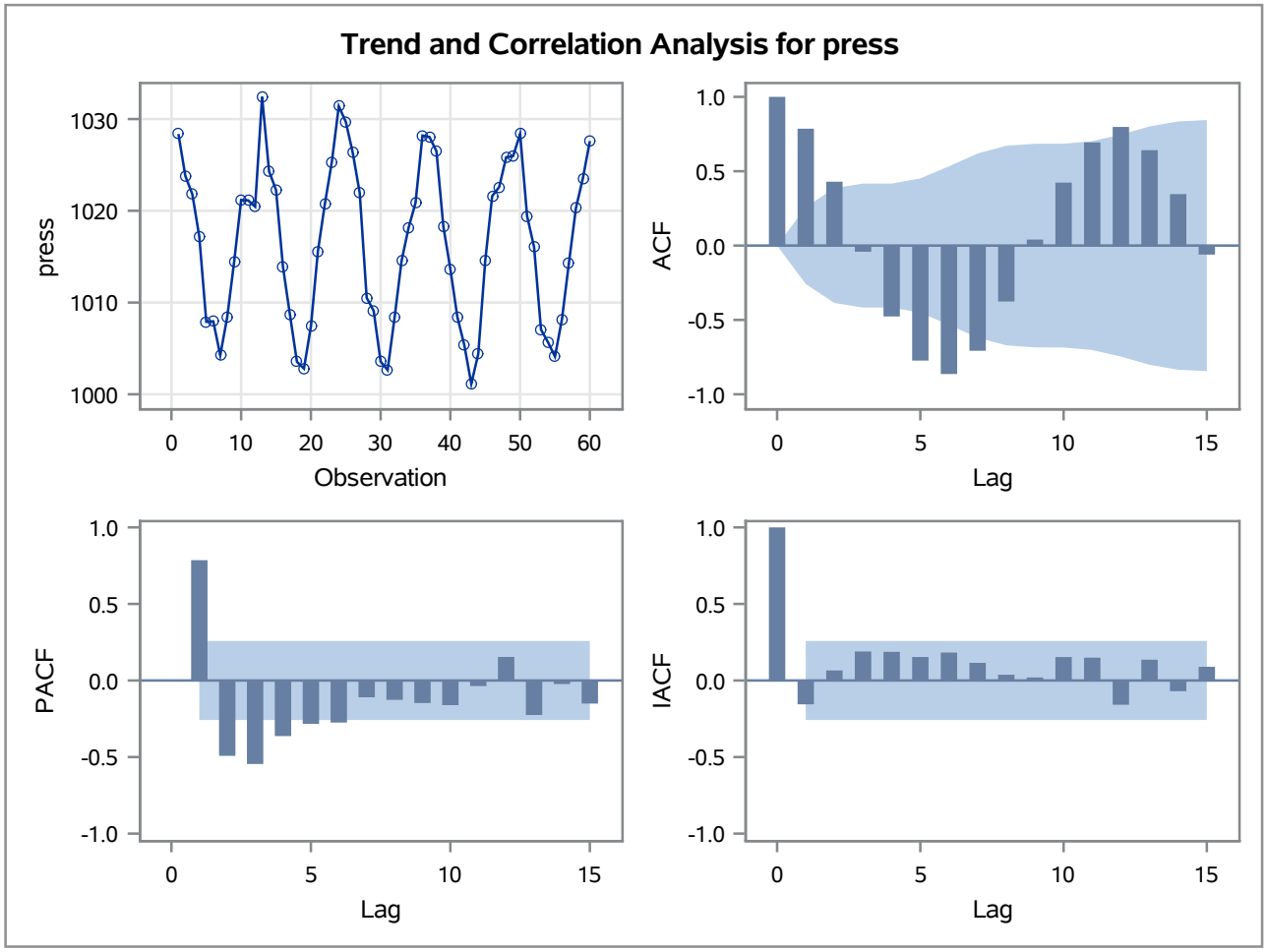
Name of Variable = press	
Mean of Working Series	1016.5
Standard Deviation	8.784038
Number of Observations	60

Autocorrelation Check for White Noise									
To Lag	**Chi-Square**	**DF**	**Pr > ChiSq**	**Autocorrelations**					
6	157.80	6	<.0001	0.786	0.429	-0.041	-0.477	-0.773	-0.864
12	302.31	12	<.0001	-0.707	-0.376	0.040	0.423	0.694	0.798



Warning: Estimates did not improve after a ridge was encountered in the objective function. The iteration process has been terminated.

Warning: Estimates may not have converged.

ARIMA Estimation Optimization Summary	
Estimation Method	Maximum Likelihood
Parameters Estimated	5
Termination Criteria	Maximum Relative Change in Estimates
Iteration Stopping Value	0.001
Criteria Value	9.94E-14
Maximum Absolute Value of Gradient	2672.548

ARIMA Estimation Optimization Summary	
R-Square Change from Last Iteration	0.232544
Objective Function	Log Gaussian Likelihood
Objective Function Value	-137.597
Marquardt's Lambda Coefficient	1E12
Numerical Derivative Perturbation Delta	0.001
Iterations	19
Warning Message	Estimates may not have converged.

