WHAT IS CLAIMED IS:

1. A method for cleaning of an installed gas turbine engine comprising an engine core and defining a primary gas path, the engine core including at least one airfoil extending into the primary gas path, the method comprising:

initiating a cleaning program, wherein initiating the cleaning program comprises;

executing a flight schedule having a plurality of predetermined flight stages, wherein the plurality of predetermined flight stages comprises a cruising stage and a descent stage; and

establishing that the installed gas turbine engine is in one of the cruising stage or the descent stage;

directing a cleaning fluid toward the engine core in response to the initiation of the cleaning program; and

initiating delivery of the cleaning fluid through a non-atomizing nozzle as a non-vaporized liquid within the primary gas path to the engine core.

2. The method of claim 1, wherein initiating the cleaning program includes receiving a pre-buildup abatement signal.

3. The method of claim 1, wherein initiating the cleaning program includes receiving a particulate detection signal.

4. The method of claim 1, wherein initiating the cleaning program includes determining a temperature limit has been exceeded.

5. The method of claim 1, wherein the cleaning fluid includes a primary liquid, wherein the gas turbine engine encloses a reservoir configured to store the primary liquid, and wherein directing the cleaning fluid includes motivating the primary liquid from the reservoir.

6. The method of claim 5, wherein directing the cleaning fluid includes selectively introducing a secondary agent into the primary liquid.

7. The method of claim 1, wherein initiating the cleaning program includes determining reduced combustion within the gas turbine engine.

8. A method for cleaning of an installed gas turbine engine comprising an engine core and defining a primary gas path, the engine core including at least one airfoil extending into the primary gas path, the method comprising:

initiating a cleaning program;

directing a cleaning fluid toward the engine core in response to the initiation of the cleaning program;

initiating delivery of the cleaning fluid through a non-atomizing nozzle as a non-vaporized liquid within the primary gas path to the engine core; and

tuning engine output, including maintaining an engine thrust at a predetermined level during delivery of the cleaning fluid to the gas turbine engine in-flight.

9. A method for cleaning of a gas turbine engine installed on an aircraft, the gas turbine engine comprising an engine core and defining a primary gas path, the engine core including at least one airfoil extending into the primary gas path, the method comprising:

executing a flight schedule having a plurality of predetermined flight stages, wherein the plurality of predetermined flight stages comprises a takeoff stage, and ascent stage, a cruising stage, a descent stage, and a landing stage;

establishing that the landing stage has been completed;

taxiing the aircraft with the gas turbine engine operating in an idle mode;

initiating a cleaning program;

directing a cleaning fluid toward the engine core in response to the initiation of the cleaning program; and

initiating delivery of the cleaning fluid through a non-atomizing nozzle as a non-vaporized liquid within the primary gas path to the engine core while the aircraft is taxiing.

10. The method of claim 9, wherein the cleaning fluid is carried on board the aircraft.

11. The method of claim 9, wherein the cleaning fluid comprises a water on board the aircraft, the method further comprising:

taxiing the aircraft to a destination gate;

establishing a reduced combustion state within the gas turbine engine by ceasing combustion; and

replenishing the water on board the aircraft.