



Air Quality Permitting Statement of Basis

SEPTEMBER 22, 2006

Permit to Construct No. P-060128

Century Publishing Co., Post Falls

Facility ID No. 055-00054

Prepared by:

A handwritten signature in black ink, appearing to read "Robert Baldwin".

Robert Baldwin, Associate Engineer
AIR QUALITY DIVISION

FINAL

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Acronyms, Units, and Chemical Nomenclatures

AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
BRC	below regulatory concern
CO	carbon monoxide
DEQ	Department of Environmental Quality
HAPs	hazardous air pollutants
hr	hour(s)
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pound per hour
MACT	Maximum Available Control Technology
MMBtu	million British thermal units
NESHAP	Nation Emission Standards for Hazardous Air Pollutants
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	Permit to Construct
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO ₂	sulfur dioxide
TAP's	toxic air pollutant(s)
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

2. FACILITY DESCRIPTION

The facility conducts printing and publishing.

3. FACILITY / AREA CLASSIFICATION

Century Publishing is not a major source, in accordance with IDAPA 58.01.01.008.10. The facility classification for the AIRS is “Synthetic Minor (SM)”, because the facilities potential to emit is limited to less than 100 tons per year for regulated criteria air pollutants and to less than 10 T/yr for any single HAP and to less than 25 T/yr for any combination of HAPs. Century Publishing is not applicable to NSPS, NESHAPS or PSD requirements.

Century Publishing is located within Kootenai County, which is classified as attainment or unclassifiable for all criteria air pollutants. The facility is located in AQCR 62 and UTM Zone 11.

4. APPLICATION SCOPE

Century Publishing is proposing to increase the amounts of solvents and inks used annually in anticipation of future growth at its Post Falls, Idaho facility. The facility has two press lines consisting of a press, a drying oven, and an afterburner. Century Publishing was issued a PTC on September 3, 2004.

4.1 Application Chronology

August 6, 2006	DEQ received application for modification of the existing permit to construct.
August 31, 2006	DEQ sent a letter deeming the application complete.
November 7, 2006	DEQ received facility’s comments
November 28, 2006	DEQ sent a response to the facility’s comment
January 9, 2007	DEQ received facility’s agreement to issue the permit

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action:

5.1 Equipment Listing

- Oven 1, Harris M1000 Press Sahara S140881 rated 2.42 MMBtu/hr
- Web Press 1, Manufactured by Harris, Model # M1000
- Afterburner, Manufactured by TEC, Rated at 1.8 MMBtu/hr

Allowable ambient impacts are as follows:

Table 5.2 AMBIENT IMPACTS
Allowable Concentrations (ug/m³)

	1hr	3hr	8hr	24hr	Annual
PM ₁₀	--	--	--	150.00	50.00
SO ₂	--	1300.00	--	365.00	80.00
NO _x	--	--	--	--	100.00
CO	40000.00	--	10000.00	--	--

Appendix C contains DEQ’s evaluation of the modeling data with NAAQS. Appendix C also contains the facility’s submitted modeling information.

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC:

IDAPA 58.01.01.201.....Permit to Construct Required

The facility’s proposed project does not meet the permit to construct exemption criteria contained in Sections 220 through 223 of the Rules. Therefore, a PTC is required.

IDAPA 58.01.01.203.....Permit Requirements for New and Modified Stationary Sources

The applicant has shown to the satisfaction of DEQ that the facility will comply with all applicable emission standards, ambient air quality standards, and toxic increments.

IDAPA 58.01.01.210.....Demonstration of Preconstruction Compliance with Toxic Standards

The applicant has demonstrated compliance for all TAPs identified in the permit application.

IDAPA 58.01.01.224.....Permit to Construct Application Fee

The applicant satisfied the PTC application fee requirement by submitting a fee of \$1,000.00 at the time the original application was submitted, August 6, 2006.

IDAPA 58.01.01.225.....Permit to Construct Processing Fee

The total emissions from the proposed application are between 1 and 10 T/yr; therefore, the associated processing fee is \$2,500.00. No permit to construct can be issued without first paying the required processing fee.

