PERFORMANCE

WORK STATEMENT

FOR

OIL/WATER SEPARATOR, STORM WATER

FILTRATION, & GRIT CHAMBERS SERVICE

CONTRACT

LOCATED at PATRICK SPACE FORCE BASE, FL.

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1 March 2021 (Rev 2)

1. PERFORMANCE WORK STATEMENT. IAW FAR 8.405-2 (b), (c), (iii). This requirement is a Firm Fixed Price Service Contract. The period of performance is a base 1-year plus four 1-year option year periods. The contractor shall inspect, clean, repair, and maintain oil/water separator (OWS) systems (including any filter media), storm water filtration systems (including any filter media) and grit chambers of used oil/sludge/debris. All work shall be accomplished at Patrick Space Force Base (PSFB), Florida.

1.1. SPECIFICATIONS & DESCRIPTION OF WORK. The contractor shall provide all management, labor, equipment, tools and supplies necessary to inspect, clean, repair, and maintain oil/water separator systems, storm water filtration systems, and grit chambers located on PSFB, FL. The contractor must sustain compliance with the requirements in DAFMAN 32-1067, *Water and Fuel Systems*, DAFMAN 32-7002, *Environmental Compliance and Pollution Prevention*, specifically relating to this Performance Work Statement, (PWS). The contractor shall also comply with all applicable Federal, State, and local environmental and related DoD and USAF directives, including City of Cocoa Beach Wastewater Ordinance. The estimated quantities of work are listed in Appendix B, titled Workload Estimates. The contractor shall submit reports and documentation as identified throughout this PWS. The contractor must notify the COR upon commencement and completion of work.

NOTE: No hazardous material shall be brought onto government property that does not directly relate to requirements for the performance of this contract. Typical materials requiring Safety Data Sheets (SDS) and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, stains and varnishes, solvents, adhesives, aerosol, petroleum products and asbestos containing material. The Contractor shall comply with, but not limited to: DAFMAN 32-7002, *Environmental Compliance and Pollution Prevention* and SLD 45th SW HAZMAT Tracking Procedures for Construction and Service Contractors. The contractor must contact the Installation Hazardous Materials Program Manager (45 CES Environmental Office) at (321) 494-9259 to review hazardous materials authorization procedures within two weeks of commencement of work.

1.2. OIL/WATER SEPARATOR SYSTEMS/STORM WATER FILTRATION SYSTEMS/GRIT CHAMBERS.

1.2.1. Inspection: The contractor shall inspect all devices listed in Appendix B according to the frequency given for each device. The contractor shall use an American Petroleum Institute (API) calibrated stick, with a detection paste, for measuring the thickness of fluids and sludge's in each OWS chamber. Based on the inspections, the contractor shall submit an inspection report to include device location, device type, device condition, service recommendations, and all items inspected for each device. Service recommendations shall include cleaning and repair recommendations, including filter media as required. The contractor shall submit all inspection reports to the COR within 10 days of the completion of an inspection event.

1.2.2. Sampling & Analysis. Sampling & Analysis of each system shall be performed at least annually, or as necessary to remain in compliance with applicable Federal, State, and local environmental and related DoD and USAF directives. Results of the recently performed (20 Oct 2011), results are available upon request. Prior to pumping and cleaning each system, the contractor shall take adequate, representative samples of each device (one (1) liquid and one (1) solid). The contractor shall have samples analyzed by an independent NELAC certified lab for the parameters identified in Appendix C. If an OWS is associated with an Underground Storage Tank (UST) which is a product recovery tank, the UST contents must be sampled also. No OWS or Grit Chamber shall be pumped or cleaned until the sampling results have been received and authorization has been given by the CO.

a. Methods. The sampling methods and test equipment used shall conform to procedures described in Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, SW-846, (latest edition) or Standard Test Methods for Chlorine In Used Petroleum Products, ASTM Method D 5384-95.

b. Parameters. The contractor shall have the analysis identified in Appendix C performed on all samples:

c. Results Reporting. All test results, and EPA hazardous waste numbers (if applicable), shall be included in a Sampling Results Report and submitted to the COR within 30 days after sampling.

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1.3. OWS, STORM WATER FILTRATION SYSTEMS & GRIT CHAMBER CLEANING. An OWS, Storm Water Filtration System or Grit Chamber may be cleaned after the COR has reviewed the service recommendations and sampling results, and has approved the cleaning process to commence. The liquids resulting from the cleaning process shall be appropriately handled and disposed of based on the characteristics of the original liquid/solid in the device. The contractor must comply with AFMAN 32-7002, *Environmental Compliance and Pollution Prevention*.

1.3.1. OWS, Storm Water Filtration System & Grit Chamber Waste Handling: Non-Hazardous Waste.

1.3.1.1. Liquid Waste.

a. Water. Non-Hazardous water that has no visible sheen will be pumped out and then transported off base by the contractor to a State/Federal Approved disposal site. The truck(s) used for water transport shall be marked as such and shall not be used for any other materials.

b. Petroleum Contaminated Water. Water that is contaminated with petroleum shall have the sheen removed by padding, filtration, etc. Upon COR and/or Contracting Officer (KO) approval, the water will be transported by the contractor off base to a State/Federal approved disposal site.

Note: A copy of all Disposal Manifests will be provided to the Air Force COR for submittal to 45CES/CEIE (Environmental Office; 321-494-9270)

1.3.1.2. Solid Waste. Sludges/Solids/Grit Removal and Disposition. The contractor shall be responsible for the costs associated with the transportation and disposal of all solids collected in the performance of this contract to an off-base treatment facility.

1.3.2. Hazardous and Controlled Waste Handling. The contractor shall contact the 45 CES/CEIE Environmental Office (321-494-9270) to coordinate the establishment of hazardous and controlled waste management procedures prior to generating any hazardous waste.

1.3.2.1. The contractor shall provide the KO and the 45 CES/CEIE with documentation for completed RCRA hazardous waste and DOT training prior to generating any waste, reference 40 CFR 265.16 and AFMAN 32-7002, *Environmental Compliance and Pollution Prevention*. All individuals involved in generating waste shall be properly trained.

1.3.2.2. If any waste is determined to be hazardous, as defined in 40 CFR 261, the KO must be notified immediately.

1.3.2.3. All hazardous and controlled waste shall be characterized and managed IAW State, Federal, and Air Force requirements (the SLD 45 SW Hazardous Waste Management Plan) by the contractor and final disposal shall be accomplished by the Govt. under the Installation EPA identification number.

1.3.2.4. The contractor shall follow established procedures identified in SLD 45 SW Hazardous Waste Management Plan to determine whether they are hazardous or non-hazardous.

1.3.2.5. Locations of accumulation sites shall be approved by the Government prior to generating hazardous waste. The contractor shall provide enclosed, lockable storage for hazardous waste containers. The Prime Contractor shall be responsible for ensuring Subcontractors are in compliance with all Federal, State, and Air Force hazardous waste requirements.

1.3.2.6. No waste or reinstates shall be discharged to the PSFB sanitary sewer system without prior authorization provided by the 45 CES/CEIE Environmental offices. Contractor shall follow the established waste characterization process (Process Waste Questionnaire/Technical Response Package (PWQ/TRP)) when requesting disposal into the sanitary sewer system.

1.3.2.7. Cleanup and Disposal

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1.3.2.7.1. Hazardous waste shall be managed by the contractor in accordance with 40 CFR 262, FAC Chapter 62-730, AFMAN 32-7002, Environmental Compliance and Pollution Prevention and the SLD 45 SW Hazardous Waste Management Plan at the contractor's expense, and shall include the following at a minimum:

a. Management of one or more hazardous waste accumulation sites.

b. Provide portable fire extinguishers, eyewash stations and required signs for each hazardous waste accumulation site.

c. Provide appropriate Department of Transportation (DOT) containers for storage and disposal of hazardous and controlled waste.

d. Properly mark and label container.

e. Perform and document required weekly hazardous waste accumulation site inspections.

f. Provide spill prevention and clean-up equipment.

g. Provide drum handling equipment.

h. Follow Process Waste Questionnaire/Technical Response Package (PWQ/TRP) process prior to request of hazardous waste disposal services.

i. Prepare internal manifest and deliver the drums of hazardous waste to the designated on-base storage facility within timeframes specified by the Government.

1.3.2.7.2. The contractor shall submit to the COR a copy of the closeout form for all hazardous waste accumulation sites operated by the contractor.

1.3.3. Cleaning of Walls, Ceilings, and Floors. Once the waste has been pumped out, the contractor shall remove all remaining sludge and debris, and coordinate with Environmental Office for appropriate disposal. Walls, ceilings, and floors shall be scrubbed or pressure washed if needed to remove debris.

1.3.4. Returning Device to Operational Condition. If necessary, the contractor shall refill appropriate devices with a sufficient amount of clean water to ensure immediate unit operability following waste removal and cleaning.

1.4. MAINTENANCE & REPAIR OF OWS, STORM WATER FILTRATION SYSTEMS & GRIT CHAMBERS. The contractor shall perform minor maintenance, and repair on systems when directed and approved by the COR for items less than $350.00. The contractor must have pre-approval in writing by the KO for maintenance and repair items exceeding $350.00. When repairs are expected to exceed $350.00, KO approval is required. The contractor shall prepare an itemized estimate to include all costs associated with the repair. The contractor shall submit the estimate in writing to the COR within 48 hrs. of identifying the required repair. The COR will submit an itemized government estimate, along with the contractor's estimate to the KO for approval. The contractor shall follow guidance in the Air Combat Command (ACC) Oil/Water Separator Management Guidance Document, Reference Number 93-019, which provides assistance in compliance with federal regulations related to the discharges from an OWS, and provides appropriate procedures to upgrade, minimize, and eliminate an OWS.

1.5. RECORDS & DISPOSITION. It is recommended the contractor use recycled paper products in the performance of meeting the requirements of this contract. The contractor shall provide a monthly report to the COR detailing all work accomplished during the month. All reports shall be submitted by the 5th workday of each following month. All contractors will comply with the Privacy Act of 1974 (the Act) and AFI 33-332, the Air Force Privacy Act Program. All records in the form of hard copy and/or soft copy and produced/generated for the direct use of this contract will become the property of the government upon contract expiration.

