

MAINTENANCE TECHNICAL SUPPORT CENTER
HEADQUARTERS MAINTENANCE OPERATIONS
UNITED STATES POSTAL SERVICE



Maintenance Management Order

SUBJECT: BDS_BA Preventive and Operational
Maintenance (Non-eCBM)

DATE: March 25, 2025

TO: All BDS Sites

PUB NO: MMO-004-24
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This Maintenance Management Order (MMO) provides Operational and Preventive Maintenance Guidelines for the Biohazard Detection System (BDS). This bulletin applies to Acronym BDS, Class Code BA.

The workhours indicated in the workload estimate (Attachment 1) are a calendar-based schedule to reflect the maximum annual workhours required to maintain each system. Management may modify task frequencies to address local conditions.

The minimum maintenance skill level required to perform each task is included in the Minimum Skill Level column of each checklist. This does not preclude higher level employees from performing any of this work.

WARNING

Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.

WARNING

The use of compressed or blown air is prohibited. An alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp rag, lint-free cloth, or brush must be used in place of compressed or blown air.

WARNING

Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO for appropriate EWP PPE and barricade requirements.

For questions or comments concerning this bulletin contact the MTSC HelpDesk, either online at **MTSC>HELPDESK>Create/Update Tickets** or call (800) 366-4123.



Frederick L. Jackson III
Executive Manager
Maintenance Technical Support Center
Asset Maintenance Planning, Performance, and Support

- Attachments
1. Summary Workload Estimate For BDS_BA
 - 2.. BDS Preventive Maintenance (PM) Weekly Master Checklist
 3. BDS Preventive Maintenance (PM) Monthly Master Checklist
 4. BDS Preventive Maintenance (PM) Semi-Annual Master Checklist
 5. BDS Preventive Maintenance (PM) Annual M aster Checklist
 6. BDS Operational Maintenance (OM)

ATTACHMENT 1**SUMMARY WORKLOAD ESTIMATE****FOR BDS_BA**

						Operational Maintenance + Total Servicing		
Operation Days	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr)*	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr)**	Total Servicing per Machine (Hrs/Yr)	1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
5 Days	81.20	24.36	105.56	10.56	116.12	163.79	0.00	0.00
6 Days	81.20	24.36	105.56	10.56	116.12	173.32	0.00	0.00
7 Days	81.20	24.36	105.56	10.56	116.12	182.85	0.00	0.00

* Repair maintenance estimates based on 30% of preventive maintenance.

** Based on 10% of total PM and repair.

THRESHOLDS and PM TIME SUMMARY Hrs PER Year			OPERATIONAL MAINTENANCE		
Daily	0.00				
Weekly	76.27		One Tour	Two Tours	Three Tours
Biweekly	0.00	5 Day	47.67	0.00	0.00
Monthly	3.47	6 Day	57.20	0.00	0.00
Quarterly	0.00	7 Day	66.73	0.00	0.00
Semi-Annual	1.03				
Annual	0.43				

	* -- The tasks marked with one asterisk are per unit tasks				
	** -- The tasks marked with two asterisks are critical tasks				
	Frequency Codes (1 AP = 4 Weeks)				
Code	Frequency	Description	Code	Frequency	Description
A	ANNUAL	Once every 13 APs	B	BI-WEEKLY	Once every half AP
C	BI-MONTHLY	Once every 2 APs	D	DAILY	Once a day; 7 days a week
E	DAILY	Once a day; 6 days a week	F	DAILY	Once a day; 5 days a week
G	DAILY	Once a day; 4 days a week	H	DAILY	Once a day; 3 days a week
J	SEMI-WEEKLY	2 days a week	K	BI-ANNUAL	Once every 26 APs
L	tdl-ANNUAL	Once every 39 APs	M	MONTHLY	Once every AP
N	QUAD-ANNUAL	Once every 52 APs	P	QUINT-ANNUAL	Once every 65 APs
Q	QUARTERLY	4 times every 13 APs	S	SEMI-ANNUAL	Twice every 13 APs
V	TOURLY	3 times a day; 6 days a week	W	WEEKLY	Once 1/4 AP (a week)
Z	TOURLY	Twice a day; 5 days a week			
WI(*)	WEEKS INTERVAL	Perform a task once every # weeks e.g., WI(60) = Once every 60 weeks			
		# = number of weeks			

