F-2: Inspection Schedule [401 KAR 39:090 Section 1 & 40 CFR 264.15]

F-2a: General Inspection Requirements [401 KAR 39:090 Section 1, and 38:090 Section 2 & 40 CFR 264.15(a)-(b), and 270.14(b)(5)]

The scheduled inspections of the Main Plant Facility include, but are not limited to, containers, tank systems, Subpart X systems, containment, safety, maintenance, emergency, and operating equipment needed to prevent, detect, or respond to environmental or human health hazards. Maintenance and monitoring will be conducted in accordance with SOPs developed for these activities; specific checklists to be used during inspections are included in these SOPs. The BGCAPP Main Plant Project Document Control Center (PDCC) maintains the completed inspections.

Each inspection record includes:

(1) Date and time of inspection

(2) Name and signature of inspector

(3) Notation of any observations made

(4) Repairs made or remedial actions taken at the time of the inspection will be recorded with the observation

F-2a(1): Types of Problems [401 KAR 39:090 Section 1 & 40 CFR 264.15(b)(3)]

Inspection schedules are subdivided into tables for each type of area, including Container Storage, Tanks, Sumps, and Miscellaneous Units. Each table identifies general types of problems for which to inspect including deterioration, malfunctions, leaking pipe and fittings, inoperable pumps or sumps, etc. Furthermore, each checklist helps the Operator to identify common problems associated with each specific area of inspection. Problems found during an inspection will be noted on the inspection checklist and addressed in accordance with applicable requirements and severity. A sample inspection checklist for the EONC Leaker Airlock, TEMPLATE-01220, is included as Figure F-1.

This document has been reviewed for ITAR and ITAR-sensitive information has been removed.

Figure F-1: EONC Leaker Airlock Sample Inspection Checklist

EONC Leaker Airlock – Daily Inspection

Shift Clerk date inspection issued:					
Inspector's Name and Signature:					
Inspection Date and Time:					
Item	Criteria	Method	Acceptance		Findings (any unsatisfactory condition requires this section)
Munitions Demilitarization Building (MDB)					
EONC Leaker Airlock – 07 102					
Floor and sumps	Inspect the floor and sumps for spills or leaks.	Physical	☐ Sat	☐ Unsat	
TO BE COMPLETED BY THE SUPERVISOR OR DELEGATE BY THE END OF SHIFT					
List all Service Requests/Work Order Numbers generated from this inspection sheet and additional comments					
I have reviewed this inspection sheet and found it to be complete and accurate to the best of my knowledge					Supervisor print/sign

F-2a(2): Frequency of Inspection [401 KAR 39:090 Section 1 & 40 CFR 264.15(b)(4), 40 CFR 264.195(d)]

Table F-1, Table F-2, Table F-3, and Table F-4 summarize the scheduled frequency of inspection for features, subsystems, and systems in the Main Plant facility and WTS. Basis for selection of these frequencies was the rate of possible deterioration of equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Inspection frequencies of all container storage area, tanks, sumps, and miscellaneous units are ***weekly unless otherwise specified***, as each of these areas are subject to spills. Daily and weekly inspections can include a review of data gathered by electronic monitoring systems, leak detection, level indicators or other electronic means, and/or by the use of CCTV cameras in areas not easily or safely accessible due to the inherent high hazard of the area inspected. Malfunctioning or impaired CCTV cameras will be repaired as soon as feasible, based upon planned work and entry accessibility to each area containing the camera. Keep in mind that the primary functions of the CCTV cameras are to ensure personnel safety, to support the safety of demilitarization operations, and as such a malfunctioning camera hindering operations will receive a high priority for repair.

F-2b: Specific Process Inspection Requirements [401 KAR 39:090, Section 1 & 40 CFR 264.15(b)(4)]

F-2b(1): Container Inspections [401 KAR 39:090 Section 1 & 40 CFR 264.174]

Table F-1 shows an inspection criteria schedule for the inspections of the permitted container storage areas within the Main Plant Facility. Main Plant Facility personnel conduct ***weekly*** inspections of containers in the MDB, with the exception of EONCs, and the SPB for deterioration, corrosion, spills, and evidence of leakage. These weekly inspections include a visual inspection for obstructions, inspection of the secondary containment for damage to coating, damage to concrete supporting the coating, and proper maintenance of aisle space between the rows of munitions in pallets/skids within the CHB, MDB, SPB, and WTS, as applicable and to the extent possible using CCTV cameras in areas where a high hazard risk may prevent entry to the area.

Weekly (i.e., once between Sunday and Saturday of each week) inspections will be conducted and documented for each of the container storage areas (excluding containers stored in EONCs). The inspection will include the applicable elements identified in the following list for each storage area, with focus on identifying leaking containers, damage/deterioration of containers, and damage to or leakage/spills within the containment system for each storage area.

- Hazardous waste container is in good condition and not leaking; if leaking container is found, workers will transfer the waste contents into a new container, or the entire leaking container will be over-packed.
- Containers are properly marked and labelled per waste management procedures.
- Incompatible wastes are not stored together. If incompatible items are found stored together, these will be separated into areas divided by berms, dikes, walls, or other physical barriers as appropriate for the waste type.

