

APPENDICES

**ENVIRONMENTAL IMPACT
ASSESSMENT**

for

**THE INSTALLATION OF A NEW
INCINERATOR**

at the

**UNIVERSITY HOSPITAL
OF THE
WEST INDIES**

Ianthe Smith
Environmental Engineering Consultant
February 3, 2004

TABLE OF CONTENTS

- Appendix 1: Pictures of the existing incinerator at the University Hospital of the West Indies
- Appendix 2: Terms of Reference EIA for the Installation of a New Incinerator at the University Hospital of the West Indies
- Appendix 3: Specifications of the incinerator at the St. Ann's Bay Hospital
- Appendix 4: Infectious Waste Generation at the University Hospital of the West Indies
- Appendix 5: Screen Model Runs
- Appendix 6: UHWI Incinerator Social Survey

APPENDIX 1

Pictures of the Existing Incinerator at the University Hospital of the West Indies

Incinerator



Incinerator Stack



Medical Waste awaiting incineration



Linen and other waste awaiting incineration



APPENDIX 2

TERMS OF REFERENCE **EIA FOR THE INSTALLATION OF A NEW INCINERATOR AT THE** **UNIVERSITY HOSPITAL OF THE WEST INDIES**

Introduction

The University Hospital of the West Indies (UHWI) has been experiencing operational problems with the existing incinerator used for the management of infectious waste. The incinerator is very old, believed to have been at the hospital since the mid 1950's. The following outlines some of the problems being experienced with the incinerator:

- Excessive soot blowing for a few minutes when the boilers are fired up
- Incineration of medical waste is confined to night hours as there is excessive soot and fumes generated during incineration. This is a source of pollution and discomfort to the staff and patients at the hospital. There may also be long term health impacts from emissions associated with the incomplete combustion of the waste incinerated that have not yet been identified.
- Disposal of the residue from incineration (including waste which has not completely burned) with the regular garbage which is ultimately taken to the Riverton disposal site.

In order to address this situation, the UHWI proposes to replace the existing incinerator with a new, modern facility with appropriate emission controls enabling compliance with the regulatory requirements of the National Environment and Planning Agency (NEPA), the Ministry of Health and the National Solid Waste Management Authority (NSWMA).

As a requirement of the NRCA regulations, a permit application and Project Information Form were submitted to the NEPA. Based on the assessment of the submission by the NEPA, the UHWI was advised that an EIA will be required for an undertaking of this nature.

As the first step in the process of conducting the EIA, NEPA needs to approve the Terms of Reference for the EIA, the outline of which is contained herein.

Content of EIA

The EIA will cover the following areas:

- Purpose & need for the project
- Applicable Environmental Policy, Legal, Regulatory and Approval Frameworks
- Description of Project, Owner and Applicant
- Alternatives to project
- Description of Baseline/Affected Environment
- Significant Environmental Impacts of Construction and Operation

- Mitigation Measures
- Environmental Management & Monitoring
- Decommissioning of the existing incinerator
- Interagency/Non-Governmental Organisations/Public Involvement

Content of Chapters

1. Purpose & need for the project

This section will include a brief history of the hospital facility and the nature of the problem being experienced. This section will provide a justification for the project.

2. Applicable Environmental Policy, Legal, Regulatory and Approval Frameworks

This section will indicate all the relevant agencies that have policy and regulatory jurisdiction over the project that is to be undertaken. The specific interest and regulatory scope of each of these agencies will be presented and the requirements that the UHWI will need to fulfill for approval of this project will be outlined.

The legislation applicable to this type of project will be included in this section.

These include:

- The Natural Resources (Prescribed Areas) (Prohibition of Categories of Enterprise, Construction and Development) Order, 1996
- The Natural Resources Conservation (Permits and Licences) Regulations, 1996
- The Natural Resources Conservation Authority (Air Quality) Regulations, 2002 (Draft)
- National Solid Waste Management Act 2001

Additionally the policies and requirements of the following agencies will be presented.

