

Insulating Fluid Analysis

WILKES BARRE VAMC

Unit Substation B

VAULT ROOM GEORGETOWN (PYB-0140 TRN)

Equipment ID	PYB-0140	Manufacturer	COOPER	Owner	WILKES BARRE VAMC
Apparatus Type	TRN	Serial No	PYB-0140	Location	VAULT ROOM
Fluid Type	OIL	Year Mfg		Designation	GEORGETOWN
Fluid Cap.	280 US Gal	Model/Type		Description	POWER TRANSFORMER
Analysis Rules	OILTRN	kV Rating	12.47	Preservation	INERT GAS PRESSURE
		MVA Rating	1.5	Cooling	OA

Gas Analysis	11/18/2013	ppm/day	Limits
Sample No	1		
Fluid Temp C	45		
Hydrogen (H2)	<5		< 100
Methane (CH4)	16		< 120
Ethane (C2H6)	19		< 65
Ethylene (C2H4)	3		< 50
Acetylene (C2H2)	<1		< 5
Carbon Monoxide (CO)	153		< 350
Carbon Dioxide (CO2)	3116	Abnormal	< 2500
Oxygen (O2)			
Nitrogen (N2)			
TDCG (ppm)	191		< 720
CO2/CO	20.37		
O2/N2			
Water	1		< 35
Water Saturation	1		
Equipment Condition	1		

Result		Port or Tank	BOT MAIN	Test Lab	EPS
Interval (days)	365	Sampled by	AS	Test Date	12/16/2013
Gas Std	OILTRN IEEE DG	Reason	ROUTINE	Lab Ref No	

Gas Analysis Remarks

SAMPLE TAKEN BY EPS PERSONNEL FOR ROUTINE TESTING.
 * Continue normal operation.

Fluid Quality	11/18/2013	Limits
Sample No	1	
Fluid Temp C	45	
Acid Number	0.02 mg KOH/g	< .2
Interfacial Tension	40.2 mN/m	> 24
Diel Str (D877)	48.3 kV	> 26
Water	1 ppm	< 35
Water Saturation	1 %	< 20
Color	2.5	< 3
Specific Gravity	0.878	
Fluid / PCB Cond	1/0	
Visual	CLR	

Result		Port or Tank	MAIN	Test Lab	EPS
Interval (days)	365	Sampled by	AS	Test Date	12/16/2013
Fluid Std	OILTRN TO 69 (IEEE)	Reason	ROUTINE	Lab Ref No	

Fluid Quality Analysis Remarks

SAMPLE TAKEN BY EPS PERSONNEL FOR ROUTINE TESTING.
 * The oil condition is satisfactory for continued use.

Report Date 12/26/2013

Transformer Oil Analyst 3.3



Insulating Fluid Analysis

WILKES BARRE VAMC

Unit Substation A

VAULT ROOM PINE RIDGE (PXA-0068 TRN)

Equipment ID	PXA-0068	Manufacturer	COOPER	Owner	WILKES BARRE VAMC
Apparatus Type	TRN	Serial No	PXA-0068	Location	VAULT ROOM
Fluid Type	RTEMP	Year Mfg		Designation	PINE RIDGE
Fluid Cap.	269 US Gal	Model/Type		Description	POWER TRANSFORMER
Analysis Rules	OILTRN	kV Rating	12.47	Preservation	INERT GAS PRESSURE
		MVA Rating	1.5	Cooling	OA

Gas Analysis	11/18/2013	ppm/day	Limits
Sample No	1		
Fluid Temp C	45		
Hydrogen (H2)	<5		< 100
Methane (CH4)	7		< 120
Ethane (C2H6)	5		< 65
Ethylene (C2H4)	<1		< 50
Acetylene (C2H2)	<1		< 5
Carbon Monoxide (CO)	96		< 350
Carbon Dioxide (CO2)	2381		< 2500
Oxygen (O2)			
Nitrogen (N2)			
TDCG (ppm)	108		< 720
CO2/CO	24.80		
O2/N2			
Water	4		< 35
Equipment Condition	1		

Result		Port or Tank	BOT MAIN	Test Lab	EPS
Interval (days)	365	Sampled by	AS	Test Date	12/16/2013
Gas Std	OILTRN IEEE DG	Reason	ROUTINE	Lab Ref No	

Gas Analysis Remarks

SAMPLE TAKEN BY EPS PERSONNEL FOR ROUTINE TESTING.
 * Continue normal operation.