ATTACHMENT 2**BDS_BA PREVENTIVE MAINTENANCE (PM)****WEEKLY MASTER CHECKLIST**

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	B	D	S				B	A	0	0	1	M
Equipment Nomenclature Biohazard Detection System	Equipment Model BDS						Bulletin Filename mm24004				Occurrence Weekly			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
SAFETY STATEMENT	1	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Check for suspicious dust or unusual debris. If any unusual substance is found, notify supervisor prior to proceeding with any further action on the equipment.</p> <p>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p>WARNING FOR EWP/PPE: Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO or appropriate EWP PPE and barricade requirements.</p> <p>WARNING FOR SDS: Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.</p>	1	All			

Tasks marked with one asterisk after the time required are per unit tasks.
Tasks marked with two asterisks after the item number are critical tasks.

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
Biohazard Detection System (BDS): Site Controller	2	<p>Verify Node Server and Shared Storage Front LED Status Indicators.</p> <p>NOTE: On both Node Servers, the hard drive in the top right position, position 3, is the spare drive. Typically, the LEDs on this drive will not be illuminated. This drive is used as a backup drive if one of the drives in the disk array fails. If the LEDs on this drive turn green, it could indicate that one of the drives in the array has failed. In this event, the RAID manager will rebuild this drive to take the place of the failed drive. The failed drive LED will be amber. If this occurs, contact MTSC.</p> <p>NOTE: When the Network LED, Node Health LED, Health, UID LED, and Power LEDs flash simultaneously, a power fault has occurred. Contact MTSC.</p> <p>CAUTION: Do not remove the Node Server hard drive when the Do Not Remove Indicator LED is illuminated. If the drive is removed, data will be lost, and a recovery will have to be performed to restore the system to normal operation.</p> <ol style="list-style-type: none"> On the front of both Node Servers: <ol style="list-style-type: none"> Verify Node Health LED is green. Verify Network LED is blinking green. Verify LEDs on position 3 hard drive are not illuminated. On the front of both Node Servers: <ol style="list-style-type: none"> Verify Drive Status LEDs on the hard drives in position 1 and 2 are solid green. Verify Activity Ring LEDs on the hard drives in position 1 and 2 are solid or flashing green. On the front of the Shared Storage Device: <p>NOTE: If a drive was replaced due to failure, the replaced drive will now be the unlit spare drive.</p> <ol style="list-style-type: none"> Verify the Online Activity LED on five hard drives (usually positions 1 through 5) is illuminated; either solid green or flashing. Verify the Fault/UID LED on five hard drives (usually positions 1 through 5) is not illuminated. 	5	10			W

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		c. Verify that one of the drives (spare drive, usually the furthest right, position 6) is not illuminated. 4. On the Shared Storage Device Right Ear: a. Verify the UID LED is off. b. Verify the Heartbeat LED is solid green. c. Verify the Fault LED is off. 5. Generate a work order to address any deficiencies.					
Biohazard Detection System (BDS): Site Controller	3	Verify Time Sync Between Nodes. NOTE: Node 1 and Node 2 system times should match. Problems occur when their times are off by more than two minutes. NOTE: Pressing Scroll Lock twice switches between nodes. 1. Use Scroll Lock to select Node 1 display. Node 1 lock screen should appear. 2. If currently logged on (blue Node 1 desktop is displayed), press Ctrl-Alt-Del and then Enter to display lock screen. 3. Record system time on Node 1 lock screen. 4. Use Scroll Lock to select Node 2 display. Node 2 lock screen should appear. 5. If currently logged on (green Node 2 desktop is displayed), press Ctrl-Alt-Del and then Enter to display lock screen. 6. Record system time on Node 2 lock screen. 7. If Node 1 and Node 2 system times are off by more than 3 minutes, contact MTSC. 8. Generate a work order to address any deficiencies. Reference BDS Operation and Maintenance Handbook, Volume 4, SW#49.	5	10			W
Biohazard Detection System (BDS): Site Controller	4	Verify Cell Router VPN Light. NOTE: There are currently two different Cell router models in use, and they have different displays. Refer to BDS Operation and Maintenance Handbook, Volume 4, SW#49 for images of each.	5	10			W

