March 5, 2009

Jim La Spina
Siting Specialist
Energy Facility Site Evaluation Council
905 Plum Street, Building 3
P.O. Box 43172
Olympia, WA 98504-3172

Re: Chehalis Generation Facility Auxiliary Boiler Project

Dear Mr. La Spina:

Amendment No. 2 of Resolution No. 325 of the Site Certification Agreement (SCA) for the Chehalis Generation Facility requires PacifiCorp to submit an application to EFSEC for the installation of an auxiliary boiler to provide steam to the Chehalis facility's heat recovery steam generators (HRSGs) and steam turbine. This letter and attached Notice of Construction permit application is hereby submitted to meet that requirement.

PacifiCorp proposes that a natural gas fired auxiliary boiler be installed at the Chehalis Generating Facility to provide steam for process use, including use in the HRSGs and steam turbine. The auxiliary boiler will be fired exclusively on natural gas, will utilize best available control technology to control emissions of nitrogen oxides (NO_X), and will have a maximum heat input rate of 30.0 MMBtu/hour.

PacifiCorp requests that EFSEC issue a Notice of Construction (NOC) permit for the installation of the Chehalis auxiliary boiler. There are no applicable conditions in the Chehalis facility's existing prevention of significant deterioration (PSD) permit that will require modification resulting from the construction of a new auxiliary boiler or would preclude issuance of an NOC permit.

An evaluation of criteria pollutant emission rates indicates that the auxiliary boiler is not subject to PSD review. The following table summarizes the potential-to-emit (PTE) criteria pollutant emission rates from the proposed Chehalis auxiliary boiler.

Pollutant	PSD Significant Emission Rate (tons/year)	Chehalis Facility PTE Rate (tons/year)	PSD Significance Level Exceeded
Carbon Monoxide (CO)	100	4.80	No
Nitrogen Oxides (NO_X)	40	1.39	No
Sulfur Dioxide (SO_2)	40	0.13	No
Particulate Matter (PM_{10})	15	1.31	No
VOC	40	0.53	No
Lead	0.6	0.0	No
Sulfuric Acid Mist	7	0.0	No

Although potential-to-emit emission rates for criteria pollutants from the proposed Chehalis auxiliary boiler are below the PSD significance thresholds and the auxiliary boiler is not subject to PSD review, an evaluation of impacts to ambient air quality standards was performed for the auxiliary boiler project. Impacts to ambient air quality standards was completed using the EPA SCREEN3 modeling protocol. The SCREEN3 modeling analysis is a conservative approach that evaluates the impact to ambient air quality from pollutants emitted from an emissions point source.

The results of the SCREEN3 modeling indicates that the maximum impact to ambient air quality standards from operation of the Chehalis auxiliary boiler will occur 312 meters from the auxiliary boiler stack exit. Furthermore, the impacts to ambient air quality standards resulting from operation of the Chehalis auxiliary boiler are well below the Significant Impact Levels (SILs) for Class II areas.

The following table summarizes the results of the SCREEN3 ambient air quality analysis.

Pollutant	Averaging Period	Class II Significant Impact Levels $\mu g/m^3$	SCREEN3 Modeling 1-hour Max. Conc. $\mu g/m^3$	24-hour Conc. $\mu g/m^3$ [1]	Annual Conc. $\mu g/m^3$ [2]	Class II SIL Exceeded
NO_X	Annual	1	1.354	0.5416	0.1354	No
SO_2	3-hour 24-hour Annual	25 5 1	0.1279	0.05116	0.01279	No
PM_{10}	24-hour Annual	5 1	1.279	0.5116	0.1279	No
CO	1-hour 8-hour	2,000 500	4.668	1.867	0.4668	No
Pb	Calendar Quarter	NA	0.00006207	0.00002483	0.000006207	NA
HC/VOC	NA	NA	0.5115	0.2046	0.05115	NA
Formaldehyde	NA	NA	0.009309	0.003724	0.0009309	NA
Benzene	NA	NA	0.0002607	0.0001043	0.00002607	NA

Attached is a completed *Washington Department of Ecology Notice of Construction Application* for the Chehalis auxiliary boiler project. The attached application includes the methods used to calculate the potential-to-emit emission rates for criteria pollutants emitted from the proposed Chehalis auxiliary boiler. The application also includes the auxiliary boiler operating parameters and site conditions used in the SCREEN3 modeling as well as copies of the SCREEN3 model runs for the individual pollutants evaluated in the ambient air quality analysis.

Please contact me at (360) 748-1300 or Jim Doak at (801) 220-2306 if you have any questions or comments regarding the attached Notice of Construction permit application or our request to have EFSEC issue an NOC for the proposed Chehalis auxiliary boiler project.

Sincerely,

Rob Smith
Plant Manager
Chehalis Generating Facility
1813 Bishop Road
Chehalis, WA 98532

Attachment

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[1] The 24-hour average pollutant concentrations were obtained by multiplying the maximum 1-hour values by 0.4.

[2] The annual average pollutant concentrations were obtained by multiplying the maximum 1-hour values by 0.1.

