Condition Assessment Manual

Transformer Inspection Form and Checklist

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Prepared by

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And

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for the
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Main Transformer – Information Checklist

General Information:

Date of Site Visit: _____ Unit No._____

Plant name: _____

Source/s of data: _____ Plant contacts: _____

Main Transformer Nameplate Data:

Manufacturer: _____ Year Manufactured: _____ Serial No.:_____

Voltage Ratings (kV):_____ Rated Output (MVA):_____ Phase (1 or 3):_____

Temperature Rise Rating: _____ Cooling Class: _____ BIL Rating: _____

De-energized Tap Changer - No. of positions above and below set tap and % steps: _____

Cooling System:

General description of the cooling system and components:

_____

_____

Cooling stages controlled by what temperature device_____

Oil Preservation System:

General description and type of the oil preservation system:

_____

_____

Neutral Grounding:

Neutral Ground Method (i.e., oil filled reactor, air core reactor, resistance, solid, etc.):

_____

_____

Load Tap Changer (if equipped):

General description type, and tap positions of the load tap changer:

_____

_____

_____

_____

Advanced Technology Monitoring Instrumentation (if equipped):

Describe any advanced monitoring systems installed (i.e. winding temperature fiber optics, partial discharge probes, on-line gas-in-oil analyzer, bushing power factor monitors, etc.)

_____
_____
_____

Summary Maintenance History / Major Repairs:

_____
_____
_____
_____
_____
_____

Summary Failure History/ Major Faults:

_____
_____
_____
_____
_____
_____

Summary Abnormal Operating Events:

_____
_____
_____
_____
_____
_____

Test Reports and Data Availability:

Factory Test Reports available (Yes/No): _____

Routine Electrical Test Reports available (Yes/No): _____

Thermographic Inspection data available (Yes/No): _____

Gas-in Oil Analysis data available (Yes/No): _____

Insulating Oil Quality data available (Yes/No): _____

Additional Information:

On-site spare transformer available (Yes/No): _____

System spare transformer available (Yes/No): _____

Critical spare parts available (Yes/No): _____

Fixed fire suppression system provided (Yes/No): _____

Oil containment system provided (Yes/No): _____

Additional Comments:

_____
_____
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Main Transformer Inspection Checklist

Plant_____ **Transformer Position**_____ **Serial No**_____ **Date**_____

Task	Yes	No	N/A	Comments
Main Tank				
Paint system in good condition				
Rust observed				
Tank grounds in good condition				
Provisions for future additional cooling				
Conduit and fittings secure				
External core ground provided				
Excessive vibration or noise observed				
Oil leakage observed				
Cooling System				
Radiator or cooler fins clean				
All valves to main tank open and secure				
All fans in place and operational				
All oil pumps in place and operational				
Oil flow indicators function properly				
Excessive vibration or noise observed				
Oil leakage observed				
Oil Preservation System				
Inert gas positive pressure system				
Pressure regulator for nitrogen blanket properly set				
Gas blanket pressure reading				
or				
Conservator (free breathing, membrane, air cell) system				
Oil level gauge indicating proper level				
Silica gel breather in good condition				
Oil cup on breather filled to proper level				
or				
Sealed tank system				
Pressure gauge reading on main tank				

Task	Yes	No	N/A	Comments
Bushings				
All bushings clean and no defects observed				
Bushing oil levels at proper level				
Oil leakage observed				
De-energized tap changer (DETC)				
Position indicator tap position recorded				
Locking mechanism properly engaged and secured				
Routinely exercised				
Load tap changer (LTC)				
Position indicator tap position recorded				
Oil level gauge (if equipped) indicating proper level				
Silica gel breather in good condition				
Oil cup on breather filled to proper level				
Oil leakage observed				
Control Cabinet				
All connections/components appear in good condition				
Weather tight seals in good condition				
Strip heaters in cabinet				
Evidence of moisture egress				
Protective and Indicating Devices				
Oil temperature indicator reading				
Oil temperature indicator set points				
Oil temperature remotely recorded				
Winding temperature indicator reading				
Winding temperature indicator set points				
Winding temperature remotely recorded				
Buchholtz Gas Accumulator relay alarm/trip				
Sudden pressure (rapid rise) relay alarm/trip				
Gas Detector relay alarm/trip				
Other monitoring or indicating devices installed				

Task	Yes	No	N/A	Comments
Other				
Additional comments or findings to be addressed				
Inspection performed by:				

For overall questions
please contact:

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