fuel filters (requirement to drain into the off specification fuel tank and then to air dry)
- CBRN Filters
- Paint and paint related products (can be managed as universal waste in Texas)
- Paint booth (filters and PPE)
- Pesticides (can be managed as universal waste)
- Damaged materials (hazardous materials that are damaged and cannot be turned in to DLADS)
- Excess hazmat (disposed due to shelf life)

Hazardous waste determinations for the materials turned in to the CU were inadequate (AOC 4). Fort Hood guidance does not specify labeling any containers with the words “hazardous waste” or “universal waste” and does not direct the generator to mark the initial date of accumulation.

According to Mr. Riki Young, the environmental department does not track the total number of UPRP’s. Mr. Young estimated the number of UPRP’s at between 100 and 200. Mr. Glen Collier, Environmental Compliance and Assessment Team Leader, later stated that they used an ever evolving list of active units or facilities at Fort Hood to track the UPRPs. The list was later provided by Mr. Mora. Based upon that list, it appears that Fort Hood is operating at least 170 UPRPs (Appendix 5). Fort Hood’s Environmental Compliance Assessment Team inspects UPRPs annually. Some UPRPs are inspected more frequently, see “DynCorps” section below.

Wastes brought to the UPRP are to be described on Form 3161 (request for issue or turn-in). The inspection team reviewed the 3161 forms for the year 2015 and selected a number of generators that documented either sending significant amounts of material to the CU or sending what appeared to potentially hazardous wastes to the CU. Based upon those forms, the team requested to make site visits to several “generator” locations as described below.

SITE TOURS

M2 Services Corp (example 3161 Appendix 6)

The team visited M2 (on West Fort Hood) on 8/3/17 and met with Danielle Beltran and Justin Guin, Safety Manager. The inspection team observed spent lithium batteries (Photo 825) and one spent

mercury vapor bulb (Closed cardboard box behind batteries in Photo 823) accumulated in the daily product reuse storage area (Photo 824). Ms. Beltran explained that the lithium batteries were not allowed to be accumulated in the UPRP. Neither the batteries or the bulb were marked with the words "universal waste". Neither the batteries nor the bulb were marked with the initial date of accumulation (AOC 9, 13). In addition, a single spent aerosol can was observed in this area (Photo 824). The daily spent product reuse area also housed a ~30-gallon drum labeled "adhesive and contaminated materials only" (Photo 828). The drum contained dried adhesives including EA 9313 and Pro Seal 8802 and 81733 (Photo 826-827). The inspection team requested hazardous waste determinations for these materials. The team observed one approximately 30-gallon drum labeled "hazardous waste" (Photo 829). The drum contained waste alodine solution. Although the drum was not full, it was marked with an initial accumulation date of 9/1/15 (AOC 3). D. Robertson explained the satellite accumulation marking requirements to the M2 representatives. Finally, the team observed three steel trash cans labeled "contaminated trash only", "aerosol cans only, No contaminated trash", and "dirty poly pads". All containers were partially filled with material. Mr. Guin explained that contaminated trash meant any refuse contaminated with a petroleum product or other foreign substance.

Following daily accumulation near the point of generation, materials are moved outside the hangar to the UPRP (Photo 831). Based upon the contents it appears the material similar to the "adhesive and contaminated materials only" container seen in Photo 828 was placed into the brown container labeled "empty every night" (Photo 834-835). This UPRP also contained a blue drum labeled "expired hazmat and/or empty cans (Photo 837-838). The M2 group operated a second UPRP serving the "Dutch Hangar" Hangar 90120 (Photo 845). The inspection team requested waste determinations for each of these wastes.

Second Battalion 227 Aviation (example 3161 Appendix 7)

The inspection team met with Sgt. [REDACTED]. The team observed the three UPRP storage units associated with this unit (Photos 734, 740, and 743). Sgt. [REDACTED] was unable to completely describe the contents of the UPRPs. It appeared that the UPRPs contained spent floor sweep, spent dried fuel filters, used oil filters, used fuel filters, and both full and empty containers of oil (Photos 735-739, 740, and 743-745). Because the containers were covered with other material (Photo 735, 738, 739), the labeling, closure, condition, and dating could not be observed (AOC 4). The inspection team requested the RCRA training records for Sgt. [REDACTED]. Sgt. [REDACTED] has received no RCRA specific training as will be described in the "training" section below (AOC 12).

