



Fire Protection Systems and Equipment

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	Document Owner (Title): Manager, Utilities, NPA Oil Sands	Applies To: Wood Buffalo Region

Summary of Changes

Rev No.	Section Changed	Revision Made
1	All	Major rewrite. Formerly known as LMS0023A.
2	Definitions	Updated FRS definition.
3	Appendix 3	Added new appendix. Previously numbered RGS0030A.

Scope

This document applies to work performed at Suncor Energy operated sites in the Wood Buffalo region that includes:

- Oil Sands including Firebag and Mackay River
- East Tank Farm
- Fort Hills

This standard applies to all Fire Protection Systems and Equipment in the Wood Buffalo Region.

Purpose

To define the minimum responsibilities for the ownership, maintenance, inspection, testing, installation or updating of Fire Protection Systems and Equipment.

Precautions

- Any Fire Protection Systems and Equipment requiring a Critical System Defeat is to follow [RGP09010](#) for the defeat.
- Any Fire Protection Systems and Equipment requiring a Safe Work Permit is to follow [RGP0004A](#) for the permit.
- The result of system activation at minimum is a reportable incident that will require an investigation.
- Only the ESD is authorized to use the Fire Water System, except in the case of emergency or as required for maintenance of the Fire Water System.
- In exceptional circumstances that could impact plant production, Fire Water System may be used providing prior authorization for fire water usage has been obtained from the Site Wide Lead and ESD.

Compliance

This document applies to work performed at Suncor Energy operating sites in the Wood Buffalo Region that includes Oil Sands, East Tank Farm, and Fort Hills. Deviations to this standard are performed in accordance with [RGP11007](#).

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Roles and Responsibilities

The following individuals and groups have the following roles and responsibilities:

- | | |
|--------------------------|---|
| Document Owner | <ul style="list-style-type: none">• Ensures this document is reviewed according to the required review cycle.• Ensures the document is updated to accommodate changes to Suncor, provincial, and federal regulation.• Ensures the document is updated to mitigate risks found as the result of an incident. |
| Document Approver | <ul style="list-style-type: none">• Ensures this standard is necessary and that it aligns with management and company direction. |
| Asset Owner | <ul style="list-style-type: none">• Ensures the requirements of this standard are adhered to.• Provides recommended changes to this document to the Document Owner. |
| Business Area | <ul style="list-style-type: none">• Ensures the requirements of this standard are adhered to. |
| ESD | <ul style="list-style-type: none">• Ensures the requirements of this standard are adhered to. |

References

- Suncor Corporate Technical Standards:
- [CTS-0060](#) – Fire Prevention and Protection
- [CTS-0061](#) – Fire Detection and Alarm Systems
- [RGP09010](#) – Critical System Defeat
- [RGP0004A](#) – Safe Work Permit
- [PGP0045A](#) – Working on Equipment in Areas with Fire Detection Protection Systems
- Alberta Building Code (2014)
- Alberta Fire Code (2014)

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Terms, Definitions and Acronyms The following terms, definitions and acronyms are used in this standard:

Asset Owner	Industrial Utilities/Facilities CFT, Firebag NPA CFT, Fort Hills NPA Site Services CFT.
Building and Occupant Life Safety Systems	The systems within a building or area that afford the occupants a determined level of life safety. Includes emergency power systems, exit and fire doors, exit lighting and exit signs.
ESD	Suncor Emergency Services Department.
FRS	Fire Risk Specialist – a designated fire prevention official or Fire Safety Codes Officer acting as Authority Having Jurisdiction under Suncor’s Quality Management Plan.
Fire Alarm Detection System	A combination of electrical devices designed to provide early detection and warn occupants of fire.
Fire Protection Authorization	An authorization form obtained from Emergency Services that provides information and authorization for anyone working on or near Fire Protection Systems and Equipment, excluding Portable Fire Fighting Equipment.
Fire Protection Systems and Equipment	Includes Fire Alarm Detection Systems, Water Based Fire Protection Systems, Fire Water Pump Assembly, Special Fire Suppression System and Portable Fire Fighting Equipment, Building and Occupant Life Safety Systems.
Fire Water Pump Assembly	All pumps designed to automatically boost the pressure and increase flow to the Water-Based Fire Protection Systems. Typically comprised of a pump and driver (diesel or electric) and commonly referred to as fire pump, as opposed to separate items. Also includes suction and discharge piping and pump controllers including fuel systems, water storage tanks and associated equipment.
Portable Fire Fighting Equipment	Includes all portable fire extinguishers, 150/350 lb dry chemical wheeled/stationary units or vehicle mounted, hose carts, foam carts, and wheeled monitors.
RFO	Ready for Operations (i.e., item is fully operational)
Special Fire Suppression Systems	Are designed to respond rapidly to contain or extinguish a fire. The special fire suppression consists of five types of suppression systems: clean agent, foam, dry chemical, wet chemical, carbon dioxide and water mist systems/hybrid systems.
Water Based Fire Protection System	The pipe and its components of automatic sprinkler, deluge, spray-mist, foam and hose reel/standpipe systems. Includes all fire hydrants and manifolds, post indicator valves, fixed monitors, and related appurtenances.

