

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

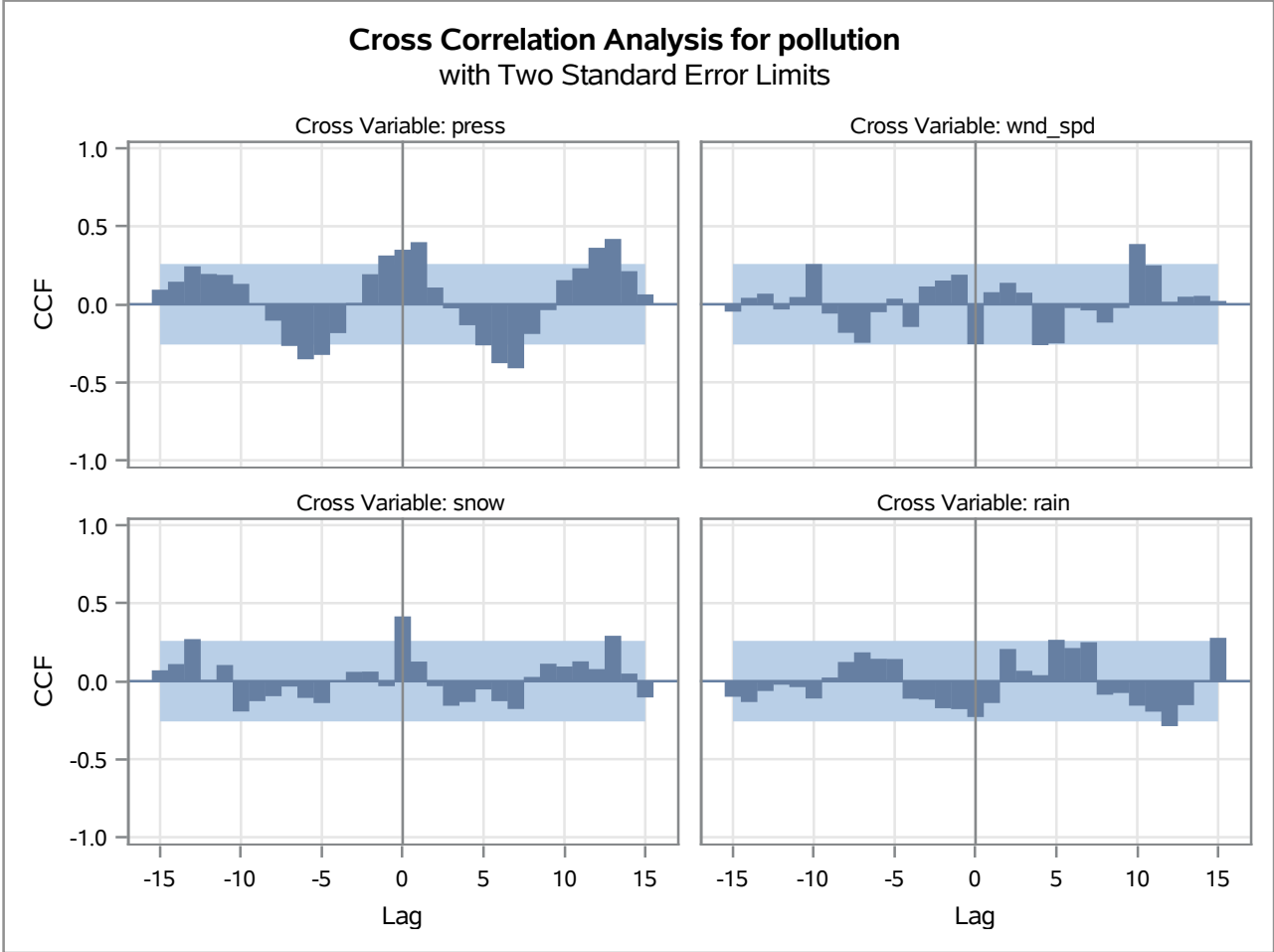
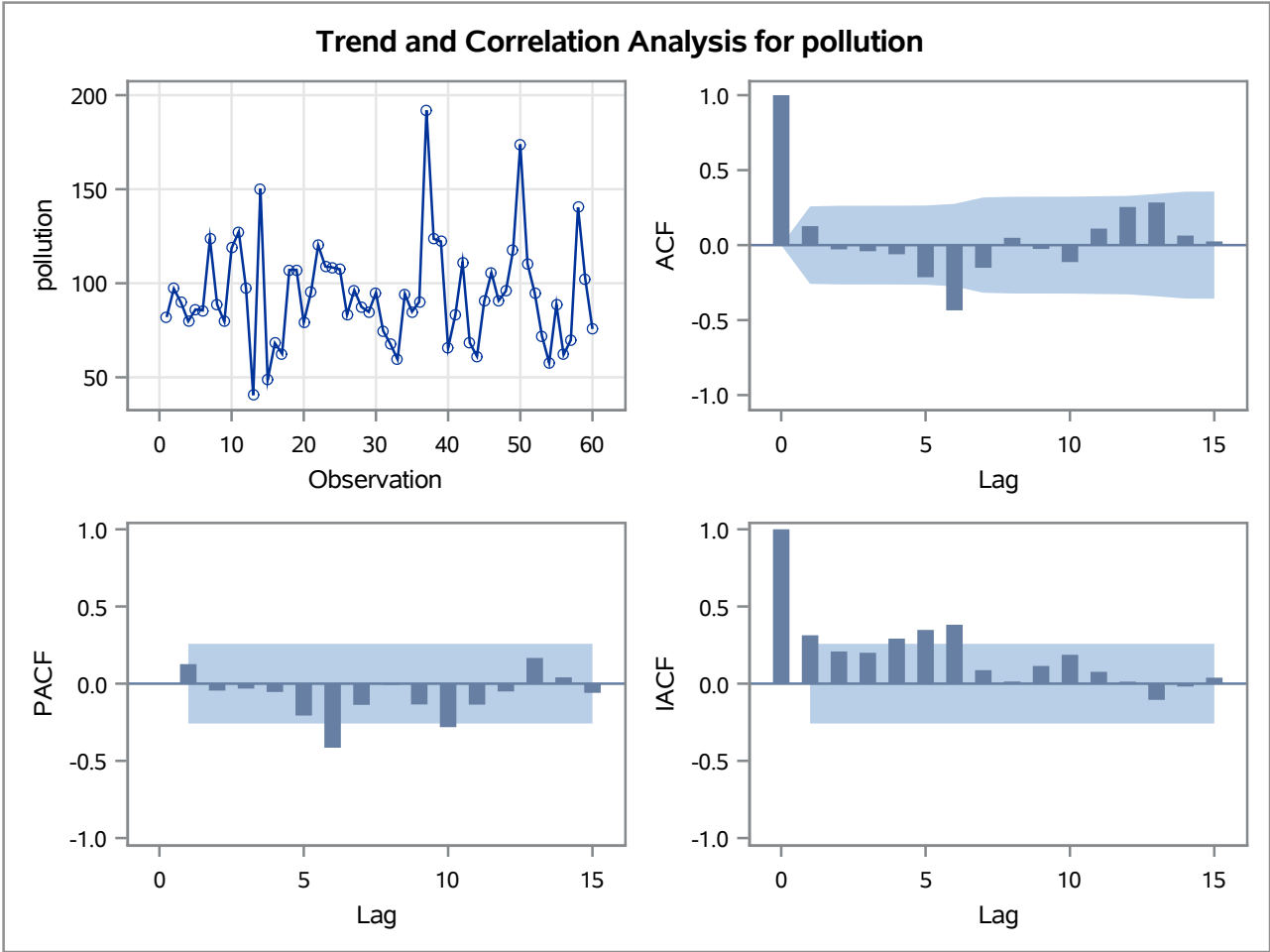
Autocorrelation Check for White Noise									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	17.55	6	0.0075	0.127	-0.028	-0.041	-0.061	-0.214	-0.435
12	26.25	12	0.0099	-0.151	0.049	-0.026	-0.113	0.110	0.254