1.5.1. The contractor shall utilize Wide Area Work Flow (WAWF), for invoicing for all work performed IAW this

PWS. Instructions on how to use the web based service are available via the WAWF web site @ https://wawf.eb.mil//.

1.6. SPILLS. The contractor is solely responsible for immediate (24-hour) containment, cleanup, and disposal of any spills occurring in the performance of this contract. Any damage to include contaminated soil shall be the responsibility of the contractor to repair and/or remediate. Any site where a spill occurs shall be returned to its original condition. All costs incurred by the contractor due to the result of a spill shall be the contractor's responsibility. In the event of a spill **on PSFB of any materials involved in this contract, the contractor must immediately notify the PSFB Fire** Department by dialing (321) 494-7642 and the Environmental Office at 321-298-7022. The contractor should also notify the KO and COR. The contractor should be prepared to give the following information:

1. Contractor's name
2. Location of spill
3. Number of injured people and nature of injuries (if applicable)
4. Substance spilled
5. Source of spill
6. Approximate quantity of spills and current rate of spilling
7. Cause and time of spill
8. Extent spill has traveled
9. Waters which might be affected
10. Any action underway to confine or clean-up the spill.

The Environmental Office will make the regulatory notifications, if required.

1.7. ON-CALL SERVICE CALLS. Unexpected services may be required in the event of natural disasters or other unscheduled repairs to pipes or other infrastructure involving oil/water separator systems, Storm Water Filtration Systems, and grit chambers. In the event that servicing is required outside the contractor's schedule, the contractor shall begin the service as soon after notification as possible. The Contractor shall report to the work location, survey the repair, and provide to Contracting Officer or their designated representative an estimated time to repair and cost of repairs. The Contractor shall commence repair work after approval from the Contracting Officer or their representative.

1.8. SAFETY & HEALTH STANDARDS. The contractor will comply with all applicable Occupational Safety and Health (OSHA) Standards while performing work on 45th Space Wing property. Entry into permitted confined spaces will be conducted under the contractor's own master entry plan. In the event of a mishap involving government property, or if contacted by OSHA, the contractor will immediately notify 45 CONS and 45 SW/SEG (Occupational Safety).

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2.0. SERVICE DELIVERY SUMMARY.

	Performance Objective	PWS Reference	Performance Threshold
1	Perform scheduled services on Oil/Water Separators, Storm Water Filtration Systems & Grit Chambers.	1.1 - 1.7 and Appendix D	Contractor responds and performs IAW this PWS. No more than 1 validated customer complaint per scheduled service.

2	Perform device content sampling.	1.2.2	Contractor shall perform sampling and provide results to COR IAW the PWS. One liquid and one solid sample from each device, 100% compliance

3.0. GOVERNMENT FURNISHED PROPERTY & SERVICES. The government will provide the following equipment, materials, and services.

Facilities: None

Equipment: None

Materials: The Government will provide (upon request) the contractor all service history and maintenance records available for each device.

Services: None

Emergencies: Phone number is 911 for police, fire, and medical emergencies. (Must state to 911 representatives that the emergency is on PSFB to be transferred to Military Emergency Response Personnel)

4.0. GENERAL INFORMATION.

4.1. SUBMITTALS. The following schedule lists the submittals that shall be submitted to the KO or COR as applicable. Prior to pumping any waste, the contractor shall be required to submit to the COR a proposed work schedule to permit Government inspection at the work site while work is in progress. The proposed work schedule shall include date(s), time(s), and list sequential pumping by facility number(s). The contractor shall not be allowed to begin work until his work schedule has been approved.

Submittal Description	Submittal Time Frame
SUBMITTALS TO CONTRACTING OFFICER	
Approval of Testing Laboratory	Within 5 days of receipt of award
Certificate of EPA Registration	Within 5 days of receipt of award
Permit to Treat/Dispose/Recycle Waste and Oil	Within 5 days of receipt of award
DOT License	Within 5 days of receipt of award
Personnel Qualifications	Within 5 days of receipt of award
Site Safety Plan	Within 5 days of receipt of award
Proof of Insurance Coverage for hazardous transport	Within 5 days of receipt of award
QUALITY CONTROL SUBMITTALS TO COR	
Quality Control Plan	Within 5 days of receipt of award
Service Records	As required IAW PWS
Pumping Log (FY Schedule Calendar)	30 days after samples are taken and before pumping can start
Analytical Laboratory Results for Samples	31 days after samples are taken and before pumping can start
Tabular Designation of Waste	30 days after samples are taken
Inspection Report	Within 10 days after Inspection
Quarterly Work report	Within 5 work days after work is completed for that quarter
Cleaning Report	Within 10 days of cleaning
Used Oil Shipment report	Within 10 days of shipment
Dipstick Conversion Charts	Prior to pumping waste

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Manufacturer's Data or Owner's Manual of Pump Trucks	Prior to initial pumping of waste and before new equipment is used
Sludge and Liquid Quantities Pumped as Certified by Disposal Facility	10 days after waste disposal

4.2. QUALITY ASSURANCE. The government will periodically evaluate the contractor's performance by COR(s) to monitor performance to ensure services are received. The government COR will evaluate the contractor's performance through intermittent on-site inspections, review of records, reports, logs, or by any means IAW the PWS. The government may inspect each task as completed or increase the number of quality assurance inspections if deemed appropriate because of repeated failures discovered during quality assurance inspections or because of repeated customer complaints. Likewise, the government may decrease the number of quality assurance inspections if performance dictates.

4.3. QUALITY CONTROL. The contractor shall develop and submit to the government for approval a quality control (QC) plan indicating the contractors' methods to ensure that all work performed under this PWS are in accordance with commercial standards, local and federal environmental regulations, and the requirements of this PWS. All QC records shall be current and made immediately available to the government upon request throughout the contract performance period.

4.4. GOVERNMENT REMEDIES. The KO shall follow FAR 52.212.4, Contract Terms and Conditions-Commercial Items (Oct 2003), for contractor's failure to perform satisfactory services or failure to correct non-conforming services.

4.5. HOURS OF OPERATION. No contract maintenance shall occur during the hours before 7:30 A.M. and not after 4:30 P.M. on Mondays through Fridays, and none on weekends unless prior approval by the KO or COR.

4.6. RECOGNIZED HOLIDAYS. The contractor is not responsible to provide normal service on the following days: New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Juneteenth, Fourth of July, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day. **Emergency services can be expected at any time.**

SECURITY REQUIREMENTS. The contractor personnel shall apply for a base identification card to be carried while working on PSFB. All Government properties (identification cards, restricted area badges, and privately owned vehicle (POV) passes shall be returned within 24 hours after employment is terminated. It is the responsibility of contract manager to retrieve, turn in, or report any loss or misuse of such items to the COR, and Base Pass and Identification office. AFFARS clause 5352.242-9000, Contractor Access to Air Force Installations, and PSFB clause 5352.204-1000, Contractor Security Agreement, provide base access and security requirements. In addition, contractors shall follow guidance IAW Installation Access policies and anti-terrorism training.

Note: The contractor will be escorted while working in controlled/secured areas.

4.7. Licenses and Permits. The contractor shall be responsible for obtaining any necessary licenses and permits to transport non-hazardous waste in accordance with the Commercial Vehicle Safety Act of 1986, and for complying with any federal, state, and municipal laws, codes and regulations applicable to the performance of work. The contractor shall be responsible for all new and updated laws during the duration of the contract. The contractor shall provide proof of such applicable licenses and permits upon request of the Air Force.

4.8. Reductions to contract price for non-performed, defective services, or late service. Shall be determined by the KO individually as applicable to each instance at time of occurrence.

5.0. APPENDICES.

A. Technical Information, Drawings & Maps

B. Workload Estimates

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C. Sampling Parameters

D. Applicable Publications and Regulations List

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APPENDIX A

Building: 331
Building Location: Atlas Avenue
Building Name: Auto Hobby Shop

Facility Description: The Auto Hobby Shop is used on a recreational basis to perform repairs and maintenance on personal vehicles. The facility houses 12 working bay's, a machine room, body shop, welding area, paint booth, and tool storage area.

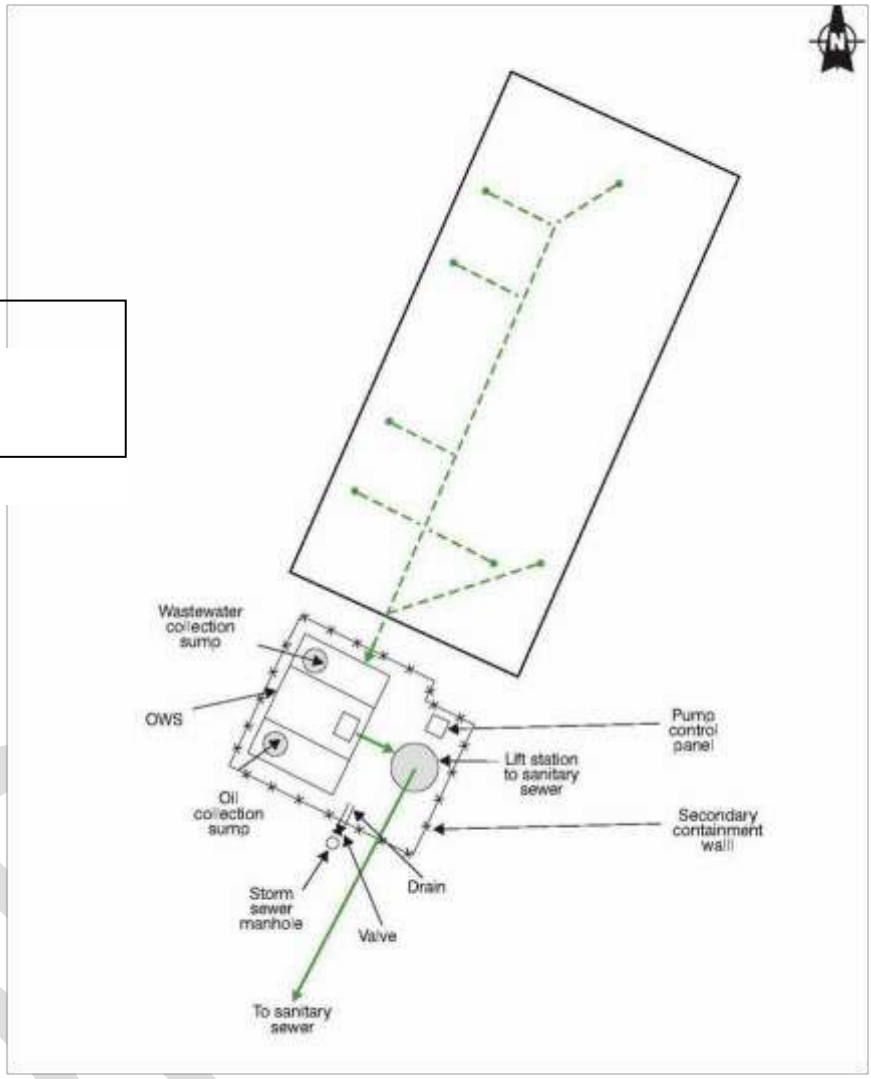
Oil/Water Separator and/or Grit Chamber Description: The OWS at the Auto Hobby Shop is a three- chambered, in-ground, concrete unit, measuring 9'4" (L) x 5' (W) x 5' (D). The OWS and adjacent lift station are surrounded by a 1-foot-high concrete containment berm. Storm water that collects in the containment area is visually inspected for sheens before a valve is opened and the contents are drained to a storm sewer manhole. The first chamber of the OWS acts as a wastewater collection sump and grit chamber for particulates. Wastewater flows into the first chamber and