- Ministry of Health
- Environmental Health Unit, Ministry of Health
- Kingston and St. Andrew Corporation (KSAC)
- Jamaica Fire Brigade

3. Description of Project, Owner and Applicant

The proposed project will be described in detail with information provided about the owner and applicant who are one and the same.

All significant activities associated with the project will be described including the construction, commissioning, decommissioning and operational phases.

Details with regards to the incinerator will be provided as listed below:

- The design of the incinerator,

- Fuel source,
- Types and quantities of wastes to be incinerated,
- Interim storage facilities for waste prior to incineration
- Storage and disposal of ash after incineration
- Emission control equipment
- Stack height
- Manufacturer
- Maintenance requirements
- Examples of other jurisdictions where the incinerator is working
- Expected useful life of the incinerator

4. Alternatives to project

The options that were examined prior to deciding that a new incinerator would be the preferred option will be discussed including the “do nothing” alternative. Factors which helped to determine the preferred option such as cost (operation and maintenance), effectiveness of the option (particularly in rendering infectious waste innocuous), regulatory requirements and space will be included in the discussion of the alternatives. The impacts of the various alternatives will also be presented.

5. Description of Baseline/Affected Environment

The project is a brownfield development and will be sited in an already highly disturbed area. However, the environment is sensitive as it is a hospital and the description of this environment will be presented, particularly social setting as persons on the premises and in adjoining communities are those that could potentially be most affected by the new project.

6. Significant Environmental Impacts of Construction and Operation

The positive, negative and cumulative impacts from construction activities as well as from the operation of the facility will be presented.

The impacts associated with noise, fugitive dust and waste disposal will be covered for the construction phase. The positive impacts of a new incinerator will be covered and the potential negative impacts of the operations related to stack emissions, disposal of ash and handling of infectious waste will be discussed.

Screening modeling of stack emissions will be conducted to determine the facility's impact

on ambient air quality including hydrochloric acid, dioxins and furans at maximum design load. The model will include stacks from:

- the boiler across from the site
- the generator,
- the boiler for the hospital's laundry
- the proposed incinerator

Cumulative impacts for this and other facilities in the vicinity of the proposed site for the incinerator will be outlined.

The Interim Background Concentration will be used in the absence of actual data and the scope will include the Long Mountain and Dallas Mountain.

7. Mitigation Measures

Recognising that construction and operation of the facility will potentially have negative impacts, the measures to mitigate these impacts will be presented along with the associated costs and a monitoring plan for assessing the effectiveness of the mitigation measures will be outlined.

Mitigation measures related to the operation of the incinerator will be based primarily on the manufacturer's design of the incinerator and such features as the emission controls and the type of fuel used.

At a minimum, the monitoring programme will address monitoring frequency, reporting and institutional arrangements for such monitoring.

An Emergency Response Plan will also be developed including procedures for addressing emergencies; man-made such as fire, and natural disasters such as hurricanes and earthquakes.

8. Environmental Management and Monitoring

The following areas will be included in the environmental management and monitoring programme for the incinerator:

- the measures required to ensure optimal operation including preventative maintenance requirements of the facility based on the requirements of the regulatory agencies, particularly NEPA, which has proposed specific requirements associated with the draft Air Quality Regulations
- a waste management plan identifying all sources, types, nature, handling procedures, sorting, storing, logging and disposal of waste related to the incinerator
- a contingency and maintenance plan

The training programme for staff managing the incinerator as it relates to operation, maintenance and reporting to regulatory agencies will be included in this section.

9. Decommissioning of the existing incinerator

The decommissioning exercise for the existing incinerator will be presented including the schedule and the method of dismantling and the disposal of the components. The

monitoring programme for the decommissioning exercise as well as post decommissioning will be presented.

10. Interagency/Non-Governmental Organisations/Public Involvement

The involvement of the principal stakeholders in the EIA will be described including meetings and other media used to capture information related to their perception of the project and the possible impacts, negative and positive that the project will have. Principal stakeholders include the patients and staff at the hospital, active NGOs or CBOs in the area, the neighbouring communities including the University Campus and all the regulatory agencies described at Section 2 above.