Correlation of pollution and press	
Variance of input =	77.15933
Number of Observations	60

Correlation of pollution and wnd_spd	
Variance of input =	246.3649
Number of Observations	60

Correlation of pollution and snow	
Variance of input =	14.37682
Number of Observations	60

Correlation of pollution and rain	
Variance of input =	51.65104
Number of Observations	60



Warning: The model defined by the new estimates is unstable. The iteration process has been terminated.
Warning: Estimates may not have converged.

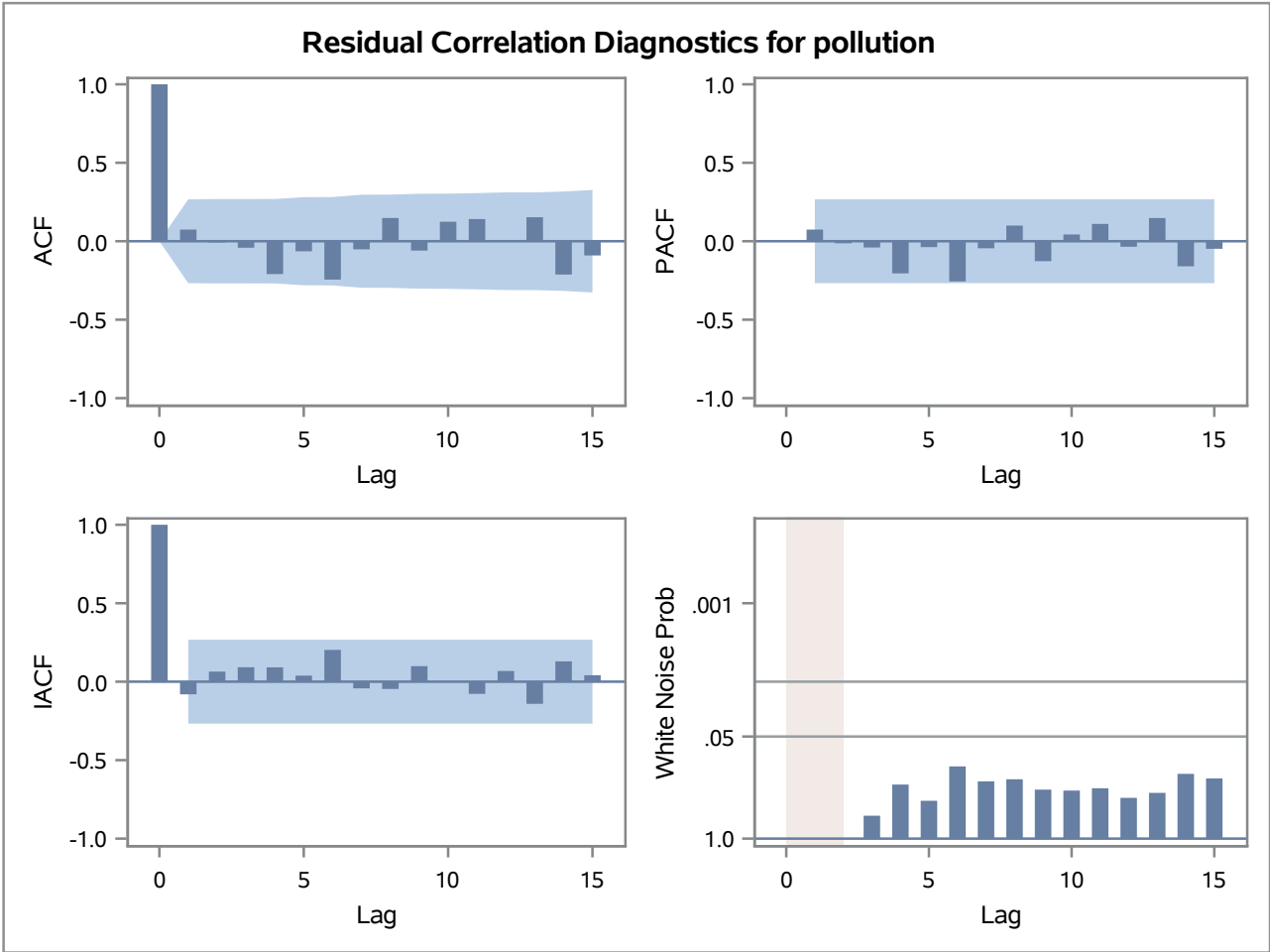
ARIMA Estimation Optimization Summary	
Estimation Method	Maximum Likelihood
Parameters Estimated	7
Termination Criteria	Maximum Relative Change in Estimates
Iteration Stopping Value	0.001
Criteria Value	6.879261
Maximum Absolute Value of Gradient	112826.3
R-Square Change from Last Iteration	0.205351
Objective Function	Log Gaussian Likelihood
Objective Function Value	-246.636
Marquardt's Lambda Coefficient	0.00001
Numerical Derivative Perturbation Delta	0.001
Iterations	7
Warning Message	Estimates may not have converged.

