



Work Instruction (WI)

DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

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TITLE: Chief, Information and Logistics Management Division

COMPLIANCE IS MANDATORY

Responsible Office: 270/Information and Logistics Management Division

Title: Vehicle and Equipment Fleet Management Operations

PREFACE

P.1 PURPOSE

The purpose of this document is to outline the management procedures for the operations, maintenance, repair, and fueling for vehicles and equipment, associated with logistics support services provided to the National Aeronautics and Space Administrations' site at the Goddard Space Flight Center. These procedures ensure, to the greatest extent possible, that the Goddard Logistics and Technical Information Contract provides the necessary quality service to the GSFC community (Greenbelt, Wallops, and associated contractors) in a timely and cost-effective manner. This work instruction supplements directives contained in NPD 6000.1.

P.2 APPLICABILITY

This work instruction applies to the Bldg. 27 Vehicle & Equipment Maintenance Facility, and will be managed the Code 274, Logistics and Transportation Management Branch, and performed by garage operations personnel provided by the Code 279 logistics services contractor. Upkeep for Transporter Hardware for space flight projects and ground support systems shall be managed by the Code 274 Logistics and Transportation Management Branch Project Support Engineer.

P.3 REFERENCES

- a. 250-WI-8500.3, Satellite Accumulation Area Inspections
- b. 250-WI-8500.5, Oil Operations Compliance Inspection Plan
- c. DD Form 626, Vehicle Inspection Form
- d. GPR 5340.2, Documentation and Control of Process Nonconformances and Customer Complaints
- e. GPR 8500.3, Waste Management
- f. NASA Fleet Management Handbook 2011
- g. NPD 6000.1, Transportation Management
- h. NPR 1441.1, NASA Records Retention Schedules
- i. NPR 4200.1, NASA Equipment Management Manual

P.4 CANCELLATION

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

270-WI-6700.0.1, Vehicle and Equipment Fleet Management Operations
270-WI-6400.1.8C, Space Flight Transportation Support Equipment Maintenance Plan.

P.5 TOOLS, EQUIPMENT, AND MATERIALS

Hand, electric, and compressed air-operated mechanic's tools, material handling equipment; including vehicle hoists, tire changing equipment, forklifts, electric pallet jacks, and carts. Standard mechanical and electrical tools for heating, venting, and air conditioning (HVAC), diesel generators, and trailers shall be required for the maintenance and repair of these project support systems.

P.6 SAFETY PRECAUTIONS AND WARNINGS

Lifting Safety: Personnel safety is of extra concern during operations where vehicles or equipment is lifted or lowered whether by mechanical or manual means. The following safety precautions will be observed during these operations:

- (a.) Safety shoes must be worn. Hard hats must be worn if working under suspended loads.
- (b.) The area around the lifting/lowering operation must be clear of unnecessary material and personnel, provides good footing/traction and is free of trip hazards.
- (c.) A sufficient number of qualified personnel must be assigned to the lifting/lowering operation including extra personnel to assist with manual operations and a dedicated "spotter" to assist forklift operators handling loads that obstruct the driver's unrestricted vision.
- (d.) Ensure that the load destination is clear of obstacles and provides a stable base to support the load.
- (e.) All forklifts used for critical lifts must have a current weight test certification unless a formal waiver has been issued and is readily available to equipment operators.
- (f.) A daily safety checklist, 270-FORM-0003, must be completed each day before the first use of any forklift or powered hand truck.
- (g.) For critical lifting operations, manual lifting/lowering shall be restricted to a maximum 35 pounds.
- (h.) For critical lifts, project customers will provide a verified Critical Procedure and/or Work Order Authorization specific to the lifting operation being conducted and a pre-task briefing will be conducted. Code 270 personnel involved in the lifting/lowering operation will review procedures and WOAs for compliance with NASA and Goddard requirements.

P.7 TRAINING

- Hazardous Waste Generators Training
- Forklift Operators Certification Training
- Storm Water Pollution Prevention Program Training

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- Environmental Awareness Training
- Integrated Contingency Plan Training
- Compressed Gas Safety Training

P.8 RECORDS

Record Title	Record Custodian	Retention
DD Form 626, Vehicle Inspection Form	Vehicle / Equipment Lead Mechanic	* <u>NRRS 6/11A</u>
GSA Motor Vehicle Standard Description and Vehicle Checklist	Vehicle / Equipment Lead Mechanic	* <u>NRRS 6/11E1</u>
DD Form 250, Material Inspection and Receiving Report	Vehicle / Equipment Lead Mechanic	*NRRS 6/2C
GSFC 23-54, Hazardous Waste Disposal Inventory	Vehicle / Equipment Lead Mechanic	<u>NRRS 8/23.5C</u>
270-FORM-0003 Forklift and Battery Powered Pallet Jack Daily Safety Checklist	Vehicle / Equipment Lead Mechanic	NRRS 6/11/I2
270-FORM-0077, New Vehicle Data	Vehicle / Equipment Lead Mechanic	* <u>NRRS 6/11D1</u>
270-FORM-0112, Internal Purchase Requisition	Vehicle / Equipment Lead Mechanic	* <u>NRRS 5/1F</u>
274-FORM-0001, "A" Preventative Maintenance	Vehicle / Equipment Lead Mechanic	* <u>NRRS 6/11I2</u>
274-FORM-0002, "B" Preventative Maintenance	Vehicle / Equipment Lead Mechanic	* <u>NRRS 6/11I2</u>
274-FORM-0003, Annual Trailer Inspection Report	Vehicle / Equipment Lead Mechanic	* <u>NRRS 6/11I2</u>

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DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Record Title	Record Custodian	Retention
Flight Shipping Containers and Flight Support Transportation Equipment Maintenance Folder	ILMD Project Support Engineer	*NRRS 6/11I2

* NRRS – NASA Records Retention Schedule (NPR 1441.1)

P.9 MEASUREMENT/VERIFICATION

Fleet Vehicle/Equipment Maintenance Management Metrics referenced from the Statement of Work in contract **NNG12AZ11C**:

- 5.3.1.1 Preventive Maintenance
- 5.3.1.2 Emissions
- 5.3.1.3 Winterization
- 5.3.1.4 Snow Removal Activities
- 5.3.1.5 Repairs
 - 5.3.1.5.1 In-House Repairs
 - 5.3.1.5.2 Commercial Repairs
- 5.3.1.6 Stock Room

INSTRUCTIONS

1.0 OVERVIEW AND POLICY

The Goddard Logistics Services support contractor will provide vehicle and equipment maintenance and repair services. The support contractor shall also maintain the PMXpert database and record all transactions involving maintenance and repairs completed and provide reports as required. The support contractor will be responsible to maintain fuel dispensing equipment, fuel accountability records, and adequate fuel supplies.

2.0 INDIVIDUAL RESPONSIBILITIES

This section contains procedures and responsibilities applicable to managing, performing and documenting vehicle and equipment maintenance, repairs, and fuel related activities. These procedures are established with oversight and guidance provided by the Center Transportation Officer (CTO).

2.1 The Transportation Branch Manager Responsibilities

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EXPIRATION DATE:	<u>10-19-2020</u>

The Code 279 Transportation Branch Manager is responsible for the management and overall supervision of transportation activities and personnel enumerated within this work instruction, related to vehicle and equipment maintenance and repair, and fuel related activities in support of GSFC's institutional and project requirements.

2.2 Code 274 Project Support Engineer

The Code 274 Project Support Engineer keeps records on all aspects of the Transporter hardware including the PM Inspection Schedule as well as records of all work, maintenance, repair, and modifications performed. The Project Support Engineer shall be responsible for upkeep of the ECS. Inspection, analysis, and recommendations will be made when performing the PM Inspection. The Code 274 Project Support Engineer shall be responsible for the following list of items:

- a. Develops and maintains the PM Inspection Schedule for every Transporter piece of hardware.
- b. Responsible to perform a comprehensive PM inspection prior to any flight hardware transportation effort or extensive operation.
- c. Responsible for having a comprehensive PM inspection performed by a qualified HVAC technician on the Environmental Control Unit(s) prior to any flight hardware transportation effort or extensive operation.
- d. Responsible for initiating and tracking work or procurements needed to correct deficiencies found during the completion of relevant PM Checklists.
- e. Maintains the Maintenance Folder for Flight Shipping Containers and Flight Support Transportation Equipment for each Transporter piece of hardware, and consists of:
 - (1) Records of all routine PM performed on each piece of hardware.
 - (2) Documentation of all repair, modification, or rework performed on hardware.
 - (3) Information on all prior use of the hardware including the dates and projects which utilized the hardware.

2.3 The Vehicle / Equipment - Lead Mechanic Responsibilities

The Vehicle / Equipment - Lead Mechanic is responsible to ensure the support staff follow the procedures related to vehicle and equipment maintenance, repair, and fuel related activities. The Vehicle / Equipment - Lead Mechanic will be responsible for completing the monthly inspection report of the bulk storage tanks included in the Integrated Contingency Plan, and notating the current conditions of the individual tanks, and making known to the Transportation Branch Manager (Code 279) any immediate action requirement. The Vehicle / Equipment - Lead Mechanic will be responsible for establishing, directing and monitoring the daily activities of the Vehicle Maintenance Section, and to act as the POC for the garage hazardous waste Satellite Accumulation Area. The Vehicle / Equipment - Lead Mechanic will maintain a spreadsheet with the annual

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garage parts budgeted amount, that is annotated with each individual expenditure so that there will always be an up to date total of monies spent, and monies available.