- Containers are closed. Containers of hazardous wastes are verified as closed, except to add, remove, or characterize wastes.
- Containers are stacked no more than two high.
- The layout of storage areas provides sufficient aisle space (minimum of 30 inches) to allow ease of inspection and ensure equipment used to move containers/pallets does not rupture containers.
- Containers stored within secondary containment systems do not contact the containment wall or berm and have sufficient space (between the berm or wall and the stored containers) to allow inspection and viewing of the stored containers.
- Preparedness and prevention equipment (fire extinguishers, communications equipment and alarms, and spill response kits) are in place.
- Proper signs are in place as applicable to area (e.g., Hazardous Waste Storage Area, Authorized Personnel Only, No Smoking, Flammables).

The vapor space of the EONCs containing waste that remain in the CHB for more than 1 week will be monitored—using an agent monitor port in the EONC—on a weekly basis. This monitoring for agent vapor will be in lieu of the RCRA required visual inspections of the containers (munitions). Results will be documented in the Operating Record.

Each container in permitted storage will be labeled with the words “Hazardous Waste”, a description of the waste stream/waste number, and the date the container was filled. Individual munitions contained in EONCs will not be labelled; only the outside of the EONCs will be labelled.

F-2b(2): Tank System Inspection [401 KAR 39:090 Section 1 & 40 CFR 264.195]

Table F-2 shows an inspection criteria schedule for the inspections of the permitted tank storage areas within the Main Plant Facility. Main Plant Facility personnel conduct ***weekly*** inspections of tanks with leak detection for deterioration, corrosion, spills, and evidence of leakage. These weekly inspections include a visual inspection of the secondary containment for damage to coating, damage to concrete supporting the coating, visual inspection of leak detection systems for damage. Daily inspections are conducted for tanks without leak detection. The daily inspections include a visual inspection of the secondary containment for damage to coating, damage to concrete supporting the coating, and visual inspection for leaks.

Table F-3 shows an inspection criteria schedule for the inspections of the permitted sumps within the Main Plant Facility. Main Plant Facility personnel conduct ***weekly*** inspections of sumps for with level indicating transmitters (LIT) for deterioration, corrosion, spills, and evidence of leakage. Inspections will be performed by CCTV to the extent possible. ***Daily*** monitoring of data gathered from sump LITs occurs continuously in the control room Daily inspections will be conducted for sumps without LITs for deterioration, corrosion, spills, and evidence of leakage.

To ensure proper functioning, sump LITs will be verified by visual weekly inspections regarding the overall contents of a sump, with inspections performed by CCTV to the extent possible. If a sump is confirmed to be at the high level with liquid but the LIT indicates otherwise, the LIT will be repaired or replaced as soon as feasible. Many LIT parts are interchangeable, and as such it is possible that the replacement part or transmitter itself will

be readily available as part of the spare parts inventory in the warehouse. All LIT alarms in the Control Room will be investigated.

- Plant operators will conduct weekly inspections of overfill controls, tanks, data from monitoring and leak detection equipment, construction materials, and the area surrounding the tank systems. To the extent possible inspections will be conducted using CCTV cameras in areas where a high hazard risk may prevent entry to the area. Plant operators will verify that overfill controls are functioning for each tank based on a schedule recommended by equipment manufacturers. Inspections of the tank systems within the Category A and Category B areas (within the MDB) will be conducted from observation areas around the systems or during worker entries into these areas based on worker entry schedule: weekly worker entries will not be conducted solely for tank system inspections (i.e., due to inherent risks). CCR operators also can use CCTV to conduct inspections of the Category A and Category B areas within the MDB on a weekly basis. The basis for the frequency of inspection will be the rate of possible deterioration of equipment and the probability of an environmental or human health incident if deterioration, malfunction, or operator error goes undetected between inspections. The BGCAPP will conduct daily inspections of areas subject to spills, including loading and unloading areas if in use. The following paragraphs summarize the criteria and regulatory requirements for these inspections.

    1. Overfill controls will be monitored from the control room if waste is present in the tank system. Sensors will alarm if levels exceed established thresholds for each tank.

    2. Leak detection equipment on sumps sends a signal to the control room immediately notifying operators of a leak. Alarms from leak detection equipment will be responded to immediately to determine whether the tank, sump or associated piping is fit for use or needs to be removed from service.

    3. All tanks for which weekly inspections are proposed have leak detection measures consisting of sumps with level indicator alarms and CCTV access in A and B areas. Tank and sumps for which automated leak detection is not present will be inspected daily.

    4. The BGCAPP hazardous waste tank systems outside the Category A and Category B areas in the MDB (including tank shell and bottom, piping and valves, pumps, tank supports, and construction materials, area around the tank, and secondary containment system) will be visually inspected weekly to detect corrosion, erosion, or signs of waste releases with the use of leak detection and liquid level monitoring in secondary containment as well as work practices to monitor the detection of leaks.