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					Run Hours	Pieces Fed (000)	Freq.
		<ol style="list-style-type: none"> 1. Verify that the Cell Router VPN light is on. 2. If VPN light is on, proceed to next section Verify Cell Router Wireless Signal. 3. If the VPN light is off, go to the back of the site controller rack and power the Cell Router off, then power it back on. 4. Wait 5 minutes and then verify that the VPN light is ON. 5. If the VPN light does not come on within 5 minutes, contact MTSC. 					
Biohazard Detection System (BDS): Site Controller	5	<p>Verify Cell Router Wireless Signal.</p> <ol style="list-style-type: none"> 1. Verify that the Cell Router has at least two bars (RSSI lights or LTE lights, depending on the model). 2. If Cell Router has at least two bars, proceed to next section. 3. If the Cell Router has less than two bars, attach the second antenna that is in the lockbox. 4. Go to the back of the site controller rack and power the Cell Router off, then power it back on. 5. Wait 5 minutes, then verify that the Cell Router has at least two bars. 6. If the Cell Router does not have at least two bars, contact MTSC. <p>Reference BDS Operation and Maintenance Handbook, Volume 4, SW#49.</p>	5	10			W
Biohazard Detection System (BDS): Site Controller	6	<p>Send DBHealth from Node 1.</p> <ol style="list-style-type: none"> 1. Log on to Node 1. 2. Double-click DBMain icon. 3. At main menu, type 1 for Run DBHealth and press Enter. 4. In the "Reason for Report" box, enter your name and Node 1 DBHealth. 5. Click Next>Next>Next>Next. 6. Click Done, OK. 7. If any errors are displayed, contact MTSC. 	5	10			W

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		8. At main menu, type 0 and press Enter to exit. 9. Generate a work order to address any deficiencies.					
Biohazard Detection System (BDS): Site Controller	7	Send DBHealth from Node 2. 1. Ensure KVM 2 light is ON . If the "1" is on, double tap the Scroll Lock button on the right side of the keyboard to switch to Node 2. 2. Log on to Node 2. 3. Double-click DBMain icon. 4. At main menu, type 1 for Run DBHealth and press Enter. 5. In the "Reason for Report" box, enter your name and Node 2 DBHealth 6. Click Next>Next>Next>Next. 7. Click Done, OK. 8. If any errors are displayed, contact MTSC. 9. At main menu, type 0 and press Enter to exit. 10. Generate a work order to address any deficiencies.	5	10			W
Biohazard Detection System (BDS): Site Controller	8	Check and Acknowledge Site Controller Alarms. 1. Log on to Node 1 Server and wait one minute for BDS Maintenance page to open. 2. Check Host: and Database: fields at bottom of Status page. Ensure both Host and Database are green and normal. 3. Select the Diagnostics tab to view the active alarms on the system. 4. Select the Machine Name to display the Active alarms. NOTE: Active alarms on the Local Controllers cannot be cleared from the Site Controller. 5. The Active alarms are displayed. Notice a date and time displays in the Cleared Time column for some alarms. Select Help to view Troubleshooting if necessary. 6. Click the dropdown box to display all the cleared Alarm Types. Click All . Click Acknowledge .	30	10			W