The Transportation Branch Manager will monitor and direct the activities of the Vehicle / Equipment - Lead Mechanic.

2.4 The Mechanics Responsibilities

The mechanics will be responsible for troubleshooting, diagnosing, repairing and emergency road service calls for all vehicles/equipment. Additional responsibilities include the use of all appropriate safety related equipment, maintenance of a current status of all job related training courses, and the proper disposal or recycling of, any items generated as a by-product of job tasks performed.

2.5 The Vehicle Dispatchers Responsibilities

2.5.1 The vehicle dispatcher will be responsible for providing assistance and administrative support to the Vehicle Maintenance section in the areas of reporting vehicle misuse or abuse, fielding concerns or complaints from vehicle users, coordinating license plate and credit card issuance with the Code 274 Motor Vehicle Officer, maintain vehicle and Fuelmaster dispensing keys, ordering and maintaining fuels coordinate Preventative Maintenance appointments for vehicles assigned to the logistics contractors users, and permanently assigned users; receive and sign for parts ordered from vendors; and maintaining the eye-wash station.

2.5.2 The Dispatcher will be responsible for compiling and data input of maintenance records into the PMXpert vehicle maintenance system.

2.5.3 When Motor Pool Use vehicles assigned for daily local or travel use are not available, an email will be sent to the Motor Vehicle Officer (presently robert.g.dipalo@nasa.gov) advising him of the request date/time and the particulars of the individual requestor (i.e. name, code, phone #).

3.0 GENERAL POLICIES AND PROCEDURES

3.1 Hours of Operation

The Bldg. 27 Vehicle and Equipment Maintenance Facility (the Garage) will be operational from Monday through Friday, during the hours of 6:30 a.m. to 4:30 p.m.

3.2 Service Priority

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Service to vehicles/equipment will be prioritized as follows: Code 220 emergency vehicles, ILMD support vehicles, Code 220 non-emergency vehicles and other fleet vehicles/equipment. Maintenance personnel will follow the above priority list and changes must be approved by Contracting Officer's Technical Representative. The only exception to this policy is emergency service to mobile electrical power equipment as provided for below.

Emergency Service - Mobile Electrical Power Equipment Maintenance personnel will provide priority service to designated mobile industrial equipment when power-generating equipment is being used to supply emergency electrical power to any occupied Greenbelt building or trailer.

Provision is also made when power-generating equipment is used to supply standby electrical power to any occupied Greenbelt building or trailer during designated space flight operations.

Bikes Around Goddard pick-up request for repairs will be handled same day, no later than next day.

3.3 Cannibalization

No vehicles or equipment will be cannibalized without the express authority of the Contracting Officer's Technical Representative. All requests for such actions will be routed through the Transportation Branch Manager.

3.4 Vehicle Misuse and Abuse

Anyone who has reason to believe someone, whether government or contractor, has misused or abused equipment or materials must report this fact to the Dispatcher, Vehicle / Equipment - Lead Mechanic , or the Transportation Branch Manager. Dispatchers and the Vehicle / Equipment - Lead Mechanic should notify the Transportation Branch Manager. A report will be submitted on the incident to Head, Logistics and Transportation Management Branch (Code 274) via Transportation Branch Manager (Code 279) if reasonable cause is present.

Mechanics will document incidents and analyze trends of equipment misuse and abuse by any Greenbelt organization or contractor. Findings will be submitted to the Head, Logistics and Transportation Management Branch (Code 274) and/or the Motor Vehicle Utilization Board via the Transportation Branch Manager.

3.5 Subcontract Services

The Vehicle / Equipment - Lead Mechanic will arrange for subcontract work on equipment when repairs or services are beyond in-house capabilities, or would be more cost effective to the government if completed outside. Prior to arranging for subcontract work, the Vehicle / Equipment - Lead Mechanic will perform a cost trade-off study to determine the most economical means of accomplishing the services and to document

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this information. Repair costs greater than or equal to \$500 will be documented on a commercial vendors parts/repair estimate and routed through the designated Code 274 Motor Vehicle Officer for approval.

The Vehicle / Equipment - Lead Mechanic will arrange for the inspection and acceptance of subcontract work. The dispatcher will arrange for the return of vehicles and equipment to the Equipment Maintenance Facility. Upon arrival the vehicle/equipment will be inspected by a mechanic for acceptance. Defective repairs/service will be notated and returned to the subcontractor immediately for correction, and a Maintenance Work Order will be completed and entered in the PMXpert system then filed in the vehicle jacket to provide historical data. Corrections will be completed to the satisfaction of the Vehicle / Equipment - Lead Mechanic prior to payment.

3.6 Warranty Work

All warranty repair and services provided, will be performed by an authorized representative of the manufacturer. Acceptance for warranty work follows the same guidelines prescribed for subcontractor performed work as outlined in section 3.5.

3.7 Maintenance of Tools and Shop Equipment

Maintenance and care of non-specialized tools and garage equipment, such as hydraulic floor and bottle jacks, transmission jacks, truck wheel dollies, gas driven portable battery chargers, etc. are the responsibility of the Vehicle / Equipment - Lead Mechanic and his staff .

The Garage personnel will repair shop air hoses and electrical cords if possible or notify Facilities Division via eMOD request for replacement as required.

Additionally, the Garage personnel will report physical plant deficiencies, such as inoperative shop lighting, heaters, doors, electrical receptacles, etc. to the Vehicle / Equipment - Lead Mechanic who will initiate a eMOD work request for the building FOM . For emergency or urgent repairs the Vehicle / Equipment - Lead Mechanic will call the Trouble Desk (x6-5555) and subsequently inform the Bldg. 27 FOM as soon as possible.

All requests for repair or replacement of existing shop equipment and requests for new equipment will be made through the Vehicle / Equipment - Lead Mechanic. The Vehicle / Equipment - Lead Mechanic will include a cost trade-off comparing repair versus replacement. Requests will be routed through the Vehicle / Equipment - Lead Mechanic prior to presentation to the Contracting Officer's Technical Representative. Requests for replacement will include a cost trade off study outlining the cost difference between repair and purchase, along with a recommendation.

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All lifting devices, e.g. forklifts, and other devices will be marked and certified IAW Goddard Procedural Requirement (GPR 8719.1) Certification and Recertification of Lifting Devices and Equipment and Its Operators. Certification will be scheduled annually or as required. Annual inspections of the Garage vehicle lifts are under the inspection purview of Code 350 Occupational Safety Office and maintained /inspected by Code 224 Elevator Safety Shop.

Code 540 will advise the Transportation Branch Manager of certification requirements. The Transportation Branch Manager will ensure that all lifting devices are certified and marked to comply with the requirements of GPR 8719.1 Certification and Re-certification of Lifting Devices and Equipment.

3.8 Performance Standard

The logistics contractor shall maintain an availability rate of 90% of the vehicles for which they are responsible. Vehicles and Equipment will be repaired using parts that meet or exceed manufacturer's specification, unless such parts are not available, or may be too expensive to warrant use. These exceptions will be cleared by the Contracting Officer's Technical Representative. Labor hours will be within the guidelines set forth in the Time and Labor Guide and repairs will meet industry standards.

4.0 NEW EQUIPMENT ACCEPTANCE

This section outlines the procedures to accept new equipment into the inventory, ensure that it meets the government specifications, arrives undamaged, and is entered into the maintenance program.

4.1 Procedures

Code 274 Vehicle Coordinator will notify the Code 279 Transportation Branch Manager of the location and arrival time of new vehicle/equipment. If the vehicle/equipment is not delivered to the Bldg. 27 Vehicle & Equipment Maintenance Facility, the Branch Head will arrange for acceptance inspection and pickup. Code 274 will provide all procurement order paperwork to the Vehicle / Equipment - Lead Mechanic prior to delivery of the vehicle/equipment. This will ensure that all options, changes, or modifications to vehicle/equipment orders, have been made known to the Vehicle / Equipment - Lead Mechanic prior to order inspection and acceptance. If any deficiencies are found the vehicle will not be accepted and Code 270 will be notified immediately. If the vehicle is accepted the Code 274 Motor Vehicle Officer issues a license plate to the Vehicle / Equipment - Lead Mechanic and a credit card to the Code 279 Dispatcher.

Once the vehicle/equipment arrives the mechanic will open and complete a New Vehicle Data worksheet, (270-FORM-0077) and perform the required modifications including, but not limited to: installation of flare kits, license plates, decals; placing of accident reporting kit and vehicle/equipment manual in glove boxes.

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EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

Page 10 of 40

The Vehicle / Equipment - Lead Mechanic will immediately notify Equipment Management, Code 273, or the responsible property custodian of receipt of any vehicle/equipment regardless of the procurement method (to include credit card purchase), which by-passed Central Receiving (direct deliveries); so the equipment can be properly controlled and tagged in accordance with the Agency policy (NPR 4200.1, NASA Equipment Management Procedural Requirements).

The mechanic will submit one set of keys to the dispatcher for placement on a key tag and attaching an encoded fuel key. The spare set of keys will be submitted to the Vehicle / Equipment - Lead Mechanic for logging in the Spare Key Box.

If during the course of this work any mechanic discovers any additional deficiencies, they will be brought to the attention of the Vehicle / Equipment - Lead Mechanic. These will be noted on the Work Order and the equipment will be returned to the dealer for appropriate repairs.