Fluid Quality	11/18/2013	Limits
Sample No	1	
Fluid Temp C	45	
Acid Number	0.03 mg KOH/g	< .2
Interfacial Tension	38.2 mN/m	> 24
Diel Str (D877)	55.4 kV	> 26
Water	4 ppm	< 35
Color	2.0	< 3
Specific Gravity	0.880	
Fluid / PCB Cond	1/0	
Visual	CLR	

Result		Port or Tank	MAIN	Test Lab	EPS
Interval (days)	365	Sampled by	AS	Test Date	12/16/2013
Fluid Std	OILTRN TO 69 (IEEE)	Reason	ROUTINE	Lab Ref No	

Fluid Quality Analysis Remarks

SAMPLE TAKEN BY EPS PERSONNEL FOR ROUTINE TESTING.
 * The oil condition is satisfactory for continued use.

Report Date 12/16/2013

Transformer Oil Analyst 3.3



Insulating Fluid Analysis

WILKES BARRE VAMC

Unit Substation MDS

BOILER ROOM 750KVA (810339-1 TRN)

Equipment ID	810339-1	Manufacturer	SQUARE D	Owner	WILKES BARRE VAMC
Apparatus Type	TRN	Serial No	810339-1	Location	BOILER ROOM
Fluid Type	OIL	Year Mfg		Designation	750KVA
Fluid Cap.	335 US Gal	Model/Type		Description	POWER TRANSFORMER
Analysis Rules	OILTRN	kV Rating	12.47	Preservation	INERT GAS PRESSURE
		MVA Rating	.75	Cooling	OA

Gas Analysis	11/18/2013	ppm/day		Limits
Sample No	1			
Fluid Temp C	40			
Hydrogen (H2)	<5			< 100
Methane (CH4)	13			< 120
Ethane (C2H6)	4			< 65
Ethylene (C2H4)	7			< 50
Acetylene (C2H2)	<1			< 5
Carbon Monoxide (CO)	673	High		< 350
Carbon Dioxide (CO2)	3949	Abnormal		< 2500
Oxygen (O2)				
Nitrogen (N2)				
TDCG (ppm)	697			< 720
CO2/CO	5.87			
O2/N2				
Water	4			< 35
Water Saturation	3			
Equipment Condition	3			
Result	???/CELLULOSE	Port or Tank	BOT MAIN	Test Lab
Interval (days)	30	Sampled by	AS	Test Date
Gas Std	OILTRN IEEE DG	Reason	ROUTINE	Lab Ref No

Gas Analysis Remarks

SAMPLE TAKEN BY EPS PERSONNEL FOR ROUTINE TESTING.

* Cellulose insulation may be affected. Obtain more data to allow trend analysis.

Fluid Quality	11/18/2013			Limits
Sample No	1			
Fluid Temp C	40			
Acid Number	0.03	mg KOH/g		< .2
Interfacial Tension	39.1	mN/m		> 24
Diel Str (D877)	48.7	kV		> 26
Water	4	ppm		< 35
Water Saturation	3	%		< 20
Color	1.0			< 3
Specific Gravity	0.880			
Fluid / PCB Cond	1/0			
Visual	CLR			
Result		Port or Tank	MAIN	Test Lab
Interval (days)	365	Sampled by	AS	Test Date
Fluid Std	OILTRN TO 69 (IEEE)	Reason	ROUTINE	Lab Ref No

Fluid Quality Analysis Remarks

SAMPLE TAKEN BY EPS PERSONNEL FOR ROUTINE TESTING.

* The oil condition is satisfactory for continued use.

Report Date 12/26/2013

Transformer Oil Analyst 3.3