    5. The BGCAPP personnel will inspect hazardous waste tank area sumps, trenches, and secondary containments equipped with leak detection at least weekly. These inspections will consist of real time monitoring of LIT instrument readings transmitted to the control room supplemented by visual observations as necessary using CCTV in Category A/B areas. Level indicating transmitters transmit data continuously to the control room, such that liquid levels and alarms in a sump can be monitored in real time. Response to alarms from LIT instruments occur immediately to prevent overflows from secondary containment. Visual inspection of sumps will occur weekly as well by CCTV to the extent possible.

6. If a leak detection device is activated in a Category A or B sump, the control room will investigate via CCTV. If the activation was triggered by an active leak rather than a probe malfunction (based on CCTV observation), the control room will monitor the sump for any potential leak migrating to the affected sump. A maintenance package will be developed and executed to investigate the sump alarm and interstitial probe. The operating record will be searched to identify the last time the sump was used and the associated activity. If the investigation shows that the probe was not the cause of the leak detection device activation, a borescope will be used to investigate the sump for the leak. If the probe was the issue, it will be replaced. If the secondary containment was found to contain a breach in the sump, further investigation will be required and process operations will be suspended until repairs are made. If repairs are required, the tank will be emptied as soon as possible and will be removed from service until the repair is complete.
7. The tank systems within the Category A and Category B areas in the MDB will be inspected weekly, with inspection by CCTV to the extent possible.
8. If a sump pump fails within a Category A and/or Category B area, the control room will investigate via CCTV to verify that the contents were not being pumped during the failure. A maintenance work package will be developed for repairs to the pump. In the event the sump contains liquid, and the sump pump was inoperable, entrants will bring in a portable pump and transfer the contents from the sump. If the sump pump replacement cannot be accomplished immediately, the portable pump will remain in the sump until the repairs are complete. Following the sump pump replacement, a function test will be performed successfully, and the sump will be returned to normal operations. The tank will not be removed from service during this investigation and repair process as long as the sump remains viable.
9. The BGCAPP does not provide external cathodic protection for the hazardous waste tanks; therefore, inspections of this item will not be required.
10. BGCAPP will respond immediately when alarms are detected during daily inspections of the control panel of the TraceTek® leak detection equipment that monitors for leaks of hazardous waste lines outside of secondary containment. BGCAPP will verify weekly that the TraceTek® leak detection equipment is functioning properly.
11. TraceTek® leak detection system will alarm to a localized control panel, providing both a visual and audible alarm. These panels currently do not report back to the Control Room, so therefore these control panels will be inspected on a daily basis to determine if the panel is in an alarm condition. Leak detection alarms and functionality are checked during daily Environmental Inspections using both audible and visual indicators in the following manner.
    - Type of alarm: Audible alarm -- Sounds at the control panel in the control cabinet. Control cabinet 07-EE-00-CPDL0701 is in the MDB (Room 07-141) and control cabinet 10-EE-00-CPDL1001 is in the SCWO reactor room.

- Alarm Detection: Audible alarms are detected by Operator performing Rounds and Readings
- Type of alarm: Visual alarm – Operating indicator lights and trouble alarm lights at the Control Panel.
- Alarm detection: Environmental inspectors conducting daily inspections confirm the operability of TraceTek® Leak Detection System by ensuring the green operating light is illuminated and the trouble lights are not illuminated on the TraceTek® Detection Master Module.
- Response: Operations takes necessary action to respond to leak.

12. Category D sumps will be inspected weekly and the results documented on the applicable inspection forms. Sumps will be pumped to the lowest level achievable by the pump. This action can be initiated from the Control Room at the discretion of the Control Room Supervisor at any time. In Category A and B areas, liquids in floors will be addressed as soon as it is feasible to enter the area. In Category C and D areas, liquids in floors will be addressed within 24 hours upon discovery.

13. The SPB floors will be inspected daily when they can be safety performed, since the floors are inadequately sloped to drain to the sumps properly. A visual inspection will be conducted each operating day, and if any liquid is discovered then it will be addressed within 24 hours. Inspections will include inspections of floors, sumps, and trenches of secondary containment in RCRA tank areas for the presence of liquids provided that it is safe to perform the inspection. CCTV cameras are planned for installation in the SPB in the near future and can aide the inspection process.

14. Regarding outside tank storage areas, after and/or during a precipitation event, the collected precipitation will be inspected and cleared prior to discharge (as outlined in the Waste Analysis Plan). Hydrolysate in the Hydrolysate Storage Area (HSA) is highly alkaline, and therefore clearance criteria will be based upon the pH of the stormwater. Anything greater than a pH of 9+ will indicate a hydrolysate leak. SCWO effluent and RO Reject are more saline than typical stormwater, and therefore conductivity will be used as the clearance criteria for stormwater collected in the SCWO Tank Area (STA). Clearance levels based upon conductivity will be determined when analytical data is available.

F-2b(3): Waste Pile Inspections [401 KAR 39:090 Section 1 & 40 CFR 264.254]

Not applicable. The Main Plant Facility does not have any waste piles.