A Public Meeting will be held as a part of the process of conducting the EIA to ensure that the interested citizens have an opportunity to share their views about the proposed project. The results of the meeting will be included as a part of the EIA report and where applicable outputs from the meeting will be used to help formulate the mitigation measures and the monitoring requirements.

Liaison with the NEPA

We propose to have regular consultations with the NEPA on their requirements to try to ensure a smooth and expeditious process.

APPENDIX 3

MODEL C1000H / Serial # 1C98190798
CONTROLLED AIR, HOT HEARTH INCINERATOR
SPECIFICATION
ST. ANN'S HOSPITAL

OVERVIEW: The Crawford Model C1000H is a Multiple chamber, Controlled Air, Hot-Hearth, Incineration System designed to accommodate mixed waste streams ranging from pathological to high BTU content plastics while complying with the higher temperatures and residence times being required by environmental agencies. Utilizing a unique negative pressured, controlled air, hot hearth design with a sealed hydraulic ram feed charging system, the unit can process nominal volumes of 1100 pounds in a normal 8 hour work shift with the capability of extended continuous operation to meet greater demands.

I. EQUIPMENT:

Crawford Multiple Chambered, Hot Hearth/Waste Incinerator Chamber
2 Light Weight Fuel Oil Fired
U.L. Underwriters Laboratories, Inc., listed: (Control #54E3)

II. MANUFACTURER:

Crawford Equipment & Engineering Co.
436 West Landstreet Road
Orlando, Florida 32824

III. APROXIMATE INCINERATOR DIMENSIONS :

Main structure & loader: Length: 20 ft. 0 in. Height: 8 ft. 10 in. Width: 5 ft. 0 in.
Overall (with control panels): Length: 20 ft. 6 in. Width: 6 ft. 5 in.

IV. OPERATING TEMPERATURE: (as required)

1,200-1,600 degrees Fahrenheit (primary chamber)
1,600-1,900 degrees Fahrenheit (secondary chamber)

V. SECONDARY CHAMBER RETENTION TIME:

In excess of 1 second

VI. CAPACITY:

150 lbs/hr @ 8,500 Btu/lb Ave. Waste

VII. CHAMBER VOLUMES:

The Crawford Incineration Chamber shall meet or exceed nationally accepted incinerator construction standards per the Incinerator Institute of America (IIA) publication guidelines; i.e.* Primary Chamber will not exceed 60% of total chamber volume, flue connection shall not be considered part of furnace volume.

Primary: 73 cu. ft.

Secondary: 71 cu. ft.

VIII. DRAFT:

Induced via patented 2400°F refractory lined draft inducer

IX. SHIPPING WEIGHT

Approx. 29,500 lbs. with loader

X. COMBUSTION AIR CONTROL:

Automatic, temperature actuated, modulated controls combustion air injection to maintain desired level of overall system efficiency.

XI. INTEGRAL EMISSION CONTROL:

Controlled 1850°F secondary chamber (71 cu.ft.) with - 1.5 MBtu/hr max. fire burner, and controlled, turbulent combustion air injection.

XII. MONITORING:

Primary and Secondary combustion chamber temperature, standard.

XIII. STEEL CONSTRUCTION SPECIFICATIONS:

- A. The incinerator chamber structure to be 3" square tube structure ends with 3", 4.9 lb/ft angle sides, 8", 11.5 lb/ft channel full length bottom skids 3" square tube full length top stringers, and 2", 4.7 lb/ft angle cross members.
- B. Sub-floors to be 3/16" steel plate, seal welded construction.
- C. The exterior shell to be 12 gauge steel removable panels.
- D. The interior shell to be 3/16" steel plate seal-welded.
- E. End plate casings to be 5/8" steel plate.