collects behind a weir, allowing particulates to settle out. Water then flows into the second chamber through a 6-inch-diameter hole in the top of the concrete weir. The second chamber acts as a gravity separation chamber. Oils and hydrocarbons rise to the surface due to density differences, and an oil skimmer transports these fluids to the third chamber, which acts an oil collection sump. Clean water in the second chamber flows to the adjacent lift station through a 4-inch PVC effluent pipe.

Figure A-1

Facility 331:
Base Auto Hobby Shop
PSFB, FL.

Industrial Wastewater Summary:
Minimum Daily Flow: 10 gallons
Average Daily Flow: 25 gallons
Maximum Daily Flow: 40 gallons



APPENDIX A Cont.

Buildings: 623, 627, & 667 (Base Fuel Storage)
Building Location: Rescue Road and Atlas Avenue
Building Names: Bldg. 623: North Bulk Storage Tank Farm
Bldg. 627: North Bulk Storage Tank Farm
Bldg. 667: South Bulk Storage Tank Farm

Facility Description: The base fuel storage area or "fuel farm" is a fenced compound consisting of large aboveground fuel storage tanks, coalescers, and fuel delivery pumps. The area includes facilities 623, 627, and 667, which serve as storage depots and supply facilities for fuel tanker trucks. The storage tanks at these facilities are supported on concrete pads and are surrounded by secondary containment berms.
Additionally, each facility (623, 627, and 667) has a 900-gallon grit chamber and a 5,000-gallon open secondary containment pit to isolate and contain minor spills.

Grit Chamber Description: The grit chambers and secondary containment pits at facilities 623, 627, and 667, and function as a way to contain spills. The grit chambers are concrete, in-ground units, measuring 4' (L) x 6' (W) x 8' (D). Each chamber has two compartments, separated by a concrete partition. The first compartment is an influent sump to collect incoming storm water and allow settlement of particulates. The second compartment discharges effluent to storm water systems through a 12- inch discharge pipe. Facilities 623 and 627 discharge to storm sewers, while facility 667 discharges to a wet canal, that subsequently empties into the Banana River (Figures A-4, A-5, and A-6). The secondary containment pits are large 5,000-gallon, open, concrete pits, measuring 24' (L) x 12' (W) x 8' (D). Influent water from the grit chambers collects in these pits and is visually inspected for sheens before being pumped back to the grit chamber effluent compartment, where it subsequently drains to storm water systems. As mentioned above, the grit chamber compartments are separated by a concrete partition, which allows overflow during large storm events. An 8-inch pipe in the first compartment conveys water to the secondary containment pit.

APPENDIX A Cont.

Building: 623 (Base Fuel Storage)
Building Location: Rescue Road and Atlas Avenue
Building Names: Bldg. 623: North Bulk Storage Tank Farm

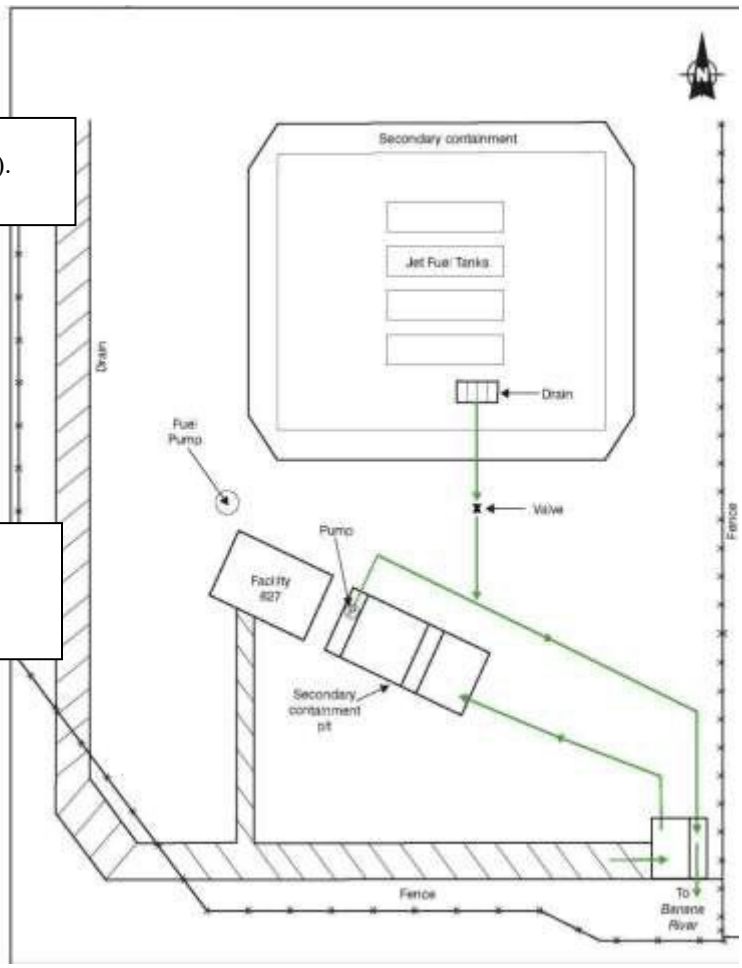
Facility Description: The base fuel storage area or "fuel farm" is a fenced compound consisting of large aboveground fuel storage tanks, coalescers, and fuel delivery pumps. The area includes facilities 623, 627, and 667, which serve as storage depots and supply facilities for fuel tanker trucks. The storage tanks at these facilities are supported on concrete pads and are surrounded by secondary containment berms. Additionally, each facility (623, 627, and 667) has a 900-gallon grit chamber and a 5,000-gallon open secondary containment pit to isolate and contain incidental spills.

Grit Chamber Description: The grit chambers and secondary containment pits at Facilities 623, 627, and 667, and function as a way to contain spills. The grit chambers are concrete, in-ground units, measuring 4' (L) x 6' (W) x 8' (D). Each chamber has two compartments, separated by a concrete partition. The first compartment is an influent sump to collect incoming storm water and allow settlement of particulates. The second compartment discharges effluent to storm water systems through a 12- inch discharge pipe. Facilities 623 and 627 discharge to storm sewers, while Facility 667 discharges to a wet canal that subsequently empties into the Banana River (Figures 3-4, 3-5, and 3-6). The secondary containment pits are large 5,000-gallon, open, concrete pits, measuring 24' (L) x 12' (W) x 8' (D). Influent water from the grit chambers collects in these pits and is visually inspected for sheens before being pumped back to the grit chamber effluent compartment, where it subsequently drains to storm water systems. An 8-inch pipe in the first compartment conveys water to the secondary containment pit.

Figure A-2

Facility 623:
North Bulk Storage Tank Farm, (Jet Fuels).
PSFB, FL.

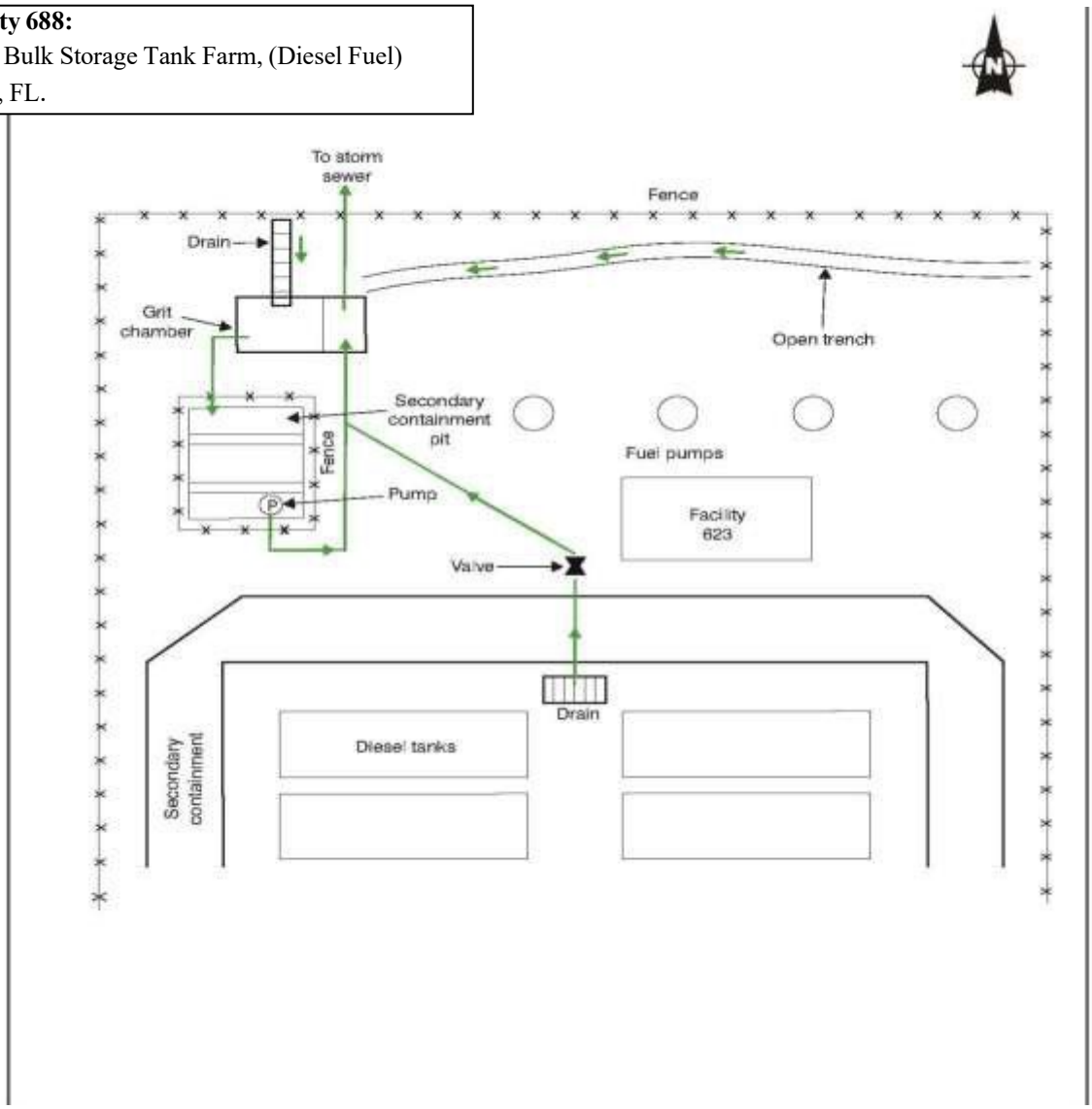
Industrial Wastewater Summary:
Minimum Daily Flow: 0 gallons
Average Daily Flow: 0 gallons
Maximum Daily Flow: 0 gallons