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					Run Hours	Pieces Fed (000)	Freq.
		<p>NOTE: Most, if not all, the alarms on the Site Controller should be caused by weekly database cleanups, backups, software version checks and UPS battery testing.</p> <p>7. The Acknowledgement screen is displayed. Click the Failure Reason dropdown then click the reason from the list. Write a brief reason for the alarm in the box provided, then click Apply. Click Back when done.</p> <p>8. All alarms should be cleared.</p> <p>9. Repeat steps 3 - 8 until all Site Controller active alarms are acknowledged.</p> <p>10. If any Local Controller alarms are still present, go to those cabinets and acknowledge the alarms. Once all alarms are acknowledged on the Local Machines, return to the Site controller to verify that Active Alarms list is now empty.</p> <p>11. Exit the BDS software by clicking X in the upper right corner.</p> <p>12. Generate a work order to address any deficiencies.</p>					
Biohazard Detection System (BDS): Site Controller	9	<p>Check Virus Definitions.</p> <p>Virus definitions are automatically updated on the Site Controller via the IT Admin Network and NGSS. To ensure this has been accomplished, perform the following procedure.</p> <p>NOTE: The Virus Definition Version date will generally be within 7 days of the current date. In no case should it be older than 14 days. If older than 14 days, contact MTSC.</p> <p>1. Log on to Node 1 Server and wait 1 minute for BDS Maintenance page to open.</p> <p>2. Click X in upper right corner to close BDS Maintenance page.</p> <p>3. In the bottom right-hand corner of the desktop, click the Show hidden icons button (the arrow pointing up on the lower right) and then double-click the Symantec shield. The Symantec Endpoint Protection screen opens.</p> <p>4. On the left side of the screen, ensure that Status is selected.</p>	10	10			W

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		5. Near the center of the screen, observe the Virus Definitions date. 6. Observe there are no Error or Warning messages present in the Status screen. If there is, contact MTSC before moving forward. 7. Close Symantec Endpoint Protection window 8. Switch over to Node 2 on the KVM by tapping twice on the SCROLL LOCK button. The KVM Light for Node 2 should be on. 9. Repeat Virus Definitions Check Steps 1-7 on Node 2 Server.					
Biohazard Detection System (BDS): Site Controller	10	Inspect Windows Server Backup. 1. Log on to Node 1 Server and wait 1 minute for BDS Maintenance page to open. 2. Click the View tab and click Maintenance Alarms on the left. 3. Verify there are no uncleared 7413 or 7414 Windows System Backup is Missing or Out-of-Date alarms present. 4. If there are 7413 or 7414 alarms present, contact MTSC. 5. Log off Node 1. 6. Generate a work order to address any deficiencies.	5	10			W
Biohazard Detection System (BDS): Site Controller	11	Inspect Site Controller Exterior. 1. Inspect Site Controller exterior for the following damage: <ul style="list-style-type: none"> Scratches Dings Dents Punctures Missing nuts or bolts Warping Torn or missing gaskets 2. Record exterior inspection and damage in maintenance logbook.	5	10			W

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		3. Generate a work order to address any deficiencies.					
Biohazard Detection System (BDS): Site Controller	12	Inspect Air Filters. 1. On the front of both Node Servers: a. Detach filter from front of server. b. Carefully detach loop side edge of filter from hook side adhesive strip. c. Press down on adhesive strip while slowly pulling filter away from strip. d. Inspect both sides of filter for dirt. e. If filter is dirty, use HEPA vacuum with brush attachment, vacuum filter. If filter is too dirty and vacuuming no longer works, replace filter. f. Reinstall filter by placing loop-sided edge of filter onto hook-side adhesive strip to secure in place. g. Reattach filter to the front of both Node Servers. 2. On the front of the Shared Storage Device: a. Detach filter from front of Shared Storage Device. b. Carefully detach loop side edge of filter from hook side adhesive strip. c. Press down on adhesive strip while slowly pulling filter away from strip. d. Inspect both sides of filter for dirt. e. If filter is dirty, use HEPA vacuum with brush attachment, vacuum filter. If filter is too dirty and vacuuming no longer works, replace filter. f. Reattach filter to front of Shared Storage Device. 3. Generate a work order to address any deficiencies.	7	10			W