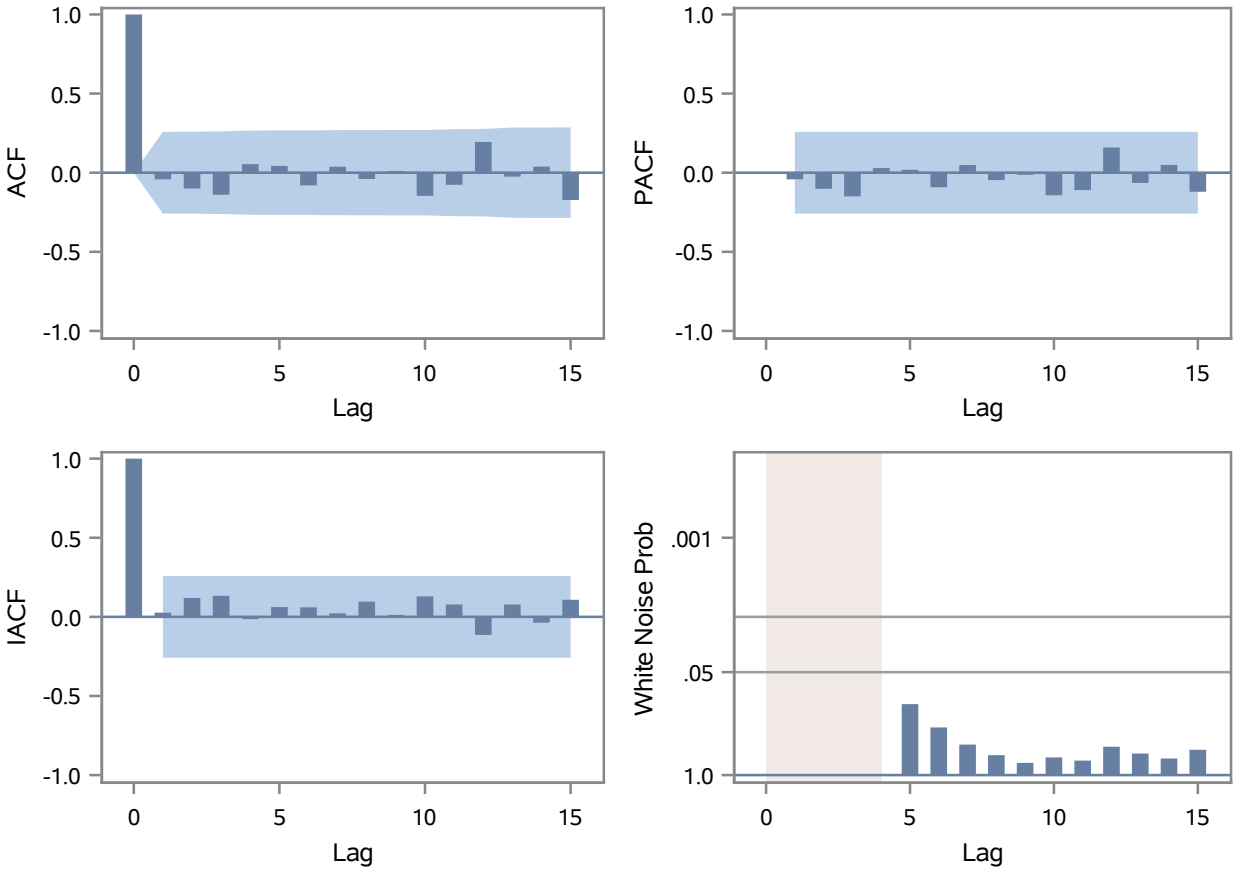
Maximum Likelihood Estimation					
Parameter	**Estimate**	**Standard Error**	**t Value**	**Approx Pr > |t|**	**Lag**
MU	1016.5	0.27126	3747.23	<.0001	0
MA1,1	1.65481	0.10457	15.83	<.0001	1
MA1,2	-0.91405	0.10729	-8.52	<.0001	2
AR1,1	1.73091	0.0034155	506.79	<.0001	1
AR1,2	-0.99979	0.0011175	-894.66	<.0001	2

Constant Estimate	273.3197
Variance Estimate	5.362903
Std Error Estimate	2.315794
AIC	285.1936
SBC	295.6653
Number of Residuals	60

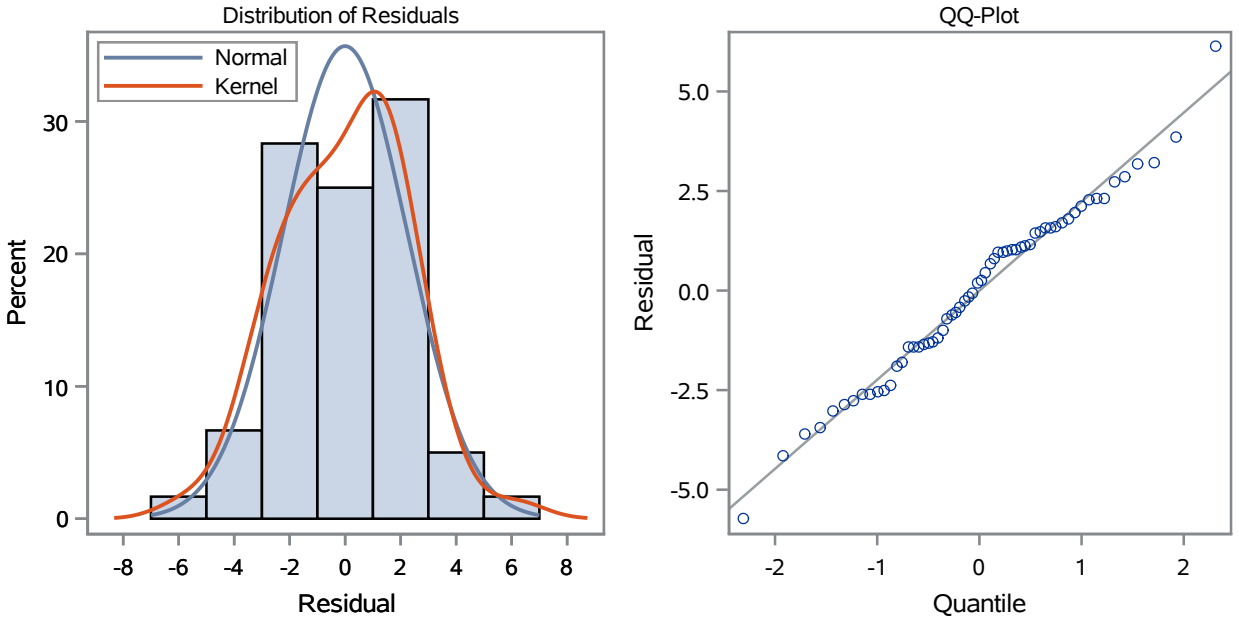
Correlations of Parameter Estimates					
Parameter	**MU**	**MA1,1**	**MA1,2**	**AR1,1**	**AR1,2**
MU	1.000	0.058	-0.027	0.151	-0.051
MA1,1	0.058	1.000	-0.892	0.485	-0.812
MA1,2	-0.027	-0.892	1.000	-0.195	0.864
AR1,1	0.151	0.485	-0.195	1.000	-0.299
AR1,2	-0.051	-0.812	0.864	-0.299	1.000