Once modifications are completed, the worksheet is signed and reviewed by the Vehicle / Equipment - Lead Mechanic. The New Vehicle/Equipment Service Worksheet, all paper work received with vehicle/equipment and the New Vehicle Data for PMXpert (270-FORM-0077), are assembled together for creation of an individual vehicle file and the Vehicle / Equipment - Lead Mechanic will enter the data in the PMXpert system, and initiate the PM schedule, Maryland emissions testing schedule and update the PMXpert Trip Reporting Module.

The Vehicle / Equipment - Lead Mechanic then opens a vehicle/equipment Maintenance File (a green hanging file labeled with the equipment's identification or license plate number) and all records are placed in the central equipment file. This is located in the Vehicle Maintenance Facility (Motor Pool Dispatch Office) in Building 27. In addition to the Equipment Data Card, this file will contain all documents pertaining to that equipment, including, but not limited to:

- a. Material Inspection and Receiving Report (DD-250);
- b. Certificate of Origin;
- c. Manufacturer's Line Sheet;
- d. Carrier Delivery Report;
- e. Owner's Manual;
- f. Warranty Information;
- g. New Vehicle/Equipment Acceptance Inspection Report;

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EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

Page 11 of 40

- h. New Vehicle Data For PMXpert
- i. Repair work orders and Cost Reports for both government and vendor work;
- j. Preventive Maintenance Work Records;
- k. Emissions Test Records, and;
- l. Repair Orders.

5.0 PREVENTIVE MAINTENANCE

To ensure safe, operable equipment, to extend the service life of equipment, and to ensure the greatest return on the government's sale of used equipment, an aggressive Preventive Maintenance program shall be maintained by the logistics contractor.

5.1 Procedures

There are two preventive maintenance (PM) cycles for equipment in the Greenbelt fleet. One covers equipment life during the equipment's warranty period, and the second covers the equipment life following expiration of the warranty.

5.1.1 Warranty Period

The PM cycle during the warranty period is designed to ensure that the warranty is not voided. This is accomplished by scheduling PM and performing the maintenance specified for the equipment in accordance with the information supplied by the manufacturer.

The warranty PM information will be copied from the equipment warranty book and will be stapled to the New Equipment/Vehicle Worksheet so that the Vehicle / Equipment - Lead Mechanic can input the frequency of maintenance into the PMXpert system. The Vehicle / Equipment - Lead Mechanic will generate a PM requirements schedule on the 1st day of each month (PMXpert report Work Order List) and submit it to the mechanics and the Transportation Branch Manager.

The Vehicle / Equipment - Lead Mechanic will notify the mechanics when a vehicle is ready for PM. The mechanic will open a Maintenance Work Order and the appropriate PM work sheet. If warranty repairs are needed the mechanic will notify the Lead Mechanic, who will then make arrangements with the dealership for

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EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

repairs. Upon completion the Vehicle / Equipment - Lead Mechanic will sign and review the Maintenance Work Order and have the Dispatcher enter the data in the PMXpert System. During PM an occasional discrepancy may be found which is not part of the cycle and does not affect the safe operation of that equipment. In these cases corrective maintenance (CM) may be delayed. Any PM Deferment must be approved in writing by the Motor Vehicle Officer.

All warranty work that is conducted by an outside vendor must be inspected prior to the equipment's return to the fleet. These procedures are identical to those required anytime work is conducted by outside parties and the procedures for inspecting the work are the same. They are outlined in section 3.6 of this Work Instruction.

5.1.2 Non-Warranty PM

Following the expiration of the warranty, all equipment, except those items specifically identified by the government will have a preventive maintenance cycle of 5,000 miles and/or 6 months whichever comes first. This PM will be notated by the use of the "A" inspection for 274-FORM-0001. PM inspections conducted on an Annual basis will be noted on a "B" schedule for 274-FORM-0002. For vehicles that travel less than 5,000 miles in six months' time, a safety inspection will be conducted at the end of six months to ensure that the equipment is safe to operate. When the last warranty-specified preventive maintenance has occurred, the Vehicle Maintenance Supervisor/Lead Mechanic will update the maintenance schedule in the PMXpert system. All NASA plated trailers will be inspected on an annual basis utilizing the 274-FORM-0003.

5.1.1 Procedures

The following procedures apply Preventive Maintenance programs for NASA plated vehicles, NASA owned industrial and construction equipment, golf carts, and bicycles under the Bikes Around Goddard Program.

The 1st day of the month the Vehicle / Equipment - Lead Mechanic will generate a Preventive Maintenance (Work Order List) schedule from PMXpert and submit it to the dispatcher, the Transportation Branch Manager, and the Motor Vehicle Officer. Additionally, the Motor Vehicle Officer will receive the prior months' Work Order Service Performance report which outlines the PM's performed. The report will also highlight any uncompleted PM actions by specific vehicle.

The PM Schedule utilizes a ten percent (10%) rule. The ten percent (10%) rule states that equipment may be brought in within \pm 500 miles and \pm 10 working days without violating scheduled requirements. This allows for flexibility based on the workload, emergencies, PM workload, needed repairs in the maintenance facility and for road services. The Dispatcher and Vehicle / Equipment - Lead Mechanic will review the list and make adjustments to the schedule (i.e., scheduling vehicles which are due for a safety check based on six months of service would warrant a 5,000 mile preventive maintenance covering both). Additional changes will continually be made to accommodate emergency and non-programmed requirements.

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EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

All adjustments to the schedule must be approved by the Transportation Branch Manager on the advice and recommendation of the Vehicle / Equipment - Lead Mechanic.

The Vehicle / Equipment - Lead Mechanic will then consolidate a weekly schedule of equipment for preventive maintenance and coordinate with the mechanics to ensure timely access to the required equipment. If the Vehicle / Equipment - Lead Mechanic contacts the user and the user twice fails to make a scheduled preventive maintenance appointment, he will notify the Transportation Branch Manager who will report this information to the Head, Logistics and Transportation Management Branch (Code 274).

When delivered for a preventive maintenance appointment, equipment will be replaced with similar equipment, or comparable equipment, should similar equipment be unavailable. This temporary equipment loan will not be made in a situation where the operational tempo is such that spare equipment cannot be provided.

Keys to the equipment turned in for preventive maintenance will be given to the Vehicle / Equipment - Lead Mechanic who will assign a mechanic.

The mechanic will identify all required parts and requisition them from the Vehicle / Equipment - Lead Mechanic.

The work will be accomplished and the appropriate forms completed. The maintenance work order will accurately reflect the work performed, parts used, and labor hours required to complete the task.

Once the required preventive maintenance has been performed and the corresponding paperwork completed (i.e. 274-FORM-0001, 274-FORM-0002, or 274-FORM-0003), the equipment and forms are sent to the Vehicle / Equipment - Lead Mechanic for reviewing, and inputting by the Dispatcher for report generation by PMXpert.

If a defect is found in the work completed, it is corrected immediately and the appropriate forms are completed.

Once accepted, the maintenance work order data will be entered into the PMXpert system for inclusion in the monthly report (Work Order Service Performance). The vehicle is returned the Dispatcher.

The keys are given to the Dispatcher, and the vehicle will be returned to service. If the vehicle is permanently assigned the Dispatcher will contact the responsible person and arrange for the return of the equipment at the earliest possible time.

5.3 EMISSIONS TESTING PROGRAM (MARYLAND)

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EXPIRATION DATE:	<u>10-19-2020</u>

NASA registered gasoline powered vehicles are subject to a voluntary compliance emissions testing program. The program runs on a continuous two-year cycle using individual coupons purchased through the Maryland Vehicle Emissions Inspection Program. The Vehicle / Equipment - Lead Mechanic will arrange workarounds so each vehicle requiring inspection can be cycled through by using any available drivers (the Dispatcher, the Mechanics, or other personnel provided by Transportation). The record of each inspection will be notated in the individual vehicle file within the PMXpert system.

6.0 REPAIR

No matter how complete and aggressive a maintenance program may be, vehicles and equipment occasionally break down or are damaged. The section will detail how the logistics contractors' procedures are designed to return vehicles or equipment to "as good as new" condition.

6.1 Procedures

The Vehicle / Equipment - Lead Mechanic MS upon receipt of a complaint about a specific vehicle or equipment from the operator, will detail the nature of the problem. Complaints received by other personnel (the Dispatcher or mechanics) shall be forwarded to the Vehicle / Equipment - Lead Mechanic. Vehicles / Equipment by definition also include golf carts and the bicycles included in the Bikes Around Goddard Program. Work Order repair entries for these items will be included in the PMXpert system.

When the vehicle or equipment can be inducted for repair immediately, the keys and the Maintenance Work Order are turned over to the Vehicle / Equipment - Lead Mechanic for work assignment.

When there is a shortage of working shop space, the Vehicle / Equipment - Lead Mechanic will determine whether or not the vehicle/equipment in question is operable and safe. If it is deemed safe and operable it may be returned to service until the shop is ready to induct the equipment.

In cases where the vehicle/equipment is either unsafe or inoperable, the subject item will be staged in the "awaiting repair" section of the motor pool, if its mobile equipment. It is inducted to the shop at the earliest possible time.

If repairs are deemed under warranty, the same procedure is followed as stated in section 5.2.

If a case arises where the Vehicle / Equipment - Lead Mechanic believes costs may exceed \$500, a written Estimate for Repairs shall be provided by the repair vendor. If the anticipated repair is \$3,000 or more, three (3) repair estimates must be provided. The Vehicle / Equipment - Lead Mechanic will make a repair recommendation and forward same to the Head, Logistics and Transportation Management Branch (Code 274) for approval.