IDAPA 58.01.01.625.....Visible Emissions

This standard applies because this proposed increase in emissions may generate visible emissions.

40 CFR 52Prevention of Significant Deterioration

This proposed change is well below PSD requirements per IDAPA 58.01.01.205.04.

40 CFR 60New Source Performance Standards

This proposed change does not have any affected emission units that are regulated by a NSPS.

40 CFR 61 and 63NESHAP & MACT

This proposed change does not have any affected emission units that are regulated by NESHAP & MACT standards.

5.5 Permit Conditions Review

This section describes only those permit conditions that have been revised, modified or deleted as a result of this permit action. All other permit conditions remain unchanged.

Press Line 1

5.5.1 Visible Emissions Limits

Permit Condition 2.3 is taken directly from IDAPA 58.01.01.625.02. Other than the sources listed in IDAPA 58.01.01.625.01, emissions from all stationary point sources in the state of Idaho are subject to the opacity standard; therefore, the afterburner stacks must comply with this standard.

5.5.2 Compliance Demonstration

Compliance with the opacity standard is assumed as long as the afterburner is operating when Press Line 1 is operating.

5.5.3 VOC Emissions Limits

Short term and annual emission limits have been established using the permittee's proposed operating conditions.

5.5.4 Compliance Demonstration

Operating limits have been included in the permit as a method of demonstrating compliance with the VOC emissions limit. The permittee shall, as part of demonstrating compliance with the VOC throughput limit, monitor and record the VOC throughput on a pound per hour (as determined by calculating a daily average as specified in the permit) and ton per 12 consecutive month basis.

Recorded VOC throughput data shall then be used to demonstrate compliance with the operating limit. In order to assure compliance with the VOC emissions limit, the permittee is also required to operate the afterburner whenever Press Line 1 operates. This operating requirement has been included to assure that the afterburner is used to control VOC emissions, and that the facility can take credit for its control efficiency.

Natural gas emissions at maximum capacity are included in the permit limits. The operating conditions used to estimate emissions reflect the rated capacity of Press Line 1, and estimated emissions are considered to be small when compared to emissions from inks and cleaners. Therefore, the compliance demonstration for Press Line 1 is that it be fired on natural gas only.

Press Line 2

5.5.5 Visible Emissions Limits

Permit Condition 3.4 is taken directly from IDAPA 58.01.01.625.02. Other than the sources listed in IDAPA 58.01.01.625.01, emissions from all stationary point sources in the state of Idaho are subject to the opacity standard; therefore, the afterburner stack must comply with this standard.

5.5.6 Compliance Demonstration

Compliance with the opacity standard is assumed as long as the afterburner is operating when Press Line 2 is operating.

5.5.7 VOC Emissions Limits

Short term and annual emission limits have been established using the permittee's proposed operating conditions.

5.5.8 Compliance Demonstration

Operating limits have been included in the permit as a method of demonstrating compliance with the VOC emission limit. The permittee shall, as part of demonstrating compliance with the VOC throughput limit, monitor and record the VOC throughput on a pound per hour (as determined by calculating a daily average as specified in the permit) and ton per 12 consecutive month basis. Recorded VOC throughput data shall then be used to demonstrate compliance with the operating limit. This data is then used to determine compliance with the 12-consecutive month operating limit.

Natural gas emissions at maximum capacity are included in the permit limits. The operating conditions used to estimate emissions reflect the rated capacity of Press Line 2, and estimated emissions are considered to be small when compared to emissions from inks and cleaners. Therefore, the compliance demonstration for Press Line 2 is that it be fired on natural gas only.

6. PERMIT FEES

Century Publishing paid the \$1,000 application fee as required in IDAPA 58.01.01.224 on August 4, 2006.

A permit to construct processing fee of \$2,500 is required in accordance with IDAPA 58.01.01.225, because the increase in emissions from the modification was 8.2 T/yr as indicated in Table 6.1.

The facility is not a major facility as defined in IDAPA 58.01.01.008.10. Therefore, registration fees are not applicable in accordance with IDAPA 58.01.01.387.