[1, 2] Guidance provided by Washington Department of Ecology (Clint Bowman) February 13, 2009.

c: John Bowater
Jim Doak
Bill Lawson
Mark Miller
Ian Andrews
Kjell Stuvstad

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY
NOTICE OF CONSTRUCTION APPLICATION
DECLARING INTENT TO CONSTRUCT, INSTALL OR ESTABLISH
OR
REPLACEMENT OR SUBSTANTIAL ALTERATION OF
EMISSION CONTROL TECHOLOGY ON AN EXISTING STATIONARY SOURCE

I. PERMITTING AUTHORITY (Send Completed Application to this address)

Department of Ecology Headquarters / Industrial Section PO Box 47600 Olympia WA 98504-7600 360-407-6000	Department of Ecology Central Region 15 East Yakima Avenue, Suite 200 Yakima WA 98902-3452 509-575-2490	Department of Ecology Eastern Region North 4601 Monroe Spokane WA 98205-1295 (509) 329-3400

II. COMPANY INFORMATION

1. Legal Name of Company PacifiCorp	
2. Company Mailing Address (street, city, state, zip) 1407 West North Temple, Salt Lake City, UT 84116	
3. Company Responsible Official & Title Joseph F. Moore, Vice President Generation	
4. Company Phone Number (801) 220-4017	5. Company FAX Number (801) 220-4648

III. FACILITY INFORMATION

1. Facility Name (if different from Legal Company Name above) Chehalis Generating Facility	
2. Facility Mailing Address (if different from Company Mailing Address above) 1813 Bishop Road, Chehalis, WA 98532	
3. Facility Site Legal Description The Chehalis Generating Facility is located in the southwest quarter of the southeast quarter of Section 10, Township 13 North, Range 2 West of the Willamette Meridian, Lewis County, Washington	
4. Facility Contact Person (if different from Company Responsible Official above) Rob Smith	
5. Facility Phone Number (if different from Company Phone # above) (360) 748-1300 extension 2	6. Facility FAX # (if different from Company FAX # above) (360) 740-1891
7. General Proposal for Facility (see section on next page for specific description of proposal). Installation of a natural gas fired auxiliary steam boiler	
8. Proposal Construction Starting Date April 1, 2010	9. Proposal Construction Completion Date September 1, 2010

IV. PROPOSAL INFORMATION

1. Complete Description of Specific Proposal (attach Drawings, Schematics, Prints or Block Diagrams)

This is a project to install a natural gas-fired auxiliary steam boiler at PacifiCorp's Chehalis Generating Facility. The auxiliary boiler will have an hourly heat input rate of less-than-or-equal-to 30.0 MMBtu/hour.

The auxiliary boiler will be used to provide steam to the gas turbine generators' support equipment and to reduce the required duration of gas turbine startup events.

The auxiliary boiler will utilize a low-NO_X burner system to reduce emissions of nitrogen oxides.

PacifiCorp is required to submit a permit application to Ecology for construction of a Chehalis auxiliary boiler as indicated in the facility's Site Certification Agreement, Resolution No. 2, Amendment No. 2, dated September 22, 2008.

2. This Application if for (Please Check One):

- [x] New Construction
- [ ] Existing Equipment / Facility Operating without a Permit
- [ ] Change of Control Technology
- [ ] Modification to Facility
- [ ] New Permit Conditions
- [ ] Production Increase

3. Complete Description of Best Available control Technology (BACT) for Proposal (see attached Summary of BACT Process) Attach Manufacturer's or Vendor's Information.

The auxiliary boiler will incorporate the use of low-NO_X burners to reduce emissions of nitrogen oxides. The boiler will meet a NO_X emission standard of 9 ppm and a CO emission standard of 50 ppm.

The boiler will have a maximum heat input rate of less-than-or-equal-to 30.0 MMBtu/hour; a thermal efficiency of 80 percent; and a maximum steam production rate of less-than-or-equal-to 19,800 lb/hour.

4. Maximum Potential Production Output per Year	5. Maximum Potential Production Output per Hour
Less-than-or-equal-to: 86,724 tons/year steam; 262,800 MMBtu/year heat input	Less-than-or-equal-to: 19,800 lb/hour steam; 30.0 MMBtu/hour heat input
6. Actual Production Output per Year	7. Actual Production Output per Hour

8. Operating Schedule	Hours Per Day	Days Per Week	Weeks per Year
	24	7	52

9. Percentage of Production	Jan-Feb-Mar	April-May-June	July-Aug-Sept	Oct-Nov-Dec
	25	25	25	25

V. EMISSIONS ESTIMATIONS OF CRITERIA POLLUTANTS

1. Particulate Matter (PM) (Pounds or Tons per Year) Actual Emissions =	Potential Emissions $\leq$ 1.31 tons/year
2. Nitrogen Oxides (NO_x) (Pounds or Tons per Year) Actual Emissions =	Potential Emissions $\leq$ 1.39 tons/year
3. Carbon Monoxide (CO) (Pounds or tons per Year) Actual Emissions =	Potential Emissions $\leq$ 4.80 tons/year
4. Sulfur Dioxide (SO2) (Pounds or Tons per Year) Actual Emissions =	Potential Emissions $\leq$ 0.13 tons/year
5. Volatile Organic Compounds (VOCs) (Pounds or Tons per Year) Actual Emissions =	Potential Emissions $\leq$ 0.53 tons/year
6. Lead (Pb) (Pounds or Tons per Year) Actual Emissions =	Potential Emissions $\leq$ 0.13 lb/year