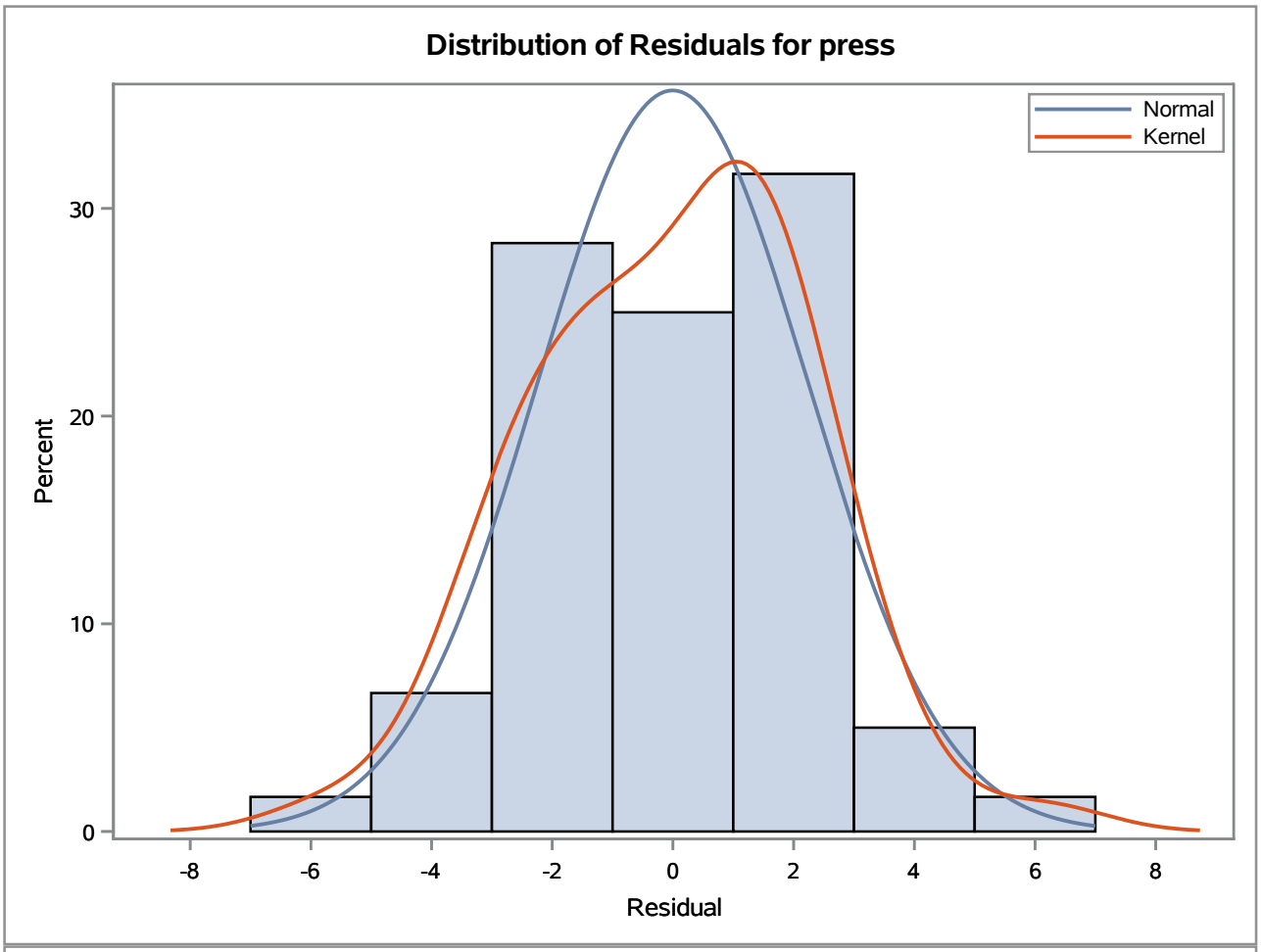
Autocorrelation Check of Residuals									
To Lag	**Chi-Square**	**DF**	**Pr > ChiSq**	**Autocorrelations**					
6	2.77	2	0.2501	-0.042	-0.100	-0.139	0.054	0.043	-0.080
12	7.95	8	0.4388	0.038	-0.040	0.011	-0.146	-0.076	0.194
18	12.16	14	0.5931	-0.025	0.039	-0.173	0.129	-0.018	-0.042
24	20.34	20	0.4366	0.001	0.005	-0.009	-0.235	0.163	0.026