F-2b(4): Surface Impoundment Inspections [401 KAR 39:090 Section 1 & 40 CFR 264.226]

Not applicable. The Main Plant Facility does not have any surface impoundments.

F-2b(5): Incinerator Inspections [401 KAR 39:090 Section 1 & 40 CFR 264.347]

Not applicable. The Main Plant Facility does not include an incinerator.

F-2b(6): Landfill Inspections [401 KAR 39:090 Section 1 & 40 CFR 264.303]

Not applicable. The Main Plant Facility does not have any landfills.

F-2b(7): Land Treatment Inspections [401 KAR 39:090 Section 1 & 40 CFR 264.278]

Not applicable. The Main Plant Facility does not have any land treatment units.

F-2b(8): Subpart X Inspections [401 KAR 39:090 Section 1 & 40 CFR 264.602]

Table F-4 shows an inspection criteria schedule for the inspections of the miscellaneous units within the Main Plant Facility. This schedule includes drip pans located under each of the Rocket Shear Machines (RSMs) in the Explosive Containment Rooms (ECRs).

The Main Plant Facility personnel conduct daily, weekly, monthly, quarterly and semi-annual inspections of each Subpart X system.

Metal Parts Treaters

1. Mitigation requirements to minimize exposure to electromagnetic fields due to the induction coils of the MPTs will be identified during systemization activities.
2. Restrictions due to temperatures near the MPTs in Room 07-146 will be identified during systemization activities.

F-2b(9): Subpart BB/CC Organic Air Emissions {401 KAR 39:090 Section 1, 40 CFR 264.1050 & 40 CFR 264:1080

Subpart BB/CC Organic Air Emissions inspection and monitoring requirements will be provided in an addendum to this schedule.

F-2c: Remedial Action [401 KAR 39:090 Section 1 & 40 CFR 264.15(b)(5)(c)]

The operations personnel conducting the inspections of the specific areas or equipment inspect based on criteria identified on the SOP checklist templates and record problems found on the inspection checklist.

Note that if leak detection systems are not functioning, daily inspections, either visual or with a combination of CCTV and air monitoring, will be performed. If leak detection systems are not functioning and either CCTV or air monitoring is not functioning, daily visual inspections will be performed.

F-2d: Inspection Log [401 KAR 39:090 Section 1 & 40 CFR 264.15(b)(5)(d)]

Not Applicable. No waiver of Inspection Log is required or being requested.

Table F-1: Container Storage Areas Summary Table

Container Storage Area	Max. Waste Capacity (gal)	Inspection Frequency/Method	Inspection Satisfied by Room #s/ Boundaries	Containment Design	Drainage / Container Management	Containment Capacity (gal)
Container Handling Building (CHB)	9,500	Weekly/Visual	CHB	Secondary Containment provided by EONCs; up to 50 EONCs staged on CHB concrete floor (24915-06-AE-00-00001)	Rockets or projectiles stored on pallets in EONC	Each EONC: ~4,500 gal (empty volume) >> 58 gal maximum liquid volume present in projectiles or rockets stored in a single EONC
Waste Transfer Station (WTS) – Outside CLA	176,500	Weekly/Visual	WTS Concrete pads and storage buildings	Concrete with spill pallets as necessary (sprung structure) Concrete (storage pads, tanker bays)	*WTS storage building: containers with liquids stored on spill pallets *WTS outside: area sloped away from stored containers (no free liquids in containers) *WTS truck bays: bays sloped toward collection sumps *Evaluate storm water for conductivity	130,984 (24915-00-TKD-GGPT-10108 RD&D CSI 6)
Box Transfer Area, Room 1 (Room 07-165)	1,500	Weekly/Visual	07-165	Concrete floor with SC-1 coating*	Not applicable - RM and SFT storage containers will not contain liquids	Not applicable (no free liquids stored except on spill pallets)
Box Transfer Area, Room 2 (Room 07-166)	1,500	Weekly/Visual	07-166			
Agent Neutralization System (ANS) Storage Area (Room 07-123)	2,750	Weekly/Visual	07-123	Concrete floor with curbs, SC-1 coating*	Drainage to sumps	121,843 (see 24915-8H4-V14-H000-00007)
Tray/Container Transfer Room (Room 07-124)	550	Weekly/Visual	07-124	Concrete floor with curbs, SC-1 coating*	Drainage to sumps	121,843 (see 24915-8H4-V14-H000-00007)