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Standard**1. Fire Alarm Detection Systems**

Responsibility	Item	Description
Asset Owner	1.1	When the shutdown or repair of Fire Alarm Detection Systems is required, an Operations Maintenance Coordinator (OMC) shall be assigned. The Coordinator shall take the appropriate steps to advise the stakeholders and tag equipment indicating OUT OF SERVICE as well as take appropriate steps to ensure that the system is restored to normal conditions as quickly as possible.
Asset Owner	1.2	In conjunction with the Business Area, ESD and FRS, shall ensure that during an interruption of protection of the Fire Alarm Detection Systems, temporary measures shall be put in place to provide an agreed upon level of protection.
Business Area/ ESD/Asset Owner	1.3	Ensure notifications for any damaged Fire Alarm Detection Systems is entered for the correct planning group. Refer to Appendix 2 for planner group info for each site.
ESD	1.4	Initiate emergency call-out as required for Fire Alarm Detection Systems that cannot be returned to normal operating condition.
Asset Owner	1.5	Provide personnel for emergency call-out, as requested, after hours or weekends and holidays to return system to normal operating condition.
ESD/Asset Owner	1.6	Provide emergency reset or shutdown on the Fire Alarm Detection Systems.
ESD/Asset Owner	1.7	Reset Fire Alarm Detection Systems after false or actual fire activations, where required.
Business Area/Asset Owner	1.8	Request Fire Protection Authorizations as required.
ESD	1.9	Issue Fire Protection Authorizations.
ESD	1.10	Visually inspect Fire Alarm Detection Systems Graphic User Interface (GUI) to ensure the specified devices on the Fire Protection Authorizations are in their normal operating condition before Fire Protection Authorization is closed out.
ESD	1.11	Maintain a record of all Fire Protection Authorizations issued for the last two years.
Asset Owner	1.12	Ensure Fire Alarm Detection Systems are inspected, tested and maintained in accordance to the Alberta Fire Code and Appendix 1 .
Asset Owner	1.13	Perform code required inspections per Appendix 1 , including but not limited to: <ul style="list-style-type: none"> • Unobstructed and accessibility • Electrical components in service • No physical damage
Asset Owner	1.14	Maintain up to date records of all tests, inspections and maintenance of Fire Alarm Detection Systems and ensure records are available for review.

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Responsibility	Step	Action
Asset Owner	1.15	Ensure all modifications or new installations are completed in accordance with applicable codes / standards.
Asset Owner	1.16	Maintain up-to-date: <ul style="list-style-type: none"> • engineering drawings/records, • governing documents (e.g., operating procedures, maintenance procedures), • supporting documents (e.g., manuals, training documentation).
FRS	1.17	Conduct audit inspections for PM compliance and maintain up to date records of the audits per Appendix 3 .

2. Water Based Fire Protection Systems

Responsibility	Item	Description
Asset Owner	2.1	When the shutdown or repair of Water Based Fire Protection Systems is required, an Operations Maintenance Coordinator (OMC) shall be assigned. The Coordinator shall take the appropriate steps to advise the stakeholders and tag equipment indicating OUT OF SERVICE as well as take appropriate steps to ensure that the system is restored to normal conditions as quickly as possible.
Asset Owner	2.2	In conjunction with the Business Area, ESD and FRS, shall ensure that during an interruption of protection of the Water Based Fire Protection Systems, temporary measures shall be put in place to provide an agreed upon level of protection.
Business Area/ ESD/Asset Owner	2.3	Ensure notifications for any damaged Water Based Fire Protection Systems is entered for the correct planning group. Refer to Appendix 2 for planner group info for each site.
ESD	2.4	Initiate emergency call-out as required for Water Based Fire Protection Systems that cannot be returned to normal operating condition.
Asset Owner	2.5	Provide personnel for emergency call-out, as requested, after hours or weekends and holidays for the following: <ul style="list-style-type: none"> • To re-winterize hydrants after use. • To return system to normal operating condition.
ESD	2.6	Provide emergency reset or shutdown on the Water Based Fire Protection Systems.
Business Area/Asset Owner	2.7	Request Fire Protection Authorizations as required.