Inside the unit maintenance area, the facility operated a parts washer (Photo 754). The inspection team observed a liquid under the parts washer that appeared to discharge from a plastic catch pan under the unit (Photo 752 and 753). The inspection team requested that Sgt. [REDACTED] positively identify the source of the liquid. Following the inspection, EPA requested information on how this spill was delineated and cleaned up and how the material generated was disposed (AOC 5).

The inspection team also observed an open, and split pail of used oil (Photo 752) that was not closed or labeled with the words "used oil" (AOC 6).

MATES (example 3161 Appendix 8)

The MATES (Maneuver Area Training Equipment Site) facility is located at North Fort Hood and operated by the National Guard, but still within the Fort Hood contiguous property. MATES conducts vehicle washing, vehicle maintenance, and painting operations. The inspection team observed the vehicle wash rack, paint booth, water blast area, and the walnut shell blast area. The wash rack discharges to a concrete lined settling basin that includes an oil/water separator and then to an on-site pond (Photos 852 and 853). The discharge is not permitted under the clean water act (potential CWA AOC). Fort Hood is aware of this problem and is beginning to take steps to apply for a permit (see email from David Boucher dated August 3, 2017; Appendix 9). According to the email, Fort Hood plans to get an application into the TCEQ for this discharge by the end of September, 2017. The facility continues to use the wash rack (Photos 849 and 850). Periodically, the sediment from the wash rack is removed and sampled. Sample results from 2017 indicate elevated levels of metals including total cadmium at 15.2 mg/kg and total lead at 36.7 mg/kg (Appendix 10). In 2008, sediment sample results indicated elevated cadmium 85 mg/kg; elevated lead 140 mg/kg (Appendix 11). According to Mr. Mora, the material removed from the oil/water separator would have been placed into the biotreatment facility either before or after it was registered with the TCEQ. According to Mr. Mora, MATES is not providing analytical results to Fort Hood when sending sediment to the biotreatment facility.

MATES sends spent paint booth filters and paper to the Fort Hood CU for disposal. MATES provided some analytical for these items (Appendix 12), but did not attempt to classify these wastes as hazardous or non-hazardous (Appendix 13). MATES manages paint waste, spent mineral spirits, and spent paint gun cleaner as universal waste. MATES accurately dates the universal waste containers as soon as any universal waste is placed in those containers. The containers observed were closed, labeled, and in good condition. However, one drum containing universal waste spent paint gun cleaner was 2/3 full at the time of the inspection and dated with an initial accumulation date of 5/31/16 (Photo 859). The date of the inspection was 8/4/17. The universal waste paint gun cleaner was accumulated for over 1 year. That drum along with two others were shipped off site as universal waste on August 24, 2017 according to an email from Mr. Melton on August 25, 2017 (Appendix 14; AOC Resolved 1)

At the time of the inspection, MATES was accumulating spent walnut shells previously used as blasting media to remove paint or to prepare military equipment for painting. The waste from the blasting operation was first captured in bag houses, then drained to 55-gallon drums (Photo 863). Finally, the drums were emptied into a 20 yard roll-off container (photo 860). At the time of the inspection, the roll-off was approximately 60% full. According to emails from Mr. Melton (Attachments 14 and 15), the roll-off contained spent walnut shells that began accumulating in May, 2012. The roll-off was closed with a tarp, but was not labeled or dated. Mr. Melton, provided analytical results from previous samples of this waste. The analytical results only included total metals. Mr. Melton stated that TCLP only needs to be run when the lab flags a result. I explained the 20 times dilution for TCLP analysis and suggested that, if the analysis was conducted for the purpose of hazardous waste determination, TCLP should be run. The results (Appendix 12) indicated elevated total metals including: chromium 126 mg/kg and lead 597 mg/kg. Mr. Melton stated via email that the facility had discontinued using the roll-off for blast

media storage and would run TCLP analysis on that material they had accumulated. Mr. Melton stated that MATES would immediately begin managing this waste in 55-gallon drums as universal waste.

Following the inspection, MATES provided TCLP analysis for the material observed in the roll-off container. The results indicated that the material did not exhibit a characteristic of hazardous waste.