Container Storage Area	Max. Waste Capacity (gal)	Inspection Frequency/Method	Inspection Satisfied by Room #s/ Boundaries	Containment Design	Drainage / Container Management	Containment Capacity (gal)
Metal Parts Treater (MPT) Cooling Conveyor Storage Area (Room 07-150)	8,190	Weekly/Visual	07-150	Concrete floor with SC-1 coating*; containers with liquids placed on spill pallets	Drainage to sumps	Not applicable (no free liquids stored except on spill pallets)
Toxic Maintenance Area (TMA) Storage Area (Room 07-125)	5,500	Weekly/Visual	07-125	Concrete floor with curbs, SC-1 coating*	Drainage to sumps	121,843 (see 24915-8H4-V14-H000-00007)
Explosive Containment Vestibule (ECV) Storage Area, ECV-1 (Room 07-103)	275	Weekly/Visual	07-103	Concrete floor with curbs, SC-1 coating*	Drainage to sumps	10,368 (see 24915-8H4-V14-H000-00007)
Explosive Containment Vestibule (ECV) Storage Area, ECV-2 (Room 07-106)	275	Weekly/Visual	07-106			7,800 (see 24915-8H4-V14-H000-00007)
Unpack Area (UPA) No. 1, UPA-1 (Room 07-101)	2,400	Weekly/Visual	07-101	Concrete floor with SC-1 coating*; containers with liquids placed on spill pallets	Drainage to sumps	47,177 (see 24915-8H4-V14-H000-00007)
Unpack Area (UPA) No. 2, UPA-2 (Room 07-128)	2,400	Weekly/Visual	07-128			
Motor Shipping Room (MSR) / Covered Loading Area (Room 07-164 / Area 07-168)	350	Weekly/Visual	07-164; 07-168	Concrete floor with SC-1 coating* (07-164) Concrete (07-168)	Not applicable - RM and SFT storage containers will not contain liquids	Not applicable (no free liquids stored except on spill pallets)
Motor Packing Room (MPR) Storage Area (Room 07-163)	350	Weekly/Visual	07-163			10,520 (see 24915-8H4-V14-H000-00007)
Explosive Containment Room (ECR) Storage Area No. 1, ECR-1 (Room 07-104)	55	Weekly/Visual	07-104	Concrete floor with curbs, SC-1 coating*	Drainage to sumps	3,778 (see 24915-8H4-V14-H000-00007)
Explosive Containment Room (ECR) Storage Area No. 2, ECR-2 (Room 07-105)	55	Weekly/Visual	07-105			

Container Storage Area	Max. Waste Capacity (gal)	Inspection Frequency/Method	Inspection Satisfied by Room #s/ Boundaries	Containment Design	Drainage / Container Management	Containment Capacity (gal)
MWS Reject Table – MJ-MWS-0103 (Room 07-135)	5	Weekly	07-135	Concrete floor with curbs, SC-1 coating*	Drainage to sumps	121,843 (see 24915-8H4-V14-H000-00007)
SCWO Processing Building (SPB) Storage Area	8,550	Weekly	SPB	Concrete floor with curbs, SC-11A coating; spill pallets	Drainage to sumps, transfer to drums	27,269 (24915-10-DBC-00-00004)
All container storage areas will be inspected weekly unless otherwise noted for the following types of problems: Inspect all containers for leaks, damage to containers, corrosion, pallet spacing and damage to pallets themselves. Inspect all container storage areas for obstructions, coating damage, concrete damage and adequate aisle space.						

Table F-2: Tank Storage Areas Summary Table

Tank System / Tanks*	Inspection Frequency	Inspection Satisfied by Room #s/ Boundaries	Inspection Method	Storm Water Clearance Criteria	Construction Materials	Corrosion Protection	Air Emissions Control
Agent Collection System (ACS) Tanks							
Agent Holding Tank – MT-ACS-0105	Weekly	07-123	Visual/CCTV	N/A	PVDF Lined C.S.	PVDF Liner	Subpart CC vents to TOX
Agent Surge Tank – MT-ACS-0106	Weekly	07-123	Visual/CCTV	N/A	PVDF Lined C.S.	PVDF Liner	Subpart CC vents to TOX
Spent Decontamination System (SDS) Tanks							
MV-SDS-0101	Weekly	07-123	Visual/CCTV	N/A	PVDF Lined C.S.	PVDF Liner	Subpart CC vents to TOX
MV-SDS-0201	Weekly	07-123	Visual/CCTV	N/A	PVDF Lined C.S.	PVDF Liner	Subpart CC vents to TOX
MV-SDS-0301	Weekly	07-123	Visual/CCTV	N/A	PVDF Lined C.S.	PVDF Liner	Subpart CC vents to TOX
Agent Neutralization Reactor (ANR) Tanks							
MV-ANS-0101	Weekly	07-123	Visual/CCTV	N/A	UNS N10276	UNS N10276	Subpart CC vents to TOX
MV-ANS-0201	Weekly	07-123	Visual/CCTV	N/A	UNS N10276	UNS N10276	Subpart CC vents to TOX
Agent Hydrolysate Sampling Tanks							
MT-ANS-0103	Weekly	07-123	Visual/CCTV	N/A	316L S.S.	0.063” Corrosion Allowance	Subpart CC vents to TOX
MT-ANS-0203	Weekly	07-123	Visual/CCTV	N/A	316L S.S.	0.063” Corrosion Allowance	Subpart CC vents to TOX
MT-ANS-0303	Weekly	07-123	Visual/CCTV	N/A	316L S.S.	0.063” Corrosion Allowance	Subpart CC vents to TOX