VI. EMISSIONS ESTIMATIONS OF TOXIC AIR POLLUTANTS (consult Chapter 173-460 WAC)

Pollutant #1 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant Formaldehyde	Actual Emissions =	Potential Emissions $\leq$ 19.1 lb/year
Pollutant #2 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant Benzene	Actual Emissions =	Potential Emissions $\leq$ 0.54 lb/year
Pollutant #3 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant Sulfuric Acid	Actual Emissions =	Potential Emissions $\leq$ 2.18 lb/year
Pollutant #4 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant	Actual Emissions =	Potential Emissions =
Pollutant #5 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant	Actual Emissions =	Potential Emissions =
Pollutant #6 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant	Actual Emissions =	Potential Emissions =
Pollutant #7 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant	Actual Emissions =	Potential Emissions =

VII. EMISSIONS ESTIMATIONS OF FUGITIVE AIR POLLUTANTS

Pollutant #1 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant NA	Pounds per Hour =	Pounds per Year =
Pollutant #1 (List Pollutant Name, Pounds per Hour/Pounds per Year) Pollutant	Pounds per Hour =	Pounds per Year =

VIII. MODELING RESULTS

1. List Modeling Results of Criteria Air Pollutants (attach any Modeling Printouts)
SO_2 @ 0.1279 $\mu g/m^3$ PM @ 1.279 $\mu g/m^3$ CO @ 4.668 $\mu g/m^3$ NO_X @ 1.354 $\mu g/m^3$ HC/VOC @ 0.5115 $\mu g/m^3$ Lead @ 0.00006207 $\mu g/m^3$
2. List Modeling Results of Toxic Air Pollutants (attach any Modeling Printouts)
Benzene @ 0.0002607 $\mu g/m^3$ Formaldehyde @ 0.009309 $\mu g/m^3$

IX. EMISSIONS DATA AT DISCHARGE POINT

Stack Parameters	Other than Stack Parameters
1. List the Number of Stacks under this Proposal 1	1. List the Number of Discharge Points under this Proposal
2. List the Gas Velocity for each Stack 8.57 m/sec (28.1 ft/sec)	2. List the Gas Velocity for each Discharge Point
3. List the Height for each Stack 26.8 m (88 ft)	3. List the Height for each Discharge Point
4. List the Inside Diameter or Dimensions for each Stack 0.762 m (30 in)	4. List the Inside Diameter or dimensions for each Discharge Point
5. List the Gas Exit Temperature for each Stack 366.3^o K (200° F)	5. List the Gas Exit Temperature for each Discharge Point
6. List the Building Height, Width, Length for each Stack NA	6. List the Building Height, Width, Length for each Discharge Point
7. List the Height of the Tallest Building On-site or in the Vicinity 76.75 ft	7. List the Height of the Tallest Building On-site or in the Vicinity
8. List Whether the Facility is in an Urban or Rural Location Rural	8. List Whether the Facility is in an Urban or Rural Location
9. List the Distance from each Stack to the Property Line 100 ft (minimum)	9. List the Distance from each Discharge Point to the Property Line
10. Is this Stack Shared by more than One Source? No	10. Is this a Shared Discharge Point?
11. List the Volumetric Flow Rate for each Stack Not to exceed 8,280 ACFM	11. List the Volumetric Flow Rate for each Discharge Point
12. How does each Stack Discharge, Vertically or Horizontally? Vertically	12. How does each Discharge Point Vent, Vertically or Horizontally?

X. FUEL DATA

	PRIMARY FUEL	SECONDARY FUEL
1. Type (Natural Gas, Oil, Coal, Hogged Fuel, etc.	Natural Gas	NA
2. Unit of Measure (Gallons, Cubic Feet, Tons, etc)	Cubic Feet	
3. Maximum Consumption Units per Hour	29,126 ft^3/hour	
4. Maximum Consumption Units per Year	255.1 x 10^6 ft^3/year	
5. Actual Consumption Units per Hour		
6. Actual Consumption Units per Year		
7. BTU per Unit of Measure	1,030 Btu/ft^3	
8. Percent Sulfur (if applicable)	NA	
9. Percent Ash (if applicable)	NA	

XI. AIR POLLUTION CONTROL EQUIPMENT (ATTACH VENDOR'S INFORMATION)

BAGHOUSE	SCRUBBER	CYCLONE	E.S.P.	ADSORPTION
1. Type	1. Type	1. Type	1. Type	1. Type
2. Efficiency	2. Efficiency	2. Efficiency	2. Efficiency	2. Efficiency
3. Bag height	3. Dimensions	3. Dimensions	3. Dimensions–Plate spacing, height, length (attach layout)	3. Gas Flow Rate (cfm)
4. Bag diameter	4. Gas Differential Pressure	4. Gas Differential Pressure	4. Fields	4. Bed Media
5. Number of bags	5. Type of scrubber liquid	5. Gas Flow Rate (cfm)	5. Configuration	5. Adsorption Isotherm (attach graph)
6. Filter Area (sq. feet)	6. Liquid Flow Rate gpm)	6. Other	6. Gas Velocity (fpm)	6. Surface Area (sq. feet)
7. Filter Media	7. Gas Flow Rate (cfm)		7. Gas Flow Rate (cfm)	7. Gas Velocity (fpm)
8. Gas Flow Rate (cfm)	8. Scrubber Packing Material		8. Residence Time	8. Gas Temperature (deg. F)
9. Air- to-Cloth Ratio			9. Gas Differential Pressure	9. Bed Volume (cubic feet)
10. Overall Dimensions			10. Precipitation Rate	10. Bed Dimensions
11. Cleaning Mechanism			11. Prim/Sec. Voltage	11. Capacity (hours)
12. Other			12. Prim/Sec. Current	12. Contaminant
13. Other			13. Corona Strength	13. Regeneration Time
14. Other			14. Gas Temperature (deg. F)	14. Regeneration Type