Table 6.1 EMISSIONS INVENTORY

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0	0	0
SO ₂	0	0	0
CO	0	0	0
PM/PM ₁₀	0	0	0
VOC	8.2	0	8.2
TAPS/HAPS	0	0	0
Total:	8.2	0	8.2
Fee Due	\$ 2,500.00		

7. PERMIT REVIEW

7.1 Regional Review of Draft Permit

The draft permit was sent to the Coeur d'Alene Regional Office on October 20, 2006. No comments were received from the Coeur d'Alene Regional Office.

7.2 Facility Review of Draft Permit

A draft permit was provided for facility review on October 20, 2006. The facility's comments asked to have the hourly rates increased based on dividing the yearly tons of pollutant by the actual operating hours per year instead of by 8760 hours.

7.3 Public Comment

An opportunity for public comment period on the PTC application was provided, in accordance with IDAPA 58.01.01.209.01.c. from September 7, 2006, to October 9, 2006. To date, there were no comments on the application and no requests for a public comment period on DEQ's proposed action.

8. RECOMMENDATIONS

Based on review of application materials and all applicable state and federal rules and regulations, staff recommends that Century Publishing be issued PTC No. P-060128 for the solvent and ink increase usage modification. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

REB/bf Permit No. P-060128

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APPENDIX A
Airs Information
P-060128

AIRS/AFS^a FACILITY-WIDE CLASSIFICATION^b DATA ENTRY FORM

Facility Name: Century Publishing Company
Facility Location: Post Falls
AIRS Number: 055-00054

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO ₂	B							U
NO _x	B							U
CO	B							U
PM ₁₀	B							A
PT (Particulate)	B							U
VOC	SM						SM	U
THAP (Total HAPs)	B							U
APPLICABLE SUBPART								

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class “A” is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).

APPENDIX B
Emission Estimates For TAPs
P-060128

Century Publishing
 Project #: P-060128

		PM-10		SO2		NOx		VOC		CO	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Press Line 1	Ink							3.01	9.03		
	Cleaner							0.76	1.14		
	Oven 1	0.013	0.058	0.0011	0.005	0.176	0.769	0.013	0.057	0.15	0.65
	Afterburner	0.018	0.079	0.0014	0.006	0.236	1.034	0.001	0.042	0.20	0.87
	Subtotal	0.031	0.14	0.0025	0.011	0.41	1.80	3.79	10.27	0.35	1.51
Press Line 2	Ink							2.1	4.52		
	Cleaner							0.76	1.14		
	Oven 2	0.0136	0.059	0.001	0.005	0.179	0.782	0.010	0.043	0.150	0.657
	Afterburner	0.007	0.032	0.001	0.003	0.098	0.427	0.005	0.024	0.082	0.359
	Subtotal	0.02	0.09	0.00	0.01	0.28	1.21	2.88	5.73	0.23	1.02
	Grand Total	0.05	0.23	0.00	0.02	0.69	3.01	6.67	16	0.58	2.53

Century Publishing

Project #: P-060128 Press 1

Afterburner Efficiency, CE: = 90%
 Clean/Clean-up Wash Usage = 2500 gal/yr 1 gal/hr
 Ink Usage Rate = 700000 lbs/yr 116.7 lbs/hr

Pollutant	Usage, U		Usage, U _A		Content, VOC _c		Emission Rate, ER		Annual Emissions, AR	
	Value	Units	Value	Units	Value	Units	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled ton/yr	Controlled ton/yr
VOC (Ink)	116.7	lb/hr	700000	lb/yr	0.43	% by Wt	50.2	3.01	150.5	9.03
VOC (Duo Clean)	1	gal/hr	3000	gal/yr	6.82	lb/gal	6.82	0.68	10.23	1.02
VOC (Fountain Solution)	1	gal/hr	1500	gal/yr	0.8	lb/gal	0.8	0.08	1.2	.12