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

If at any time during the repair procedures, a defect is discovered that is a safety hazard and was not initially reported, the mechanic will immediately notify the Vehicle / Equipment - Lead Mechanic. The Vehicle / Equipment - Lead Mechanic will determine if the added repair will exceed the \$500.00 limit and, if so, will initiate a cost estimate. If not the over \$500 limit the Vehicle / Equipment - Lead Mechanic will order the parts.

The mechanic will identify all parts required to complete the repair and will requisition them from vendors using Blanket Purchase Agreement's or an Internal Requisition.

If a part is a non-inventory item, or must be fabricated / modified, and it is not possible to complete the work using in-house assets, Code 274 Motor Vehicle Officer will be notified. If in excess of \$500 the same procedures outlined in section 3.5 will be applied.

The mechanic will perform all tasks in a timely manner and will complete the repairs assigned. The mechanic will return any unused parts to the Parts Room or the vendor and will complete the work order form. The mechanic includes the work hours required to complete the repair. Work hours include time spent towing equipment to/from warranty vendors, pick up of parts by contractor employees, and road testing, among others.

Once repairs are completed, paperwork and the keys to the equipment are turned over to the Vehicle / Equipment - Lead Mechanic to be reviewed and signed.

If a defect is found in the work performed, the defect is corrected immediately, and notations are made on the Maintenance Work Order.

Once equipment has passed inspection, the paperwork is turned over to the Dispatcher for data entry into PMXpert, and the keys are returned so the equipment can be returned to service. If the equipment is permanently assigned the Vehicle / Equipment - Lead Mechanic or the Dispatcher will contact the responsible person and arrange for the return of the equipment at the earliest possible time.

7.0 PARTS ROOM OPERATIONS

Parts Room operations revolve around four main functions, which supply required items for equipment maintenance and repair. They are: Requisitioning, Vendor Direct Issue Items, Stock Issue Items, and Distribution and Reconciliation.

7.1 Parts Requisition

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

Page 16 of 40

When a mechanic requires an item to complete a repair or preventive maintenance procedure, he initiates a verbal parts request through the Vehicle / Equipment - Lead Mechanic.

Auto parts are available from two sources, stock room issues and vendor direct issues. High-turnover, low-cost items are stocked in the parts room. They are purchased through GSA and local vendors. Vendor direct issues are items purchased direct from a local vendor on Blanket Purchase Agreements. These parts are items that are stocked and direct issues. The vendors, who are approved by the purchasing department as being a low-cost, local source, are listed in the PMXpert system. The use of the vendors is rotated to ensure fair and unbiased utilization. Cost ceilings are placed on total annual purchasing based upon frequency of use and costliness of specific items.

The Vehicle / Equipment - Lead Mechanic checks the PMXpert inventory to ascertain whether or not the part is in stock. If available, the part is issued and the work order annotated to reflect this issue by listing the item nomenclature, quantity, and cost.

If the part is not stocked, the Dispatcher calls the appropriate vendor and procures the needed item either through an existing Blanket Purchase Agreement or an individual Internal Purchase Requisition.

7.2 Vendor Direct Issue Items

When ordering parts from a vendor, an auto parts store is contacted first before an authorized dealer is called as this increases savings to the government.

The Dispatcher gives the vendor the following information:

- a. Year,
- b. Make,
- c. Model,
- d. Engine size and type,
- e. Part required; and
- f. Any other pertinent data.

The vendor immediately notifies the Dispatcher whether or not the part is in stock and how long until it can be delivered.

The vendor delivers the item, normally within two hours, and the Dispatcher reviews the order information, compares it to the item being delivered, and the corresponding invoice and, if all match, accepts the part. If the item is not correct, it is returned and the correct item redelivered. The Dispatcher enters the invoice into the PMXpert system and Blanket Purchase Accounts (BPA) file.

After the Dispatcher or Mechanics accepts parts, they must be turned over to the Vehicle / Equipment - Lead Mechanic to check and ensure that the correct part(s) were delivered.

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

The part is issued to the mechanic and the invoice is placed in the suspense file until the end of the day when it is coded and entered into the PMXpert system for accountability and processed for accounts payable. Occasionally an item may be required which is not available from stock or from a vendor with whom the logistics contractor has a Blanket Purchase Agreement (BPA). In these cases the Dispatcher will complete an Internal Purchase Requisition (270-FORM-0112) and forward it to purchasing. When the part arrives it is then treated as any other vendor direct purchase.

7.3 Stock Issue Items

If the part is stocked then it is issued when requested by a mechanic.

The data collected during the work and listed on the work order is entered into the PMXpert system. PMXpert adjusts the inventory automatically. A report is generated weekly, which lists items that have dropped below their reorder point.

The Vehicle / Equipment - Lead Mechanic replenishes the stock levels when needed.

7.4 Distribution/Reconciliation

Once the item is issued or stocked, the invoice is logged on a vendor sheet and filed for biweekly processing for accounts payable reconciliation against the vendor's monthly statement. Copies are kept in the parts room for 2 years.

7.5 Parts Room Policy

This section of the Work Instruction will address general policies involving the parts room.

Stocked items are shelved according to the stock location given in the PMXpert system.

Stock levels and reorder points may be adjusted upon the discretion of the Vehicle / Equipment - Lead Mechanic. They are reviewed as required.

Items that are subject to deterioration will be stocked in quantities small enough to ensure turnover prior to expiration of shelf life.

Inventories of Parts Room items will be conducted in the following cycle: one bi-annual random sample inventories, and one yearly inventory. These inventories will be conducted and submitted to the Transportation Branch Manager.

7.6 Special Tools

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

Additionally, the Vehicle / Equipment - Lead Mechanic is responsible for maintenance and inventory of special tools. Special tools will be hung on assigned spaces on the wall or stored in assigned bins on the shelves in a manner that allows for easy visual inventory. A visual inventory will be conducted bi-weekly. An annual inventory is conducted. Special care will be taken to ensure equipment is in good working order. If it is not, or any time equipment is found to be defective, the Vehicle / Equipment - Lead Mechanic will immediately notify the Transportation Branch Manager who will recommend to Code 274 to either replace or repair the item. The Transportation Branch Manager will be notified immediately upon the loss or damage of any special tool.

8.0 ROAD SERVICE CALLS

Equipment sometimes breaks down in locations away from the Vehicle Maintenance Facility, and often in a place not conducive to efficient repair. This section spells out the logistics contractors plan to complete these types of jobs in the safest, quickest manner possible.

8.1 Procedures

Service calls will be accepted by the Dispatcher, on-duty mechanic, or the Vehicle / Equipment - Lead Mechanic.

Each service will be entered in the standard work order format in the PMXpert system, and will include date and time of call, equipment or tag number, user name and phone number, location and mileage of the equipment, and brief description of the problem(s).

The Mechanic/Lead Mechanic will provide the following information: date and time of call, equipment or tag number, organizational code, location and mileage of the equipment, and a brief description of the problem(s).

The Vehicle / Equipment - Lead Mechanic will dispatch a mechanic(s) promptly and adjust shop priorities accordingly.

In order to alleviate multiple trips between the shop and disabled equipment, maximum effort will be taken to determine the type of equipment, supplies, and services required to effectively handle the service call. If the road service is local, mechanics will take a radio, if available, and request additional tools, parts, or personnel as required.

If the equipment can be driven or towed to the Vehicle Maintenance Facility (Bldg. 27), this action will be affected immediately and repairs will then be carried out according to this Work Instruction.

Upon return to the Vehicle Maintenance Facility, the responsible mechanic will complete all required paperwork related to the service call and provide the documentation to the Vehicle Maintenance Supervisor/Lead Mechanic.

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<http://gdms.gsfc.nasa.gov> TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.**

DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

If additional repair or maintenance work, not associated with the service call, is required on the equipment, the mechanic will record the information at the time he completes the paperwork.

If safe and operable, the equipment may be returned to service, and the Vehicle / Equipment - Lead Mechanic will schedule further repairs through the Dispatcher. If either unsafe or inoperable, the equipment will be inducted for repair under the Repair Section 6 of this Work Instruction.

Maintenance personnel are required to assist any U.S. Government-owned automobile within ten miles of the installation. Services will be rendered to the extent that the equipment may return safely to the nearest parent agency motor pool.

9.0 EQUIPMENT WINTERIZATION

In order to ensure that all equipment functions properly during cold weather, the logistics contractor has implemented the following plan.

9.1 Procedures

Between August 1 and November 15 of each year, winterization services will be performed when equipment enters the shop for scheduled maintenance or repairs. Equipment not serviced through scheduled maintenance or repairs will be scheduled for winterization and the service provided not later than November 15 except for snow removal equipment.

Due to the uncertainty of weather conditions during the winter months and our limited amount of snow removal equipment, it is essential that all necessary servicing and/or repairs to this equipment be completed no later than November 1, with the exception of routine scheduled maintenance. The Vehicle / Equipment - Lead Mechanic will schedule extensive repairs to snow removal equipment through the maintenance year, to ensure all equipment is functional by the above date.

The Vehicle / Equipment - Lead Mechanic will procure all necessary supplies such as anti-freeze, tires, etc. in order to complete winterization of equipment within the specified time frames.