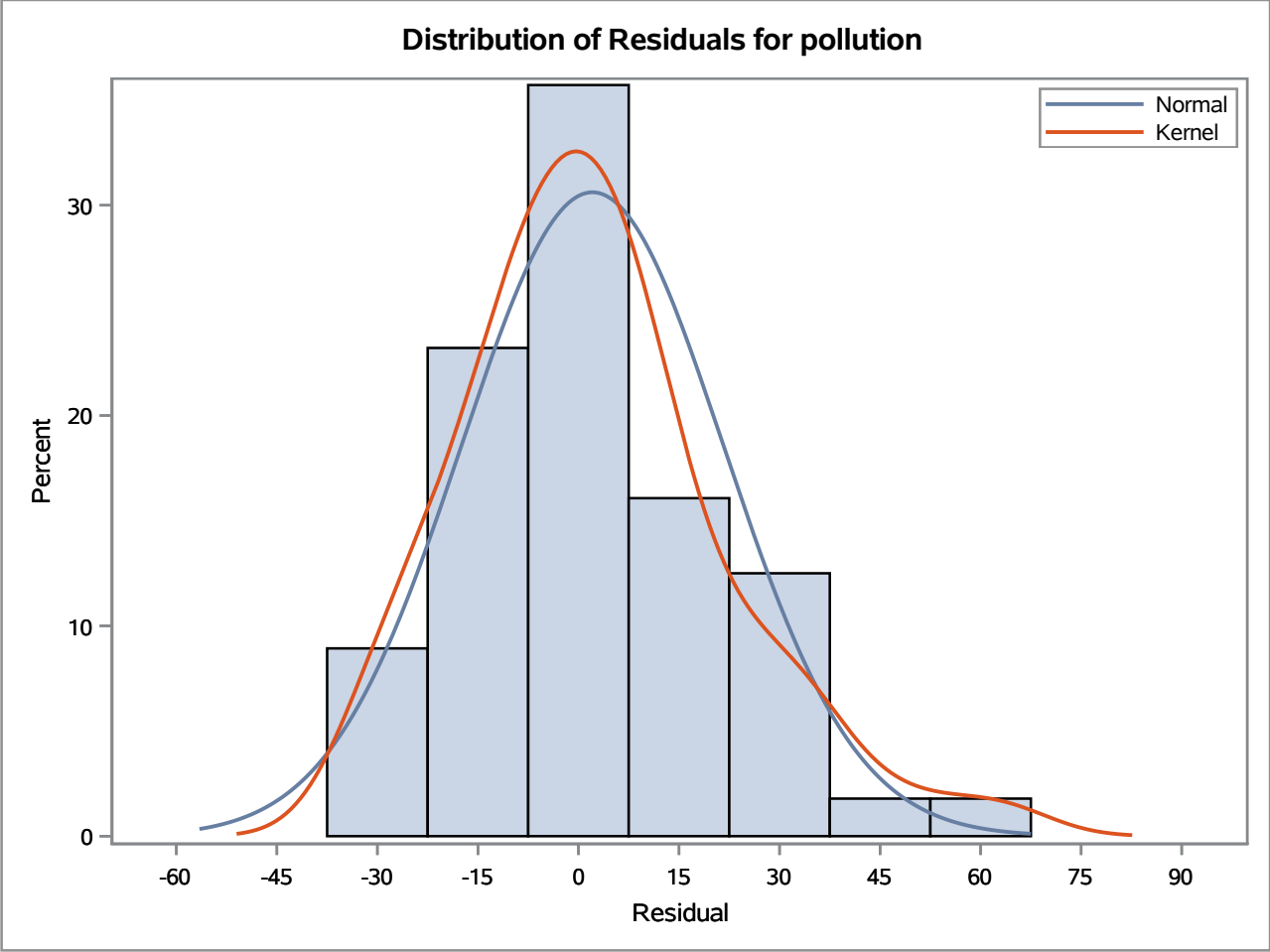
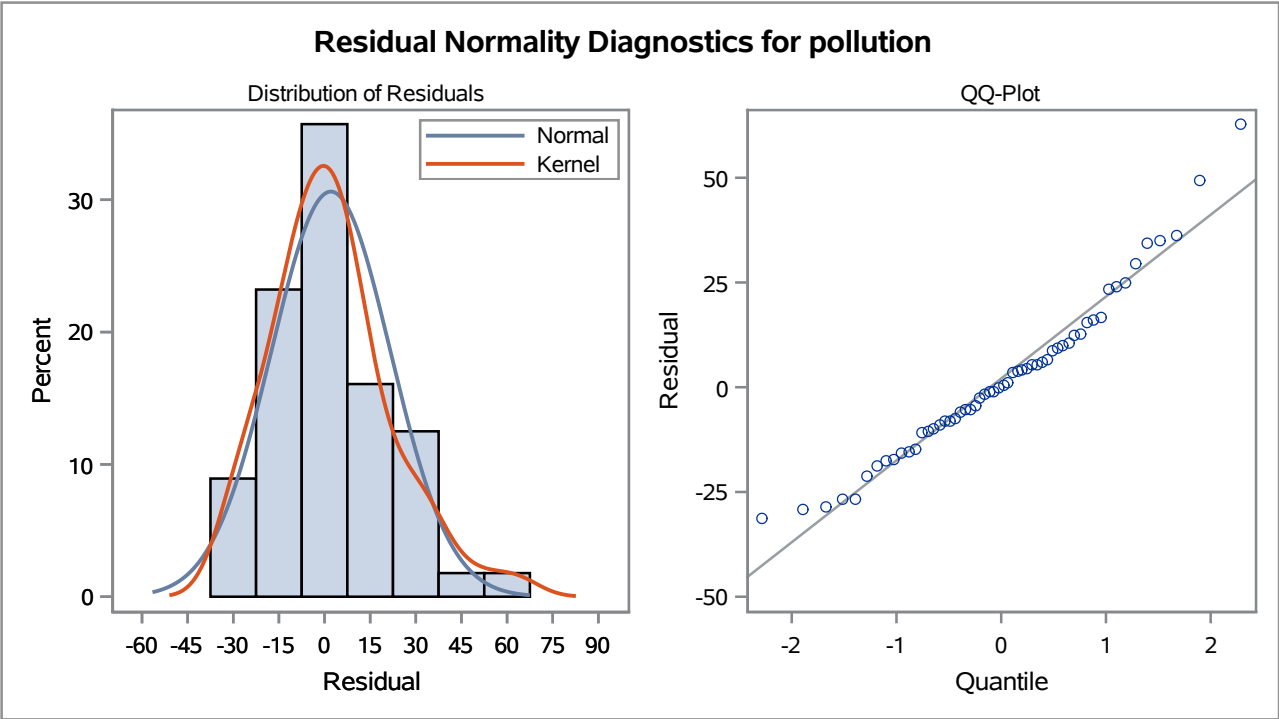
Maximum Likelihood Estimation							
Parameter	Estimate	Standard Error	t Value	Approx Pr > t	Lag	Variable	Shift
MU	-1539.4	457.58829	-3.36	0.0008	0	pollution	0
MA1,1	-0.99996	7.99474	-0.13	0.9005	1	pollution	0
AR1,1	-0.83949	0.18076	-4.64	<.0001	1	pollution	0
NUM1	1.62360	0.45361	3.58	0.0003	0	press	1
NUM2	-0.99081	0.24341	-4.07	<.0001	0	wnd_spd	0
NUM3	2.04240	1.02609	1.99	0.0465	0	snow	0
NUM4	0.47551	0.39574	1.20	0.2295	0	rain	4