MATES provided a list of wastes generated at their site (Appendix 13). The list indicated that MATES considers some wastes hazardous or universal wastes including but not limited to: empty spray solvent cans.

DynCorp International

DynCorp International conducts paint preparation, blasting operations, minor painting, and an alodine line. The team observed the alodine tank and rinse tank in building 708 (Photos 539-540). According to Mr. Ken Bullard, Environmental Compliance Officer, the spent alodine wash and other wastes from the alodine system are removed and taken directly to the <90-day classification unit.

Adjacent to the alodine bath in building 708, DynCorp managed 6 containers of various wastes (Photo 546). The containers did not appear to be immediately adjacent to the point of generation of the wastes they contain. Mr. Bullard stated that these containers were a “daily collection point” and the material they contained will not be reused, but was not waste. Mr. Bullard stated that the material would be moved to the UPRP at the end of the day and ultimately to the CU where the material would become waste. The inspection team opened one approximately 15-gallon step can labeled “contaminated paper and trash” photos 541 and 542. The team observed one container of yellowish liquid (Photo 542) inside the step can. Mr. Bullard stated that the liquid appeared to be adhesive. Later in the inspection, Mr. Bullard relayed that the container was actually paint thinner or stripper. Mr. Bullard stated that he did not know the exact type of thinner or stripper. Mr. Bullard explained that liquid material should not be in this container, rather, that employees are directed to pour liquid paints or paint thinners onto rags and put them with “contaminated rags” (presumably the “contaminated poly/absorbent pads in Photo 547). The contaminated rags trash is ultimately disposed as non-hazardous waste (see waste determination section below). Pouring a liquid waste onto a rag as a means of drying for disposal meets the RCRA definition of “treatment” (AOC 4 and 7).

The inspection team observed the UPRP for building 708 (Photo 548). The UPRP contained 5 drums with yellow lids set upon the drum, but not attached. The lids would not prevent a spill if the drums were overturned (Photo 549). This UPRP was equipped with a spill kit, and was inspected monthly. The monthly inspection, Example form Appendix 16, did not appear to include all RCRA required criteria. For example: the checklist did not reference RCRA labeling, dating, closure, or spill kit observation. None of the five drums was labeled with the words “hazardous waste” or with the beginning date of accumulation.

The team observed the daily collection point area in building 7012 (Photos 554-558). The area contained four 5-gallon pails, and one 10-gallon pail. These containers were labeled: contaminated

trash, dirty poly pads, empty plastics, empty aerosol cans and empty cans. This area did not appear to be immediately adjacent to the point of generation of this material.

The team observed the waste collection areas of building 7013, which contains a paint booth. The team observed a 55-gallon drum containing universal waste paint with a "satellite accumulation" form on the wall adjacent (Photos 559-561). The drum was labeled with the words universal waste and with the beginning date of accumulation. The team also observed a plastic bin labeled "non-hazardous waste" which contained aerosol cans. The team picked up several of the cans and found that four of the cans were approximately $\frac{3}{4}$ full of paint (photos 562-566). The plastic bin was not labeled with the words "hazardous waste" was not dated with the initial accumulation date, was not included in the facility contingency plan and was not inspected weekly (AOC 1 and 4).

The team observed the UPRP for buildings 7012 and 7013 (Photo 574). The UPRP contained seven 55-gallon drums and two other containers. None were labeled with the words hazardous waste and none were dated with the initial date of accumulation (Photo 570-574). The containers equipped with yellow lids were not closed in such a way that they were leak proof or spill proof (Photo 571). According to Mr. Bullard, the UPRP is inspected monthly. Mr. Bullard brought a spill kit to the UPRP during our site visit (AOC 1 and 4).

DynCorp operates a bead blast booth in building 7044 using Media 8 formaldehyde plastic resin beads supplied by and returned to US Technology. The blast booth building was recently cleaned to remove dust containing hexavalent chromium and cadmium. According to Mr. Bullard, the source of those metals in the building is the military specification paint. Mr. Bullard stated that the spent bead blast is accumulated until approximately 12 drums are collected, then the material is shipped as a "product" to US Technology in Macon, Georgia. Two drums containing bead blast fines were observed outside building 7044. One was approximately $\frac{1}{8}$ full and dated 7/25/17 and the other was approximately $\frac{1}{2}$ full with no initial accumulation date (Photos 579-584). The team observed one drum of spent fines inside building 7044. The drum was dated with the date July 7, 2015. Mr. Bullard stated that the facility sometimes is able to reuse this material depending on grain size. The inspection team also observed several vacuums and a HEPA filter bank in this area. Mr. Bullard stated that previous testing indicated that the spent bead blast exhibits the hazardous waste characteristic of hexavalent chromium. For more information on waste determination on bead blast see WASTE DETERMINATIONS section below.