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Responsibility	Step	Action
ESD	2.8	Issue Fire Protection Authorizations.
Asset Owner	2.9	Visually inspect Water Based Fire Protection Systems to ensure the specified control valves on the Fire Protection Authorizations are in their normal operating position before Fire Protection Authorization is closed out.
ESD	2.10	Maintain a record of all Fire Protection Authorizations issued for the last two years.
Asset Owner	2.11	Ensure Water Based Fire Protection Systems are inspected, tested and maintained in accordance to the Alberta Fire Code and Appendix 1 .
Asset Owner	2.12	Perform code required inspections per Appendix 1 , including but not limited to: <ul style="list-style-type: none"> • Unobstructed and accessibility • Control valves in normal position • Electrical components in service • No physical damage • Gauges indicating normal pressures • Foam tank level.
Business Area	2.13	Conduct visual inspection, at least monthly, to check for: <ul style="list-style-type: none"> • Unobstructed and accessibility • In a clean serviceable condition • Protective cover in place (if required) • Hose properly stored • Hose and nozzle in good condition
ESD	2.14	Ensure Water Based Fire Protection Systems is free and clear of obstructions and Ready for Operation (RFO). <ul style="list-style-type: none"> • Inspect heat in hose houses and deluge enclosures for correct operations during winter months October 1 to April 30.
ESD	2.15	Ensure fire lanes are free and clear of obstructions.
Business Area	2.16	Ensure Water Based Fire Protection Systems is free and clear of obstructions and Ready for Operation (RFO). <ul style="list-style-type: none"> • Snow removal around fire hydrants, monitors and post indicator valves are given a high priority.
Asset Owner	2.17	Winterize the system each fall by October 1 of each year.
Asset Owner	2.18	Maintain up to date records of all tests, inspections and maintenance of Water Based Fire Protection Systems and ensure records are available for review.

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Responsibility	Step	Action
Asset Owner	2.19	Ensure all modifications or new installations are completed in accordance with applicable codes / standards.
Asset Owner	2.20	Maintain up-to-date: <ul style="list-style-type: none"> • engineering drawings/records, • governing documents (e.g., operating procedures, maintenance procedures), • supporting documents (e.g., manuals, training documentation).
FRS	2.21	Conduct audit inspections for PM compliance and maintain up to date records of the audits per Appendix 3 .

3. Fire Water Pump Assembly

Responsibility	Item	Description
Asset Owner	3.1	When the shutdown or repair of Fire Water Pump Assembly is required, an Operations Maintenance Coordinator (OMC) shall be assigned. The Coordinator shall take the appropriate steps to advise the stakeholders and tag equipment indicating OUT OF SERVICE as well as take appropriate steps to ensure that the system is restored to normal conditions as quickly as possible.
Asset Owner	3.2	In conjunction with the Business Area, ESD and FRS, shall ensure that during an interruption of protection of the Fire Water Pump Assembly , temporary measures shall be put in place to provide an agreed upon level of protection.
Business Area/ ESD/Asset Owner	3.3	Ensure notifications for any damaged Fire Water Pump Assembly is entered for the correct planning group/ Refer to Appendix 2 for planner group info for each site.
Asset Owner	3.4	Operator must respond to pump running indication immediately, and remain on scene until released by ESD or incident commander.
Asset Owner	3.5	Advise Emergency Services immediately when a fire pump is out of service.
ESD	3.6	Initiate emergency call-out as required for Fire Water Pump Assembly that cannot be returned to normal operating condition.
Asset Owner	3.7	Provide personnel for emergency call-out, as requested, after hours or weekends and holidays to return system to normal operating condition.
ESD	3.8	Provide emergency reset or shutdown on the Fire Water Pump Assembly.
Business Area/Asset Owner	3.9	Request Fire Protection Authorizations as required.