The Vehicle / Equipment - Lead Mechanic will establish and maintain a record of equipment winterization. At a minimum, data should include equipment tag number or property number, degree of antifreeze protection, date service completed, sticker/tag for vehicles/equipment cooling system protection level, and mechanics initials.

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<http://gdms.gsfc.nasa.gov> TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.**

DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

9.2 Tire Policy

In the interest of operating efficiency, all-season radial tires or conventional mud and snow tires will be used on the driving axle(s) of all highway vehicles throughout the year. Retread tires where practical are installed on pick-up / delivery vehicles used on-center.

10.0 SNOW REMOVAL

Snow removal will be accomplished within the guidelines specified in Code 220's, Facilities Management Division, Snow Removal Plan. The remainder of this section will address specific items not covered in the Snow Removal Plan and will outline the logistics contractors general course of action.

10.1 Procedures

Following Code 100's decision to declare a snow emergency, one of Code 220's snow removal coordinators (normally the Chief of Code 220, Facilities Management Division) will contact the Head, Logistics and Transportation Management Branch (Code 274), who will make arrangements for Garage operations personnel to make sure the Truck Lift Bay area in the garage is clear and ready to be used for emergency purposes by the facilities contractor. Garage personnel may be requested by Code 220 for snow emergency this will be staffed accordingly to senior most qualified.

11.0 VEHICLE CLEANING AND WASHING

11.1 Vehicle Operations

The logistics contractor will insure that trash is removed from all motor pool vehicles upon return from TDY travel. The logistics contractor will schedule, wash, vacuum, check tires for low pressure and body damage for the above vehicles at least every two weeks.

11.2 Vehicles designed to support a special Center function or event. (i.e., dignitary visits, special tours, etc.)

Upon request from user organization and delivery of the vehicles to the dispatcher, the vehicles will be washed and vacuumed prior to the specified function or event.

11.3 Permanently assigned vehicles

User organization will be aware that the car wash facility is available for their use to clean and vacuum their assigned vehicles.

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<http://gdms.gsfc.nasa.gov> TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.

DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

Page 21 of 40

12.0 TRUCK INSPECTIONS

The movement of spacecraft and/or related hardware requires the inspection of a commercial carrier's equipment, prior to departure from loading point.

12.1 Notification

The Traffic Management Specialist will notify the Vehicle / Equipment - Lead Mechanic that a movement is scheduled and the time the commercial truck should arrive for inspection (within a 24 hour timespan). The Vehicle / Equipment - Lead Mechanic will immediately inform the Traffic Management Specialist of the inspection results.

12.2 Inspection

Inspection findings will be annotated on DD Form 626 , Vehicle Inspection Form and a copy maintained by garage, traffic management, and project personnel.

12.3 Customer Notification

A copy of the completed Truck Inspection Checklist (i.e. DD Form 626) will be given to the commercial driver. All findings that require repair or replacement of discrepant items must be completed prior to any movement of NASA-owned assets. If the carrier is unable to complete the required repair or maintenance, replacement of the carrier provided transport is required. A copy of the Truck Inspection Checklist will be provided to the project moving the hardware.

13.0 FLEET ROTATION

In an effort to ensure full utilization of each piece of equipment the Transportation Branch Manager will, to the extent practical, institute a policy of fleet rotation. The intent of this is to ensure that vehicles assigned to high mileage duties are swapped with those assigned shorter mileage duties so that vehicles manufactured in the same year receive approximately the same use.

On a quarterly basis the Transportation Branch Manager will, in conjunction with the Vehicle / Equipment - Lead Mechanic and the Dispatcher, review the monthly mileage logs. They will compare mileage of like vehicles from the same procurement year and will note vehicles whose usage is +/- 7,500 miles outside the average. If practical, the Transportation Branch Manager will prepare a memo for Code 274 approval. Following the user's notification by Code 274 Dispatcher will coordinate the vehicle's rotation.

14.0 EQUIPMENT DE-IDENTIFICATION

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

When equipment has reached the end of its service life, the government excesses it and turns it over to GSA for public auction.

14.1 Procedures

Code 273 will notify the Transportation Branch Manager of equipment disposal actions, referred to as excess.

If the equipment is not already located at the Vehicle Maintenance Facility, Code 273 will contact the assigned organization to request the equipment be turned in. The Dispatcher will advise the Vehicle / Equipment - Lead Mechanic upon its arrival.

The Vehicle / Equipment - Lead Mechanic will initiate a GSA Motor Vehicle Standard Description and Vehicle Checklist and assign mechanic(s) who will de-identify the equipment by cleaning the equipment thoroughly and removing items as prescribed. He will complete all paperwork and return it to the Vehicle / Equipment - Lead Mechanic for review. The equipment is staged in the lot behind the Equipment Maintenance Facility.

After final inspection, the Vehicle / Equipment - Lead Mechanic turn the old license plates to the Code 274 Motor Vehicle Officer, and Equipment Control Number (ECN) tag to the Code 274 Property Custodian. The Dispatcher will surrender the credit card to the Code 274 Motor Vehicle Officer and the Fuelmaster key to the Vehicle / Equipment - Lead Mechanic for disposition. The Fuelmaster key will be reprogrammed for future use, and the credit card will be destroyed. The De-identification paperwork will be submitted to the Vehicle / Equipment - Lead Mechanic for data entry in the PMXpert system.

The Code 274 Motor Vehicle Officer will ensure that the license plates are returned to the Agency Transportation Officer and the credit cards are shredded and the issuer notified for card cancellation. The Code 274 Motor Vehicle Officer will maintain a log of all returned license plates and cancelled credit cards. This record will include the VIN number, license plate number, credit card number, property number, and date destroyed.

15.0 FUEL ACCOUNTABILITY

The logistics contractors' personnel will receive fuel from a distributor on behalf of the government. They will track its use and report any losses to the government.

15.1 Procedures

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

Page 23 of 40

The inventory of Fuel is monitored by the vehicle dispatcher. The vehicle dispatcher prints a Fuel Status receipt daily from the fuel tank monitor located in Building 27 Dispatch Office.

When the fuel level drops below a specified point (currently 700 gals) the Dispatcher will contact the Defense Logistics Agency and order a load of fuel. The Dispatcher will obtain the anticipated delivery date from the DLA representative.

Not less than one-hour prior to anticipated delivery, fuel pumps will be shut down to allow the fuel in the tank to settle. Upon the arrival of the tanker, the vehicle dispatcher will print a Fuel Status receipt. After the tanker has dumped its load, the tank will be sealed for a minimum of one hour to allow the fuel to settle; the vehicle dispatcher will print a second Fuel Status receipt for verification of delivery amount. The vehicle dispatcher will then submit the delivery receipt to the Vehicle / Equipment - Lead Mechanic.

The Vehicle / Equipment - Lead Mechanic will contact the Defense Logistics Agency via their website for the current fuel price for the delivery date; add the appropriate taxes to calculate the final cost per gallon. This information is entered in the PMXpert Trip Reporting Module and the Fuel Purchasing file. The original fuel delivery receipts will be forwarded to the account payable section.

The vehicle dispatcher will check the Fuel tank monitor for "alarms or messages" for leaks or water in the tank. If any alarms or messages appear, the vehicle dispatcher will print the message. If an emergency situation exist, notify the designated Building 27/Code 274 Motor Vehicle Officer, and follow the emergency notification procedure outlined in Attachment D. If message is of a non-emergency status, file the message with the Fuel Status Receipts.

The Vehicle / Equipment - Lead Mechanic will import Fuelmaster transactions into the PMXpert system on a daily basis. Transactions are edited, verified, and filed for reconciliation at the end of the month.

15.2 Storage Tank Refueling, Maintenance and Spill Containment

The procedures for fuel, oil and waste oil tank operations and spill containment are contained in Appendices C, D, E, F; Figure F-1 and Tables G-1 & G-2. The Vehicle / Equipment - Lead Mechanic is responsible for insuring that all precautions, preparations, approved procedures and reports are followed.

The following extract from GSFC's Integrated Contingency Plan is to be followed in accordance with the prescribed procedures for bulk oil transfer and fuel level monitoring as outlined in GPR 8500.5 section 2.4 Oil Operations, including:

- ✓ The fuel delivery driver will chock the wheels before beginning to fill the tank.
- ✓ The total amount of fuel on truck prior to filling will be recorded.

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DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Page 24 of 40

- ✓ Fuel level measurements of tank will be taken prior to filling the tank (clock gauge reading and *Pneumercator* reading).
- ✓ Fuel level measurements will be recorded prior to filling the tank.
- ✓ The tank will be checked for water prior to filling the tank.
- ✓ The driver will check the hose connections to the tank and truck prior to filling the tank.
- ✓ The driver will remain near the shut-off valve while the transfer of fuel takes place.
- ✓ The tank clock gauge and *Pneumercator* reading will be checked/recorded after filling the tank.
- ✓ The volume of fuel transferred into tank will be recorded.

Note: (1) If a fuel truck arrives at a time when a trained and designated monitor is not present, refueling will not be permitted.
(2) If any garage facility, fleet management, Building 27 FOM, or Code 250 environmental personnel observe improper fuel monitoring procedures (as described in the ICP) taking place, they are authorized to halt the fueling process.

16.0 STORM WATER POLLUTION PREVENTION AND SPILL RESPONSE

As described in section 2.3.2 of the GSFC Storm Water Pollution Prevention Plan, there are potentially polluting materials stored outside and exposed to rainfall and runoff, the Fuelmaster fueling station poses a moderate to high risk of pollution of waters to the state and that large vehicles parked outside requiring maintenance may leak grease and oil onto the pavement.