APPENDIX A Cont.

Figure A-3

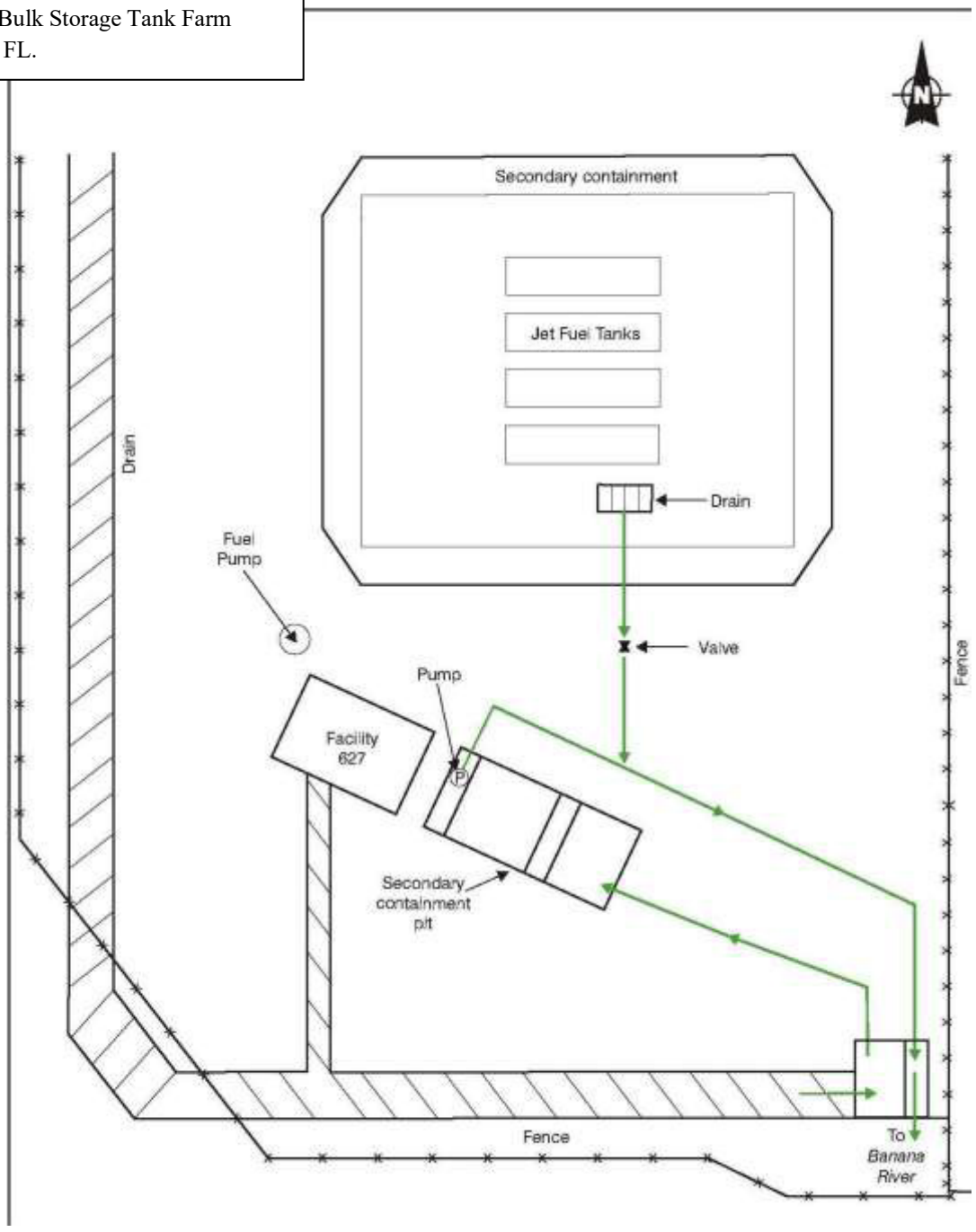
Facility 688:
North Bulk Storage Tank Farm, (Diesel Fuel)
PSFB, FL.



APPENDIX A Cont.

Figure A-4

Facility 667:
South Bulk Storage Tank Farm
PSFB, FL.



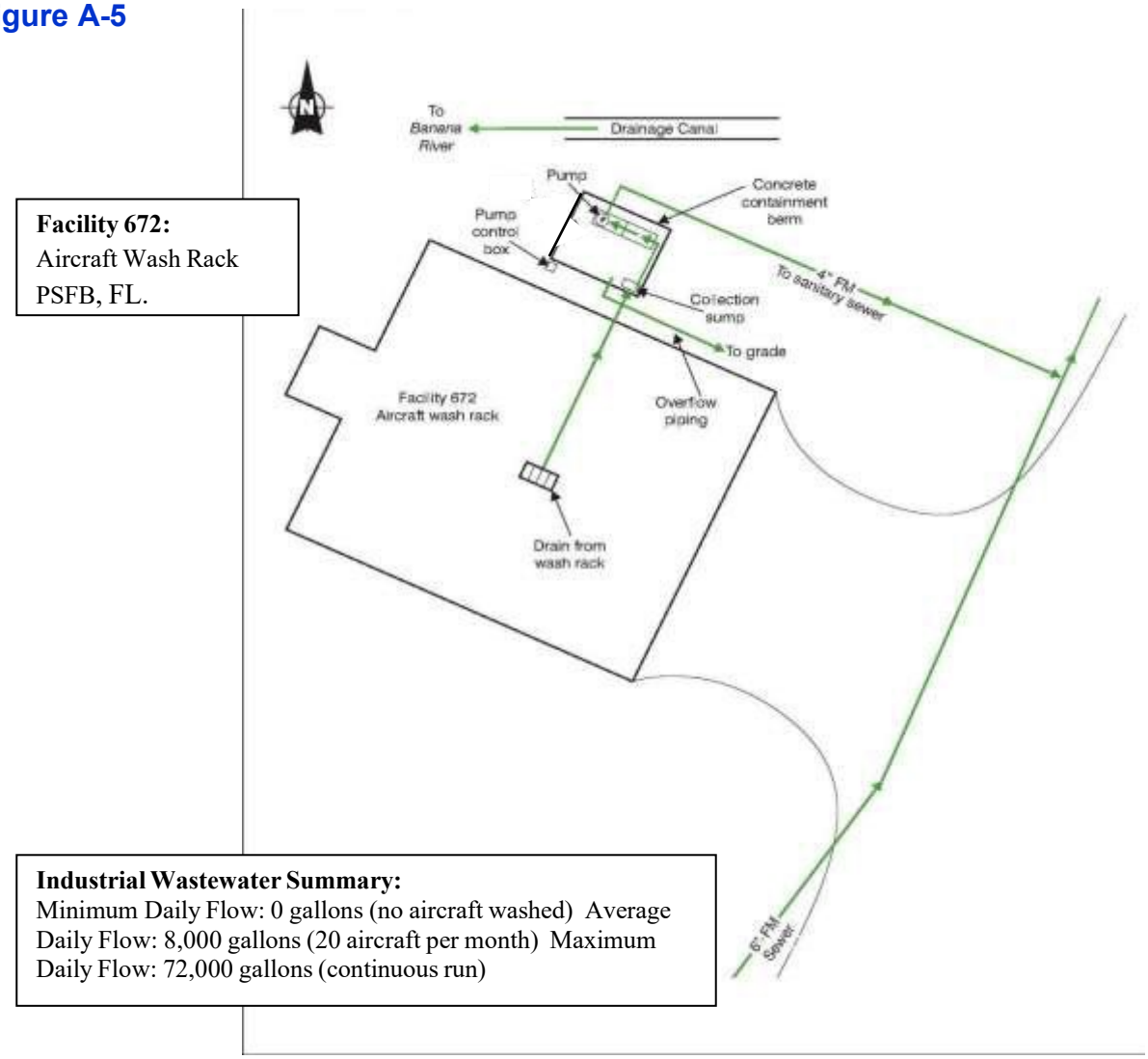
APPENDIX A Cont.

Building: 672
Building Location: Rescue Road
Building Names: Aircraft Wash Rack

Facility Description: Building 672 is the Main Aircraft Wash Rack. It consists of a large, covered, concrete wash pad, which is sloped to a grated drain in the center. PSFB frequently uses this wash rack to scrub helicopters and C-130 aircraft.

Grit Chamber Description: The grit chamber is an in-ground concrete unit with metal checker plate covers. It is a converted OWS consisting of three compartments. Wastewater flows from the wash pad into the first and second compartments, which allow particulates to settle out. A concrete partition separates the second and third compartments. Material flows through three holes in the top of this partition into the third compartment, where it is pumped to the sanitary sewer (Figure A-8). The pump operates on a float system and has a high-level alarm indicator.