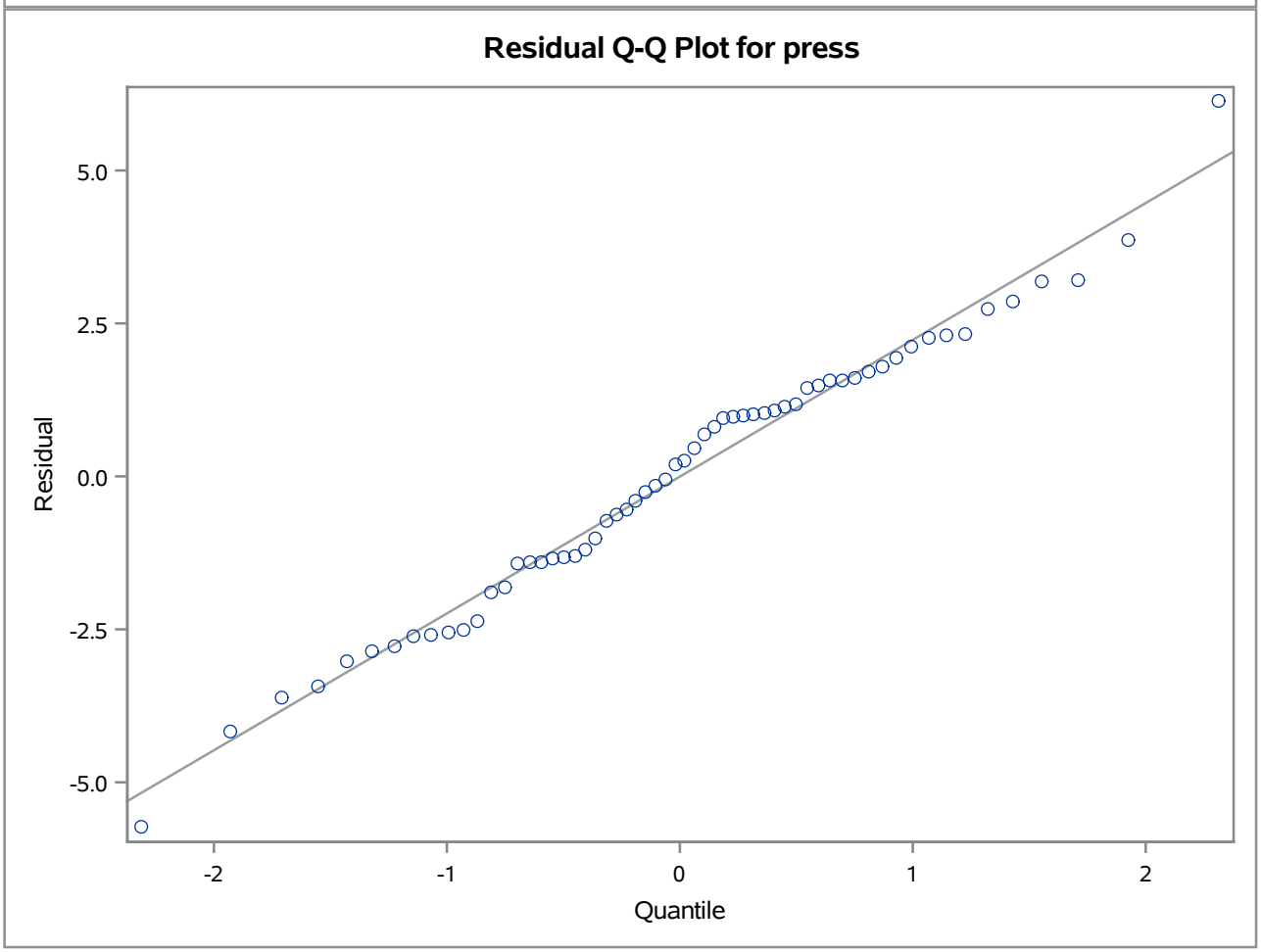
Residual Correlation Diagnostics for press



Residual Normality Diagnostics for press




Distribution of Residuals for press
Normal
Kernel
Percent
30
20
10
0
-8
-6
-4
-2
0
2
4
6
8
Residual


Residual Q-Q Plot for press
Residual
5.0
2.5
0.0
-2.5
-5.0
-2
-1
0
1
2
Quantile

Model for variable press	
Estimated Mean	1016.482

Autoregressive Factors	
Factor 1:	1 - 1.73091 B**(1) + 0.99979 B**(2)

Moving Average Factors	
Factor 1:	1 - 1.65481 B**(1) + 0.91405 B**(2)

Name of Variable = pollution	
Mean of Working Series	94.20369
Standard Deviation	27.42528
Number of Observations	60

Autocorrelation Check for White Noise									
To Lag	**Chi-Square**	**DF**	**Pr > ChiSq**	**Autocorrelations**					
6	17.55	6	0.0075	0.127	-0.028	-0.041	-0.061	-0.214	-0.435
12	26.25	12	0.0099	-0.151	0.049	-0.026	-0.113	0.110	0.254

Correlation of pollution and press	
Number of Observations	60
Variance of transformed series pollution	668.1777
Variance of transformed series press	18.81756

Both series have been prewhitened.

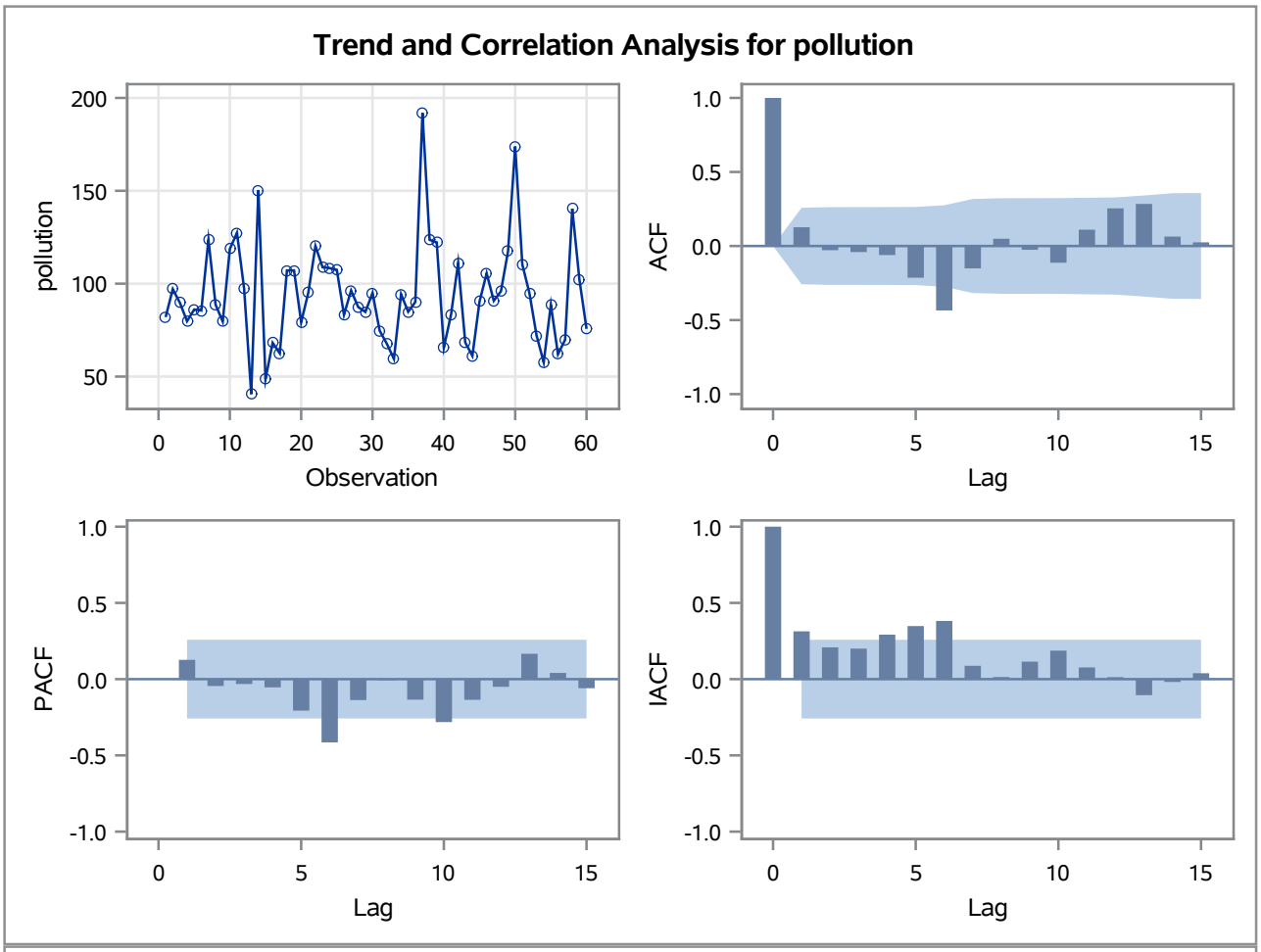
Crosscorrelation Check Between Series									
To Lag	**Chi-Square**	**DF**	**Pr > ChiSq**	**Crosscorrelations**					
5	6.70	6	0.3494	0.061	0.256	-0.172	-0.114	0.013	-0.001
11	13.64	12	0.3242	-0.148	-0.295	-0.029	-0.017	0.067	-0.027