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ATTACHMENT 3**BDS_BA PREVENTIVE MAINTENANCE (PM)****MONTHLY MASTER CHECKLIST**

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	B	D	S				B	A	0	0	1	M
Equipment Nomenclature Biohazard Detection System	Equipment Model BDS						Bulletin Filename mm24004				Occurrence Monthly			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
SAFETY STATEMENT	1	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Check for suspicious dust or unusual debris. If any unusual substance is found, notify supervisor prior to proceeding with any further action on the equipment.</p> <p>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p>WARNING FOR EWP/PPE: Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO or appropriate EWP PPE and barricade requirements.</p> <p>WARNING FOR SDS: Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.</p>	1	All			

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
Biohazard Detection System (BDS): Site Controller	2	Update and Print Site Controller Contact List. 1. Log on to Node 1 Server and wait 1 minute for BDS Maintenance page to open. 2. Log on to the BDS maintenance page using Username and password. 3. Click the Users tab at the top of the screen and then select Contact Lists in the left-hand menu. 4. Select 50 in the Items Per Page drop-down box at the bottom of the Contact Lists page. 5. Sort the contact list by clicking the Display Order column title bar until the blank cells appear at top of list. NOTE: contacts may be updated following BDS Operation and Maintenance Handbook, Volume 2a, GM11 6. Verify the local contact information is correct and update as needed. 7. On the bottom of the screen, select Contact Report . The Contact Report screen appears. 8. Right-click the Contact Report and a drop-down menu will appear. 9. Select Print preview from the drop-down menu. The Print Preview window appears. 10. Select the Landscape icon on the Print Preview screen (or press the shortcut keys Alt + L). The Print Preview screen reappears (in Landscape view). 11. On the Print Preview screen, select the drop-down list in the center of the menu bar and select Only the selected frame . 12. Select Print icon. The Print window appears. 13. Select number of copies desired. 14. Select the BDS printer or another MPE printer. 15. Click Print . 16. Close the Internet browser to log out of the BDS Site Controller web application.	15	10			M

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		17. Place the printed copy of numbered local contacts in the BDS Site Controller lock box. Additional pages beyond those that show the numbered contacts do not need to be stored in the Site Controller. 18. Record completion in maintenance logbook. 19. Generate a work order to address any deficiencies.					

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ATTACHMENT 4**BDS_BA PREVENTIVE MAINTENANCE (PM)****SEMI-ANNUAL MASTER CHECKLIST**

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	B	D	S				B	A	0	0	1	M
Equipment Nomenclature Biohazard Detection System	Equipment Model BDS						Bulletin Filename mm24004				Occurrence Semi-annual			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
SAFETY STATEMENT	1	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Check for suspicious dust or unusual debris. If any unusual substance is found, notify supervisor prior to proceeding with any further action on the equipment.</p> <p>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p>WARNING FOR EWP/PPE: Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO or appropriate EWP PPE and barricade requirements.</p> <p>WARNING FOR SDS: Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.</p>	1	All			

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
Biohazard Detection System (BDS): Site Controller	2	Inspect Site Controller UPS Battery. WARNING: Electrical shock hazard. Do not perform work on any electrical or electronic equipment unless authorized. Depending on the nature of the specific procedure to be performed, electrical safety Personal Protective Equipment (PPE) may be required. Appropriate electrical safety PPE must be used when troubleshooting or handling energized electrical circuits 50 volts or greater. Failure to comply with this precaution could result in serious injury or death. 1. Remove battery from UPS 1 per Steps 1 through 8 of BDS Operation and Maintenance Handbook, Volume 2b, RR106. 2. Inspect batteries for signs of swelling. 3. Inspect the plug on the battery for corrosion (chemical build-up, discoloration, etc.). 4. Inspect the wires for nicks and cuts in the insulation. 5. If batteries, wires, or plugs show signs of deterioration for purposes of this inspection, perform procedure BDS Operation and Maintenance Handbook, Volume 2b, RR106. Otherwise, continue with next Step. 6. Reinstall battery into UPS 1 per Steps 3 through 9 BDS Operation and Maintenance Handbook, Volume 2b, RR106. 7. Repeat Steps 1 through 6 of this procedure for UPS 2. 8. Record completion in maintenance logbook. Reference BDS Operation and Maintenance Handbook, Volume 2b, RR106.	30	10			S

Tasks marked with one asterisk after the time required are per unit tasks.