Figure A-5



APPENDIX A Cont.

Building: 676
Building Location: Rescue Road
Building Names: Fuel Truck Maintenance

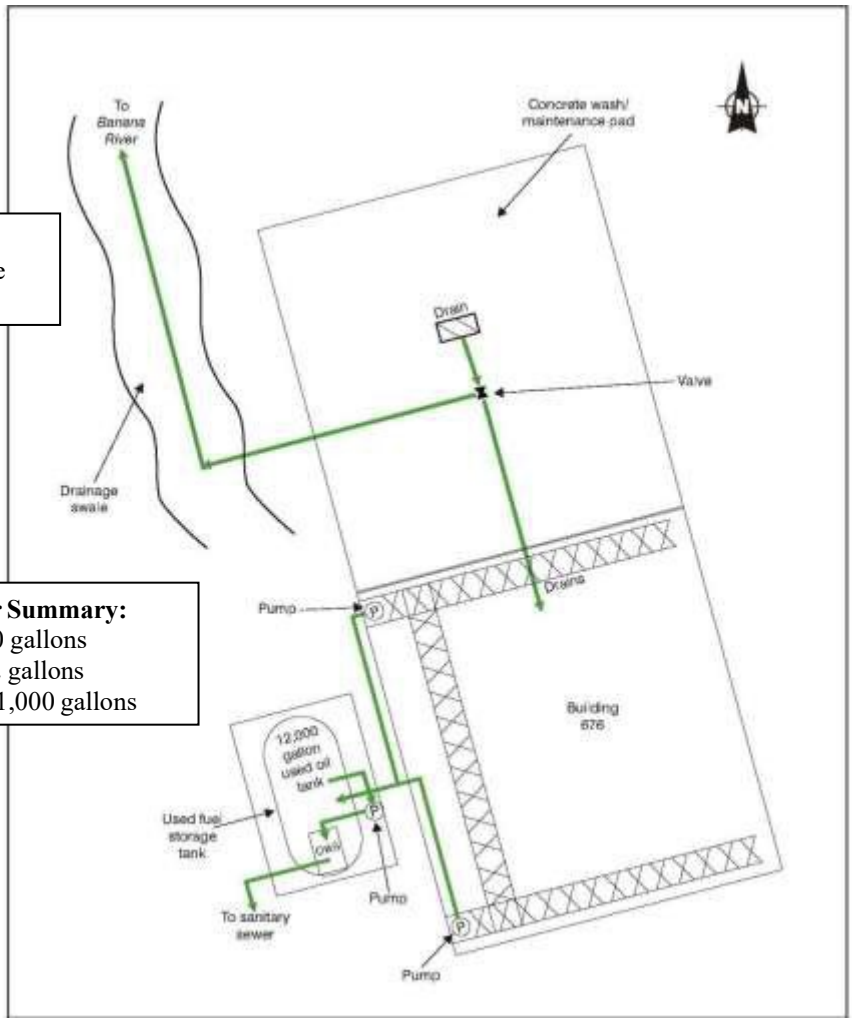
Facility Description: Building 676 is used for maintenance of fuel tanker trucks. The facility consists of a maintenance garage, an uncovered concrete parking area, a 12,000-gallon aboveground storage tank with secondary containment, and an OWS mounted on top of the tank. The garage contains several floor drains, which are piped into the 12,000-gallon storage tank. The drain from the parking area is also piped to this tank to collect any incidental spills or fuel releases (Figure A-9).

Oil/Water Separator (Above Ground) and/or Grit Chamber Description: The OWS is a rectangular fiberglass unit mounted on top of the above ground storage tank. The unit is manufactured by AFL Industries, Inc., Model # CVF-4A-305-20-S-0 and was installed in September 2011. The OWS is designed to accommodate flows of 20 gpm and has a capacity of approximately 300 gallons. Influent is pumped from the storage tank to the OWS through 2-inch piping and connects to a flanged 3-inch inlet connection. The OWS contains internal weirs, baffles, and vertical tube coalescers, which separate and isolate fuels in the main separation chamber. A manual rotary skimmer directs separated product back to the fuel storage tank through a 3-inch flanged outlet. A 3-inch pipe discharges effluent to the sanitary sewer.

Figure A-6

Facility 676:
Fuel Truck Maintenance
PSFB, FL.

Industrial Wastewater Summary:
Minimum Daily Flow: 0 gallons
Average Daily Flow: 62 gallons
Maximum Daily Flow: 1,000 gallons



APPENDIX A

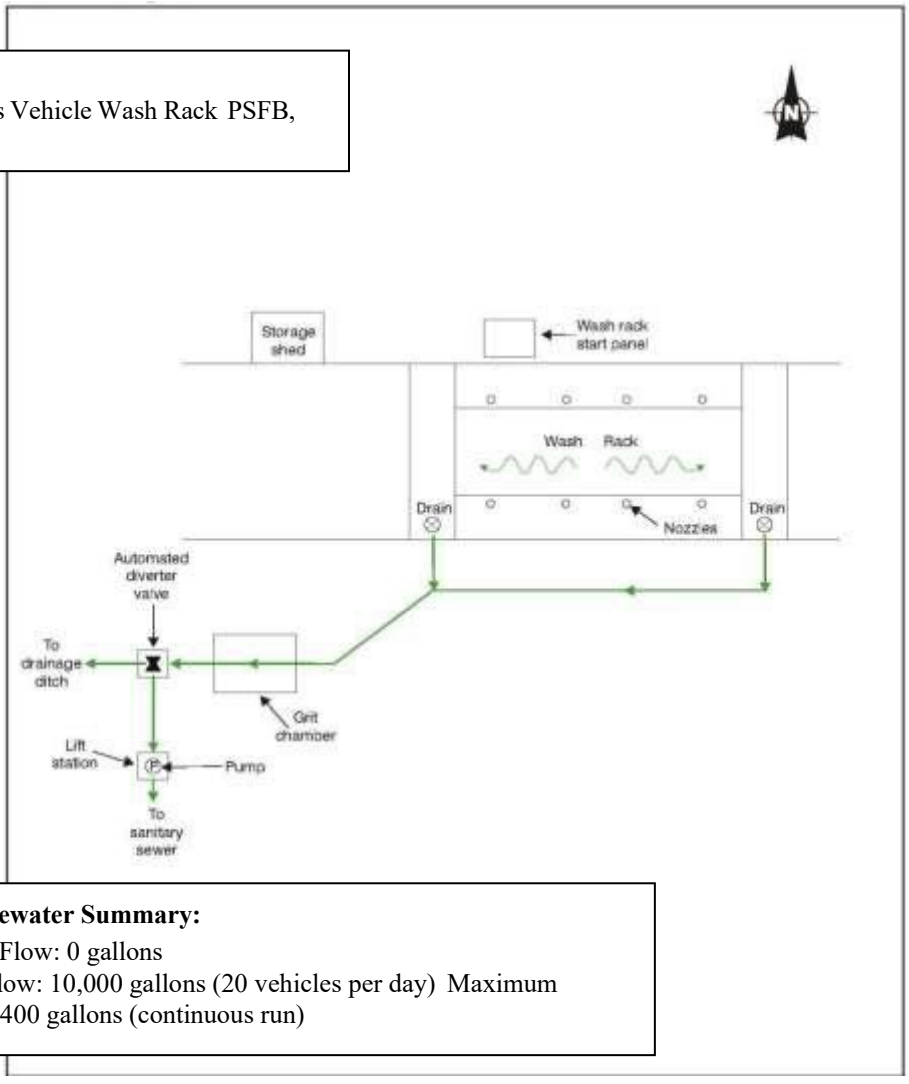
Building: 912
Location: Control Road and Maintenance Road
Building Names: Roads and Grounds Vehicle Wash Rack

Facility Description: The Roads and Grounds Vehicle Wash Rack (Figure A-12), is an uncovered, drive- through, concrete wash pad for trucks and heavy equipment. It consists of eight metal standpipes, which discharge rinse water through nozzles at approximately 2, 5, 10, and 15 feet above ground. The automated rinse station operates on a timer and is only accessible to Roads and Grounds personnel.

Grit Chamber Description: The unit at this facility is an in-ground concrete grit chamber which allows settlement of wash water solids, but does not function as an OWS. Roads and Grounds personnel indicate the chamber is typically not cleaned out until several feet of solids have accumulated, approximately once every three to four months. Additionally, sand and debris were observed in the wash rack troughs, drains, and pipes. This prevents the wash pad from draining efficiently, causing it to back-up during operation.
Prolonged use of the wash rack likely causes water to overflow the drainage troughs and drain to the grassed area adjacent to the pad.

Figure A-7

Facility 912:
Roads and Grounds Vehicle Wash Rack PSFB, FL.