In order to minimize the risk of runoff of oil or gasoline into State waters, the GSFC Standard Operating Procedures included in Attachment A, B, and C will be observed during gasoline and oil tank filling operations (Attachment A), maintenance (Attachment B) and spill response (Attachment E).

A GSFC Emergency Spill Kit as described in the Supplies Attachment D will be stored in Building 27 for oil spill countermeasures and all Garage maintenance personnel will be trained in the spill response measures specified in the Procedures of Attachment D.

17.0 HAZARDOUS WASTE SATELLITE ACCUMULATION AREA OPERATIONS

Normal vehicle maintenance operations generate small amounts of hazardous waste that must be disposed through recycling or by following the requirements of Section 2.4 of GPR 8500.3. Typical hazardous wastes generated by the garage consist of:

Disposal

Waste Fuel Filters
Empty Brake Cleaner Cans

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Recycling

Spent Solvents
Spent Wet Cell Batteries
Spent Solvent Wipes
Antifreeze
Waste Oil Filters
Waste Oil

DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Empty Solvent & Paint Cans

Up to 45 gallons of hazardous materials that cannot be recycled may be stored in a designated Satellite Accumulation Area (SAA) for no more than 90 days pending pick-up the Goddard hazardous waste disposal contractor.

The Code 274 Vehicle Coordinator is the Point of Contact (POC) for the garage SAA. The Code 279 Vehicle / Equipment - Lead Mechanic is the secondary POC. The POC is responsible for managing SAA operations and conducting/documenting required inspections in accordance with GPR 8500.3 Waste Management. Specific duties include:

Responsibility	GPG 8500.3 Reference
Read and maintain a ready copy of GPR 8500.3. Ensure that the SAA itself meets requirements in GPR 8500.3. Ensure careful housekeeping. Maintain an MSDS file for hazardous wastes	<u>2.4.3, 2.4.3.10</u>
Ensuring 45 gal limit is not exceeded	<u>2.4.3.1</u>
Ensuring proper containers are used for hazardous waste and that a secondary containment is provided for liquid hazardous waste	<u>2.4.3.2, 2.4.3.5</u>
Ensuring hazardous waste containers are properly labeled	<u>2.4.3.3</u>
Ensuring hazardous waste storage requirements are met and that supplies and emergency equipment are available on site	<u>2.4.3.4, 2.4.3.9, 2.4.3.11</u>
Posting appropriate signage	<u>2.4.3.6</u>
Ensuring the safe transfer and handling of hazardous waste	<u>2.4.5</u>
Following correct hazardous waste disposal procedures and preparing a hazardous waste disposal inventory using GSFC Form 23-54 prior to pickup	<u>2.4.6.1</u>

18.0 NON-CONFORMANCE MANAGEMENT

18.1 Non-conformances

The overall Corrective Action/Preventive Action (CAPA) Lead for the activities in this work instruction is the Code 274 Logistics and Transportation Management Branch Head. The CAPA Lead serves as the principal point of contact within ILMD responsible for the management and proper functioning of the nonconformance process in that functional area provides technical oversight and identifies nonconformance trends that may require changes to existing policies or procedures, and reports significant issues to higher management. The CAPA Lead is also responsible for reviewing and processing Problem Reports (PR's) and Nonconformance Reports (NCR's) received from any source as well as directing and documenting corrective actions taken in response to PR's and NCR's. The primary documentation for

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DIRECTIVE NO.	<u>270-WI-6700.0.1A</u>
EFFECTIVE DATE:	<u>10-19-2015</u>
EXPIRATION DATE:	<u>10-19-2020</u>

these activities shall be created in the automated Problem Reporting/Problem Failure Reporting (PR/PFR) system or the META System, which are accessed via the GSFC MS website.

18.2 Minor Non-conformances

As determined by the appropriate Code 270/279 Functional Branch Head, some non-conformances will be managed outside of the PR/PFR and META systems. There is no single method for documenting and dispositioning these minor non-conformances. All minor non-conformances shall be recorded in an approved record, and, the cognizant supervisor shall review the documentation and determine the most appropriate disposition. In those instances when a close out action is necessary, it will also be annotated in an approved record.

18.3 Non-conformances Initiation and Disposition

After the CAPA Lead reviews a PR or NCR, the CAPA Lead shall request and/or develop disposition recommendations. For most non-conformances, this will be an internal process. In the case of services provided directly under the direction of operational Projects, the appropriate Project personnel shall be consulted. In some cases, the Project may assume control of the PR or NCR process. In those cases, the CAPA Lead will update the PR or NCR to show this transition. In all other cases, the CAPA Lead shall lead the PR or NCR disposition process.

Once the review is complete, the CAPA Lead shall input the disposition into the PR/PFR or META system. In cases where policy may be affected, the ILMD management shall be consulted prior to completing the disposition process. If no corrective actions are required, the CAPA Lead shall close out the PR or NCR.

18.4 Corrective Actions

If resolution of the PR or NCR involves initiation of corrective action, the CAPA Lead shall continue to update the PR or NCR with root causes, actions taken and remedial actions if and when they are part of the corrective action process. Upon completion of all corrective actions, the CAPA Lead shall close out the PR or NCR. In some cases corrective actions will point to other non-conformance issues that need to be resolved. If this happens, the CAPA Lead shall create a follow-on PR or NCR, and the process will begin again.

DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Page 27 of 40

APPENDIX A DEFINITIONS

- (a) Center Transportation Officer – Individual appointed by the Center Director to provide functional management and leadership in the administration and operation of all transportation and traffic management functions for which the Center has responsibility (see NPR 6200.1).
- (b) Integrated Contingency Plan (ICP) – A document that consolidates multiple emergency plans, each required by a different set of regulations, into one functional emergency response plan. ICPs are typically site or facility-specific.
- (c) Material Safety Data Sheet (MSDS) – A document designed to provide workers and emergency personnel with the proper procedures for storing and handling various chemicals. The MSDS provides information in nine areas: identification, hazardous ingredients and components, physical and chemical characteristics, fire and explosion hazards, reactivity data, health hazard data, spill or leak procedures, special protection, and special precautions. Also referred to as the Safety Data Sheet (SDS).
- (d) Satellite Accumulation Area (SAA) – An area designated as a staging area for hazardous waste until proper disposal is arranged.

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DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Page 28 of 40

APPENDIX B ACRONYMS

AST – Aboveground Storage Tank
CTO – Center Transportation Officer
eMOD - Electronic Management Operations Directorate (eMOD) System
FOM – Facility Operations Manager
GSFC – Goddard Space Flight Center
ICP – Integrated Contingency Plan
MDE – Maryland Department of the Environment
MEMD – Medical and Environmental Management Division
MSDS – Material Safety Data Sheet
OEM - Original Equipment Manufacturer
OSHA - Occupational Safety and Health Act
POC – Point of Contact
PPE – Personal Protective Equipment
SAA – Satellite Accumulation Area

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ATTACHMENT A

PROCEDURE FOR REFUELING OIL STORAGE TANKS

NOTE: THIS WORK INSTRUCTION HAS BEEN EDITED TO APPLY TO CODE 270 OPERATIONS ONLY

PURPOSE

This procedure addresses refueling aboveground storage tanks (ASTs) in order to comply with GSFC's Oil Operations Permit No. 2004-OPT-3356A and Federal and State regulations.

APPLICABILITY

This procedure focuses on the Main Campus Tank Farm, the East Campus Tank Farm, other aboveground storage tanks. (**Note: For Code 270, the procedures apply to 027-FST-003 (E-85); 027-FST-004 (Biodiesel); 027-FST-001 & 002 (Unleaded); 027-LOT-001(Motor Oil).**)

TOOLS/SUPPLIES

- Sorbents (Vermiculite, Fybersorb, clay, sorbent snakes, pads, booms, mats, Drip pans, etc.).

FORMS

- Shipping papers (provided by driver; Code 279 retains a copy for records)
- AST refueling logbook (located with user/owner)

PREPARATION

Before refueling aboveground storage tanks, the following steps must be taken by the GSFC user/owner:

- a. Manually gauge storage tank to verify space for the amount of product to be delivered.
- b. Record gauge reading in refueling logbook.
- c. Ensure that spill response materials, such as sorbents and absorbent pads, are available.
- d. Ask the driver where the shut-off valves and the emergency operating mechanism for the discharge control valves are located on the oil vehicle.
- e. If applicable, verify that the emergency containment valve in the storage tanks area is closed.
- f. If applicable, verify that the oil storage tanks audible alarm system is functional.

PROCEDURES TO REFUEL ABOVEGROUND STORAGE TANKS

Record in the appropriate *Refueling logbook*:

- Date
- Ticket #
- Counter number (beginning and end)
- Gallons listed on ticket
- Tank #
- Name of the GSFC operator supervising the refueling process

ATTACHMENT B

PROCEDURE FOR MAINTENANCE/INSPECTION OF OIL STORAGE SYSTEMS

NOTE: THIS PROCEDURE HAS BEEN EDITED TO APPLY TO CODE 270 OPERATIONS ONLY

PURPOSE

This procedure encompasses maintenance of the oil storage systems in order to comply with GSFC's Oil Operations Permit No. 2004-OPT-3356A and Federal and State regulations.

APPLICABILITY

This procedure applies to all oil storage systems at Bldg. 27. The user is responsible for routine inspections and maintenance. The Medical and Environmental Management Division may also inspect oil storage systems as a function of various periodic audits and assessments; this procedure does not apply to these inspections.