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ATTACHMENT 5**BDS_BA PREVENTIVE MAINTENANCE (PM)****ANNUAL MASTER CHECKLIST**

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	B	D	S				B	A	0	0	1	M
Equipment Nomenclature Biohazard Detection System	Equipment Model BDS						Bulletin Filename mm24004				Occurrence Annual			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
SAFETY STATEMENT	1	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Check for suspicious dust or unusual debris. If any unusual substance is found, notify supervisor prior to proceeding with any further action on the equipment.</p> <p>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p>WARNING FOR EWP/PPE: Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO or appropriate EWP PPE and barricade requirements.</p> <p>WARNING FOR SDS: Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.</p>	1	All			

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
Biohazard Detection System (BDS): Site Controller	2	<p>Clean Site Controller Rack Fan.</p> <p>WARNING: Electrical shock hazard. Do not perform work on any electrical or electronic equipment unless authorized. Depending on the nature of the specific procedure to be performed, electrical safety Personal Protective Equipment (PPE) may be required. Appropriate electrical safety PPE must be used when troubleshooting or handling energized electrical circuits 50 volts or greater. Failure to comply with this precaution could result in serious injury or death.</p> <ol style="list-style-type: none"> 1. Open rear door to Site Controller rack. 2. Locate the fan power cord and unplug it from the rack AC power strip. 3. On the fan side of the power cord, grasp the hard plastic connector and pull the connector straight down and off the fan power connector. 4. Using screwdriver and adjustable wrench loosen and remove three of the four screws and lock nuts that secure the fan guard to the fan assembly. Retain hardware for later use. 5. Rotate the fan guard to access fan blades. 6. Using vacuum cleaner with soft-bristle brush, vacuum as much dust and dirt as possible from the fan guard, fan blades, rotor, and the vent on top of the rack. <p>CAUTION: In the next two steps, be sure to wring most of the moisture from the cleaning material. Leave only damp to absorb dust and dirt. Excess water could drip into the video monitor and cause serious damage to this component.</p> <ol style="list-style-type: none"> 7. Wet a soft sponge or other cleaning material (e.g., paper towels) in water and wring until no drip is present. Leave only as much moisture as is necessary to absorb dust and dirt. 	15	10			A

Tasks marked with one asterisk after the time required are per unit tasks.

Tasks marked with two asterisks after the item number are critical tasks.

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		8. Using the moist cleaning material, wipe whatever dust and dirt remains on the fan guard, fan blades, rotor, and the vent on top of the rack. It might be necessary to wipe several times to remove all the dust and dirt. 9. Rotate the fan guard back so it covers the fan assembly and reattach screws and lock nuts. 10. Connect power cord to fan assembly. 11. Connect power cord to rack AC power strip. 12. Verify proper operation of fan. Air should be pulled from the bottom and expelled from the top. 13. Close and lock rear door to Site Controller rack. 14. Record completion of cleaning of fan assembly in maintenance logbook.					
Biohazard Detection System (BDS): Site Controller	3	Perform Site Controller UPS Verification. NOTE: When facing the UPS from rear of Site Controller rack, UPS2 is on the left and UPS1 is on the right. 1. Verify Site Controller hardware/components are plugged into their designated locations on UPS1 and UPS2. This includes verifying the USB connection in the top left-hand corner of the UPS is connected/plugged into to the correct Node Server. 2. Look at the lights on top of the Keyboard-Video-Mouse (KVM) switch. If the button on the left (for Channel 1) is lit green, proceed to Step 2. Otherwise, if the light on the right (for Channel 2) is lit, press the Scroll Lock key on the keyboard twice to switch the KVM to Channel 1 (the button on the left should be illuminated green). 3. Log on to the Node 1 Server using ACE ID. 4. Log on to the BDS maintenance page on Node 1 Server. 5. Unplug UPS1 from the power strip in rear of Site Controller rack. Leave unplugged for five minutes. While UPS is unplugged, perform/observe the following:	10	10			A