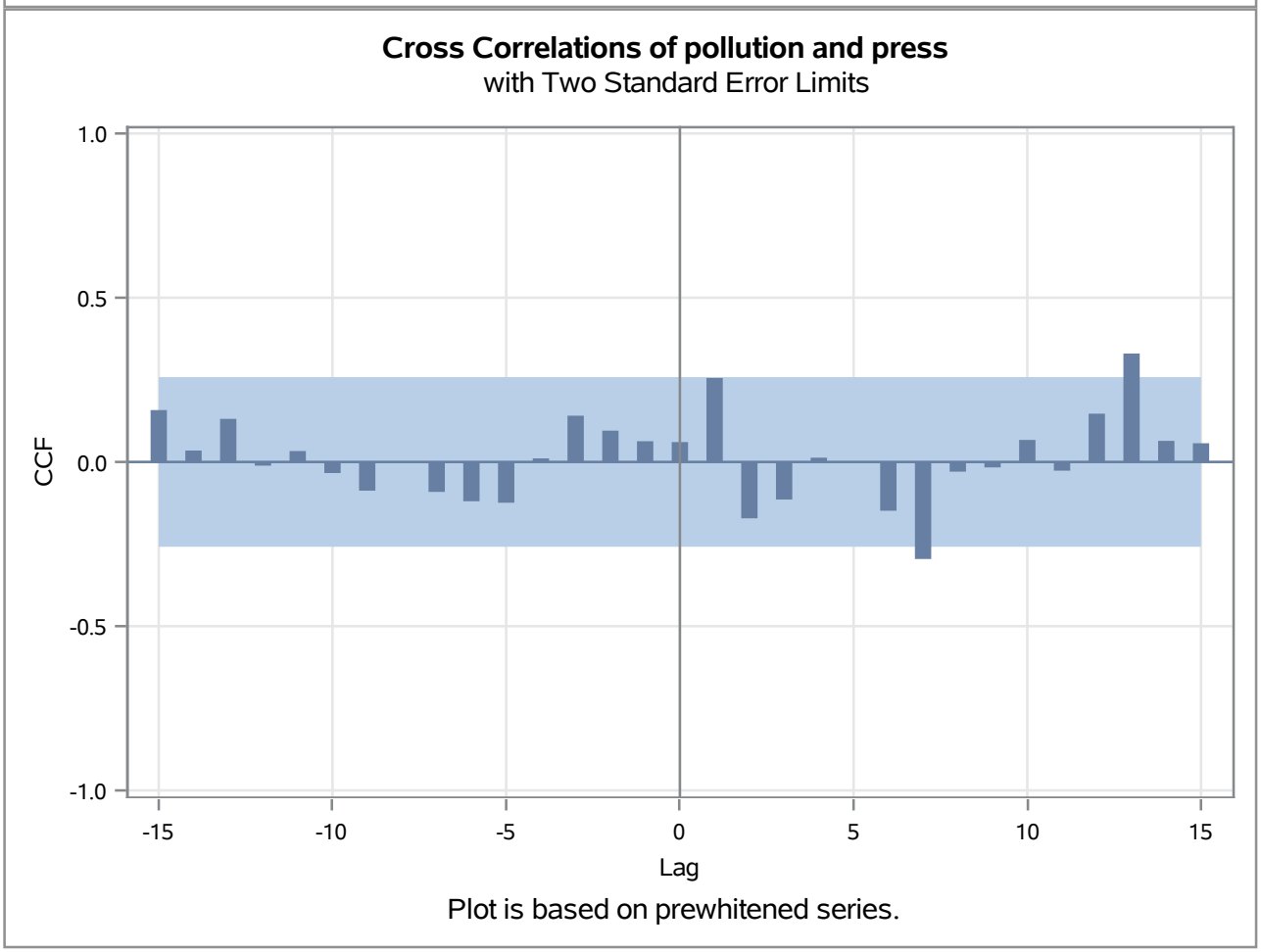
Both variables have been prewhitened by the following filter:

Prewhitening Filter

Autoregressive Factors	
Factor 1:	1 - 1.73091 B**(1) + 0.99979 B**(2)

Moving Average Factors	
Factor 1:	1 - 1.65481 B**(1) + 0.91405 B**(2)


Trend and Correlation Analysis for pollution
pollution
Observation
ACF
Lag
PACF
Lag
IACF
Lag