(Note: For Code 270, the procedures apply to the following tanks: 027-FST-003 (E-85); 027-FST-004 (Biodiesel); 027-FST-001 & 002 (Unleaded); 027-LOT-001 (Motor Oil); and 027-WST-001 (Waste Oil).

FORMS

- Maintenance/Inspection Logbook
- Maintenance/Inspection Checklist

PREPARATION

None

PROCEDURE

1. The user shall visually inspect aboveground storage tanks at least once a month:
 - Tank and support structure condition
 - Valve condition
 - Piping condition
 - Berm condition
 - Vent and fill condition
2. Log each inspection in the Maintenance/Inspection Logbook.
3. For any maintenance problems cited during a monthly inspection, note in the Maintenance/Inspection Logbook:
 - Name of the operator performing the inspection
 - Date of inspection

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DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Page 31 of 40

- Type of maintenance problem
 - ✓ Corrective action taken to solve the maintenance problem
 - ✓ Date of completed discrepancies and corrective actions.

In addition, notify the environmental staff of any maintenance problem and find its subsequent solution.

4. If any spills or sheens are observed, follow the procedures described in Attachment 3, Oil and Hazardous Waste Release Notification. Note in the Maintenance/Inspection Log:

- Occurrence of the leak
- Corrective action taken to stop the leak, and
- Date the corrective action was taken

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ATTACHMENT C

PROCEDURE FOR OIL AND HAZARDOUS WASTE RELEASE NOTIFICATION

NOTE: THIS PROCEDURE HAS BEEN EDITED TO APPLY TO CODE 270 OPERATIONS ONLY

PURPOSE

The purpose of this procedure is to define the notifications to be made in the event of an oil release, hazardous waste release (including a release to the air), or a fire/explosion at the hazardous waste accumulation area. The notifications depend on the magnitude of the incident and the time during which it occurs. In general, the **Emergency Console (x 911 or via cell or outside line @ 301 286-9111)** is to be notified when an incident is out of control, as defined below, or beyond the resources or training of the user. For the purpose of this SOP, an oil or hazardous waste spill is considered to be controlled if it is very unlikely to migrate and has not entered waters of the State (i.e., a sanitary sewer, storm drain, pond, stream, or the soil) and does not present an imminent threat to people or facilities.

APPLICABILITY

This procedure applies to an oil/hazardous waste release on/from GSFC property **or** a fire/explosion at the GSFC hazardous waste accumulation area (Building 27A).

FORMS

- MDE Oil Spill Telephone Notification Report
- MDE Oil Spill Incident Report
- WSSC Oil Spill Incident Report

PROCEDURE

1. Witness (User)

See Figure 4-1 (page 39), Witness Emergency Notification, for a graphical decision tree.

A. Oil Spill

1. If the oil spill is NOT controlled (or any spill not during working hours), contact the Emergency Console (x911 or cell @ 301 286-9111) immediately and provide the following information:
 - Name and code of reporting party;

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DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Page 33 of 40

- Type/name of material spilled;
- Location of spill;
- Cause of spill;
- Estimated quantity and flow rate of spill; and
- Time of spill.

2. If the oil spill is controlled (and during working hours), notify the Environmental Staff as soon as possible and provide the above information.

B. Hazardous Waste Spill

1. If the spill is NOT controlled (or any spill not during working hours), then contact the Emergency Console (x911 or outside GSFC or via cell @ 301 286-9111) immediately.

2. If the spill is controlled and DOES NOT pose a hazard to personnel, facility, or the environment; then notify the Environmental Staff as soon as possible.

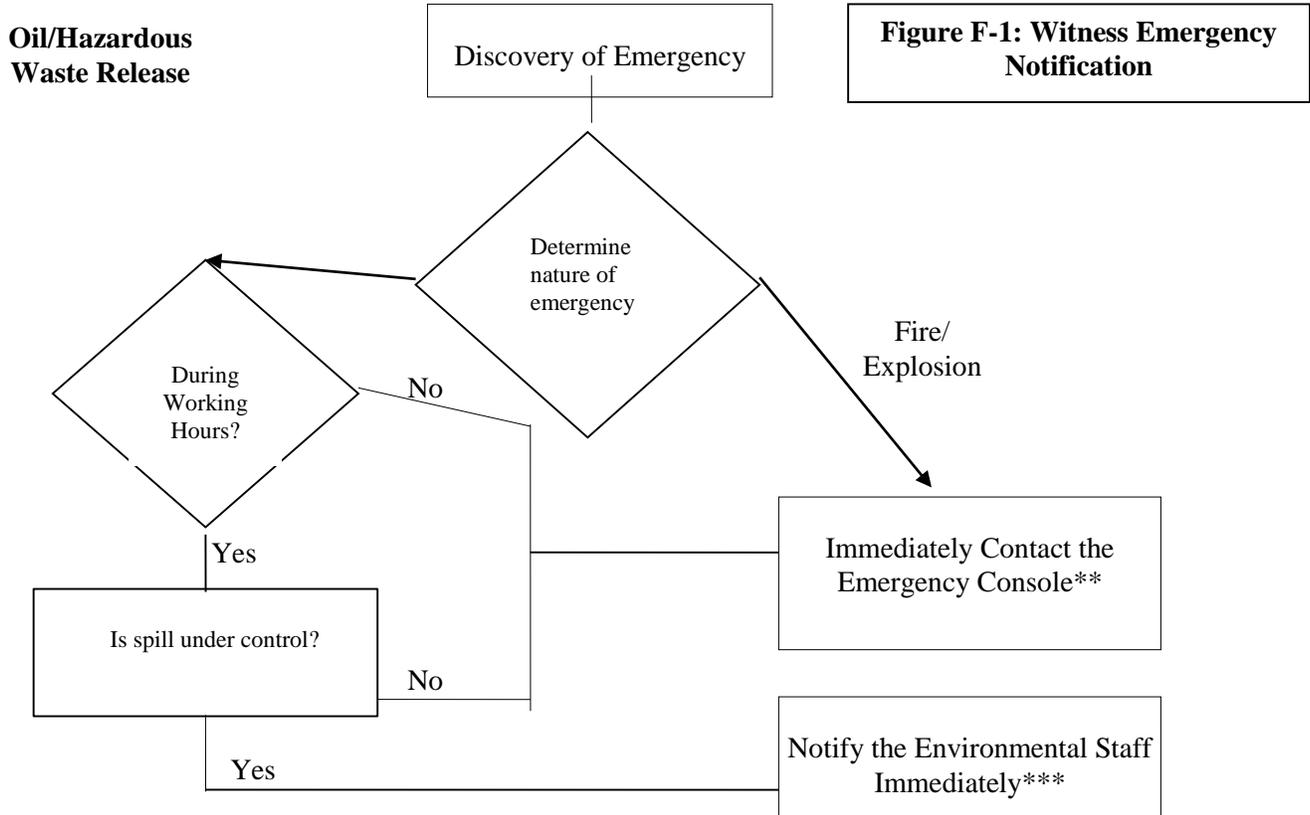
C. Fire/Explosion

1. For any fire/explosion incident, whether under control or not, immediately contact the Emergency Console (x911 or outside GSFC or via cell @ 301 286-9111).

2. If trained in the use of portable fire extinguishers, an attempt to suppress the fire may be made if the fire is small enough.

3. If, after one extinguisher is emptied, an attempt to control a fire is unsuccessful, abandon the attempt and proceed to a safe location.

Flow Diagram



For any spill notification, the reporting party shall provide the following information:

- Name and code of reporting party;
- Type/name of material spilled;
- Location of spill;
- Cause of spill;
- Estimated quantity and flow rate of spill; and
- Time of spill.

* An oil or hazardous waste spill is considered to be controlled if it is very unlikely to migrate and has not entered waters of the State (e.g., a sanitary sewer, storm drain, pond, stream, or the soil) and does not present an imminent threat to people or facilities.

** For the Emergency Console, dial:
 911 (from GSFC phones)
 (301) 286-9111 (from off-Center or cell phones)

*** For the Environmental Staff:
 Oil: Telephone: 286-0466, Radio Page: Environmental-2
 Hazardous Waste: Telephone 286-4613, Radio Page: Environmental-5

DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

POINTS OF CONTACT

1. On-Site Phone Numbers

- A. Emergency Console 911 (from GSFC phones) outside GSFC or cell (301) 286-9111
- B. Code 240 Security Officer in Charge 286-8661 24/7 response number (non-emergency).
- C. Code 350 Safety Staff

Member	Center Phone	After Hours Phone	Radio Page
Luis Muniz	286-4215	286-6296	Safety-6

D. Code 250 Environmental Staff

Member	Center Phone	After Hours Phone	Radio Page
Lixa Rodriguez (Hazardous Waste.)	286-4613	911	Environmental-2
Joe Hunter (Oil Spill)	286-0466	911	Environmental-5

ATTACHMENT D

PROCEDURE FOR CONTAINMENT OF OIL TANK RELEASES

NOTE: THIS PROCEDURE HAS BEEN EDITED TO APPLY TO CODE 270 OPERATIONS ONLY

PURPOSE

This procedure applies to the containment of oil tank releases on GSFC in order to comply with GSFC's Oil Operations Permit No. 2004-OPT-3356A and Federal and State regulations. This procedure establishes tank-specific spill containment procedures to be executed by qualified personnel.