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Responsibility	Step	Action
ESD	3.10	Issue Fire Protection Authorizations.
Asset Owner	3.11	Visually inspect Fire Water Pump Assembly to ensure the specified control valves on the Fire Protection Authorizations are in their normal operating position before Fire Protection Authorization is closed out.
ESD	3.12	Maintain a record of all Fire Protection Authorizations issued for the last two years.
Asset Owner	3.13	Ensure Fire Water Pump Assembly are inspected, tested and maintained in accordance to the Alberta Fire Code and Appendix 1 .
Asset Owner	3.14	Perform code required inspections per Appendix 1 , including but not limited to: <ul style="list-style-type: none"> • Unobstructed and accessibility • Control valves in normal position • Electrical components in service • No physical damage • Gauges indicating normal pressures
Asset Owner	3.15	Operate and inspect all Fire Water Pump Assemblies weekly, including reservoir level.
Asset Owner	3.16	Check pump room temperature daily during freezing weather.
Asset Owner	3.17	Perform annual performance testing (flow tests) of Fire Water Pump Assemblies and provide report.
FRS	3.18	Witness annual performance test of the Fire Water Pump Assemblies.
Asset Owner	3.19	Maintain up to date records of all tests, inspections and maintenance of Fire Alarm Detection Systems and ensure records are available for review.
Asset Owner	3.20	Ensure all modifications or new installations are completed in accordance with applicable codes / standards.
Asset Owner	3.21	Maintain up-to-date: <ul style="list-style-type: none"> • engineering drawings/records, • governing documents (e.g., operating procedures, maintenance procedures), • supporting documents (e.g., manuals, training documentation).
FRS	3.22	Conduct audit inspections for PM compliance and maintain up to date records of the audits per Appendix 3 .

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4. Special Fire Suppression Systems

Responsibility	Item	Description
Asset Owner	4.1	When the shutdown or repair of Special Fire Suppression System is required, an Operations Maintenance Coordinator (OMC) shall be assigned. The Coordinator shall take the appropriate steps to advise the stakeholders and tag equipment indicating OUT OF SERVICE as well as take appropriate steps to ensure that the system is restored to normal conditions as quickly as possible.
Asset Owner/FRS	4.2	In conjunction with the Business Area, ESD and FRS, shall ensure that during an interruption of protection of Special Fire Suppression System, temporary measures shall be put in place to provide an agreed upon level of protection.
Business Area/ ESD/Asset Owner	4.3	Ensure notifications for any damaged Special Fire Suppression System is entered for the correct planning group. Refer to Appendix 2 for planner group info for each site.
ESD	4.4	Initiate emergency call-out as required for Special Fire Suppression System that cannot be returned to normal operating condition.
Asset Owner	4.5	Provide personnel for emergency call-out, as requested, after hours or weekends and holidays to return system to normal operating condition.
ESD	4.6	Provide emergency reset or shutdown on the Special Fire Suppression System.
Business Area/Asset Owner	4.7	Request Fire Protection Authorizations as required.
ESD	4.8	Issue Fire Protection Authorizations.
Asset Owner	4.9	Visually inspect Special Fire Suppression System to ensure the specified control valves on the Fire Protection Authorizations are in their normal operating position before Fire Protection Authorization is closed out.
ESD	4.10	Maintain a record of all Fire Protection Authorizations issued for the last two years.
Asset Owner	4.11	Ensure Special Fire Suppression Systems are inspected, tested and maintained in accordance to the Alberta Fire Code and Appendix 1 .
Asset Owner	4.12	Perform code required inspections per Appendix 1 , including but not limited to: <ul style="list-style-type: none"> • Unobstructed and accessibility • Control valves in normal position • Electrical components in service • No physical damage • Gauges indicating normal pressures

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Responsibility	Step	Action
Business Area	4.13	Conduct visual inspection, at least monthly, to check for: <ul style="list-style-type: none"> • Unobstructed and accessibility
Asset Owner	4.14	Maintain up to date records of all tests, inspections and maintenance of Special Fire Suppression System and ensure records are available for review.
Asset Owner	4.15	Ensure all modifications or new installations are completed in accordance with applicable codes / standards.
Asset Owner	4.16	Maintain up-to-date: <ul style="list-style-type: none"> • engineering drawings/records, • governing documents (e.g., operating procedures, maintenance procedures), • supporting documents (e.g., manuals, training documentation).
FRS	4.17	Conduct audit inspections for PM compliance and maintain up to date records of the audits per Appendix 3 .