All appendices involving DynCorp use of bead blast and US Technology are included as Appendix 20.

The inspection team observed the UPRP for this building. The UPRP contained 2 drums of spent bead blast. One drum was labeled "excluded recyclable material" (Photo 592) was dated July 25, 2017 and was full. The second was similarly labeled, was approximately $\frac{1}{3}$ full and was dated June 2016 (Photo 591 and 594). The spent bead blast exhibits the hazardous waste characteristic of toxicity for cadmium D006 (see Waste Determination section below; AOC 1, 4, 8).

3rd Cavalry Pioneer Motor Pool

The inspection team met with Lt. Mansour. Lt. Mansour stated that he or a team member inspects their UPRP weekly. The UPRP did have a spill kit. A container of spent aerosol cans in this unit was not labeled with the words “hazardous waste” or with the initial date of accumulation (Photo 788).

Z Systems

The inspection team toured building 30033 with Don Ford. Mr. Ford stated that there are spill kits in the area, but contracts are not available to purchase equipment to stock the kits. The inspection team observed universal waste batteries (Photos 792-800). Two pallets of batteries labeled “bad” were accumulated outside of the containment building for pickup by Exide (Photo 792). The batteries were not labeled with the words “universal waste” and were not dated with an initial date of generation. Four pallets of waste batteries were accumulated within the containment building. Those batteries were not labeled with the words “universal waste” and were not dated with an initial date of generation (AOC 9).

Hangar 6940

The UPRP for this hangar was observed. The UPRP contained stacks of waste not clearly labeled or contained (Photos 774-786). In addition, the team in Hangar 6940 uses a minimum of 5 gallons of acetone per month to clean parts. The spent acetone ultimately winds up on rags. The rags are sent to the CU as “red rags”. According to Mr. Morgan, the rags ultimately are sent off site as a non-hazardous fuel. 100% acetone spent solvent is F003 hazardous waste. Rags contaminated with F003 are potentially F003. Spent absorbent, potentially containing spent acetone is treated on-site at the biotreatment facility (AOC 4).

<90-day storage area (referred to as Classification Unit or CU by facility)

The inspection team visited <90-day storage unit or “CU”. The area is fenced with a gate which was open at the time of our inspection. As stated previously, material to be turned in to the CU is listed on a “3161” form a review of forms generated in 2014 indicated that the way they are completed by the units is highly variable. Appendix 17 shows some examples of 3161 forms that may indicate the management of hazardous waste (ex: MEK, lithium battery, fluorescent lamps, methanol vials, cadmium mix with water) or are too general to be of use to a third party (ex: waste lab spent, contaminated trash, used seal, dirty rags, monitor, glass bead residue, bead blast residue). It appears that the 3161 forms do not contain enough information for a third party to make an adequate hazardous waste determination.
AOC 4

Within the CU, the facility manages multiple waste streams outside the <90-day storage unit. These streams include, empty containers which are washed and shredded prior to shipment for off-site recycling (Photos 595-596). Containers with residual used or virgin oil are emptied into open 5-gallon pails prior to shredding. Three 5-gallon pails containing used oil were not closed and were not labeled with the words “used oil” at the time of the inspection (Photos 597-598; AOC 6).

The facility also manages waste lithium batteries in a separate unit within the CU. These lithium batteries have the potential to cause fires so they are managed separately from the other batteries. The batteries were not labeled with the words “universal waste” nor were they dated with the initial date of accumulation (Photos 681-683; AOC 9).

The facility manages spent aerosol cans of waste paint with the <90-day storage area portion of the CU. The cans are punctured and drained (Photos 605, 610, 618). The residual material is managed as a universal waste and the empty cans are recycled for their metal content. See WASTE DETERMINATION section below for more information on spent aerosol cans.