Tank System / Tanks*	Inspection Frequency	Inspection Satisfied by Room #s/ Boundaries	Inspection Method	Storm Water Clearance Criteria	Construction Materials	Corrosion Protection	Air Emissions Control
Hydrolysate Collection Tank							
MT-EBH-1901	Weekly	07-111	Visual/CCTV	N/A	UNS S32205	UNS S32205	Subpart CC vents to HVAC Activated Carbon
Energetics Neutralization Reactor (ENR) Tanks							
MV-ENS-0101	Weekly	07-119	Visual/CCTV	N/A	C.S. WITH UNS N02200 CLAD	C.S. WITH UNS N02200 CLAD	Subpart CC vents to TOX
MV-ENS-0102	Weekly	07-119	Visual/CCTV	N/A	C.S. WITH UNS N02200 CLAD	C.S. WITH UNS N02200 CLAD	Subpart CC vents to TOX
MV-ENS-0103	Weekly	07-119	Visual/CCTV	N/A	C.S. WITH UNS N02200 CLAD	C.S. WITH UNS N02200 CLAD	Subpart CC vents to TOX
Agent Hydrolysate HSA Tanks							
MT-HSS-0105 (GB only)	Daily	HSA1	Visual	pH	Carbon Steel	0.125" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
MT-HSS-0205 (GB only)	Daily	HSA1	Visual	pH	Carbon Steel	0.125" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
Energetics Hydrolysate HSA Tanks							
MT-HSS-0604	Daily	HSA1	Visual	pH	Carbon Steel	0.125" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
MT-HSS-0704	Daily	HSA1	Visual	pH	Carbon Steel	0.125" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
Aluminum Precipitation Reactor Tanks							
MV-APS-0101	Daily	10-102	Visual/CCTV	N/A	UNS N10276	UNS N10276	Subpart CC vents to Activated Carbon Canisters
MV-APS-0102	Daily	10-102	Visual/CCTV	N/A	UNS N10276	UNS N10276	Subpart CC vents to Activated Carbon Canisters
Aluminum Filtration Feed Tanks							
MT-AFS-1010	Daily	10-102	Visual/CCTV	N/A	316L S.S.	0.125" Corrosion Allowance	Subpart CC Vents to HVAC Activated Carbon
MT-AFS-2010	Daily	10-102	Visual/CCTV	N/A	316L S.S.	0.125" Corrosion Allowance	Subpart CC Vents to HVAC Activated Carbon
Aluminum Filtrate Tank							
MT-AFS-1012	Daily	10-102	Visual/CCTV	N/A	316L S.S.	0.125" Corrosion Allowance	Subpart CC Vents to HVAC Activated Carbon
SCWO Hydrolysate Blend Tanks							
MT-SCWO-0030	Daily	10-101	Visual/CCTV	N/A	316L S.S.	0.125" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon

Tank System / Tanks*	Inspection Frequency	Inspection Satisfied by Room #s/ Boundaries	Inspection Method	Storm Water Clearance Criteria	Construction Materials	Corrosion Protection	Air Emissions Control
MT-SCWO-0031	Daily	10-101	Visual/CCTV	N/A	316L S.S.	0.125" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
SCWO Batch Hydrolysate Holding Tank							
MT-SCWO-0032	Daily	10-101	Visual/CCTV	N/A	316L S.S.	0.125" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
SCWO Off-Spec Effluent Tank							
MT-SCWO-0041	Daily	10-101	Visual/CCTV	N/A	316L S.S.	0.063" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
SCWO Emergency Relief Tank							
MT-SCWO-0040	Daily	10-103	Visual/CCTV	N/A	316L S.S.	0.063" Corrosion Allowance	Subpart CC vents to HVAC Activated Carbon
SCWO Effluent Tanks							
MT-SCWO-0101	Daily	STA	Visual	Conductivity	Carbon Steel	0.125" Corrosion Allowance	None Required (Due to SCWO Treatment)
MT-SCWO-0201	Daily	STA	Visual	Conductivity	Carbon Steel	0.125" Corrosion Allowance	None Required (Due to SCWO Treatment)
MT-SCWO-0301	Daily	STA	Visual	Conductivity	Carbon Steel	0.125" Corrosion Allowance	None Required (Due to SCWO Treatment)
RO Reject Tanks							
MT-RO-0106	Daily	STA	Visual	Conductivity	Carbon Steel with Epoxy Lining	Epoxy Lining	None Required (Due to SCWO Treatment)
MT-RO-0206	Daily	STA	Visual	Conductivity	Carbon Steel with Epoxy Lining	Epoxy Lining	None Required (Due to SCWO Treatment)
RO Permeate Tanks							
MT-SWS-0101	Daily	STA	Visual	Conductivity	Carbon Steel with Epoxy Lining	Epoxy Lining	None Required (Due to SCWO Treatment)
MT-SWS-0201	Daily	STA	Visual	Conductivity	Carbon Steel with Epoxy Lining	Epoxy Lining	None Required (Due to SCWO Treatment)
All aboveground portions of tanks and secondary containment will be inspected **weekly** unless otherwise noted for the following types of problems: Corrosion, Releases of waste, Sign of releases of waste (stains, wet spots, dead vegetation where applicable), Visible damage to leak detection systems, Visual alarms of leak detection systems, tank systems, or secondary containment.							
For those tank systems using leak detection systems, data from the leak detection systems will be examined **daily**.							
Tanks in Category A and B areas of the MDB will be monitored electronically and inspected visually aided by the use of CCTV cameras.							