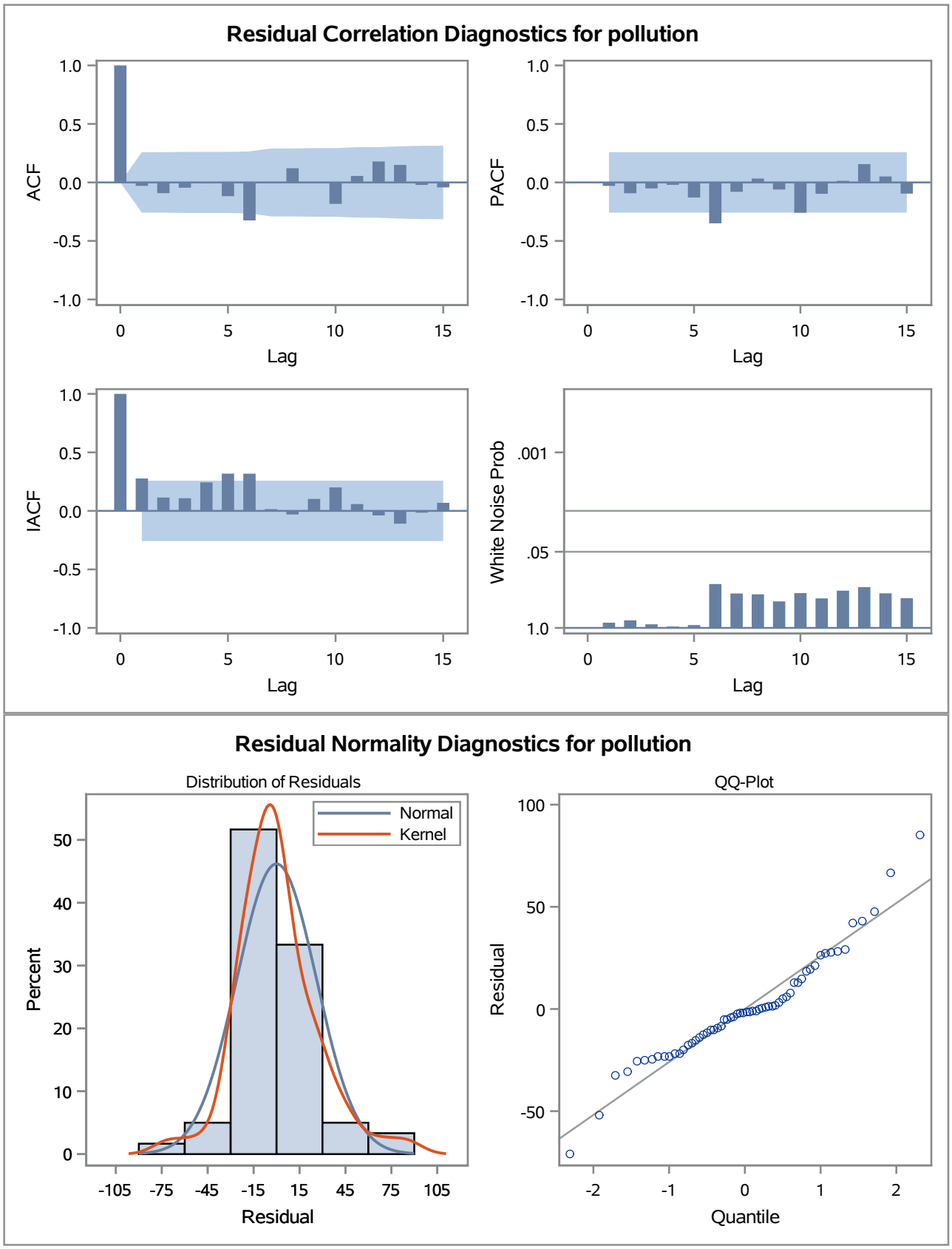

Cross Correlations of pollution and press
with Two Standard Error Limits
CCF
Lag
Plot is based on prewhitened series.

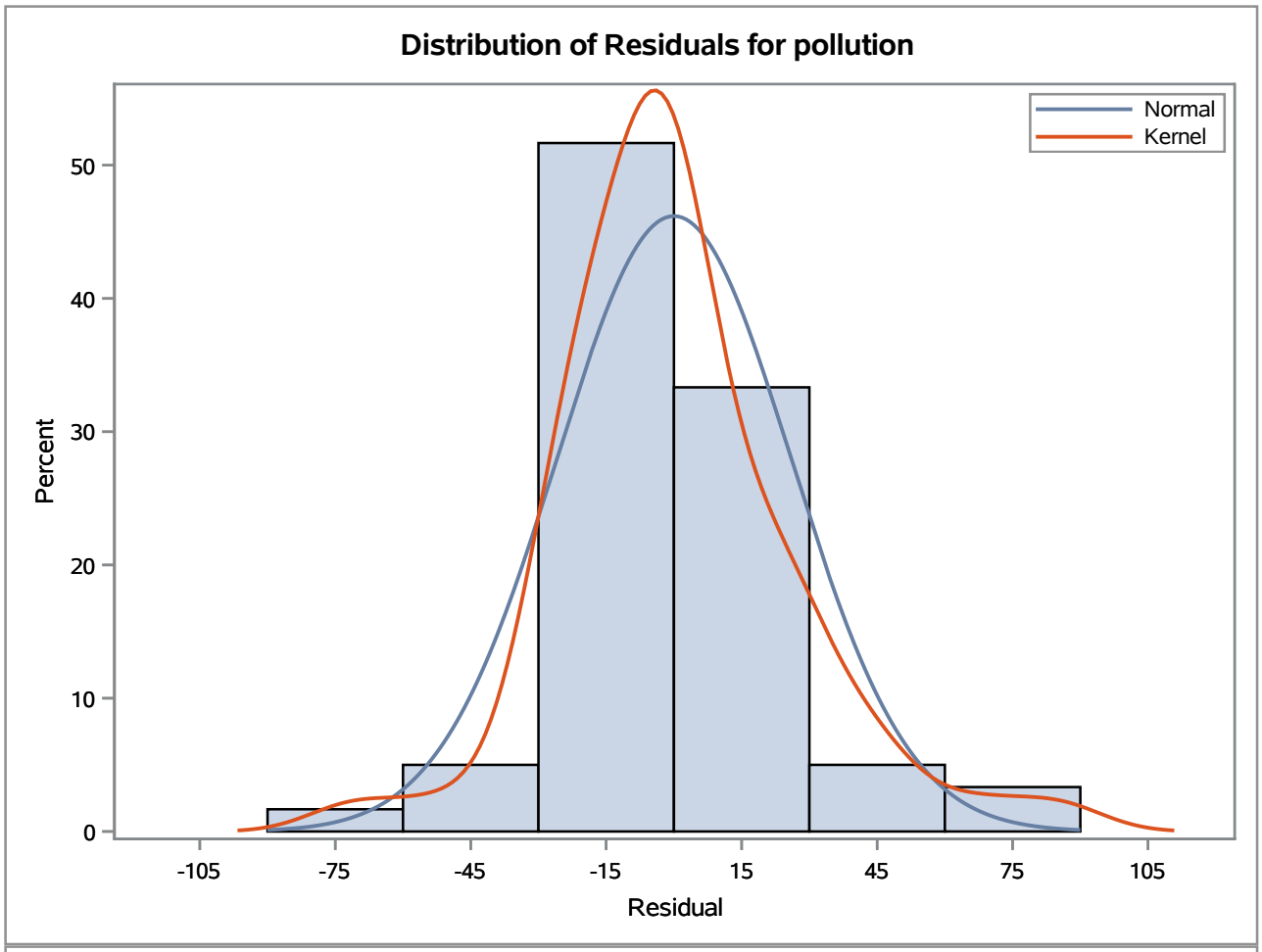
Maximum Likelihood Estimation							
Parameter	Estimate	Standard Error	t Value	Approx Pr > |t|	Lag	Variable	Shift
MU	-1014.9	390.46348	-2.60	0.0093	0	pollution	0
NUM1	1.09113	0.38411	2.84	0.0045	0	press	0