7.62 3.77 11.43 10.17

Estimated Emission Rates
 ER Uncontrolled = U*VOC_c
 ER Controlled = U*VOC_c*(1-CE)/2000*0.60
 AR Uncontrolled = U_A*VOC_c
 AR Controlled = U_A*VOC_c*(1-CE)/2000*0.60

Where:

U = Usage Rate (gal/hr, lb/hr)
 U_A = Usage Rate (gal/yr, lb/yr)
 ER = Estimated Emission Rate, lb/hr
 AR = Estimated Emission Rate, ton/hr
 Pound to Ton Conversion Constant = 2000
 VOC_c = VOC content (% by Wt, lb/gal)
 VOC Retention In Substrate = 60%

Pollutant	Usage		Content, VOC _c		Emission Rate, ER	TAP Screen	
	Value	Units	Value	Units	lb/hr	lb/hr	
Cumene ^A	1	gal/hr	0.36	lb/gal	0.36	16.3	OK
Xylene ^A	1	gal/hr	0.28	lb/gal	0.28	29	OK

Century Publishing

Press Line 1, Oven

Project #:

P-060128

Emission Estimated From Natural Gas Combustion

Rating

2.42E+06

Fuel Usage, FR

=

2.361E-03

10⁶ ft³/hr

Pollutant	Emission Factor, EF	Emission Rate, ER	TAP Screen	Screen	Model, CU	Annual Emissions
	lb/ MCMF	lb/hr	lb/hr	OK?	ok?	ton/yr
SO2	0.6	0.0014				0.006
Nox	100	0.236				1.034
CO	84	0.198				0.869
PM-10	7.6	0.0179				0.079
VOC	5.5	0.013				0.057
Benz(a)anthracene	1.80E-06	4.25E-09				
Benzo(a)pyrene	1.20E-06	2.83E-09				
Benzo(k)fluoranthene	1.80E-06	4.25E-09				
Chrysene	1.80E-06	4.25E-09				
Indeno(1,2,3-cd)pyrene	1.80E-06	4.25E-09				
PAH (Sum of Above Pollutants)		1.98E-08	1.50E-03	OK		
Formaldehyde	7.50E-02	1.77E-04	5.10E-04	OK		
Benzo(a)pyrene	1.20E-06	2.83E-09	2.00E-06	OK		
Benzene	2.10E-03	4.96E-06	8.00E-04	OK		

Estimated Emission Rate, ER (lb/hr) = FR* EF

Where:

FR = Firing Rate, gal/hr
 ER = Estimated Emission Rate, lb/hr
 EF = Emission Factor Value, lb/10⁶ ft³
 Constant = 1025 Btu/ft³

Annual Emissions, TPY = ER* (8760 hours per year operation) / (2000 lbs/ton)

Century Publishing

Press Line 1, Afterburner

Project #:

P-060128

Emission Estimated From Natural Gas Combustion

Rating = 1.80E+06

Fuel Usage, FR = 1.756E-03 10⁶ ft³/hr

	Emission Factor, EF	Emission Rate, ER	TAP Screen	Screen	Model, CU	Annual Emissions
Pollutant	lb/ MCF	lb/hr	lb/hr	OK?	ok?	ton/yr
SO2	0.6	0.0011				0.005
NO _x	100	0.176				0.769
CO	84	0.148				0.646
PM-10	7.6	0.0133				0.058
VOC	5.5	0.01				0.04
Benz(a)anthracene	1.80E-06	3.16E-09				
Benzo(a)pyrene	1.20E-06	2.11E-09				
Benzo(k)fluoranthene	1.80E-06	3.16E-09				
Chrysene	1.80E-06	3.16E-09				
Indeno(1,2,3-cd)pyrene	1.80E-06	3.16E-09				
PAH (Sum of Above Pollutants)		1.48E-08	1.50E-03	OK		
Formaldehyde	7.50E-02	1.32E-04	5.10E-04	OK		
Benzo(a)pyrene	1.20E-06	2.11E-09	2.00E-06	OK		
Benzene	2.10E-03	3.69E-06	8.00E-04	OK		

Estimated Emission Rate, ER (lb/hr)

= FR * EF

Where:

FR = Firing Rate, gal/hr

ER = Estimated Emission Rate, lb/hr

EF = Emission Factor Value, lb/10⁶ ft³

Constant = 1025 Btu/ft³

Annual Emissions, TPY = ER* (8760 hours per year operation) / (2000 lbs/ton)

Century Publishing

Project #: P-060128 Press 2

Afterburner Efficiency, CE: = 90%
 Ink Usage Rate 350000 lbs/yr 81.57 lbs/hr

Pollutant	Usage, U		Usage, U _A		Content, VOC _c		Emission Rate, ER		Annual Emissions, AR	
	Value	Units	Value	Units	Value	Units	Uncontrolled lb/hr	Controlled lb/hr	Uncontrolled ton/yr	Controlled ton/yr
VOC (Ink)	81.57	lb/hr	350000	lb/yr	0.43	% by Wt	35.07	2.1	75.25	4.52
VOC (Duo Clean)	1	gal/hr	3000	gal/yr	6.82	lb/gal	6.82	0.68	10.23	1.02
VOC (Fountain Solution)	1	gal/hr	3000	gal/yr	0.8	lb/gal	0.8	0.08	1.2	0.12

7.62 11.43 5.66

Estimated Emission Rates
 ER Uncontrolled = U*VOC_c
 ER Controlled = U*VOC_c*(1-CE)/2000*0.60
 AR Uncontrolled = U_A*VOC_c
 AR Controlled = U_A*VOC_c*(1-CE)/2000*0.60

Where:

U = Usage Rate (gal/hr, lb/hr)
 U_A = Usage Rate (gal/yr, lb/yr)
 ER = Estimated Emission Rate, lb/hr
 AR = Estimated Emission Rate, ton/hr
 Pound to Ton Conversion Constant = 2000
 VOC_c = VOC content (% by Wt, lb/gal)
 VOC Retention In Substrate = 60%

Duo Clean Wash 1 gal/hr
 2500 gal/yr

Pollutant	Content		Emission Rate, ER lb/hr	TAP Screen		Annual Emissions ton/yr
	Value	Units		lb/hr		
Cumene ^A	0.36	lb/gal	0.36	16.3	OK	0.45
Xylene ^A	0.28	lb/gal	0.28	29	OK	0.35

Century Publishing

Press Line, Oven 2

Project #:

P-060128

Emission Estimated From Combusting Natural Gas

Firing rate, FR = 1.785E-03 10⁶ ft³/hr

Pollutant	Emission Factor, EF	Emission Rate, ER	TAP Screen	Screen	Model, CU	Annual Emissions
	lb/ MMCF	lb/hr	lb/hr	OK?	ok?	ton/yr
SO2	0.6	0.0011				0.005
NO _x	100	0.179				0.782
CO	84	0.150				0.657
PM-10	7.6	0.0136				0.059
VOC	5.5	0.010				0.043
Benz(a)anthracene	1.80E-06	3.21E-09				
Benzo(a)pyrene	1.20E-06	2.14E-09				
Benzo(k)fluoranthene	1.80E-06	3.21E-09				
Chrysene	1.80E-06	3.21E-09				
Indeno(1,2,3-cd)pyrene	1.80E-06	3.21E-09				
PAH (Sum of Above Pollutants)		1.50E-08	1.50E-03	OK		
Formaldehyde	7.50E-02	1.34E-04	5.10E-04	OK		
Benzo(a)pyrene	1.20E-06	2.14E-09	2.00E-06	OK		
Benzene	2.10E-03	3.75E-06	8.00E-04	OK		

Estimated Emission Rate, ER (lb/hr)

= FR * EF

Where:

FR = Firing Rate, gal/hr

ER = Estimated Emission Rate, lb/hr

EF = Emission Factor Value, lb/10⁶ ft³

Constant = 1025 Btu/ft³

Annual Emissions, TPY = ER* (8760 hours per year operation) / (2000 lbs/ton)

Century Publishing

Press Line 2, Afterburner

Project #:

P-060128

Emission Estimated From Natural Gas Combustion

Rating

1.00E+06

Fuel Usage, FR

=

9.756E-04

10⁶ ft³/hr

Pollutant	Emission Factor, EF	Emission Rate, ER	TAP Screen	Screen	Model, CU	Annual Emissions
	lb/ MMCF	lb/hr	lb/hr	OK?	ok?	ton/yr
SO2	0.6	0.0006				0.003
Nox	100	0.098				0.427
CO	84	0.082				0.359
PM-10	7.6	0.0074				0.032
VOC	5.5	0.005				0.024
Benz(a)anthracene	1.80E-06	1.76E-09				
Benzo(a)pyrene	1.20E-06	1.17E-09				
Benzo(k)fluoranthene	1.80E-06	1.76E-09				
Chrysene	1.80E-06	1.76E-09				
Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09				
PAH (Sum of Above Pollutants)		8.20E-09	1.50E-03	OK		
Formaldehyde	7.50E-02	7.32E-05	5.10E-04	OK		
Benzo(a)pyrene	1.20E-06	1.17E-09	2.00E-06	OK		
Benzene	2.10E-03	2.05E-06	8.00E-04	OK		

Estimated Emission Rate, ER (lb/hr) =

FR* EF

Where:

FR =

Firing Rate, gal/hr

ER =

Estimated Emission Rate, lb/hr

EF =

Emission Factor Value, lb/10⁶ ft³

Constant =

1025 Btu/ft³

Annual Emissions, TPY =

ER* (8760 hours per year operation) / (2000 lbs/ton)

APPENDIX C

Screen 3

Summary Of Model Results

P-060128

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

Century Publishing Co. P-060128 Line 1

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	0.126000
STACK HEIGHT (M)	=	10.2108
STK INSIDE DIAM (M)	=	0.3932
STK EXIT VELOCITY (M/S)	=	9.7169
STK GAS EXIT TEMP (K)	=	755.3722
AMBIENT AIR TEMP (K)	=	293.1500
RECEPTOR HEIGHT (M)	=	0.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	7.0000
MIN HORIZ BLDG DIM (M)	=	34.0000
MAX HORIZ BLDG DIM (M)	=	58.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 2.254 M**4/S**3; MOM. FLUX = 1.416 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	0	0.0	0.0	0.0	0.00	0.00	0.00	NA
100.	27.14	4	8.0	8.0	2560.0	10.77	8.20	7.10	SS
200.	25.01	4	4.5	4.5	1440.0	13.02	15.56	10.34	SS
300.	19.65	4	3.5	3.5	1120.0	15.25	22.61	13.24	SS
400.	15.96	4	3.0	3.0	960.0	17.14	29.45	16.19	SS
500.	13.43	4	2.5	2.5	800.0	19.94	36.15	18.97	SS

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

70.	33.99	5	5.0	5.0	10000.0	11.90	4.46	5.61	SS
-----	-------	---	-----	-----	---------	-------	------	------	----

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** REGULATORY (Default) ***
PERFORMING CAVITY CALCULATIONS
WITH ORIGINAL SCREEN CAVITY MODEL

(BRODE, 1988)

*** CAVITY CALCULATION - 1 ***

CONC (UG/M**3) = 0.000
CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 7.02
CAVITY LENGTH (M) = 33.05
ALONGWIND DIM (M) = 34.00

*** CAVITY CALCULATION - 2 ***

CONC (UG/M**3) = 0.000
CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 7.00
CAVITY LENGTH (M) = 26.87
ALONGWIND DIM (M) = 58.00

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

END OF CAVITY CALCULATIONS

*** INVERSION BREAK-UP FUMIGATION CALC. ***

CONC (UG/M**3) = 0.000
DIST TO MAX (M) = 621.81

DIST TO MAX IS < 2000. M. CONC SET = 0.0

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
----- SIMPLE TERRAIN	----- 33.99	----- 70.	----- 0.