XII. OTHER DATA

1. Site Plan and Equipment Layout for the site attached?	☐YES	☒NO
2. MSDS Sheets for Chemicals or Materials related to this proposal attached?	☐YES	☒NO
3. Vendor's and/or Manufacturer's information attached?	☐YES	☒NO
4. Modeling Information attached?	☒YES	☐NO
5. Fugitive Dust Control Plan attached?	☐YES	☒NO
6. All Enclosures for your Specific Proposal attached?	☒YES	☐NO

7. Name and Title of Person Filling out this Form

Printed Name Jim Doak Signature Date March 5, 2009

8. Name and Title of Responsible Official

Printed Name Rob Smith Signature Date March 5, 2009

Ecology is an equal opportunity agency.

XIII. ADDITIONAL INFORMATION FOR SPECIFIC EQUIPMENT (Attach Vendor's Information)

BOILER	BURNER	ASPHALT PLANT	SAND / GRAVEL	PAINT BOOTH
1. Type and Number To be determined 2. Size (BTU per hour input ≤ 30.0 MMBtu/hour 3. Size (steam pounds per hour) ≤ 19,800 lb/hour 4. Efficiency 80 percent 5. NOx Rating (PPM@ 7% Oxygen) 9 ppm 6. CO Rating (PPM @ 7% Oxygen) 50 ppm	1. Type and Number 2. Size (BTU per hour input 3. NOx Rating (PPPM@7% Oxygen) 4. CO Rating (PPM @ 7% Oxygen)	1. Type (Drum, Batch) 2. Size (tons per hour) 3. VOC Emission Points (attach layout) 4. VOC Controls 5. Aggregate Piles (acres) 6. Off Road Vehicle Use (miles per year) 7. Power (Line, Genset, etc.) 8. Number of Vehicles	1.Crusher Type (Prim., Sec., Tertiary) (attach layout) 2. Size (tons per hour) 3. Number of Screens 4. Number of Conveyors 5. Fog Spray Location (attach layout) 6. Aggregate Piles (acres) 7. Off Road Vehicle Use (miles per year) 8. Number of Vehicles	1.Operation Type 2. Application Method 3. Filter Bank Area 4. Filter Exhaust Flow 5. Coating & Solvent Types & MSDS Sheets (attach details) 6. Gun Cleaning Method 7. Drying Method

LANDFILL	ABRASIVE BLASTING	CONCRETE BATCH	OTHER	OTHER
1. Type 2. Capacity (tons) 3. Year started 4. Year closed 5. Area of Landfill (attach site plan)	1. Attach details of booth or hanger to be used 2. Abrasive Materials to be used. Attach MSDS Sheet(s) 3. Filter Bank Area 4. Filter Exhaust Flow 5. Approximate Number of Items to be Abrasively Blasted each Calendar Year.	1. Size (tons or cubic yards of product)) 2. Cement Silo Controls (baghouse, etc.) 3. Charging Station Controls (baghouse, enclosure, etc.) 4. Conveyor Controls		

Chehalis Auxiliary Steam Boiler

SCREEN3 Modeling Data

Chehalis Auxiliary Boiler Project: Potential-to-Emit Emission Rates

	Value	Units	Reference
Maximum Boiler Heat Input Rate:	30.0	MMBtu/hour	Cleaver Brooks
Natural Gas Heating Value	1,030	Btu/SCF	2008 Chehalis Facility Data
Maximum Annual Operaing Time:	8,760	hours/year	Maximum potential operating time
Maximum Annual Natural Gas Usage:	0.0291	10^6 SCF/hour	Calculated value
Maximum Annual Natural Gas Usage:	255.1	10^6 SCF/year	Calculated value

Pollutant Emission Rate	Value	Units	Reference
CO	50	ppm	Cleaver Brooks
CO	0.0365	lb/MMBtu	Cleaver Brooks
NO_X	9	ppm	Cleaver Brooks
NO_X	0.0106	lb/MMBtu	Cleaver Brooks
SO_X	1	ppm	Cleaver Brooks
SO_X	0.001	lb/MMBtu	Cleaver Brooks
HC/VOC	10	ppm	Cleaver Brooks
HC/VOC	0.004	lb/MMBtu	Cleaver Brooks
PM	0.01	lb/MMBtu	Cleaver Brooks
Formaldehyde	0.075	lb/10^6 SCF	AP-42, Table 1.4-3
Benzene	0.0021	lb/10^6 SCF	AP-42, Table 1.4-3
Lead	0.0005	lb/10^6 SCF	AP-42, Table 1.4-2