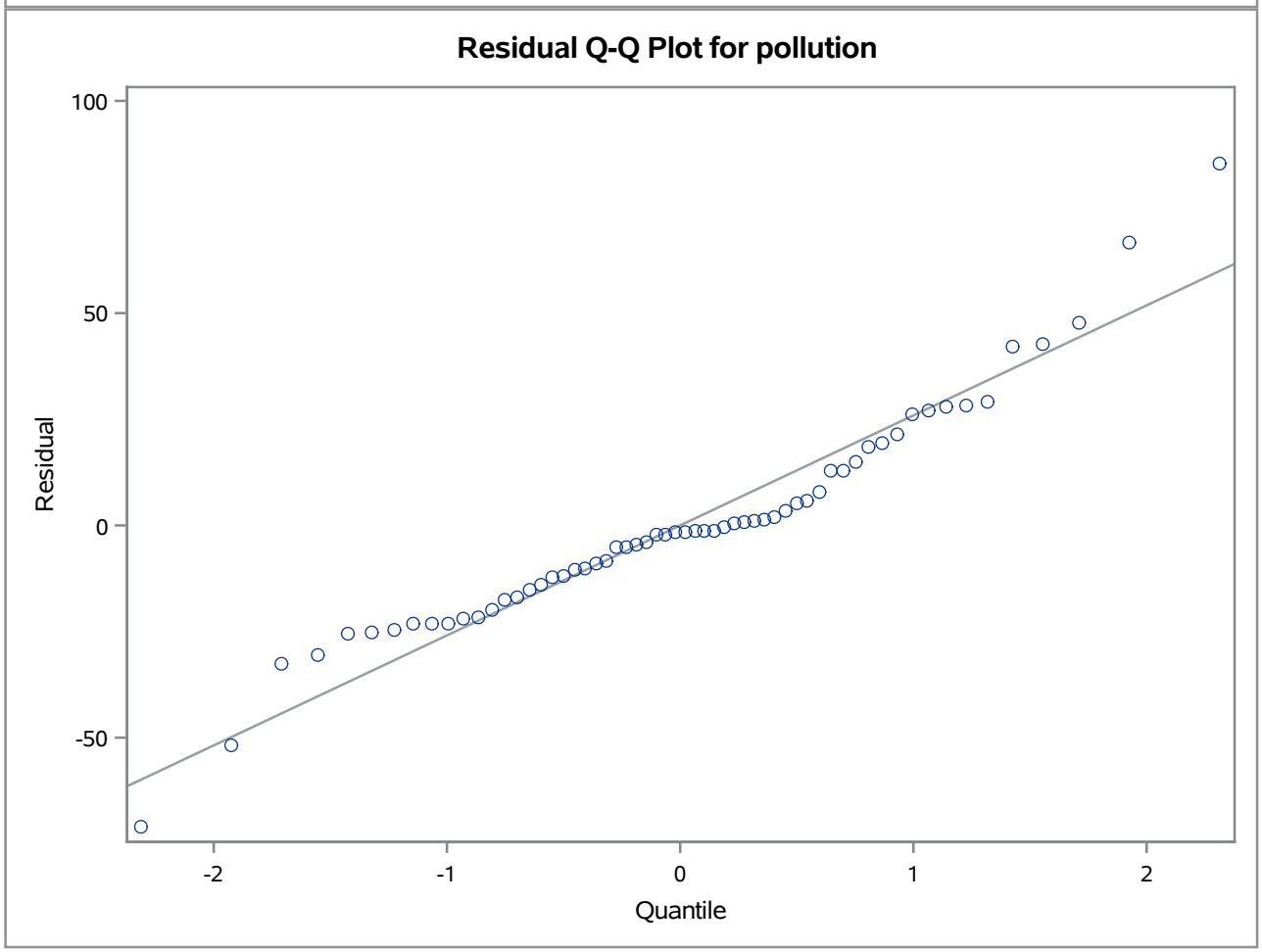
Constant Estimate	-1014.93
Variance Estimate	683.0509
Std Error Estimate	26.13524
AIC	563.8327
SBC	568.0214
Number of Residuals	60

Correlations of Parameter Estimates			
Variable	Parameter	pollution MU	press NUM1
pollution	MU	1.000	-1.000
press	NUM1	-1.000	1.000