Table F-3: Sump Summary Table

Category A Sumps: MDB							
Sump No.	**Room No.**	**Location**	**Pumped?**	**Volume (gal)**	**Inspection Method/Frequency**	**Type of Liquid Alarm(s)**	**Discharges to**
SDS-0131	07-104	ECR 1	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0134	07-105	ECR 2	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0136	07-111	EBH	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0138	07-106	ECV 2	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0141	07-135	MWS	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0143	07-125	TMA	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0144	07-125	TMA	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0145	07-125	TMA	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0147	07-120	DPE Cor	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0148	07-123	ANS	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0149	07-123	ANS	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0151	07-109	Airlock	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0152	07-103	ECV 1	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0174	07-136	Airlock	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0175	07-132	Airlock	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks

Category B Sumps: MDB							
Sump No.	**Room No.**	**Location**	**Pumped?**	**Volume (gal)**	**Inspection Method/Frequency**	**Type of Liquid Alarm(s)**	**Discharges to**
SDS-0135	07-107	Airlock	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0165	07-119	ENS	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0166	07-119	ENS	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0167	07-126	Airlock	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0170	07-124	TCTR	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0171	07-124	TCTR	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0173	07-146	MPT	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0177	07-133	TMA Equip	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0178	07-124	TCTR	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0182	07-163	MPR	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0184	07-142	Airlock	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0201	07-113	EBH Suppt	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks
SDS-0228	07-162	Airlock	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks

SDS-0235	07-146	MPT	Yes	84.2	LIT Daily; Visual Monthly	Sump and Liner	Spent Decon Tanks

Category C Sumps: MDB

Sump No.	Room No.	Location	Pumped?	Volume (gal)	Inspection Method/Frequency	Type of Liquid Alarm(s)	Discharges to
SDS-0154	07-137	OBS Cor	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0168	07-144	OBS Cor	Yes	82.9	LIT Daily; Visual Weeklyy	Sump	Spent Decon Tanks
SDS-0169	07-118	SHT	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0176	07-129	Transfer	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0180	07-148	Washout	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0181	07-148	Washout	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0190	07-101	UPA 1	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0191	07-101	UPA 1	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0198	07-121	ANS G Box	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0200	07-117	OBS Cor	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0202	07-102	EONC Lkr	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0220	07-118	SHT	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0222	07-128	UPA 2	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0223	07-128	UPA 2	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0227	07-203	EBH Suppt	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0229	07-140	OTE	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0230	07-140	OTE	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0231	07-140	OTE	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0232	07-140	OTE	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0233	07-140	OTE	Yes	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks
SDS-0185	07-134	UPA Eq Rm	No	82.9	LIT Daily; Visual Weekly	Sump	Spent Decon Tanks

Category D Sumps: MDB

Sump No.	Room No.	Location	Pumped?	Volume (gal)	Inspection Method/Frequency	Type of Liquid Alarm(s)	Discharges to
NCD-0230	07-141	OTM	Yes	82.9	Visual/Weekly	Sump	Drums, Storm Drains, or HSS
NCD-0231	07-141	OTM	Yes	82.9	Visual/Weekly	Sump	Drums, Storm Drains, or HSS
NCD-0232	07-141	OTM	Yes	82.9	Visual/Weekly	Sump	Drums, Storm Drains, or HSS
NCD-0235	07-150	MPT Disch	No	82.9	Visual/Daily	None	Drums
NCD-0236	07-150	MPT Disch	No	82.9	Visual/Daily	None	Drums
NCD-0233	07-164	Mtr Pcking	No	82.9	Visual/Daily	None	Drums

Category D Sumps: SPB							
Sump No.	**Room No.**	**Location**	**Pumped?**	**Volume (gal)**	**Inspection Method/Frequency**	**Type of Liquid Alarm(s)**	**Discharges to**
SCWO-01	10-01	Chemicals	No	82.9	Visual/Daily	None	Drums
SCWO-02	10-01	Chemicals	No	82.9	Visual/Daily	None	Drums
SCWO-03	10-04	Blend	No	82.9	Visual/Daily	None	Drums
SCWO-04	10-04	Blend	No	82.9	Visual/Daily	None	Drums
SCWO-05	10-07	EmReTank	No	82.9	Visual/Daily	None	Drums
SCWO-06	10-05	Reactors	No	82.9	Visual/Daily	None	Drums
SCWO-07	10-02	APR	No	82.9	Visual/Daily	None	Drums
SCWO-08	10-02	AFR	No	82.9	Visual/Daily	None	Drums
SCWO-09	10-02	AFR	No	82.9	Visual/Daily	None	Drums
SCWO-10	10-03	RO	No	82.9	Visual/Daily	None	Drums
SCWO-11	10-03	RO	No	82.9	Visual/Daily	None	Drums
SCWO-12	10-03	RO	No	82.9	Visual/Daily	None	Drums
SCWO-13	10-06	RO	No	82.9	Visual/Daily	None	Drums
SCWO-14	10-06	RO	No	82.9	Visual/Daily	None	Drums
STA	10-16	STA	Yes	82.9	Visual/Daily	None	Storm Drains, Drums
RO Heat Exchanger	10-14	RO HX	No	3.7	Visual/Daily	None	Storm Drains, Drums
Truck Load	10-17	Truck Load	Yes	75.7	Visual/Daily	None	Storm Drains, Drums