Bulk paint containers and paint pails are managed by emptying into a 55-gallon drum and then allowing the empty container to air dry before shredding and recycling. The facility intermingles household paints and base generated paints and, once intermingled, cannot identify the source. Photos 614 and 615 show residual liquid paint in containers following emptying. The containers do not appear to be “RCRA empty” based upon the fact that paint could still be poured from them. The paint containers with residual paint were not labeled with the words “universal waste” and were not dated with the initial date of accumulation (AOC 10).

In the same area, the team observed a 55-gallon drum labeled “hazardous waste” “thin prep”. The drum was ½ full and was not marked with an initial accumulation date (Photos 625 and 627). This drum was labeled during the inspection (AOC 11).

The inspection team observed a cubic yard box labeled non-hazardous waste in the <90-day storage area (Photos 633-635). The box was opened and a small portion of the contents were observed. The inspection team took photos of several containers, not chosen at random, but rather chosen based upon the inspector’s belief that the containers have the potential to exhibit a characteristic of hazardous waste. The team requested hazardous waste determinations for the containers photographed. Photos 636-647 show approximately 8 items for which waste determinations were requested. Fort Hood personnel determined using SDS forms that the containers seen in Photos 640, 641, 643, and 644, which were the same material or different examples of the same material were hazardous waste based upon flashpoint of 68°F (Appendix 18, PPG 870A part B relevant portion only). It appears that Fort Hood is relying on SDS forms for their hazardous waste determination. SDS forms are not required to list ingredients below 0.1% which is equivalent to 1000 ppm; therefore, SDS forms alone are not sufficient to make a hazardous waste determination (AOC 4).

ON-SITE DISTILLATION

The facility was in the process of replacing their on-site distillation unit housed in Building 1948. The distillation unit being replaced has been shut down since June 5, 2016 (Appendix 19). The replacement distillation unit was in place, but not yet fully functional or in use (Photos 701-705).

The inspection team observed 55-gallon drum storage for solvent awaiting distillation (housed in Building 1949; Photo 695). The facility had two categories of spent solvent awaiting distillation:

- (47) Drums of solvent that had been previously distilled using the failing “old” distillation unit and required reclamation before reuse.
- (18) drums of spent solvent that awaiting initial distillation.

In addition to the 65 drums requiring distillation noted above, six 55-gallon drums containing spent solvent requiring rework (Photos 696-697) were stored in the distillation building (Building 1948). None of the drums containing spent solvent were marked with the words “hazardous waste” or with an initial date of accumulation. There was no spill kit in the drum storage area (AOC 2).

Fort Hood provided a hazardous waste determination, profile WP#45NQ9-130, (Appendix 21) That included three separate waste streams:

- Spent Solvent (P2-1) – tested as non-hazardous on the profile; distilled on-site
- Parts Washer Bottoms (P2-2) – tested as hazardous for cadmium; distilled on-site
- Distillation Still Bottoms (P2-3) – tested as hazardous for cadmium and lead; disposed off-site as hazardous waste

In addition, a profile that appears to be based on sample data not included in the package indicates the spent solvent exhibits the characteristic of ignitability (Appendix 22). The characteristically hazardous spent parts washer bottoms are removed with the spent parts washer solvent (placed in drum together) and ultimately distilled on-site (Appendix 23).

Biotreatment facility

The facility operates a concrete lined, sides supported by soil, biotreatment area. The area is drained via open pipe to the clear well at the Tactical Vehicle wash basin for 3CR. The area is permitted as a Class V MSW transfer facility by the TCEQ. Soils and absorbents contaminated with oil, fuel, or lubricants are brought to the area by the active military units. The facility will receive any size container of contaminated media from a small bag to a full trailer load. The contaminated media is not tested upon generation or receipt at the area.

The contaminated material is stockpiled within the concrete containment until enough to begin a windrow for biotreatment is accumulated. Once that level is reached (5-7 months), a composite sample is collected and analyzed for RCRA 8 metals, PCB's, TPH and benzene. If the analysis shows that the composite material is non-hazardous, the material is combined with manure and wood chips and placed in a windrow on the concrete area for biotreatment. The goal is to return the contaminated material to Texas Risk Reduction Program (TRRP) residential levels of contamination for reuse or to < 1500 ppm TPH for landfill disposal (generally in the on-site special waste trench). This unit has been in operation since February 2015, and to date, no contaminated media has been treated to low enough TPH levels to meet the TRRP residential standard for reuse. To date, all bio treated media has been disposed in the on-site landfill or used a daily cover at the on-site landfill. Example analytical are include as Appendix 25. The facility does not test incoming wastes to determine if they exhibit a characteristic prior to treatment (AOC 4).