5. Portable Fire Fighting Equipment

Responsibility	Item	Description
Business Area/ ESD/Asset Owner	5.1	Ensure notifications for any damaged Portable Fire Fighting Equipment is entered for the correct planning group. Refer to Appendix 2 for planner group info for each site.
ESD	5.2	Ensure all Portable Fire Fighting Equipment are inspected, tested and maintained in accordance to the Alberta Fire Code and Appendix 1 .
Business Area	5.3	Conduct visual inspection, at least monthly, to check for: <ul style="list-style-type: none"> • Unobstructed and accessibility • In a clean serviceable condition • Protective cover in place (if required) • Gauges registering proper pressure (where applicable) • Hose properly stored • Hose and nozzle in good condition • Seals intact • Sign and date attached inspection tag
Business Area	5.4	Provide assistance as requested in transporting Portable Fire Fighting Equipment to and from the areas during the Annual Maintenance Inspection (change out) program.

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Responsibility	Step	Action
ESD	5.5	Maintain sufficient stocks of spare parts and chemicals for repairs or recharge.
Business Area	5.6	Maintain up-to-date inventory records of all Portable Fire Fighting Equipment located within the Business Unit.
Asset Owner	5.7	Ensure all modifications or new installations are completed in accordance with applicable codes / standards.
ESD	5.8	Ensures up-to-date: <ul style="list-style-type: none"> • engineering drawings/records, • governing documents (e.g., operating procedures, maintenance procedures), • supporting documents (e.g., manuals, training documentation).
ESD	5.9	Conduct audit inspections for PM compliance and maintain up to date records of the audits.

6. Building and Occupant Life Safety System

Responsibility	Item	Description
Asset Owner	6.1	When the shutdown or repair of Building and Occupant Life Safety System is required, an Operations Maintenance Coordinator (OMC) shall be assigned. The Coordinator shall take the appropriate steps to advise the stakeholders and tag equipment indicating OUT OF SERVICE as well as take appropriate steps to ensure that the system is restored to normal conditions as quickly as possible.
Asset Owner	6.2	In conjunction with the Business Area, ESD and FRS, shall ensure that during an interruption of protection of the Building and Occupant Life Safety System, temporary measures shall be put in place to provide an agreed upon level of protection.
Business Area/ ESD/Asset Owner	6.3	Ensure notifications for any damaged Building and Occupant Life Safety System is entered for the correct planning group. rRefer to Appendix 2 for planner group info for each site.
ESD	6.4	Initiate emergency call-out as required for Building and Occupant Life Safety System that cannot be returned to normal operating condition.
Asset Owner	6.5	Provide personnel for emergency call-out, as requested, after hours or weekends and holidays to return system to normal operating condition.
ESD	6.6	Provide emergency reset or shutdown on the Building and Occupant Life Safety System.

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Responsibility	Step	Action
ESD	6.7	Reset Building and Occupant Life Safety System after false or actual fire activations, where required.
Business Area/Asset Owner	6.8	Request Fire Protection Authorizations as required.
ESD	6.9	Issue Fire Protection Authorizations.
ESD	6.10	Visually inspect Building and Occupant Life Safety System to ensure they are returned to normal operating condition before Fire Protection Authorization is closed out.
ESD	6.11	Maintain a record of all Fire Protection Authorizations issued for the last two years.
Asset Owner	6.12	Ensure Building and Occupant Life Safety System are inspected, tested and maintained in accordance to the Alberta Fire Code and Appendix 1 .
Asset Owner	6.13	Perform code required inspections per Appendix 1 , including but not limited to: <ul style="list-style-type: none"> • Unobstructed and accessibility • Electrical components in service • Systems not obstructed • No physical damage • Emergency exits and lighting.
Business Area	6.14	Conduct visual inspection, at least monthly, to check for: <ul style="list-style-type: none"> • Unobstructed and accessibility • In a clean serviceable condition • Fire doors and dampers • Emergency exits and lighting.
Asset Owner	6.15	Maintain up to date records of all tests, inspections and maintenance of Building and Occupant Life Safety System and ensure records are available for review.
Asset Owner	6.16	Ensure all modifications or new installations are completed in accordance with applicable codes / standards.
Asset Owner	6.17	Maintain up-to-date: <ul style="list-style-type: none"> • engineering drawings/records, • governing documents (e.g., operating procedures, maintenance procedures), • supporting documents (e.g., manuals, training documentation).
FRS	6.18	Conduct audit inspections for PM compliance and maintain up to date records of the audits per Appendix 3 .