APPLICABILITY

An oil release is considered to be contained if its migration is halted, by physical barrier, whether it is contained at the point of release (i.e., localized) or the perimeter of GSFC property. This procedure addresses uncontained oil releases. (Note: For Code 270, the procedures apply to 027-FST-003 (E-85); 027-FST-004 (Biodiesel); 027-FST-001 & 002 (Unleaded); 027-LOT-001(Lube Oil); and 027-WST-001(Waste Oil).

SUPPLIES

- GSFC Emergency Spill Kit:
 - (4) 1 lb. of sorbent pulp
 - (2) 3" x 48" sorbent snakes
 - (40) 18" x 18" double weight sorbent mats
 - (More sorbent material, if necessary)

FORMS

See Attachment 3 (page 29), Oil Release Notification, for the forms required for notification.

PREPARATION

1. The GSFC Emergency Spill Kit must be present in an easily accessible area at all times.
2. All operators shall be aware of the location of the GSFC Emergency Spill Kit.
3. Collecting agents, dispersants, and sinking agents shall not be used unless previously authorized by the Medical and Environmental Management Division.

PROCEDURE

1. The general strategy for containing an oil release that is localized and has not spread into the storm water system, surface water, or other State waterway is as follows:
 - a. Place sorbent booms around the perimeter of the spillage so that it is completely encircled with no gaps between the booms. Ensure that the volume contained by the sorbent booms is adequate to contain the entire potential release (should the release still be occurring at the time of containment) and the addition of other sorbents (e.g., vermiculite, sorbent pillows). Stop the release, if possible.
 - b. Protect target storms drains and other surface water outside of the contained area with the appropriate spill equipment (e.g., mats, sorbent booms).
 - c. If the spill has occurred at or near an aboveground oil storage tank, also implement the tank-specific procedures in **Table G-1**.

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Table G-1: Tank-Specific Spill Containment Procedures

Tank #	Containment Procedure
027-LOT-001 Lube Oil	This tank is in a small room with some secondary containment; the room has a sump pump activated with a float switch. In the event of a spill, ensure that the sump pump is deactivated and place a sorbent boom outside to room entrance. If the pump has released the oil, place a sorbent boom at the outfall.
027-FST-001 Unleaded	Spills shall be contained by placing sorbent booms/pillows in the drainage ditch at the bottom of the slope.
027-FST-002 Unleaded	Spills shall be contained by placing sorbent booms/pillows in the drainage ditch at the bottom of the slope.
027-FST-003 E-85	Spills shall be contained by placing sorbent booms/pillows in the drainage ditch at the bottom of the slope.
027-FST-004 Biodiesel	Spills shall be contained by placing sorbent booms/pillows in the drainage ditch at the bottom of the slope.
027-WST-001 Waste Oil	Spills shall be contained by placing a long sorbent boom at the leading edge of the spill which will sheet flow to the east.

2. Upon arrival to the scene, if the release has spread into the storm water system, surface water, or other State waterway; proceed as follows (in addition to the above tank-specific spill containment procedures).
 - a. GSFC can be divided into 16 drainage watersheds. Determine the watershed outfall using the Storm Water Schematic and Map 5: Approximate Boundaries of Drainage Subareas and Points of Discharge Off NASA Property, found in Appendix A (*of the NASA GSFC Integrated Contingency Plan - from which this procedure was extracted*)
 - b. Proceed to the most reasonable destination that is downstream of the release front (refer to the Location-Based Response, above).
 - c. Place sorbent booms, as noted below, to protect the potential destination (e.g., collection pond, outfall to areas beyond GSFC).
 - d. Follow the water flow upstream and place sorbent booms at accessible areas (e.g., open channels, manholes) until the release front is met.

In the case that additional spill equipment is required, the Information and Logistics Management Division, through the Emergency Management Plan, is capable of emergency procurements for additional services, equipment, and supplies. **Table G-2** list vendors and stock numbers for typical spill equipment.

DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

Table G-2: Spill Equipment Vendors and Stock Numbers

	Stock Numbers	
	Lab Safety Supply, Inc. http://www.labsafety.com 800 356-0783	New Pig Corporation http://www.newpig.com 800 468-4747
Oil Spill Equipment		
Loose Absorbent	YW-2950	PLP201
Absorbent Pads	YW-11473	PIL203
Oil Absorbent Booms	YW-11472	BOM304
Hazardous Waste Spill Equipment		
Loose Absorbent		PLP201
Absorbent Pads		MAT309
Acid Neutralizer	YW-14631	
Caustic Neutralizer	YW-14632	
Formaldehyde Polymerizer	YW-14634	
Solvent Adsorbent	YW-14633	
Mercury Spill Kit	YW-23946	
Absorbent Booms		HA2010
Generic Spill Equipment		
Non-Absorbent Dikes	YW-26042	PLR204
Drain Blockers	YW-21069	PRL203
Drum Repair Putty		PTY201

DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	12/18/2014	Initial Release
A	10/19/2015	<p>Note: This Work Instruction rewrite combines 270-WI-6400.1.8C, Space Flight Transportation Support Equipment Maintenance Plan (now cancelled) with 270-WI-6700.0.1A, Vehicle and Equipment Fleet Management Operations.</p> <p>P.2 APPLICABILITY; add: Upkeep for Transporter Hardware for space flight projects and ground support systems shall be managed by the Code 274 Branch, Project Support Engineer.</p> <p>P.4 CANCELLATION; add: 270-WI-6700.0.1, Vehicle and Equipment Fleet Management Operations.</p> <p>add: 270-WI-6400.1.8C, Space Flight Transportation Support Equipment Maintenance Plan</p> <p>P.5 TOOLS, EQUIPMENT, AND MATERIALS</p> <p>add: Standard mechanical and electrical tools for heating, venting, and air conditioning (HVAC), diesel generators, and trailers shall be required for the maintenance and repair of these project support systems.</p> <p>P.8 RECORDS; add: DD Form 250, Material Inspection and Receiving Report.</p> <p>add: Annual, delete Quarterly to title of form 274-FORM-0003 Annual Trailer Inspection Report.</p> <p>add: Flight Shipping Containers and Flight Support Transportation Equipment Maintenance Folder.</p> <p>add:</p> <p>2.2 Code 274 Project Support Engineer Responsibilities</p> <p>The Code 274 Project Support Engineer keeps records on all aspects of the Transporter hardware including the PM Inspection Schedule as well as records of all work, maintenance, repair, and modifications performed. The Project Support Engineer shall be responsible for upkeep of the ECS. Inspection, analysis, and recommendations will be made when performing the PM Inspection. The Code 274 Project Support Engineer shall be responsible for the following list of items:</p> <ul style="list-style-type: none"> a. Develops and maintains the PM Inspection Schedule for every Transporter piece of hardware. d. Responsible for initiating and tracking work or procurements needed to correct deficiencies found during the completion of relevant PM Checklists. e. Maintains the Maintenance Folder for Flight Shipping Containers and Flight Support Transportation Equipment for each Transporter piece of hardware, and consists of:

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DIRECTIVE NO. 270-WI-6700.0.1A
EFFECTIVE DATE: 10-19-2015
EXPIRATION DATE: 10-19-2020

		<p>(1) Records of all routine PM performed on each piece of hardware. (2) Documentation of all repair, modification, or rework performed on hardware. (3) Information on all prior use of the hardware including the dates and projects which utilized the hardware.</p> <p>2.3 The Vehicle / Equipment - Lead Mechanic Responsibilities add: The Vehicle / Equipment - Lead Mechanic will be responsible for completing the monthly inspection report of the bulk storage tanks included in the Integrated Contingency Plan, and notating the current conditions of the individual tanks, and making known to the Transportation Branch Manager (Code 279) any immediate action requirement.</p> <p>2.5 The Vehicle Dispatchers Responsibilities; 2.5.2 add: The Dispatcher will be responsible for compiling and data input of maintenance records into the PMXpert vehicle maintenance system. 2.5.3 add: When Motor Pool Use vehicles assigned for daily local or travel use are not available, an email will be sent to the Motor Vehicle Officer (presently robert.g.dipalo@nasa.gov) advising him of the request date/time and the particulars of the individual requestor (i.e. name, code, phone #).</p> <p>3.2 Service Priority add: Bikes Around Goddard pick-up request for repairs will be handled same day, no later than next day. add: When Motor Pool Use vehicles assigned for daily local or travel use are <u>not</u> available, an email will be sent to the Motor Vehicle Officer (presently robert.g.dipalo@nasa.gov) advising him of the request date/time and the particulars of the individual requestor (i.e. name, code, phone #).</p> <p>5.1.2 Non-Warranty PM, add: All NASA plated trailers will be inspected on an annual basis utilizing the form 274-FORM-0003.</p> <p>5.2 PROCEDURES; add: The following procedures apply Preventive Maintenance programs for NASA plated vehicles, NASA owned industrial and construction equipment, golf carts, and bicycles under the Bikes Around Goddard Program.</p> <p>6.1 PROCEDURES; add: Vehicles / Equipment by definition also include golf carts and the bicycles included in the Bikes Around Goddard Program. Work Order repair entries for these items will be included in the PMXpert system.</p> <p>15.2 Storage Tank Refueling, Maintenance and Spill Containment; add: Fuel level measurements of tank will be taken prior to filling the tank (clock gauge reading and Pneumercator reading). add: The tank clock gauge and Pneumercator reading will be checked/recorded after filling the tank.</p> <p>-end-</p>
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