Industrial Wastewater Summary:
Minimum Daily Flow: 0 gallons
Average Daily Flow: 10,000 gallons (20 vehicles per day) Maximum Daily Flow: 230,400 gallons (continuous run)

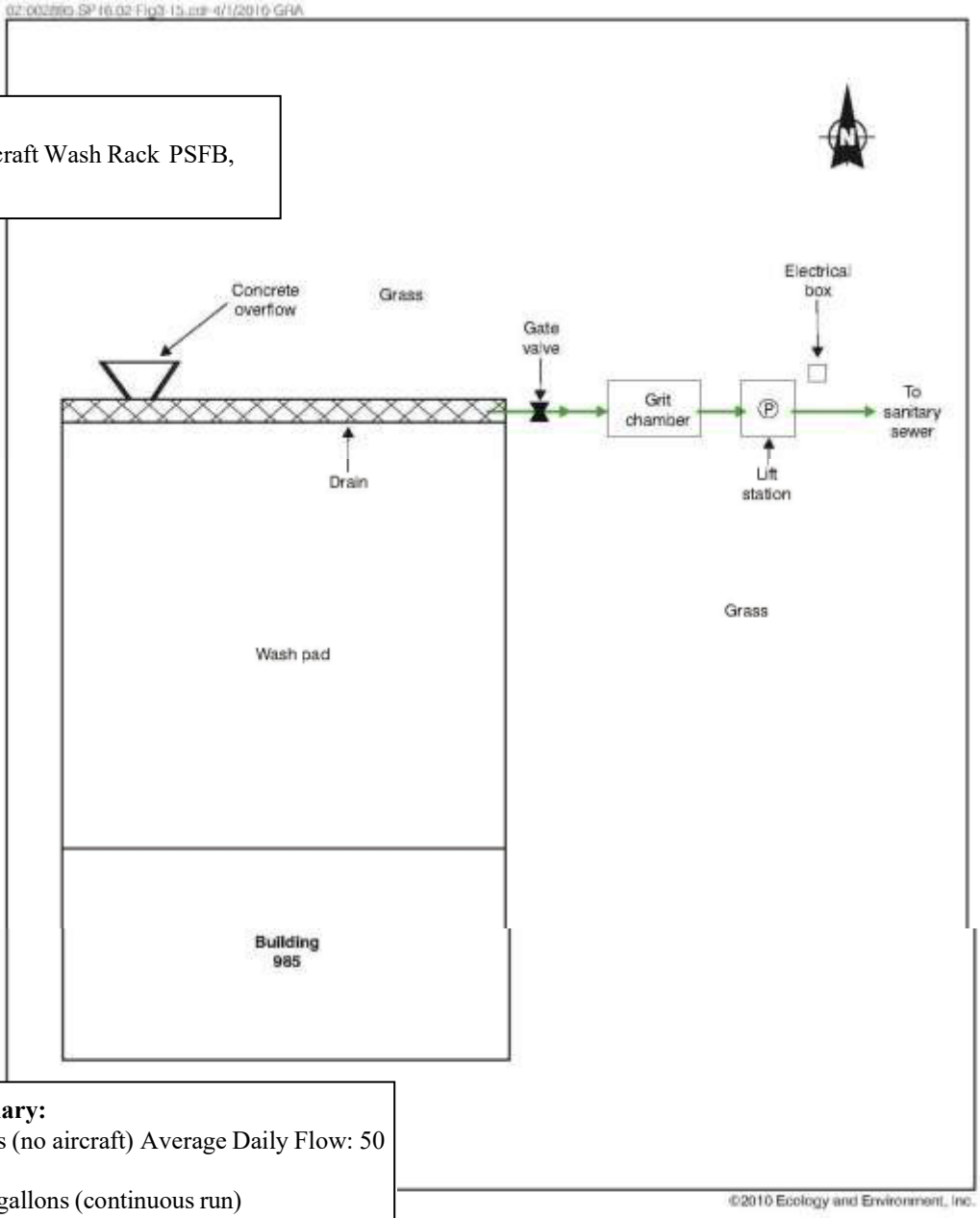
Building: 985
Location: South Patrick Drive
Building Names: Department of State Aircraft Wash Rack

Facility Description: The Department of State (DOS) Aircraft Wash Rack is used to wash helicopters and small jet and turboprop aircraft. The wash rack is an uncovered concrete pad located south of the DOS aircraft maintenance hangar.

Grit Chamber Description: The unit at this facility is an in-ground concrete grit chamber measuring 50" (L) x 55" (W) x 44" (D). The grit chamber allows settlement of wash water solids, but does not function as an OWS.

Figure A-8

Facility 985:
Department of State Aircraft Wash Rack PSFB, FL.



Industrial Wastewater Summary:
Minimum Daily Flow: 0 gallons (no aircraft) Average Daily Flow: 50 gallons (3 aircraft per week)
Maximum Daily Flow: 36,000 gallons (continuous run)

Figure 3-14 Facility 985
Department of State Aircraft Wash Rack
Oil/Water Separator Survey
U.S. Air Force Space Command
Patrick AFB, Florida

APPENDIX A Cont.

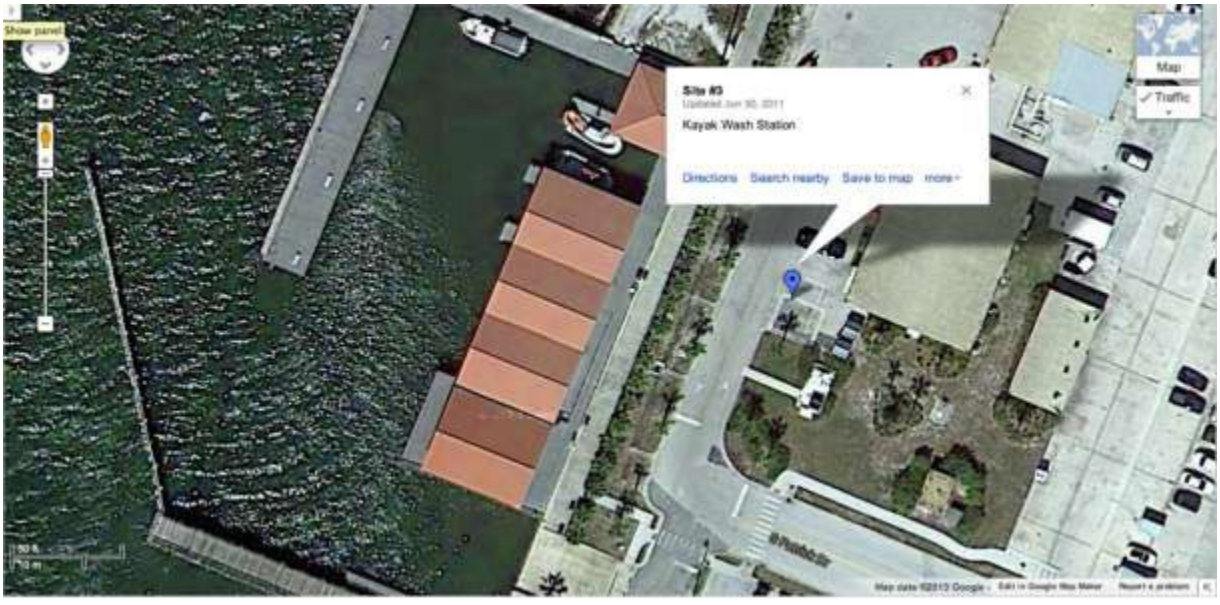
PSFB – EcoSense Int. Inc. Systems Descriptions

Site 3, Small Boat/Kayak Wash Station: ESI Part Number 10000297 with #3.5 MZ canister filter. Fits 24” x 24” Drop Inlet; Support Plate with 1-3.5MZ Canister Filter, 3-4” dia. Hooded Bypass Tubes and 1-Dry Drain. Filter Capacity is 23 GPM. Total Capacity is 383 GPM @ 12” Head. This system is designed to filter oils, grease, heavy metals, ammonia, phosphate, anionic surfactants, debris and sediment will process first flush runoff for a .22- acre parking lot. Service inspections should be performed quarterly. Sediments and Debris should be removed from holding area manually or with light duty vacuum system. Dry Drain filter should be replaced quarterly; Filters should be replaced quarterly. Filter contains MZ media; a surfactant modified zeolite.

Figure A-9

0297 Filter System 24x24 with MZ – Site 3

Site#3 – Kayak Wash Station with MZ zeolite



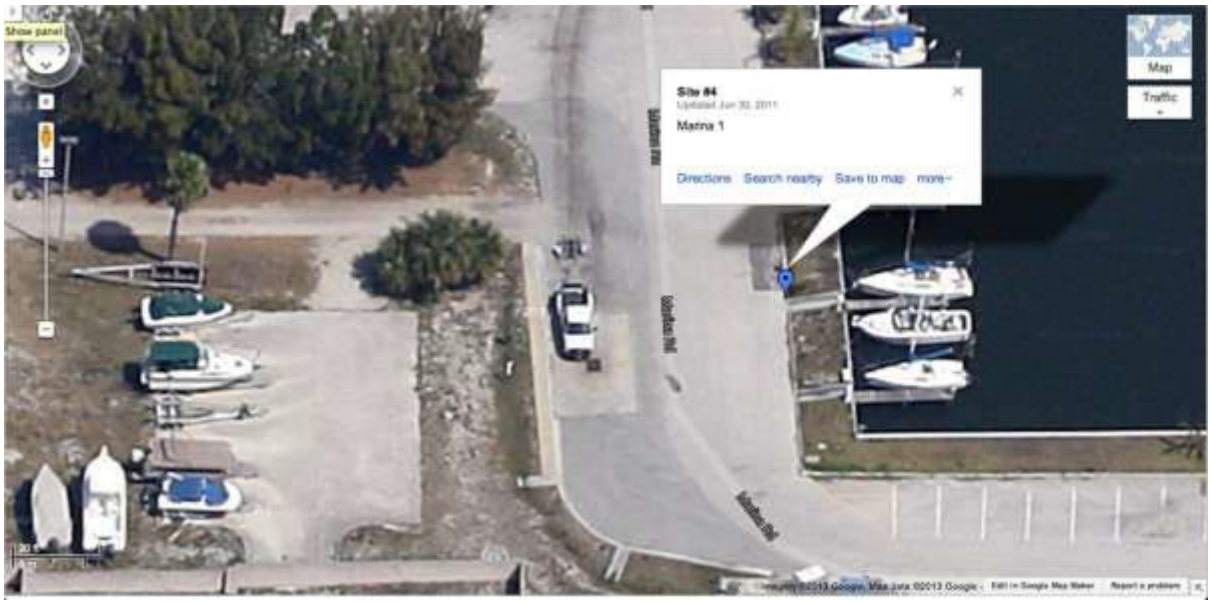
APPENDIX A Cont.

Site 4, Marina 1: ESI Part Number 10000297 with #3.5 MBPP canister filter. Fits 24” x 24” Drop Inlet; Support Plate with 1-3.5MBPP Canister Filter, 3-4” dia. Hooded Bypass Tubes and 1-Dry Drain. Filter Capacity is 24 GPM. Total Capacity is 384 GPM @ 12” Head. This system is designed to filter oil, grease, heavy metals, ammonia, phosphate, anionic surfactants, debris and sediment will process first flush runoff for a .22-acre parking lot. Service inspections should be performed semi-annually. Sediments and Debris should be removed from holding area manually or with light duty vacuum system. Dry Drain filter should be replaced semi-annually; Filters should be replaced semi-annually. Filter contains MBPP media; a specially manufactured polyolefin.