End of Standard

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Appendix 1 – Frequency of Inspection, Testing, Maintenance for Fire Protection Systems and Equipment

Whenever a defect or deficiency is discovered in any Fire Protection Systems and Equipment as a result of these maintenance requirements, CORRECTIVE ACTION must be taken IMMEDIATELY.

Check: means a visual observation to ensure the device or system is in place and is not obviously damaged or obstructed.

Inspect: means physical examination to determine that the device or system will apparently perform in accordance with its intended function.

Test: means operation of device or system to ensure that it will perform in accordance with its intended function.

AFC: Alberta Fire Code

* These articles require written records as Division C, 2.2.1.2

Daily		AFC ref. #
A1	Fire Alarm System – Check AC power lamp.	6.3.1.2.
A2	Exit Signs – Check to ensure they are in clean and legible condition.	2.7.3.1
A3	Fire Doors – Check doors in fire separation to ensure they remain closed.	2.2.2.4.(1)
A4	Exit Lights – Check to ensure they are illuminated and in good repair.	2.7.3.1.(2)
A5	Fire Pump Rooms/ buildings – Check temperature during cold weather.	6.4.1.1
A6	Fire Protection Water Tanks – Check tank heating equipment, enclosure and water temperature during heating season in systems without low temperature alarms.	6.4.1.1
Weekly		AFC ref. #
B1	Fire Pump – Check fuel and oil level.	6.4.1.1
B2	Fire Pump – Check water level in reservoirs.	6.4.1.1
B3	Fire Pump – Inspect and operate.	6.4.1.1
B4	Sprinkler System – Check that the control valves are open.	6.4.1.1
B5	Dry Pipe Sprinkler System – Check pressure gauge to ensure that air pressure is being maintained.	6.4.1.1
B6	Fire Protection Water Tanks – Check tank heating equipment, enclosure and water temperature during heating season in systems with low temperature alarms.	6.4.1.1
B7	Emergency Generator System – Inspect, test and maintain per Table 2 of CAN/CSA-C282-05 Emergency Electrical Supply for Buildings.	6.5.1.1*
B8	Hoods, Filters and Ducts in Ventilation Systems – Check for accumulation of combustible deposits and clean as required.	2.6.1.3
Monthly		AFC ref. #
C1	Fire Alarm System – Test system and check all components on emergency power supply including standby power batteries.	6.3.1.2.*
C2	Voice Communication System – Test the system.	6.3.1.2.*
C3	Water Based Fire Protection Systems – Inspect all control valve tamper switches.	6.4.1.1
C4	Fire Protection Water Tanks – Inspect the water level in tanks not equipped with supervised water level alarms connected to a constantly attended location.	6.4.1.1
C5	Emergency Generator System – Inspect, test and maintain per Table 3 of CAN/CSA-C282-05 Emergency Electrical Supply for Buildings.	6.5.1.1*
C6	Portable Fire Extinguishers – Inspect and sign or punch tag.	6.2.1.1*
C7	Exit Doors – Test all doors forming part of a means of egress to ensure they are operable.	2.7.2.1
C8	Emergency Lighting Systems – Inspect and test batteries, units and lamps.	6.5.1.6
C9	Fire Doors – Operate all doors in fire separations.	2.2.2.4.(3)