The inspection team observed all analytical results for analyses of the stockpiled contaminated media since this operation began. The facility does not have a hazardous waste determination on each individual spill waste stream as it is generated. To date, no contaminated media has been disposed or rejected as hazardous waste.

The TCEQ registration letter for the biotreatment facility is included as Appendix 26.

TANKS

The facility manages used oil, off specification fuel, and spent antifreeze in tanks. The off spec fuel is ultimately used as a fuel and is therefore, not a solid waste. The used oil tanks that the team observed were appropriately labeled.

WASTE DETERMINATIONS

The following waste determinations were requested:

- Oven dust – generated in LRC from a heater used to remove any organic residual from diesel engine blocks or heads. The inspection team requested a waste determination for this material. Mr. Mora stated that the spent oven dust is disposed by placement in a roll-off and is disposed into the on-site non-hazardous landfill. Fort Hood was not able to provide a waste determination for spent oven dust (AOC 4).
- Spent absorbents and rags – generated throughout the base. Contaminated with petroleum materials and spent solvent (initial flash 142F). The sweepable absorbent is disposed as non-hazardous waste (see manifest #016787536 JJK). The rags are disposed as non-hazardous waste (see manifest #009707059 JJK; Appendix 24). The facility provided a hazardous waste determination indicating that this material was non-hazardous. Sixty-eight drums of pads and rags were accumulated at the CU (Photo 673-674). None were marked with the words “hazardous waste” (AOC 4).
- Contaminated Trash – generated throughout the base. The material is accumulated first in Daily Used Product Storage, then in UPRPs and finally is placed in a roll-off dumpster at the CU (Photos 675-680). According to Mr. Mora, the spent solvent observed in the trash at DynCorp will ultimately be disposed in this dumpster which will be sent to the facility on-site non-hazardous landfill. Following the inspection, the facility provided a hazardous waste determination indicating that this material was non-hazardous (Appendix 27). That waste determination did not include the spent solvent observed disposed at DynCorp (AOC 4).
- Spent bead blast – generated by the motor pool (does not exhibit a characteristic of hazardous waste). The motor pool bead blast waste is used to clean engine parts for vehicles and analytical provided by the facility indicated that the spent bead blast did not exhibit any characteristic of hazardous waste (AOC 4).
- Spent bead blast – generated by DynCorp (exhibits a characteristic of hazardous waste). This bead blast waste is used to prepare aircraft including helicopters for

painting. The spent bead blast exhibits the characteristic of toxicity for cadmium (D006; Appendix 20). The facility last shipped 19 drums of this material to US Technology in Macon, Georgia on a bill of lading as a “product” on April 20, 2016 (Appendix 20; AOC 4).

- Spent walnut shell blast material from MATES. This material is generated by using walnut shell derived blast media to prepare equipment for painting. The spent material is captured by a bag house and discharged to drums (Photos 863 and 866). The facility empties the drums into a 20 yard roll-off container (Photo 860) and when ready for disposal, the material is sampled. The inspection team observed the analytical results from the most recent sample were dated June 21, 2017. The facility ran the samples for total RCRA 8 metals, but not TCLP. Mr. Don Melton, MATES Environmental Specialist explained that TCLP only needed to be run when the analysis was flagged by the lab. The totals included very high levels of metals including chromium 126 mg/kg; lead 597 mg/kg. During the inspection, Mr. Melton stated that the facility would collect a sample of the material that was currently accumulated and run that material for TCLP RCRA metals. Those sample results were received following the inspection and indicated that the material did not exhibit a characteristic of hazardous waste. Mr. Melton stated that MATES intended to manage this material as a universal waste in the future (AOC 4).
- Cadmium and water from DynCorp International (see 3161 dated 07/16/2015). The facility provided a SDS for the material showing that it contained 30% cadmium sulfate. Fort Hood was unable to make a hazardous waste determination based upon the information they provided and was unable to state how the material was disposed in 2015 (AOC 4).
- Waste aerosol cans – generated throughout the facility. Each UPRP is required to have a container for spent aerosol cans. The cans include paint and paint related material, lubricants, pesticides and other liquid contents. Waste determinations indicating that these wastes are hazardous or are universal wastes are included as Appendix 28. According to those determinations waste codes for the spent aerosol cans include: D001, D005, D007, D008, D035 D039, D040. The containers are not marked with the words “hazardous waste” are not dated, are not included in the facility contingency plan, are not inspected weekly. According to Mr. Mora, the containers are ultimately separated by hand at the CU where the aerosol containers of paint are punctured and drained and the containers of solvent are packaged as hazardous waste for disposal (AOC 4).