Pollutant	Potential Emission Rate lb/hour	Potential Emission Rate g/sec	Potential Annual Emissions lb/year	Potential Annual Emissions tons/year
CO	1.095	1.38E-01	9,591.2	4.80
NO_X	0.318	4.00E-02	2,782.6	1.39
SO_X	0.030	3.78E-03	262.8	0.13
HC/VOC	0.120	1.51E-02	1,051.2	0.53
PM	0.300	3.78E-02	2,628.0	1.31
Formaldehyde	0.00218	2.75E-04	19.1	0.01
Benzene	0.0000612	7.71E-06	0.54	0.00
Lead	0.0000146	1.83E-06	0.13	0.00
Sulfuric Acid Mist *	0.0002489	3.14E-05	2.18	0.00

Notes:

Emission rates are based on a NO_X emission rate of 9 ppm and CO emission rate of 50 ppm

Potential-to-emit emission rates are based on an auxiliary boiler operating time of 8,760 hours/year

Pollutant emission rates obtained from Cleaver Brooks boiler emission data and AP-42 emission factors

* See separate worksheet for calculation of H_2SO_4 emission rate

Chehalis Auxiliary Boiler – Sulfuric Acid Mist Emissions

Calculate potential sulfuric acid mist emissions from auxiliary boiler using Electric Power Research Institute (EPRI) method for *Estimating Sulfuric Acid Emissions from Stationary Power Plants*, Technical Update, March 2007.

Step 1: Calculate the annual manufacture of sulfur dioxide ($E2_{NG}$) from the combustion of natural gas in the Chehalis auxiliary boiler.

$E2_{NG} = K_b \bullet B_{NG} \bullet S$

Where:

$E2_{NG}$ = SO_2 mass rate, tons/year
K_b = Molecular weight and units conversion constant, equal to 0.0001359 for natural gas
B_{NG} = Burn of natural gas in TBtu/year
S = Sulfur content of natural gas, in grains per million standard cubic feet, typically 2,000 gr/10^6 scf per EPA AP-42.

B_{NG} = (30.0 x 10^6 Btu/hour) ● (8,760 hours/year) = 2.628 x 10^{11} Btu/year
B_{NG} = 0.2628 TBtu/year

$E2_{NG}$ = (0.0001359) ● (0.2628) ● (2,000) tons/year
$E2_{NG}$ = 0.0714 tons/year (potential annual SO_2 emissions)

Step 2: Calculate the annual manufacture of sulfuric acid (EM_{Comb}) from the combustion of natural gas in the auxiliary boiler.

$EM_{Comb} = K \bullet F1 \bullet E2_{NG}$

Where:

EM_{Comb} = H_2SO_4 mass rate, lb/year.
K = Molecular weight and units conversion constant, equal to 3,063 for sulfuric acid.
F1 = Fuel impact factor, equal to 0.01 for a natural gas fired boiler.
$E2_{NG}$ = Annual SO_2 emission rate from the combustion of natural gas in the Chehalis auxiliary boiler, tons/year.

EM_{Comb} = (3,063) ● (0.01) ● (0.0714) lb/year
EM_{Comb} = 2.18 lb/year (potential annual manufacture of H_2SO_4 from combustion of natural gas.)

Step 3: Calculate the annual release of sulfuric acid (ER_{Comb}) from the combustion of natural gas in the auxiliary boiler.

$ERComb = K \bullet F1 \bullet F2 \bullet E2_{NG}$

Where:

ER_{Comb} = H_2SO_4 mass rate, lb/year.
K = Molecular weight and units conversion constant, equal to 3,063 for sulfuric acid.
F1 = Fuel impact factor, equal to 0.01 for a natural gas fired boiler.
F2 = Technology impact factor for equipment contributing to pollutant emission rate reduction. Assume that there is no pollution control device on the Chehalis auxiliary boiler and that the F2 factor is equal to 1.0.
$E2_{NG}$ = Annual SO_2 emission rate from the combustion of natural gas in the Chehalis auxiliary boiler, tons/year.

$ER_{Comb} = (3{,}063) \bullet (0.01) \bullet (1.0) \bullet (0.0714)$ lb/year
ER_{Comb} = 2.18 lb/year (potential annual release of H_2SO_4 from combustion of natural gas.)

Summary

As indicated above, the potential-to-emit emission rate of sulfuric acid (H_2SO_4) from the Chehalis auxiliary boiler is equivalent to 2.18 lb/year. This value is based on a maximum boiler heat input rate of 30.0 MMBtu/year; an annual boiler operating time of 8,760 hours/year; a natural gas fuel sulfur content of 2,000 grains per million standard cubic feet; and no pollution control equipment for the control of particulate matter or sulfur dioxide from the Chehalis auxiliary boiler.

Chehalis Auxiliary Boiler Operating Parameters, Site Conditions and SCREEN3 Input Data

Auxiliary Boiler Heat Input	3.0E+07	Btu/hour
Natural Gas Heating Value	1,030	Btu/SCF
Natural Gas Combustion Rate (maximum potential)	29,126	SCF/hour
Natural Gas Combustion Rate	0.0291	10^6 SCF/hour
Stack Height:	88.0	ft
Stack Height:	26.82	m
Stack Diameter:	30.0	in
Stack Diameter:	0.762	m
Stack Flow Rate:	8,280	ft^3/min
Stack Flow Rate:	3.91	m^3/sec
Stack Flow Rate:	6,454	SCFM
Stack Gas Exit Temperature:	200	Degrees F
Stack Gas Exit Temperature:	366.3	Degrees K
Stack Gas Exit Temperature:	660	Degrees R
Standard Conditions Temperature:	60	Degrees F
Standard Conditions Temperature:	520	Degrees R
Stack Gas Exit Velocity:	28.1	ft/sec
Stack Gas Exit Velocity:	8.57	m/sec
Site Barometric Pressure	29.60	In Hg
Standard Conditions Barometric Pressure:	29.92	In Hg