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Every Three Months (Quarterly)		AFC ref. #
D1	Fire Department Connections -- Inspect.	6.4.1.1
D2	Sprinkler Alarm Devices – Inspect to verify that they are free of physical damage.	6.4.1.1
D3	Water Based Fire Protection Systems – Test all system water flow alarm devices.	6.4.1.1*
D4	Water Based Fire Protection Systems – Test all pre-action/deluge valves.	6.4.1.1*
D5	Water Based Fire Protection Systems – Test all dry pipe valves/quick-opening devices.	6.4.1.1*
D6	Fire Department Connections -- Inspect.	6.4.1.1
D7	Main Drain – Test the main drain of at least one system downstream of a device that has the sole water supply through a backflow preventer and/or pressure reducing valves.	6.4.1.1*
D8	Fire Protection Tanks – Inspect the water level in tanks equipped with supervised water level alarms that are connected to a constantly attended location.	6.4.1.1
D9	Clean hoods, grease removal devices, fans and ducts on commercial equipment used in deep frying, charbroiling or similar cooking operations.	2.6.1.9*
Every Six Months		AFC ref. #
E1	Fire Protection Systems – Test supervisory control valves.	6.4.1.1*
E2	Special Fire Suppression Systems – Inspect, test and maintain systems as per the appropriate NFPA code	6.6.1.1
E3	Commercial Cooking Equipment Suppression System – Inspect and maintain.	2.6.1.13*
E4	Clean hoods, grease removal devices, fans and ducts on commercial cooking equipment.	
E5	Emergency Generator System – Inspect, test and maintain per Table 4 of CAN/CSA-282-05.	6.5.1.1*
Annually		AFC ref. #
F1	Fire Alarm System – Conduct a test of the system by qualified personnel acceptable to the Authority having Jurisdiction (AHJ)	6.3.1.2
F2	Voice Communication System – Conduct a test of the system by qualified personnel acceptable to the AHJ.	6.3.1.4
F3	Water-Based Fire Protection System – Inspect, test, operate and maintain components of each system as required by the appropriate NFPA or CAN/ULC document referenced in the AFC.	6.4.1.1
F4	Fire Pump – Conduct a flow test.	6.4.1.1
F5	Water-Based Fire Protection System Riser – Test the main drain of each riser to determine whether there has been a change in the condition of the water supply piping and control valves.	6.4.1.1
F6	Hydrants – Inspect and flow test all private hydrants.	6.4.1.1
F7	Standpipe Hose – Inspect and re-rack.	6.4.1.1
F8	Fire Dampers and Fire Stop Flaps – Inspect.	2.2.2.4
F9	Sprinkler Heads – Inspect supply of spare sprinkler heads and replace as required.	6.4.1.1
F10	Fire Extinguishers – Conduct maintenance procedure by qualified personnel acceptable to the AHJ	6.2.1.1
F11	Electromagnetic Door Locks – Test to ensure they work properly.	2.7.2.1*
F12	Sliding Doors – Test sliding doors that are required to swing on their vertical axis in the direction of egress when pressure is applied.	2.7.2.1*
F13	Mechanical Air Conditioning and Ventilation Systems – Operate disconnect switches	2.6.1.6
F14	Fire Dampers and Fire Stop Flaps – Inspect.	2.2.2.4
F15	Emergency Generator System – Inspect, test and maintain as per Table 5 of CAN/CSA-282-05.	6.5.1.1*
F16	Chimneys, Flues and Flue Pipes – Inspect.	2.6.1.4
F17	Chimney Spark Arrestors – Inspect and clean.	2.6.2.3
Every Two Years		AFC ref. #
G1	Fire Protection Water Tanks – Check steel tanks for corrosion.	6.4.1.1
G2	Fire Protection Water Tanks – Inspect all tanks, connected to a non-potable water supply for sediment.	6.4.1.1
Every Three Years		AFC ref.#
H1	Dry Pipe Sprinkler Systems – Test the dry pipe valve with the control valve fully open and the quick-opening device, if provided, in service.	

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Every Five Years		AFC ref. #
I1	Fire Extinguishers – Hydrostatically test carbon dioxide and water type extinguishers.	6.2.1.1*
I2	Sprinkler System – Test extra-high temperature sprinkler heads per NPFA document.	6.4.1.1*
I3	Standpipe System – Flow test systems.	6.4.1.1*
I4	Standpipe System – Hydrostatically test system.	6.4.1.1*
I5	Standpipe system – Test pressure control and pressure reducing valves.	6.4.1.1*
I6	Standpipe System – Test standpipe hose.	6.4.1.1*
I7	Water Based Fire Protection Systems – Test all gauges.	6.4.1.1*
I8	Private Hydrant – Flow test exposed and underground piping	6.4.1.1*
I9	Water Based Fire Protection System – Inspect fire protection water tank for corrosion.	6.4.1.1
I10	Emergency Generator System – Inspect, test, and maintain per Table 6 of CAN/CSA-282-05.	6.5.1.1*
Every Six Years		AFC ref. #
J1	Fire Extinguishers – Replace the extinguishing agent in dry chemical.	6.2.1.1
Every Twelve Years		AFC ref. #
K1	Fire Extinguishers – Hydrostatically test dry chemical and vaporizing liquid.	6.2.1.1*
Every Twenty Years		AFC ref.#
L1	Sprinkler System – Test fast response sprinkler heads.	6.4.1.1
As Required		AFC ref. #
M1	Fire Department Access – Ensure streets, yards and private roadways that are provided for fire department access are kept clear.	2.5.1.3
M2	Dry Pipe Sprinkler Systems – Test the dry pipe valve with the control valve fully open and the quick-opening device, if provided, in service.	6.4.1.1
M3	Sprinkler System – Inspect auxiliary drains.	6.4.1.1
M4	Means of Egress – Check exterior passageways and exterior exit stairs and ensure they are maintained free of snow, ice and obstructions.	2.7.1.7
M5	Smoke Control Equipment – Maintain equipment in a manner that ensures satisfactory operation.	7.3.1.1
M6	Fire Doors – Check doors in fire separations to ensure they are closed	2.2.2.4
M7	Check lint traps in laundry equipment.	2.4.1.4