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 Tasks marked with two asterisks after the item number are critical tasks.

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		<ol style="list-style-type: none"> a. On BDS maintenance page, select the Alarms link (white box) in the bottom left-hand corner of the screen. Verify a 4106 UPS Power Failed alarm appears on the Alarms screen. In the Cleared column, n will be displayed. If this does not occur, contact MTSC. b. On UPS1 display, monitor battery level (Batt:). Wait at least one minute before monitoring battery level. If level drops below 70 percent within five minutes, the UPS may need replacing. <ol style="list-style-type: none"> 6. Plug UPS1 back into power strip; UPS1 will switch from battery to facility power. 7. On Node 1 Server, select Alarms link (white box) again so that the alarms will update. On the Alarms screen, the 4106 UPS Power Failed alarm from Step 5a will now display a y in the Cleared column. If alarm does not clear, contact MTSC. 8. Unplug UPS2 from the power strip in rear of Site Controller rack. Leave unplugged for five minutes. While UPS is unplugged, perform/observe the following: <ol style="list-style-type: none"> a. On BDS maintenance page, select the Alarms link (white box) in the bottom left-hand corner of the screen. Verify a 4106 UPS Power Failed alarm appears on the Alarms screen. In the Cleared column, an n will be displayed. If this does not occur, contact MTSC. b. On UPS2 display, monitor battery level (Batt:). Wait at least one minute before monitoring battery level. If level drops below 70 percent within five minutes, the UPS may need replacing. 9. Plug UPS2 back into power strip; UPS2 will switch from battery to facility power. 10. Select Alarms link (white box) to update alarms. On the Alarms screen, the 4106 UPS Power Failed alarm from Step 8a will now display a y in the Cleared column. If alarm does not clear, contact MTSC. 11. Close BDS maintenance page and log off Node 1 Server. 					

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
		12. Record Site Controller UPS verification in maintenance logbook. 13. Generate a work order to address any deficiencies. Reference BDS Operation and Maintenance Handbook, Volume 2a, SM9.1.					

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ATTACHMENT 6**BDS_BA OPERATIONAL MAINTENANCE (OM)**

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	9	B	D	S					BA	A	0	0	1
Equipment Nomenclature Biohazard Detection System	Equipment Model BDS						Bulletin Filename mm24004				Occurrence Daily			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
SAFETY STATEMENT	1	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Check for suspicious dust or unusual debris. If any unusual substance is found, notify supervisor prior to proceeding with any further action on the equipment.</p> <p>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p>WARNING FOR EWP/PPE: Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO or appropriate EWP PPE and barricade requirements.</p> <p>WARNING FOR SDS: Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.</p>	1	All			

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.
Biohazard Detection System (BDS): Site Controller	2	Inspect Local Controller test results from the Site Controller. <ol style="list-style-type: none"> 1. Log on to Node 1 Server and wait 1 minute for BDS Maintenance page to open. 2. Log on to the BDS maintenance page with ACE user ID. 3. On the Status tab, verify Host is Node 1 (ends with "P0") and the database is BDSDBR1. If not Node 1 and "BDSDBR1" contact MTSC. 4. Click the View tab on the top of the webpage screen. 5. Review the test results from the previous tour through current. 6. Look for actionable events (NO RESULT or NDs) and review Cause Codes for repair suggestions. 7. Close the browser window and logout. 8. Generate a work order to address any deficiencies. 	10	10			D

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