Figure A-10

0297 Filter System 24x24 – Site 4 with MBPP media

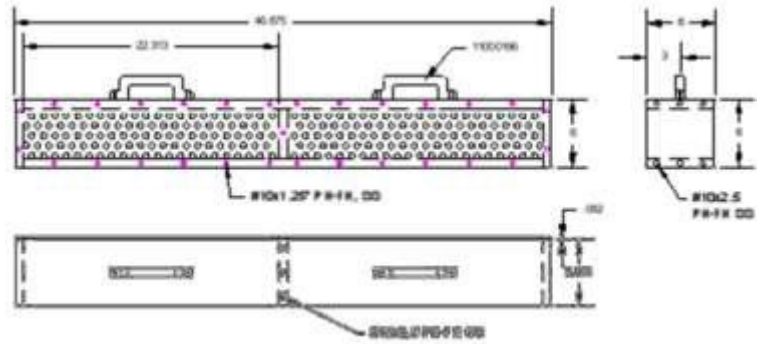
Site#4 – Marina 1 with MBPP



APPENDIX A Cont.

Sites 6 & 7 Grit Chamber Weir Cap Filters – Grit Chambers are located adjacent to fuel depots; fuel loading/unloading facilities. The grit chambers are storm water spill containment compartments, separated by a concrete partition or weir. The first compartment is an influent sump to collect incoming storm water and allow settlement of particulates. The second compartment discharges effluent storm water through an 8-inch pipe to the "Detention Basins" listed previously (sites 9 & 10). Grit chamber, site 6, discharges to Detention Basin, site 9; Grit chamber, site 7, discharges to Detention basin, site 10. Grit chamber compartments are separated by a concrete weir, which allows overflow during large storm events. Custom EcoSense 0574, 47" x 6" x 6" cassette filters are fitted in aluminum frames on the top of each overflow weir to capture tramp oils/fuels during bypass conditions. Filters are loaded with MBPP media. Filters should be inspected semi-annually and media replaced semi-annually or after a fuel/oil spill occurs.

Figure A-11



Site#6–

Site#7–

APPENDIX A Cont.

Sites 8, 9, 10 – Detention Basins Located adjacent to fuel depots; Fuel loading/unloading facilities are designed to capture and prevent transference of accidental fuel spills to the environment. Each of three 5000 gallon basins collect runoff from fueling stations which and is detained until pumps are activated for discharge. Each basin is fitted with three EcoSense #10000448 24" x 24" x 6" cassette filters with MBPP media. All water entering the detention basins must pass through the filters prior to discharge. Filters contain specially manufactured polyolefin material which efficiently removes tramp oils, fuels grease and other particles from the flow. These basins collect significant quantities of sediment and debris/algae which should be inspected Semi - annually. Sediment and debris should be removed as needed by vacuum tanker. Filters should be replaced Semi–annually.

Sites 8, 9, 10 – Left photograph is typical of filter installation of all three basins. Second third and fourth photographs: aerial views of site 8, 9 & 10 respectively.

Figure A-12

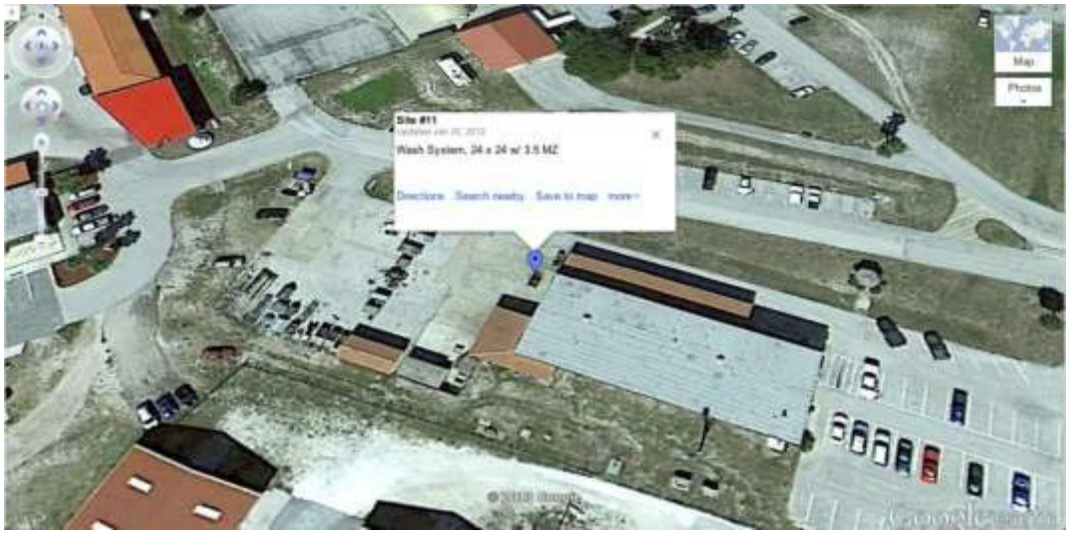
APPENDIX A Cont.

Site 11: Equipment Wash, Maintenance, & Flight Line: ESI Part Number 10000297 with #5.0 MBPP canister filter. Fits 24" x 24" Drop Inlet; Support Plate with 1-3.5MBPP Canister Filter, 3-4" dia. Hooded Bypass Tubes and 1- Dry Drain. Filter Capacity is 24 GPM. Total Capacity is 384 GPM @ 12" Head. This system is designed to filter oil, grease, heavy metals, ammonia, phosphate, anionic surfactants, debris and sediment will process first flush runoff for a .22-acre parking lot.
Note: This facility receives high levels of oils and grease from the cleaning and repair of machinery. Service inspections should be performed quarterly. Sediments and Debris should be removed from holding area manually or with light duty vacuum system quarterly. Dry Drain filter should be replaced quarterly; Filters should be replaced quarterly Filter contains MBPP media; a specially manufactured polyolefin.

Figure A-13

0297 Filter System 24x24 – Site 11 with MBPP media

Site#11 – Equipment Wash, Maintenance, Flight Line, 24x24 Filter System with MBPP

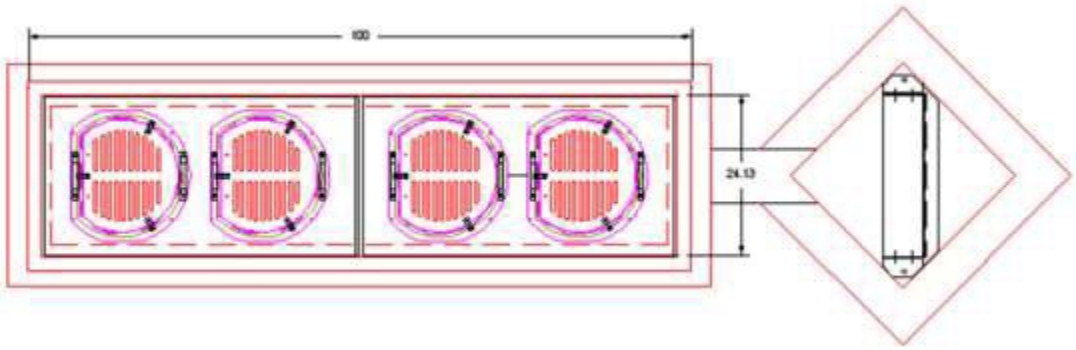


APPENDIX A Cont.

Site 12, Equipment Wash, Maintenance, Golf Course: Trench Basin with ESI System 0854. Contains (4) 16- Gallon Debris Baskets draining to 2' x 2' Basin with 0448 Baffle Buddy Cassette Filter mounted diagonally. System collects grass clippings, oils, grease and sediment from maintenance equipment. The 2' x 2' drop inlet is fitted with 1- EcoSense #10000448 24" x 24" x 6" cassette filter loaded with MBPP media. Water draining into the trench is filtered through the 4-debris baskets then flows through a 6" pipe into the 2' x 2' basin with filter. All water entering the basin must pass through the filter prior to discharge. Filters contain specially manufactured polyolefin material which efficiently removes tramp oils, fuels grease and other particles from the flow. Discharge is to the sanitary sewer system. Debris baskets and Trench should be emptied weekly or more frequently depending on usage by Golf Course Staff. Cassette filter should be inspected and replaced quarterly. Filter Basin Sump and trench should be inspected and cleaned quarterly by contractor.

Figure A-14

Site 12 – Golf Course Equipment Wash



A

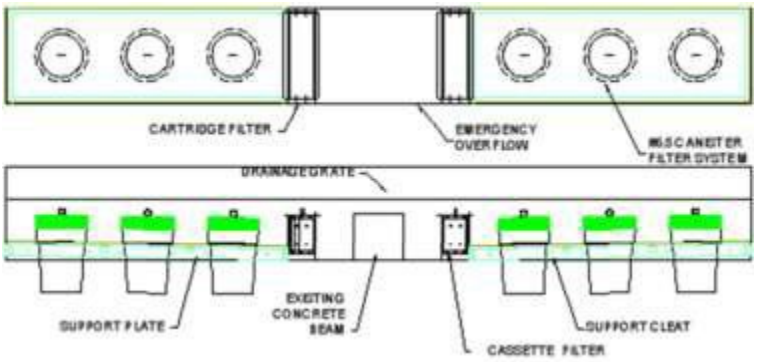
APPENDIX A Cont.

Sites T1-T6: Flight Deck Filtration Trench Systems are custom storm-water filtration systems installed inside the six drainage trenches on the “Flight Line”. These systems contain two filter styles, both 11” x 22” cassettes and #6.5 canisters. Filters contain MBPP media. There are a variable number of filters depending on the length of the trench as follows:

T-1, 6-canisters & 2-cassettes	T-2, 5-canisters & 4-cassettes	T-3, 2-canisters & 2-cassettes
T-4, 8-canisters & 4-cassettes	T-5, 11-canisters & 4-cassettes	T-6, 14-canisters & 4-cassettes

The systems are designed with deck plates sloping toward the center of the trenches. Water entering the drainage not filtered by the canister filters is filtered by the cassette filters. Safety bypass occurs when storm water volumes exceed total filter capacity. Bypass water spills over the tops of the cassette filters. Filters should be replaced with freshly reloaded filters annually. These will require heavy equipment, forklift, or some other device as the grates to access the filters are extremely heavy

Figure A-15



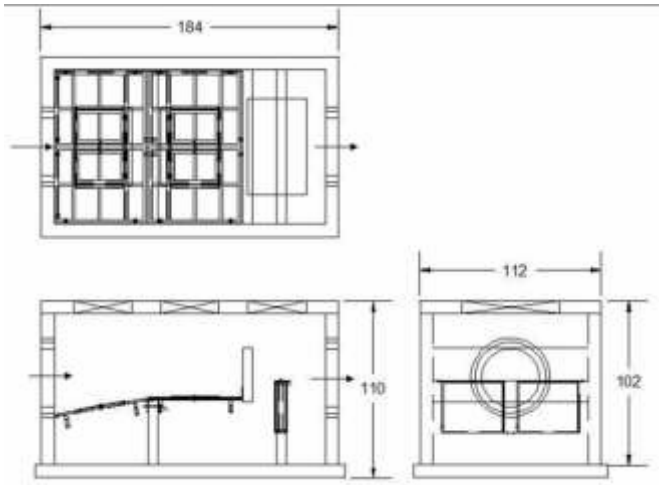
Flight Line Filter Systems

APPENDIX A Cont.