Chehalis Auxiliary Boiler SCREEN3 Parameters		
Stack Height:	26.82	m
Stack Diameter:	0.762	m
Stack Gas Exit Temperature:	366.3	Degrees K
Stack Gas Exit Velocity:	8.57	m/sec
Ambient Temperature:	293	Degrees K

SCREEN3 Modeling Notes:

Pollutant emission rates are modeled as point sources
Emission rates are input in units of grams/second
Stack height is input in units of meters
Stack inside diameter is input in units of meters
Stack exit velocity is input in units of meters/second
Stack exit gas temperature is input in units of degrees Kelvin
Ambient air temperature is input in units of degrees Kelvin
Receptor height (typical human mid-face height) is input in units of meters
Assume Rural dispersion option
Do not consider Building Downwash (stack height meets applicable General Order of Approval standards)
Do not consider Complex Terrain Screen (assume flat terrain in vicinity of Chehalis facility)
Do not consider Simple Terrain Screen (assume non-sloping flat terrain that does not exceed stack height)
Use Full Meteorology
Use Automated Distance Array
Use Minumum Distance of 30 meters and Maximum Distance of 1000 meters
Do not utilize Discrete Distances option
Do not utilize Fumigation option

Chehalis Auxiliary Steam Boiler

SCREEN3 Model Runs

02/17/09
08:14:04

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

Chehalis Auxiliary Boiler CO Modeling

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      .138000
   STACK HEIGHT (M)       =      26.8200
   STK INSIDE DIAM (M)    =        .7620
   STK EXIT VELOCITY (M/S)=       8.5700
   STK GAS EXIT TEMP (K)  =     366.3000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       1.4000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

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


BUOY. FLUX =    2.441 M**4/S**3;  MOM. FLUX =    8.528 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

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

  DIST     CONC             U10M   USTK  MIX HT   PLUME   SIGMA   SIGMA
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   Y (M)   Z (M)  DWASH
-------  ----------  ----  -----  -----  ------  ------  ------  ------  -----
    30.   .3079E-11    1     3.0    3.2   960.0   39.84    9.27    4.84    NO
   100.   .7990        1     3.0    3.2   960.0   39.84   27.11   14.43    NO
   200.   4.094        1     2.0    2.1   640.0   46.35   50.28   29.83    NO
   300.   4.648        1     1.0    1.1   320.0   65.87   72.63   48.74    NO
   400.   4.245        2     1.5    1.6   480.0   52.85   68.09   40.69    NO
   500.   4.248        2     1.0    1.1   320.0   65.87   83.50   52.30    NO
   600.   4.284        3     1.5    1.7   480.0   52.09   65.11   38.99    NO
   700.   4.219        3     1.0    1.1   320.0   64.73   75.28   45.43    NO
   800.   4.112        3     1.0    1.1   320.0   64.73   84.84   51.02    NO
   900.   3.877        3     1.0    1.1   320.0   64.73   94.30   56.57    NO
  1000.   3.591        3     1.0    1.1   320.0   64.73  103.68   62.09    NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    30. M:
   312.   4.668        1     1.0    1.1   320.0   65.87   75.36   51.59    NO

 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

```
***************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
***************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	4.668	312.	0.

```
***************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
***************************************************
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02/17/09
08:16:32

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

Chehalis Auxiliary Boiler NOx Modeling

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      .400200E-01
   STACK HEIGHT (M)       =      26.8200
   STK INSIDE DIAM (M)    =        .7620
   STK EXIT VELOCITY (M/S)=       8.5700
   STK GAS EXIT TEMP (K)  =     366.3000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       1.4000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

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


BUOY. FLUX =    2.441 M**4/S**3;  MOM. FLUX =    8.528 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

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

  DIST     CONC             U10M   USTK  MIX HT   PLUME   SIGMA   SIGMA
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   Y (M)   Z (M)  DWASH
-------  ----------  ----  -----  -----  ------  ------  ------  ------  -----
    30.   .8928E-12    1     3.0    3.2   960.0   39.84    9.27    4.84    NO
   100.   .2317        1     3.0    3.2   960.0   39.84   27.11   14.43    NO
   200.   1.187        1     2.0    2.1   640.0   46.35   50.28   29.83    NO
   300.   1.348        1     1.0    1.1   320.0   65.87   72.63   48.74    NO
   400.   1.231        2     1.5    1.6   480.0   52.85   68.09   40.69    NO
   500.   1.232        2     1.0    1.1   320.0   65.87   83.50   52.30    NO
   600.   1.242        3     1.5    1.7   480.0   52.09   65.11   38.99    NO
   700.   1.224        3     1.0    1.1   320.0   64.73   75.28   45.43    NO
   800.   1.193        3     1.0    1.1   320.0   64.73   84.84   51.02    NO
   900.   1.124        3     1.0    1.1   320.0   64.73   94.30   56.57    NO
  1000.   1.041        3     1.0    1.1   320.0   64.73  103.68   62.09    NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    30. M:
   312.   1.354        1     1.0    1.1   320.0   65.87   75.36   51.59    NO

 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

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***************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
***************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	1.354	312.	0.