Category D Sumps: HSS							
Sump No.	**Room No.**	**Location**	**Pumped?**	**Volume (gal)**	**Inspection Method/Frequency**	**Type of Liquid Alarm(s)**	**Discharges to**
HSS	11-02	11-02	Yes	611.3	Visual/Daily	None	Storm Drains, Drums
All aboveground portions of sumps will be inspected for the following types of problems: Corrosion, Releases of waste, Sign of releases of waste (stains, wet spots, dead vegetation where applicable), Visible damage to sump, grading or liner itself, Visual alarms or damage to leak detection systems or level indicating transmitters.							

Table F-4: Miscellaneous Unit Table

Miscellaneous Unit System	Physical Characteristics	Dimensions	Inspection frequency	Inspection satisfied by Room #/ Boundaries
Munitions Washout System (MWS) Miscellaneous Units				
MY-NCR-0101 MZ-MWS-0101D MZ-MWS-0101E	Input, turntable, and output conveyors with munitions storage trays, airlocks, robot, nose closure removal station, burster check station, CAMs/drain stations, weigh station, and agent transfer ancillary equipment; located in the MDB	[redacted]	Weekly CCTV Monitoring Daily	07-135
Rocket Handling System (RHS) Miscellaneous Units				
Rocket Cutting Machine (RCM) – MX-RHS-0113	Input and rotating conveyors, airlocks, Rocket Cutting Machines (RCMs) for separating SFT section and RMs from warheads, Rocket Shear Machines (RSMs) for punch and drain of agent and shearing of warhead segments, agent transfer ancillary equipment, SFT and RM transfer, located in the MDB. RSMs have drip pans located beneath them to collect liquids potentially dripping from rockets during punch and drain; daily monitoring will be conducted by CCTV to the extent allowable by camera placement.	[redacted]	Weekly CCTV Monitoring Daily	07-103
Rocket Cutting Machine (RCM) – MX-RHS-0114				07-106
Rocket Shear Machine (RSM) – MY-RHS-0101				07-104
Rocket Shear Machine (RSM) – MY-RHS-0102				07-105
Energetics Batch Hydrolyzer (EBH) Miscellaneous Units				
MV-EBH-1101	Robots for transfer of sheared rocket segments through an airlock to the EBH room and then to the EBHs, EBH reactors (each with shape similar to a	[redacted]	Weekly	07-111
MV-EBH-1201				07-111

MV-EBH-1301	concrete mixer drum), a drain system which collects the liquid energetics hydrolysate emptied from the EBHs so it can be transferred into the Energetics Batch Holding Tank, and collection conveyors that transfer sheared rocket pieces into collection trays which are transferred by robot to be further treated in the MPTs.		CCTV Monitoring Daily	07-111
Metal Parts Treaters				
ME-MPT-0101	Inductively heated cylindrical structures with inlet and exit air locks and cooling chamber designed to heat contents to a minimum of 1,000 °F.	[redacted]	Weekly	07-146
ME-MPT-0201			CCTV Monitoring Daily	07-146
SCWO Reactors				
MV-SCWO-1030	Cylindrical reactor consisting of various feed nozzles, removable liner assembly, and measurement ports	[redacted]	Weekly	10-101
MV-SCWO-2030				10-101
MV-SCWO-3030				10-101
Aluminum Filtration Units				
ML-AFS-1040	Automatic pressure filter system (plate) with disposable filter media (nominal filter area 50 ft2), with air supplying driving force for separation of solids from liquids.	[redacted]	Weekly	10-102
ML-AFS-2040				10-102
Reverse Osmosis (RO) Unit				
ML-RO-0101	Multimedia filters, canister filters, and reverse osmosis (RO) units.	[redacted]	Weekly	10-111
ML-RO-0201				10-111
ML-RO-0301				10-111
All Subpart X Equipment will be inspected **weekly** unless otherwise noted for the following types of problems: Corrosion, Releases of waste, Sign of releases of waste (stains, wet spots), Visible damage to leak detection systems or secondary containment, Visual alarms of leak detection systems, tank systems, or secondary containment.				
For those tank systems using leak detection systems, data from the leak detection systems will be examined **daily**.				
Miscellaneous units in Category A and B areas of the MDB will be inspected visually through the use of CCTV cameras.				