



Power Plant Maintenance Checklist Template

Boiler & Steam System

Inspection and maintenance tasks related to the boiler and steam generation system.

Last Boiler Inspection Date

Water Level (inches)

Steam Pressure (PSI)

Burner Flame Appearance

- ☐ Normal
- ☐ Sooty
- ☐ Weak
- ☐ Excessive Length

Observations/Notes (e.g., unusual noises, leaks)

Write something...

Blowdown Valve Operation

- ☐ Operates Normally
- ☐ Stuck Closed
- ☐ Stuck Open

Attach Boiler Inspection Report (if applicable)

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Feedwater TDS (ppm)

Enter a number...

Turbine & Generator

Checks and maintenance procedures for the turbine and generator components.

Turbine Speed (RPM)

Enter a number...

Generator Voltage (kV)

Enter a number...

Bearing Temperatures (°C)

Enter a number...

Lubrication Condition

☐ Excellent

☐ Good

☐ Fair

☐ Poor

Vibration Analysis Notes

Write something...

Last Blade Inspection Date

Enter date...

Vibration Spectrum Graph

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Abnormal Noises Observed?

☐ Humming

☐ Grinding

☐ Clicking

☐ None

Electrical Systems

Inspection of transformers, switchgear, motors, and other electrical equipment.

Transformer Voltage (kV)

Enter a number...

Switchgear Temperature (°C)

Enter a number...

Breaker Status

- ☐ Open
- ☐ Closed
- ☐ Tripped

Observations on Motor Condition

Write something...

Last Inspection Date (Motor)

Enter date...

Potential Issues Observed

- ☐ Overheating
- ☐ Arcing
- ☐ Loose Connections
- ☐ Unusual Noise
- ☐ None

Infrared Image (if applicable)

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Fuel Handling & Storage

Assessment of fuel storage tanks, delivery systems, and handling procedures.

Last Tank Level Inspection Date

Enter date...

Tank Level (feet)

Enter a number...

Water Cut (%)

Enter a number...

Tank Integrity (Visual Inspection)

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor


Potential Leaks/Corrosion Areas?

- ☐ Seam Welds
- ☐ Bottom
- ☐ Roof
- ☐ Piping Connections
- ☐ None Observed

Detailed Observations & Comments

Write something...

Photos/Diagrams of Tank Condition

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Time of Inspection

Cooling Water System

Checks for corrosion, leaks, and proper chemical treatment in the cooling water system.

Cooling Tower Water Inlet Temperature (°C)

Enter a number...

Cooling Tower Water Outlet Temperature (°C)

Enter a number...

pH Level of Cooling Water

Enter a number...

Total Dissolved Solids (TDS) (ppm)

Enter a number...

Cooling Water Treatment Chemical Type

- ☐ Scale Inhibitor
- ☐ Biocide
- ☐ Corrosion Inhibitor
- ☐ Other

Last Chemical Treatment Date

Enter date...

Observations/Comments (e.g., unusual discoloration, leaks)

Write something...

Cooling Tower Fan Status

- ☐ Operating Normally
- ☐ Noisy
- ☐ Vibrating
- ☐ Malfunctioning

HVAC Systems

Inspection and maintenance of heating, ventilation, and air conditioning systems.

Supply Air Temperature (°C)

Enter a number...

Return Air Temperature (°C)

Enter a number...

Static Pressure (Pa)

Enter a number...

Filter Condition

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Last Filter Change Date

Enter date...

Observations & Notes

Write something...

Refrigerant Leak Detection

- ☐ No Leak Detected
- ☐ Minor Leak - Repair Recommended
- ☐ Major Leak - Immediate Repair Required

Instrumentation & Control

Verification of instrument calibration and control system functionality.

Pressure Transmitter Reading (PSI)

Enter a number...

Flow Rate (GPM)

Enter a number...

Temperature (Degrees Celsius)

Enter a number...

Valve Position (Open/Closed)

- ☐ Open
- ☐ Closed

Alarm Status (Normal/Alarm)

- ☐ Normal
- ☐ Alarm

Control Loop Performance Notes

Write something...

Last Calibration Date

Enter date...

Technician Signature

Safety Equipment

Inspection of safety devices like fire extinguishers, emergency shutdown systems, and alarms.

Fire Extinguisher Inspection - Quantity

Enter a number...

Last Fire Extinguisher Service Date

Enter date...


Emergency Shutdown System Status

- ☐ Functional
- ☐ Needs Repair
- ☐ Out of Service

Alarm System Test Results

- ☐ Passed
- ☐ Failed
- ☐ Not Tested

Attach Alarm System Test Report (if applicable)

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Number of Emergency Lighting Units Checked

Enter a number...

Emergency Lighting Unit Condition

- ☐ Functional
- ☐ Needs Replacement
- ☐ Not Working

Inspector Signature

Environmental Compliance

Checks for adherence to environmental regulations regarding emissions and waste disposal.

Last Emissions Monitoring Date

NOx Emissions (ppm)

SOx Emissions (ppm)

Water Discharge Flow Rate (m³/hr)

Water Treatment Chemical Usage

- ☐ Within Limits
- ☐ Exceeding Upper Limit
- ☐ Exceeding Lower Limit

Emissions Monitoring Report

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Observations & Corrective Actions

Write something...

Spill Prevention Plan Review

- ☐ Reviewed and Updated
- ☐ No Update Required

General Plant Housekeeping

Assessment of overall cleanliness and organization of the plant area.

Debris Volume (Cubic Meters)

Enter a number...

Floor Condition

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Housekeeping Issues Observed

- ☐ Trash Accumulation
- ☐ Spills/Leaks
- ☐ Obstructions
- ☐ Pests Observed
- ☐ Poor Ventilation
- ☐ Clutter

Notes on Specific Areas

Write something...

Last Cleaning Date

Enter date...

Inspector Signature