09/18/06
15:00:05

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

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SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = 0.126000
STACK HEIGHT (M) = 10.2108
STK INSIDE DIAM (M) = 0.3932
STK EXIT VELOCITY (M/S) = 9.7169
STK GAS EXIT TEMP (K) = 588.7056
AMBIENT AIR TEMP (K) = 293.1500
RECEPTOR HEIGHT (M) = 0.0000
URBAN/RURAL OPTION = RURAL
BUILDING HEIGHT (M) = 7.0000
MIN HORIZ BLDG DIM (M) = 34.0000
MAX HORIZ BLDG DIM (M) = 58.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 1.849 M**4/S**3; MOM. FLUX = 1.817 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	0	0.0	0.0	0.0	0.00	0.00	0.00	NA
100.	31.18	4	5.0	5.0	1600.0	11.73	8.20	6.67	SS
200.	27.94	4	4.0	4.0	1280.0	12.97	15.56	10.14	SS
300.	21.98	4	3.0	3.0	960.0	15.63	22.61	12.96	SS
400.	17.92	4	2.5	2.5	800.0	18.04	29.45	15.86	SS
500.	14.89	4	2.0	2.0	640.0	21.86	36.15	18.54	SS

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

70.	35.27	5	5.0	5.0	10000.0	11.68	4.46	5.54	SS
-----	-------	---	-----	-----	---------	-------	------	------	----

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** REGULATORY (Default) ***
PERFORMING CAVITY CALCULATIONS
WITH ORIGINAL SCREEN CAVITY MODEL

(BRODE, 1988)

*** CAVITY CALCULATION - 1 ***

CONC (UG/M**3) = 0.000
CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 7.02
CAVITY LENGTH (M) = 33.05
ALONGWIND DIM (M) = 34.00

*** CAVITY CALCULATION - 2 ***

CONC (UG/M**3) = 0.000
CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 7.00
CAVITY LENGTH (M) = 26.87
ALONGWIND DIM (M) = 58.00

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

END OF CAVITY CALCULATIONS

*** INVERSION BREAK-UP FUMIGATION CALC. ***

CONC (UG/M**3) = 0.000
DIST TO MAX (M) = 543.94

DIST TO MAX IS < 2000. M. CONC SET = 0.0

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	35.27	70.	0.

Allowable Concentrations					
	1hr	3hr	8hr	24hr	Annual
PM10	--	--	--	150.00	50.00
SO2	--	1300.00	--	365.00	80.00
NOx	--	--	--	--	100.00
CO	40000.00	--	10000.0	--	--

Significant Contributions					
	1hr	3hr	8hr	24hr	Annual
PM10	--	--	--	5.00	1.00
SO2	--	25.00	--	5.00	1.00
NOx	--	--	--	--	1.00
CO	2000.00	--	500.00	--	--

Ambient Concentration					
	1hr	3hr	8hr	24hr	Annual
PM10	--	--	--	67.73	23.85
SO2	--	42.12	--	26.06	8.02
NOx	--	--	--	--	33.9
CO	10219.94	--	3413.96	--	--

Background Concentrations					
	1hr	3hr	8hr	24hr	Annual
PM10	--	--	--	67.00	23.70
SO2	--	42.00	--	26.00	8.00
NOx	--	--	--	--	32.00
CO	10200.00	--	3400.00	--	--

Stack 1

Ambient Impacts					
	1hr	3hr	8hr	24hr	Annual
PM10	--	--	--	0.43	0.09
SO2	--	0.06	--	0.03	0.01
NOx	--	--	--	--	1.12
CO	11.76	--	8.23	--	--

Enter lb/hr Emissions Rates		Enter Modeled 1-hr Unity Impact
PM10	0.0313	33.99
SO2	0.002	
NOx	0.412	
CO	0.346	

Stack 2

Ambient Impacts					
	1hr	3hr	8hr	24hr	Annual
PM10	--	--	--	0.3	0.06
SO2	--	.06	--	0.03	0.01
NOx	--	--	--	--	0.78
CO	8.18	--	5.73	--	--

Enter lb/hr Emissions Rates		Enter Modeled 1-hr Unity Impact
PM10	0.021	35.27
SO2	0.002	
NOx	0.277	
CO	0.232	