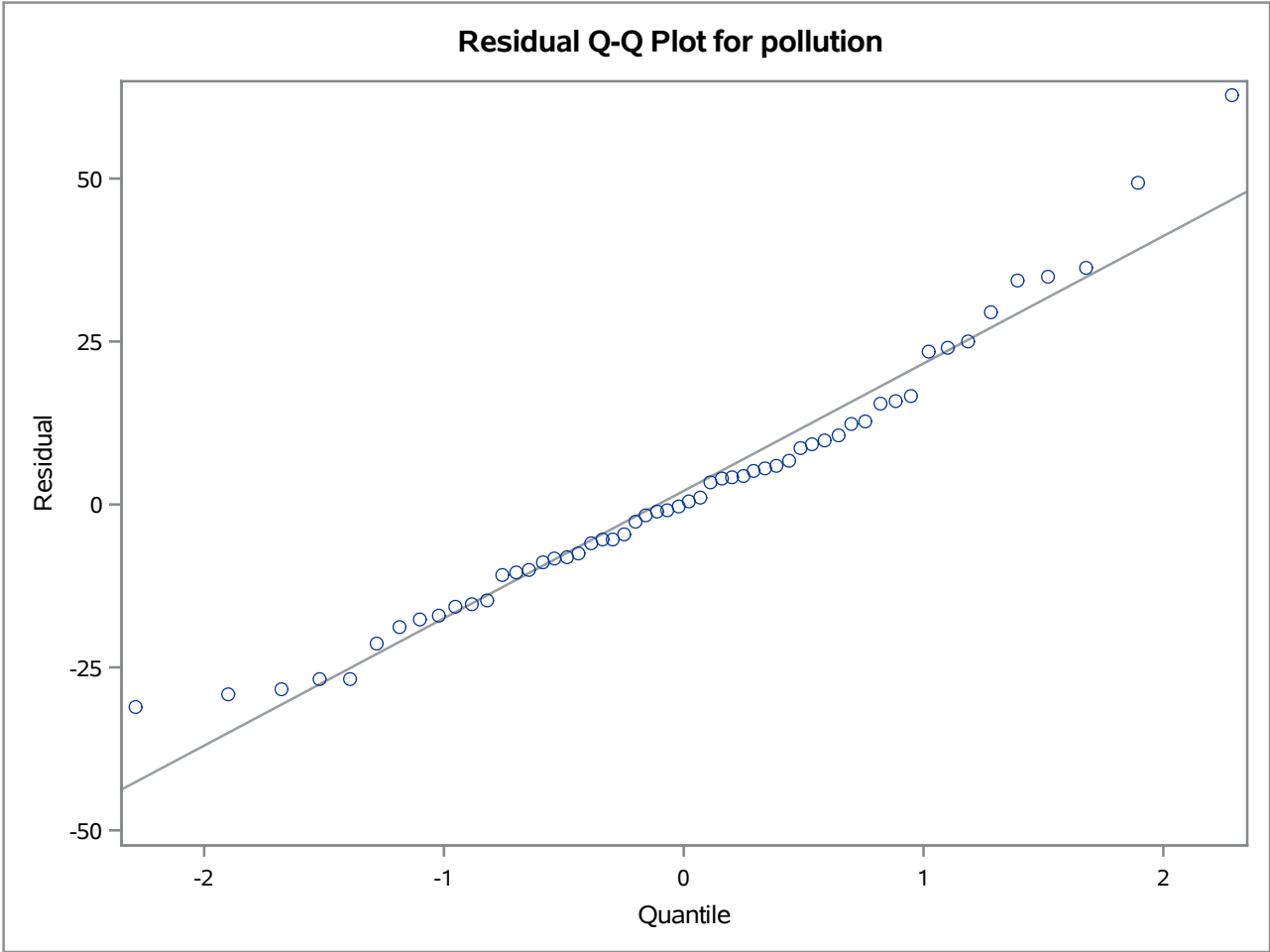
Constant Estimate	-2831.72
Variance Estimate	433.7507
Std Error Estimate	20.82668
AIC	507.2721
SBC	521.4496
Number of Residuals	56