EcoVault Type II Baffle Box: Maintenance is for cleanout only. Filters are no longer used at this location. This structure is connected in line with a 36” RCP. Flow from this structure passes through a smaller control/sampling structure and discharges into the BRL.

Note: Service of this facility requires the use of a Vacuum equipped tanker truck. The connecting pipes must be plugged prior to clean out. Regular inspections including sediment depth measurements, visual trash and debris accumulation should be performed quarterly to insure optimal performance. Cleanout should be performed when sediment depth reaches 13”. There are two large sediment chambers underneath the debris collection screens. Hatches in the screens allow access to the sediment chambers below.

Figure A-16



APPENDIX B

OIL WATER SEPARATORS & GRIT CHAMBERS

Quantities shown below are annual averages of past 5 years' workload history (AQ & Solids - per gallon)

FIG / BLDG#	BLDG NAME	CONTENTS	SERVICE FREQ.	EST. CAPACITY AQ (GAL)	EST. CAPACITY SOLIDS (GAL)	REMARKS
A-1 / 331	Auto Hobby Shop	OWS	Semi-Annual	750	20	In ground
A-2 / 623	Base Fuel Storage	Grit Chamber	Semi-Annual	900	50	Pump out Water & sludge/grit
A-3 / 627	Base Fuel Storage	Grit Chamber	Semi-Annual	900	30	Pump out Water & sludge/grit
A-4 / 667	Base Fuel Storage	Grit Chamber	Semi-Annual	900	20	Pump out Water & sludge/grit
A-5 / 672	Main Aircraft Wash Rack	Grit Chamber	Quarterly	1700	680	Pump out Water & sludge/grit
A-6 / 676	Refueling Truck Maintenance	OWS	Semi-Annual	300	5	Above Ground
A-7 / 912	Roads & Grounds	Grit Chamber	Quarterly	900	40	Pump out Water & sludge/grit
A-8 / 985	Aircraft Wash Rack (DOS)	Grit Chamber	Quarterly	500	7	Pump out Water & sludge/grit
514	Dorm Car Wash Area	Grit Chambers (2ea)	Semi-Annual	0	20	Pump out Water & sludge/grit
656	Government Vehicle Fueling Station	Grit Chamber	Semi-Annual	750	150	Pump out Water & sludge/grit
313	Parking Lot	Eco Sense	Semi - Annual	750	20	In Ground

APPENDIX B

STORMWATER FILTRATION SYSTEMS

FIG	BLDG NAME	CONTENTS	SERVICE FREQ.	EST. CAPACITY AQ (GAL)	EST. CAPACITY SOLIDS (GAL)	REMARKS
A-9	Site 3, Small Boat/Kayak Wash Station	3.5 MZ canister filter (3 ea)	Quarterly	41	15	Remove all sand and grit
A-10	Site 4, Marina 1	3.5 MBPP Canister Filter (3 ea)	Semi Annually	23	20	Remove all sand and grit
A-11	Site 6,7 Grit Chamber Weir Cap Filters	Custom EcoSense #0574 (3 ea)	Semi Annually	N/A	N/A	Remove all sand and grit
A-12	Site 8,9,10 Detention Basin Located Adjacent to Fuel Depot	Custom EcoSense #10000448 (3 ea)	Semi Annually	69	100	Remove all sand and grit
A-13	Site 11, Equipment Wash, Maint., Flight Line	5.0 MBPP Canister Filter (1 ea)	Quarterly	23	100	Remove all sand and grit
A-14	Site 12, Equipment Wash, Maint., Golf Course	Custom EcoSense #10000448 Debris Basket (1ea)	Quarterly	69	100	Remove all sand and grit
A-15	Sites T1-T6	6.5 MBPP Canister Filter (46 ea) Cassette Filter (20 ea)	Annually	28	25-50	Remove all sand and grit
A-16	EcoVault Type II Baffle Box	Cassette Filter (2 ea)	Quarterly - trash / debris; Replace Filters Annually	N/A	200	Remove all sand and grit. Will require pipe plugs and water removal

APPENDIX C

The following is a list of items that must be tested for on all samples.

HEAVY METALS. (TCLP) The following items will be tested: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver
TEST METHOD. The test method for these items shall be Toxicity Characteristics Leeching Protocol (TCLP).

VOLITILE ORGANIC COMPOUNDS (VOC's). The following items will be tested:

Chloroethane	Allyl Chloride	Trichloroethene	Methyl tert-butyl Ether
Chloromethane	1, 2 Dibromoethane	Chlorodibromoethane	Styrene
Bromomethane	Methyl Ethyl Ketone	1, 1, 2, - Trichloroethane	n- Propylbenzene
Dichlorodifluoromethane	Methyl Isobuty Ketone	cis - 1, 3 - Dichloropropene	Bromobenzene
Vinyl Chloride Methylene	Tetrahydrofuran	Bromoform	2 - Chlorotoluene
Chloride	m-Xylene and p-Xylene	1, 1, 2, 2 - Tetrachloroethene	1, 3, 5 - Trimethylbenzene
Trichlorofluoromethane	o-Xylene	Tetrachloroehtene	4 - Chlorotoluene
1, 1-Dichloroethene	Cumene	Chlorobenzene	t - Butylbenzene
1, 1-Dichloroethane	1, 1, 1, 2 - Tetrachloroethane	Benzene Toluene	1, 2, 4 - Trimethylbenzene
trans-1, 2-Dichlorethene	1, 1 - Dichloropropene	Ethyl Benzene	sec - Butylbenzene
Chloroform	Dichlorofluoromethane	1, 2 - Dichlorobenzene	p- Isopropyltoluene
1, 2-Dichloroethene	Trichlorotrifluoroetane	1, 3 - Dichlorobenzene	n - Butylbenzene
1, 1, 1, - Trichloroethane	Ethyl Ether	1, 4 - Dichlorobenzene	1, 2 - Debromo - 3 - Chloropropane
Carbon Tetrachloride	Acetone	cis - 1, 2 - Dichloroethene	1, 2, 4 - Trichlorobenzene
Bromodichloromethane	Dibromomethane	1, 3 - Dichloropropane	Hexachlorobutadiene
1, 2 - Dichloropropane	2, 2 - Dichloropropane	1, 2, 3 - Trichloropropane	Naphthalene
trans - 1, 3 - Dichloropropene	Bromochloromethane		1, 2, 3 - Trichlorobenzene

TEST METHOD. The test method for these items shall be SW 8021. Reactive
Sulfides
Reactive Cyanides
TEST METHOD. The test method for these items shall be Gas Chromatograph Purge & Trap.

APPENDIX D

Executive Order (EO) 12088, Federal Compliance with Pollution Control Standards

Department of Defense (DoD) Directive 5100.50, Protection and Enhancement of Environmental Quality

AFMAN 32-7002, Environmental Compliance and Pollution Prevention

Air Combat Command (ACC) Oil/Water Separator Management Guidance Document, Reference Number 93-019

Clean Air Act (CAA) Clean

Water Act, (CWA)

General Pretreatment Regulations for Existing & New Sources of Pollution, Title 40 of the Code of Federal Regulations (CFR), Parts 261, 262, FAC Chapter 62-730, 265.16, 403, 405 through 471, & 503.

Resource Conservation and Recovery Act (RCRA), part 40 National

Pollutant and Discharge Elimination System (NPDES) The City of Cocoa

Beach POTW - Industrial Pretreatment Program

The Hazardous and Solid Waste Amendments of 1984 (HSWA) to RCRA National

Pretreatment Program (NPP)

FAR 52.212.4, Contract Terms and Conditions-Commercial Items (Oct 2003)

AFMAN 37-139, Records Disposition Schedule. (AFMAN 33-339 will replace AFMAN 37-139 upon publication).

AFI 33-322, AF Records Management Program.

AFMAN 37-123, Management of Records. (AFMAN 33-323 will replace AFMAN 37-123 upon publication).

DoD 5400.7/AF Sup 1, DoD Freedom of Information Act Program. The

Privacy Act of 1974 (the Act)

AFI 33-332, Air Force Privacy Act Program.

APPENDIX D

AFI 37-138, Records Disposition--Procedures and Responsibilities. (AFI 33-338 will replace AFI 37-138 upon publication).

DODSTD5015.2, Department of Defense Design Criteria Standard for Records Management Applications Functional Baseline Requirements.

Title 44, U.S.C. Chapters 29 (Records Management by the Archivist of the US and by the Administrator of General Services).

Title 44, Chapter 31 (Records Management by Federal Agencies) 3101-3107 (Federal Records Act of 1950).

Title 44, Chapter 33 (Disposal of Records 3301-3314).

Title 36 (Code of Federal Regulations), Chapter XII (National Archives and Records Administration, Subchapter B, Records Management).

41 CFR, Chapter 201 (Federal Information Resources Management Regulation (FIRMR)).

Title 8, GAO Policy & Procedures Manual for Guidance of Federal Agencies, Records Management.

Circular A-130, 25 Jun 93, OMB, Federal Information Resource Management (A-130) Revision. Title 18

U.S.C. 2071, Concealment, Removal or Mutilation of Records.

DOD Directive 5015.2, Records Management Program.

Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, SW-846, (latest edition) or Standard Test Methods for Chlorine in Used Petroleum Products, ASTM Method D 5384-95.

45 SW Hazardous Waste Management Plan (2020).