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***************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
***************************************************
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02/17/09
08:18:45

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

Chehalis Auxiliary Boiler SO2 Modeling

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	.378000E-02
STACK HEIGHT (M)	=	26.8200
STK INSIDE DIAM (M)	=	.7620
STK EXIT VELOCITY (M/S)	=	8.5700
STK GAS EXIT TEMP (K)	=	366.3000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	1.4000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	.0000
MIN HORIZ BLDG DIM (M)	=	.0000
MAX HORIZ BLDG DIM (M)	=	.0000

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

BUOY. FLUX = 2.441 M**4/S**3; MOM. FLUX = 8.528 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
30.	.8433E-13	1	3.0	3.2	960.0	39.84	9.27	4.84	NO
100.	.2189E-01	1	3.0	3.2	960.0	39.84	27.11	14.43	NO
200.	.1121	1	2.0	2.1	640.0	46.35	50.28	29.83	NO
300.	.1273	1	1.0	1.1	320.0	65.87	72.63	48.74	NO
400.	.1163	2	1.5	1.6	480.0	52.85	68.09	40.69	NO
500.	.1164	2	1.0	1.1	320.0	65.87	83.50	52.30	NO
600.	.1173	3	1.5	1.7	480.0	52.09	65.11	38.99	NO
700.	.1156	3	1.0	1.1	320.0	64.73	75.28	45.43	NO
800.	.1126	3	1.0	1.1	320.0	64.73	84.84	51.02	NO
900.	.1062	3	1.0	1.1	320.0	64.73	94.30	56.57	NO
1000.	.9835E-01	3	1.0	1.1	320.0	64.73	103.68	62.09	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 30. M:

312.	.1279	1	1.0	1.1	320.0	65.87	75.36	51.59	NO

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

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*************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
*************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	.1279	312.	0.

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**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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02/17/09
08:20:59

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

Chehalis Auxiliary Boiler HC/VOC Modeling

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      .151200E-01
   STACK HEIGHT (M)       =      26.8200
   STK INSIDE DIAM (M)    =        .7620
   STK EXIT VELOCITY (M/S)=       8.5700
   STK GAS EXIT TEMP (K)  =     366.3000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       1.4000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

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


BUOY. FLUX =    2.441 M**4/S**3;  MOM. FLUX =    8.528 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
30.	.3373E-12	1	3.0	3.2	960.0	39.84	9.27	4.84	NO
100.	.8754E-01	1	3.0	3.2	960.0	39.84	27.11	14.43	NO
200.	.4485	1	2.0	2.1	640.0	46.35	50.28	29.83	NO
300.	.5093	1	1.0	1.1	320.0	65.87	72.63	48.74	NO
400.	.4651	2	1.5	1.6	480.0	52.85	68.09	40.69	NO
500.	.4654	2	1.0	1.1	320.0	65.87	83.50	52.30	NO
600.	.4693	3	1.5	1.7	480.0	52.09	65.11	38.99	NO
700.	.4623	3	1.0	1.1	320.0	64.73	75.28	45.43	NO
800.	.4506	3	1.0	1.1	320.0	64.73	84.84	51.02	NO
900.	.4248	3	1.0	1.1	320.0	64.73	94.30	56.57	NO
1000.	.3934	3	1.0	1.1	320.0	64.73	103.68	62.09	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 30. M:

312.	.5115	1	1.0	1.1	320.0	65.87	75.36	51.59	NO

```
 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

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*************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
*************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	.5115	312.	0.

```
**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
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02/17/09
08:23:06

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

Chehalis Auxiliary Boiler PM Modeling

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      .378000E-01
   STACK HEIGHT (M)       =      26.8200
   STK INSIDE DIAM (M)    =        .7620
   STK EXIT VELOCITY (M/S)=       8.5700
   STK GAS EXIT TEMP (K)  =     366.3000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       1.4000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

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


BUOY. FLUX =    2.441 M**4/S**3;  MOM. FLUX =    8.528 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
30.	.8433E-12	1	3.0	3.2	960.0	39.84	9.27	4.84	NO
100.	.2189	1	3.0	3.2	960.0	39.84	27.11	14.43	NO
200.	1.121	1	2.0	2.1	640.0	46.35	50.28	29.83	NO
300.	1.273	1	1.0	1.1	320.0	65.87	72.63	48.74	NO
400.	1.163	2	1.5	1.6	480.0	52.85	68.09	40.69	NO
500.	1.164	2	1.0	1.1	320.0	65.87	83.50	52.30	NO
600.	1.173	3	1.5	1.7	480.0	52.09	65.11	38.99	NO
700.	1.156	3	1.0	1.1	320.0	64.73	75.28	45.43	NO
800.	1.126	3	1.0	1.1	320.0	64.73	84.84	51.02	NO
900.	1.062	3	1.0	1.1	320.0	64.73	94.30	56.57	NO
1000.	.9835	3	1.0	1.1	320.0	64.73	103.68	62.09	NO
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 30. M:									
312.	1.279	1	1.0	1.1	320.0	65.87	75.36	51.59	NO

```
 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

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*************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
*************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	1.279	312.	0.