Correlations of Parameter Estimates							
Variable Parameter	pollution MU	pollution MA1,1	pollution AR1,1	press NUM1	wnd_spd NUM2	snow NUM3	rain NUM4
pollution MU	1.000	0.168	0.047	-1.000	0.465	0.575	-0.062
pollution MA1,1	0.168	1.000	0.799	-0.168	0.069	0.301	-0.207
pollution AR1,1	0.047	0.799	1.000	-0.046	-0.121	0.168	0.041
press NUM1	-1.000	-0.168	-0.046	1.000	-0.472	-0.578	0.063
wnd_spd NUM2	0.465	0.069	-0.121	-0.472	1.000	0.352	-0.539
snow NUM3	0.575	0.301	0.168	-0.578	0.352	1.000	-0.041
rain NUM4	-0.062	-0.207	0.041	0.063	-0.539	-0.041	1.000

Autocorrelation Check of Residuals									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	6.89	4	0.1420	0.084	0.003	-0.037	-0.202	-0.054	-0.237
12	11.39	10	0.3282	-0.048	0.147	-0.055	0.128	0.144	0.009
18	19.39	16	0.2489	0.157	-0.207	-0.089	0.005	-0.113	0.115
24	26.05	22	0.2494	-0.032	-0.029	0.029	-0.240	0.076	-0.056







Model for variable pollution	
Estimated Intercept	-1539.4

Autoregressive Factors	
Factor 1:	1 + 0.83949 B**(1)

Moving Average Factors	
Factor 1:	1 + 0.99996 B**(1)