UNIVERSAL WASTE BATTERIES

Fort Hood is a Large Quantity Handler of Universal Waste. The facility generates and accumulates waste batteries in multiple locations throughout the base. The inspection team observed several of these locations:

- Universal waste battery accumulation at Building 88305 (Photos 533-537). These batteries were marked with an initial accumulation date of July 24, 2016 (over one year of storage).

However, further research by Fort Hood provided documentation that all batteries had been shipped off-site on April 10, 2017. The inspection team did observe one broken battery at this site that was not managed in a manner to prevent discharge. The battery was placed in a suitable container during the inspection (AOC Resolved 2).

- Lithium batteries were accumulated in a containment building at the CU (<90-day accumulation area). The batteries were not labeled with the words “universal waste” or other identifying language and were not dated with the initial accumulation date (Photos 681-683). There was one container of spent lithium ion batteries appropriately labeled and dated in this area (Photo 684; AOC 9).
- M2 Services, Building 38003, contained a pallet of spent lead acid batteries not labeled or dated (Photos 813, 817; AOC 9).
- Z-Unit operated a containment building housing universal waste batteries (stored both indoors, Photos 793-800, and outdoors Photo 792). These batteries were not appropriately labeled or dated (AOC 9).
- Building 7007 (Photo 765). Spent lead acid battery no label and no date (AOC 9).

TRAINING

D. Robertson requested the training records for Fredrik Anderson, Environmental Protection Assistant; Sargent [REDACTED] at Second Battalion of the 227 Aviation Brigade; William Harold, Environmental Protection Specialist.

Mr. Fredrick Anderson attended “Hazardous Waste Management in Texas” training in August, 2013. Mr. Andersons most recent RCRA training was in 2013. The facility could provide no RCRA training records for Sargent [REDACTED]. For Mr. Harold, Fort Hood provided a certificate from a Transportation of Hazardous Materials course in 2015. The facility provided no RCRA training information for Mr. Harold (AOC 12).

Section III – AREAS OF CONCERN

1 – Permit required storage

Hazardous and potentially hazardous solid wastes were accumulated at numerous “Used Product Reclamation Points” (UPRPs) throughout the base. These materials were not marked with the words “hazardous waste”; were not marked with the initial date of accumulation, were not inspected weekly, were not included in the facility’s contingency plan and were many were not adequately closed. It was requested that the facility follow the accumulation time exemptions where hazardous wastes are generated or obtain a permit for storage of those wastes.

2 – Permit required storage (spent solvent)

The facility distills spent solvent in an on-site distillation unit. At the time of the inspection, the solvent distillation unit had been down for repairs for over 1 year. It was unclear how long each drum been stored since none was marked with the initial date of accumulation, but presumably the

47 drums of previously distilled solvent requiring further distillation had been stored since before the “old” distillation unit was taken out of service on June 5, 2016, and the other 24 drums of spent solvent, stored in Buildings 1948 and 1949 were generated some time after. Spent solvent pending reclamation is a solid waste. Two facility waste determinations indicate that the solid waste is a hazardous waste. This large quantity generator of hazardous waste can store hazardous wastes for a maximum of 90-days without first obtaining a RCRA permit.

3 – Permit required storage (spent alodine)

The team observed one approximately 30-gallon drum labeled “hazardous waste”. The drum contained waste alodine solution. Although the drum was not full, it was marked with an initial accumulation date of 9/1/15. This container does not appear to be managed as satellite accumulation, therefore, the maximum storage time allowed is 90-days.