```
**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
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02/17/09
08:25:14

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

Chehalis Auxiliary Boiler Formaldehyde Modeling

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      .275200E-03
   STACK HEIGHT (M)       =      26.8200
   STK INSIDE DIAM (M)    =        .7620
   STK EXIT VELOCITY (M/S)=       8.5700
   STK GAS EXIT TEMP (K)  =     366.3000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       1.4000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

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


BUOY. FLUX =    2.441 M**4/S**3;  MOM. FLUX =    8.528 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
30.	.6139E-14	1	3.0	3.2	960.0	39.84	9.27	4.84	NO
100.	.1593E-02	1	3.0	3.2	960.0	39.84	27.11	14.43	NO
200.	.8164E-02	1	2.0	2.1	640.0	46.35	50.28	29.83	NO
300.	.9269E-02	1	1.0	1.1	320.0	65.87	72.63	48.74	NO
400.	.8465E-02	2	1.5	1.6	480.0	52.85	68.09	40.69	NO
500.	.8471E-02	2	1.0	1.1	320.0	65.87	83.50	52.30	NO
600.	.8542E-02	3	1.5	1.7	480.0	52.09	65.11	38.99	NO
700.	.8414E-02	3	1.0	1.1	320.0	64.73	75.28	45.43	NO
800.	.8201E-02	3	1.0	1.1	320.0	64.73	84.84	51.02	NO
900.	.7731E-02	3	1.0	1.1	320.0	64.73	94.30	56.57	NO
1000.	.7160E-02	3	1.0	1.1	320.0	64.73	103.68	62.09	NO
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 30. M:									
312.	.9309E-02	1	1.0	1.1	320.0	65.87	75.36	51.59	NO

```
 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
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DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

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*************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
*************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	.9309E-02	312.	0.

```
**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
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02/17/09
08:28:20

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

Chehalis Auxiliary Boiler Benzene Modeling

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      .770700E-05
   STACK HEIGHT (M)       =      26.8200
   STK INSIDE DIAM (M)    =        .7620
   STK EXIT VELOCITY (M/S)=       8.5700
   STK GAS EXIT TEMP (K)  =     366.3000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       1.4000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

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


BUOY. FLUX =    2.441 M**4/S**3;  MOM. FLUX =    8.528 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
30.	.1719E-15	1	3.0	3.2	960.0	39.84	9.27	4.84	NO
100.	.4462E-04	1	3.0	3.2	960.0	39.84	27.11	14.43	NO
200.	.2286E-03	1	2.0	2.1	640.0	46.35	50.28	29.83	NO
300.	.2596E-03	1	1.0	1.1	320.0	65.87	72.63	48.74	NO
400.	.2371E-03	2	1.5	1.6	480.0	52.85	68.09	40.69	NO
500.	.2372E-03	2	1.0	1.1	320.0	65.87	83.50	52.30	NO
600.	.2392E-03	3	1.5	1.7	480.0	52.09	65.11	38.99	NO
700.	.2356E-03	3	1.0	1.1	320.0	64.73	75.28	45.43	NO
800.	.2297E-03	3	1.0	1.1	320.0	64.73	84.84	51.02	NO
900.	.2165E-03	3	1.0	1.1	320.0	64.73	94.30	56.57	NO
1000.	.2005E-03	3	1.0	1.1	320.0	64.73	103.68	62.09	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 30. M:

312.	.2607E-03	1	1.0	1.1	320.0	65.87	75.36	51.59	NO

```
 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
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DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

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*************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
*************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	.2607E-03	312.	0.

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**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
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02/17/09
08:30:19

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

Chehalis Auxiliary Boiler Lead Modeling

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      .183500E-05
   STACK HEIGHT (M)       =      26.8200
   STK INSIDE DIAM (M)    =        .7620
   STK EXIT VELOCITY (M/S)=       8.5700
   STK GAS EXIT TEMP (K)  =     366.3000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       1.4000
   URBAN/RURAL OPTION     =        RURAL
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

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


BUOY. FLUX =    2.441 M**4/S**3;  MOM. FLUX =    8.528 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
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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
30.	.4094E-16	1	3.0	3.2	960.0	39.84	9.27	4.84	NO
100.	.1062E-04	1	3.0	3.2	960.0	39.84	27.11	14.43	NO
200.	.5444E-04	1	2.0	2.1	640.0	46.35	50.28	29.83	NO
300.	.6180E-04	1	1.0	1.1	320.0	65.87	72.63	48.74	NO
400.	.5644E-04	2	1.5	1.6	480.0	52.85	68.09	40.69	NO
500.	.5648E-04	2	1.0	1.1	320.0	65.87	83.50	52.30	NO
600.	.5696E-04	3	1.5	1.7	480.0	52.09	65.11	38.99	NO
700.	.5611E-04	3	1.0	1.1	320.0	64.73	75.28	45.43	NO
800.	.5468E-04	3	1.0	1.1	320.0	64.73	84.84	51.02	NO
900.	.5155E-04	3	1.0	1.1	320.0	64.73	94.30	56.57	NO
1000.	.4774E-04	3	1.0	1.1	320.0	64.73	103.68	62.09	NO
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 30. M:									
312.	.6207E-04	1	1.0	1.1	320.0	65.87	75.36	51.59	NO

```
 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
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DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

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*************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
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CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	.6207E-04	312.	0.

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** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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