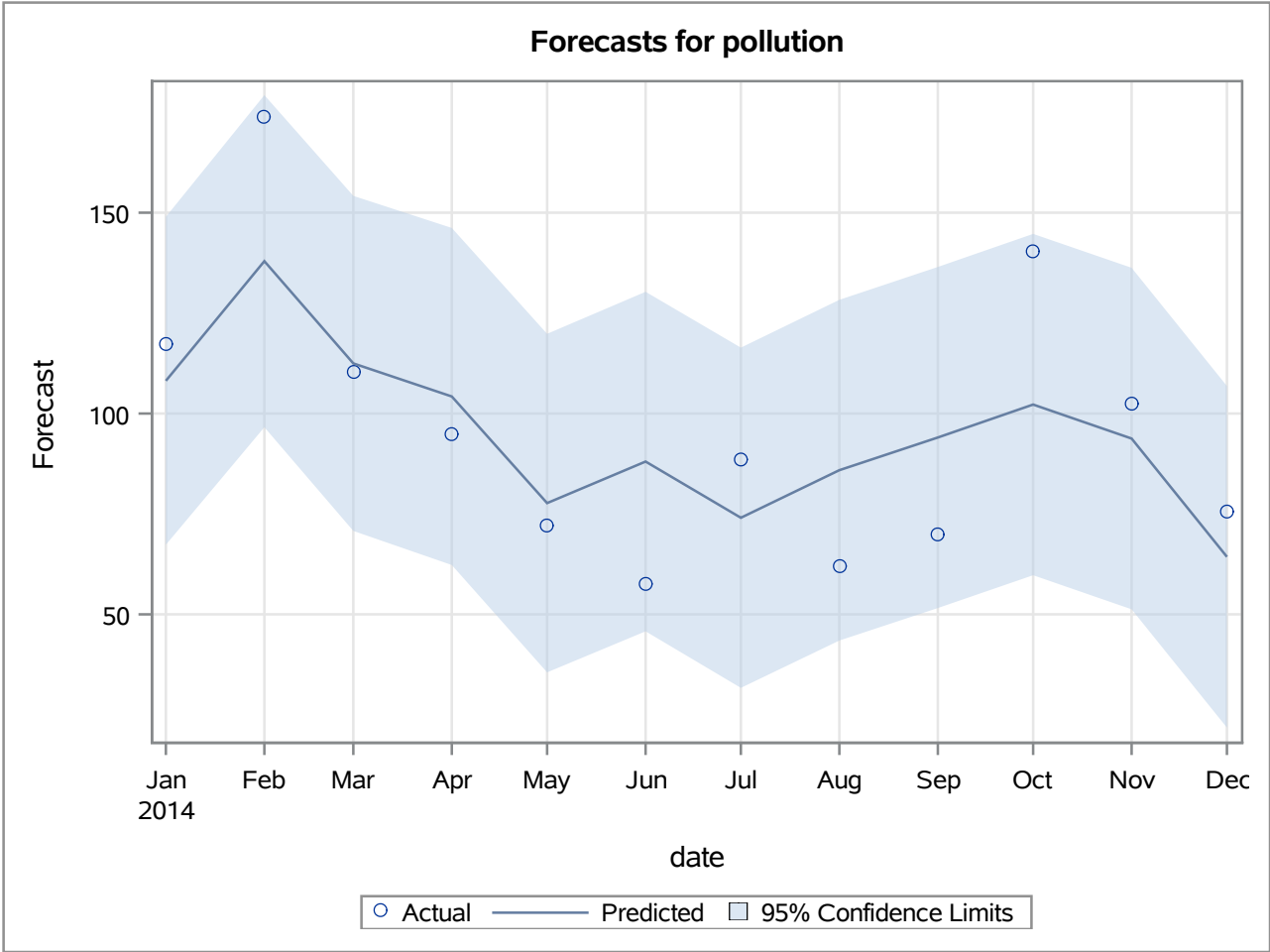
Input Number 1	
Input Variable	press
Shift	1
Overall Regression Factor	1.623602

Input Number 2	
Input Variable	wnd_spd
Overall Regression Factor	-0.99081

Input Number 3	
Input Variable	snow
Overall Regression Factor	2.042397

Input Number 4	
Input Variable	rain
Shift	4
Overall Regression Factor	0.475508

Forecasts for variable pollution						
Obs	Forecast	Std Error	95% Confidence Limits		Actual	Residual
49	108.1496	20.8267	67.3301	148.9692	117.4422	9.2926
50	137.9330	21.0931	96.5913	179.2748	173.8378	35.9048
51	112.4807	21.2789	70.7748	154.1865	110.3374	-2.1433
52	104.2436	21.4088	62.2831	146.2042	94.8361	-9.4075
53	77.7008	21.5000	35.5617	119.8400	72.0605	-5.6403
54	88.0446	21.5639	45.7800	130.3091	57.6875	-30.3571
55	74.0517	21.6089	31.6990	116.4044	88.6142	14.5625
56	85.8948	21.6405	43.4802	128.3095	62.0121	-23.8827
57	94.0310	21.6628	51.5726	136.4893	69.8056	-24.2254
58	102.2353	21.6785	59.7462	144.7244	140.3669	38.1317
59	93.7712	21.6895	51.2604	136.2819	102.3486	8.5774
60	64.3266	21.6973	21.8007	106.8526	75.6882	11.3615



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	51.81240	13.40	0.0003
50	Additive	39.62685	8.07	0.0045