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Document Approver: Stephen Young, Director Oil Sands NPA; Darin Quintilio, Director Fort Hills NPA

Appendix 2 – Planner Group Notification Information

Area		Planner Group	Plant
Oil Sands	Base Plant	FI3	1000
	Firebag	FM1	1400
Fort Hills		I04	764
East Tank Farm (ETF)		TFI	1310

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Document Approver: Stephen Young, Director Oil Sands NPA; Darin Quintilio, Director Fort Hills NPA

Appendix 3 – Auditing of Fire Protection Systems and Equipment by Fire Risk Specialist

Purpose

Suncor Fire Risk Specialists (FRS) are required to conduct periodic audits of PMs on the Fire Protection Systems and Equipment (excluding Portable Fire Fighting Equipment) at the sites under their jurisdiction. These audits are to be conducted to ensure that the highest level of safety of personnel and protection of assets is accomplished in accordance with the respective, governing codes and standards.

References

Fire Protection Systems and Equipment are required to be inspected, tested and maintained per [Appendix 1](#), the Alberta Fire Code; Division B, Part 6. Within Part 6, the following specific sections are to be adhered to by FRS:

- Electrical Fire Protection Systems and Equipment: Section 6.3. The referenced standard is CAN/ULC-S536, *“Inspection and Testing of Fire Alarm Systems”*.
- Mechanical Fire Protection Systems and Equipment: Section 6.4. The referenced standard is NFPA 25, *“Inspection, Testing and Maintenance of Water-based Fire Protection Systems”*.
- Special fire suppression systems are covered under Section 6.6 and are required to be inspected, tested and maintained as per the requirements of the relevant standard(s). (NFPA 11-Foam, NFPA 12-CO2, NFPA 17-Dry Chem, NFPA 2001- Clean Agent, NFPA 750- Water mist).

Auditing Requirements

- **Oil Sands including Firebag and East Tank Farm (ETF)**

A spreadsheet shall be compiled by the Fire Asset Specialist using information drawn from Building Reports and shall be presented to FRS on at least a monthly basis. Spreadsheet is also reviewed periodically at the weekly CFT meeting. PMs shall be marked with either RED or GREEN color to indicate whether the PM has passed 100% or not. RED PMs shall have a notification number entered on the spreadsheet to identify what aspects of the PM were unsuccessful and the corrective actions assigned. GREEN PMs shall be considered as 100% successful.

Further investigation is also required when the unsuccessful PM is in a building identified as a building requiring a FRS inspection. Such buildings shall be given greater scrutiny and follow-up on PM resolutions.

- **Fort Hills**

A stewardship report will be provided by the Suncor Fire System Coordinator through the maintenance contractor on a minimum of a monthly basis. This report shall show the percentage of PASSED and FAILED PMs and shall identify what aspects of the PM were unsuccessful and the corrective actions assigned.

Tracking

The FRS shall maintain a record of PM lists in the appropriate year folder located under FPA Audits in Livelink/ECMS. This information shall be provided to auditor as required for review.

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Document Approver: Stephen Young, Director Oil Sands NPA; Darin Quintilio, Director Fort Hills NPA



The following individuals have approved and signed this document.

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Date: Tuesday, 12 December 2017, 02:18 PM Mountain Time

Meaning: Approver 1 Signed

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UserName: Darin Quintilio (dquintilio)

Title: Dir NPA

Date: Friday, 15 December 2017, 08:46 AM Mountain Time

Meaning: Approver 2 Signed

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