Autocorrelation Check of Residuals									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	8.92	6	0.1780	-0.029	-0.092	-0.045	-0.009	-0.117	-0.325
12	15.19	12	0.2313	-0.001	0.121	-0.006	-0.183	0.055	0.179
18	19.00	18	0.3915	0.149	-0.021	-0.043	0.068	-0.125	-0.035
24	26.86	24	0.3108	0.031	0.111	0.031	-0.205	0.061	-0.140


Residual Correlation Diagnostics for pollution
ACF
PACF
IACF
White Noise Prob
Lag
Residual Normality Diagnostics for pollution
Distribution of Residuals
Normal
Kernel
Percent
Residual
QQ-Plot
Residual
Quantile


Distribution of Residuals for pollution
Normal
Kernel
Percent
50
40
30
20
10
0
-105
-75
-45
-15
15
45
75
105
Residual

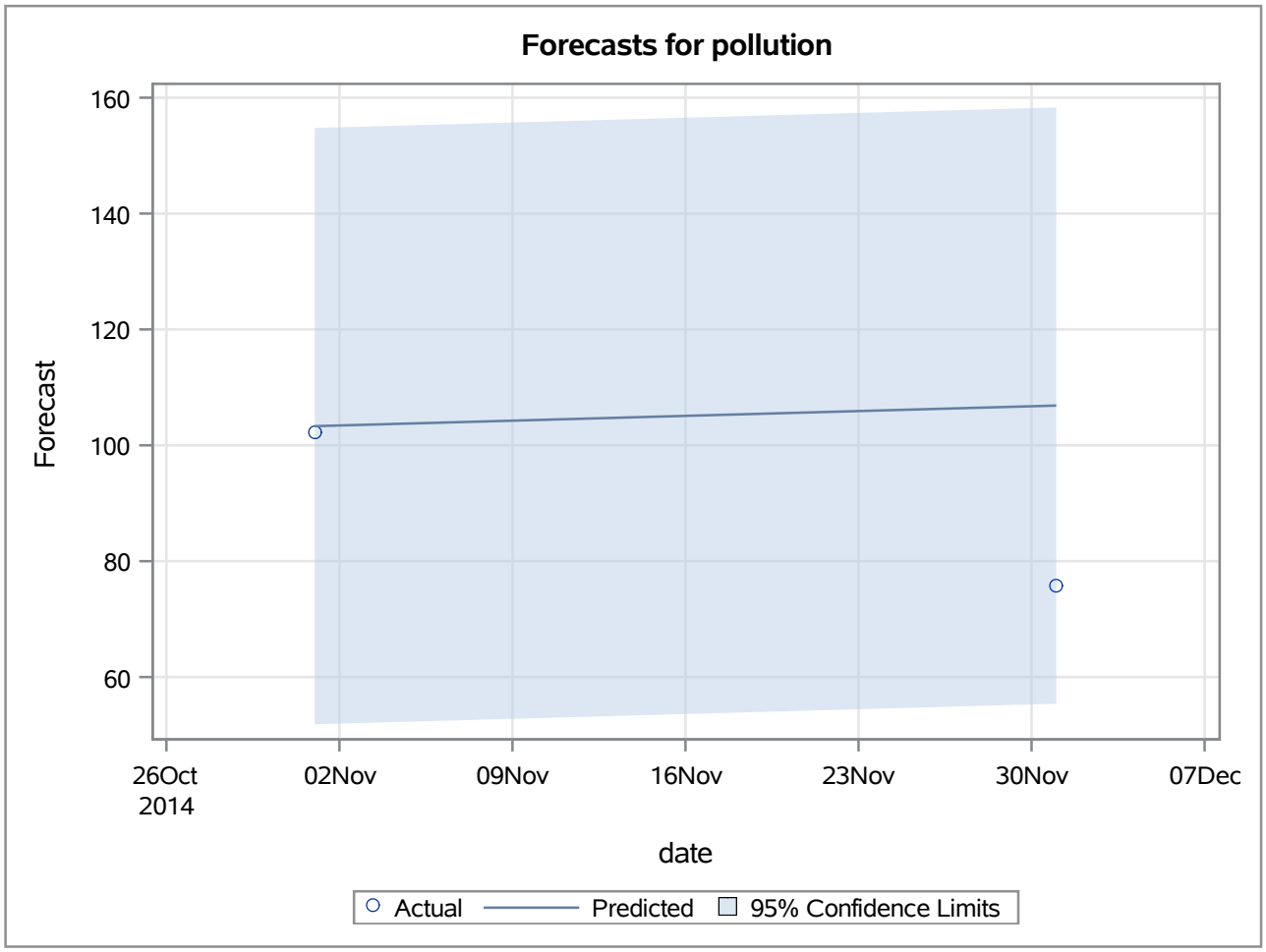

Residual Q-Q Plot for pollution
Residual
100
50
0
-50
-2
-1
0
1
2
Quantile

Crosscorrelation Check of Residuals with Input press									
To Lag	Chi-Square	DF	Pr > ChiSq	Crosscorrelations					
5	21.49	6	0.0015	-0.160	0.309	-0.389	-0.219	0.095	0.170
11	29.34	12	0.0035	-0.052	-0.292	0.110	-0.042	0.041	-0.165
17	34.57	18	0.0107	0.012	0.241	-0.027	-0.002	0.075	0.150
23	38.07	24	0.0341	-0.018	-0.146	-0.112	0.085	-0.008	-0.130

Model for variable pollution	
Estimated Intercept	-1014.93

Input Number 1	
Input Variable	press
Overall Regression Factor	1.091131

Forecasts for variable pollution						
Obs	Forecast	Std Error	95% Confidence Limits		Actual	Residual
59	103.3063	26.2571	51.8434	154.7693	102.3486	-0.9577
60	106.8598	26.2578	55.3954	158.3242	75.6882	-31.1716



Outlier Detection Summary	
Maximum number searched	2
Number found	2
Significance used	0.05

Outlier Details

Obs	Type	Estimate	Chi-Square	Approx Prob>ChiSq
37	Additive	85.17173	14.72	0.0001
13	Additive	-71.02498	11.47	0.0007