4 - Hazardous waste determination

Materials turned into the CU had inadequate hazardous waste determinations. Rags used for the disposal of spent paint thinner from DynCorps are managed as non-hazardous waste in the on-site landfill. Contaminated soils and media are treated in the facility’s on-site biotreatment facility without first being characterized. Containers accumulated at multiple UPRPs were unobservable and potential hazardous wastes were not identified including:

- Second Battalion 227 Aviation
- Hangar 6940 (potentially F003 rags, absorbent, containers)
- Hangar 7007 (aerosol cans, acetone)

5 – Texas Water Code

At the Second Battalion 227 Aviation, a discharge of solvent from a parts washer was observed. The inspection team requested that the facility determine the extent of contamination and conduct appropriate remediation.

6 – Used Oil Management

Multiple locations of accumulated used oil were not labeled with the words “used oil” or closed. Those locations include but are not limited to:

- Second Battalion 227 Aviation (Photos 733-739; open not labeled); (Photos 743-745; open not labeled); (Photo 748; open, not labeled).
- The Shredder area at the CU.
- An unknown number of containers of used oil accumulated within UPRPs.

7 – Permit required treatment of hazardous waste

DynCorp treats hazardous waste paint solvent by pouring the spent liquid solvent onto rags. The rags containing the spent solvent are placed into the “contaminated trash” container and taken to

the CU where they are placed into an open roll-off container and ultimately disposed in the special waste trench at the on-site municipal landfill.

8 – Manifesting (unauthorized facility)

DynCorps uses beads from US Technology to prepare aircraft for painting. The spent beads fail TCLP for cadmium (D006). The spent bead blast waste was sent off site to Macon, Georgia as a product. Fort Hood could provide no documentation that their spent bead blast waste was used to replace a commercial chemical product.

9 - Universal Waste accumulation (batteries)

Spent lead acid and or spent lithium ion batteries were accumulated at several locations throughout the facility. In several instances those batteries were not labeled as required and were not dated with the initial date of accumulation.

10 – Universal Waste Accumulation (paint)

The facility manages waste paint. Waste paint waiting to be drained into drums at the CU was not labeled with the words “universal waste” and was not dated with the initial date of accumulation.

11 – Permit required storage

At the CU, the team observed a 55-gallon drum labeled “hazardous waste” “thin prep”. The drum was not dated with the initial date of accumulation.

12 – Personnel Training

During the inspection training record were requested for three people who conduct RCRA management activities at the facility. None of the three had up to date RCRA training.

13 – Universal Waste Accumulation (lamps)

During the inspection spent mercury vapor bulbs were accumulated without being marked as “universal waste” and without marking the initial date of accumulation.

AOC Resolved

1- Universal waste accumulation

Universal waste accumulated for over one year at MATES was shipped off site for disposal immediately following the inspection.

2- Universal waste battery management

One broken universal waste battery was not accumulated in a suitable container. The battery was placed in a closed container during the inspection.

POTENTIAL CWA AOC

- 1- Unpermitted discharge from wash rack at MATES.

Section IV – LIST OF APPENDICES

- 1 – Photo Log
- 2 – TNRCC letter
- 3 – TNRCC Enforcement Action
- 4 – UPRP Guidance and turn in guidance
- 
- 6 – M2 3161 form
- 7 – 2-227 3161 form
- 8 – Mates 3161 form
- 9 – Email regarding water permitting for Mates outfall
- 10 – Mates sediment analysis
- 11 – Mates 2008 sediment analysis
- 12 – Mates walnut shell analysis from roll-off container
- 13 – Mates waste generation list
- 14 – Mates emails
- 15 – Mates emails regarding walnut shell analytical
- 16 – DynCorp UPRP inspection
- 17 – Example CU 3161 forms
- 18 – SDS for PPG PS 870A Part B
- 19 – Solvent distillation records
- 20 – DynCorp information on bead blast waste
- 21 – Solvent profile

22 – Second solvent profile

23 – Waste Profile

24 – Manifests for waste absorbents and rags

25 – Example analytical for biotreatment waste

26 – TCEQ biotreatment facility registration letter

27 - Roll-off dumpster at CU (ultimately disposed at on-site landfill)

28 – Aerosol can management