XIV. REFRACTORY SPECIFICATIONS:

- A. Hot Hearth: 3000°F. abrasion resistant castable refractory, 7" thick, 1 1/2" recessed top and cast monolithic arched bottom.
- B. Chamber Floors: 3000°F. abrasion resistant, high density castable refractory, 5" thick on top of 2" 2400°F LWI.
- C. Chamber Ceilings: 3000°F. arch cast monolithic castable refractory, 7" thick, topped by 2" 2400°F LWI.
- D. Chamber Walls: 2800°F. alumina-silicate firebrick, 2 1/2" x 4 1/2" x 9", backed by an additional, 2 1/2" 2600° insulating brick
- E. Stack & Breeching: Lined with minimum 2+" of 2400°F LWI

(ALL CHAMBERS BACKED BY 1-1.5" FIBER INSULATION)

XV. SKIN TEMPERATURE CONTROL

Air-cooled, dual casing design providing integral energy shroud design for pre-heating of combustion air and to prevent excessive heat radiation.

XVI. COMBUSTION EQUIPMENT:

- A Combustion Air (preheated): 1 NYB- 2608A10 - 10 hp Pressure blower
- B. Primary Chamber: One (1), down-fired, 500,000 Btu/hr. North American burner – oil fired, modulating.
- C. Secondary Chamber: One (1), 1.5 MBtu/hr., North American burner–oil fired, full modulating.
- D. Flame Safeguard: U.V. supervision on each burner.
- E.. Low-Draft Pressure Safety Switch: Interlocked to all burners.

XVII. EXHAUST GAS TEMPERATURE REDUCTION:

Via patented Crawford refractory lined draft inducer to 800-1000°F

XVIII. UTILITIES REQUIREMENT:

A. FUEL:

#2 fuel oil fired burners with propane ignition (oil tank within 25 ft. of fuel pump)

B. ELECTRICAL:

Single point electrical connection, 75 amps, 415 V, 3Ø, 50 Hz

C. WATER:

1. 2 gpm @ std. city pressure for hopper spray

XIX. INCINERATION CHAMBER DOORS:

Rectangular 1/4" steel, lined with 4" 3000° castable refractory backed by 2" light weight insulating refractory. Charging door to be hydraulic actuated, up opening guillotine type. Access doors shall be manual bearing hinged type.

XX. INCINERATOR PROCESS CONTROL:

The incinerator system is controlled by a programmable logic control (PLC) system. A visual confirmation of the system status is provided through control panel indicator lights and digital temperature display. Continuous fuel and air modulation is automatically controlled by a time/temperature actuated system. Operator interface is through simple push button controls.

XXI. EXTERIOR FINISH:

The incineration chamber is finished with high-temperature and textured polyurethane coating.

XXII. HYDRAULIC CHARGING AND ASH RAMS:

Hydraulic piston with auto retraction operated by hydraulic pump and a .6 cubic yard hopper complete with ram spray quench and hopper fire protection system. Cart dump hopper feed available.

Charging Ram Stroke:	6'-0"
Pump set:	5 H.P., 3Ø flow- 6 g.p.m. 1000 p.s.i. operating pressure

XXIII. WARRANTY:

One (1) year, limited.

APPENDIX 4

DETERMINATION OF THE QUANTITY OF INFECTIOUS WASTE GENERATED AT THE UNIVERSITY HOSPITAL OF THE WEST INDIES

A weighing exercise was conducted on Wednesday August 20, 2003 to determine the average weight of a garbage bag containing infectious waste. This was facilitated by maintenance staff at the hospital.

A balance scale was used to weigh 3 red bags and a sharps box that were in storage awaiting incineration. The weight of each bag is as follows:

- 9.5 kg
- 10.5 kg
- 9 kg

The weight of the sharps box was 6.5 kg.

The average weight of the red bag is $(9.5 + 10.5 + 9)/3 = 9.67$ kg

Information obtained from the Public Health Officer at the UHWI revealed that approximately 60 bags per day (each having a capacity of 1 cubic yard) and 13 sharps boxes are disposed of at the incinerator. This means that approximately 580 kg of infectious waste bags and 84 kg of waste comprising sharps boxes are generated daily. **The total generation of infectious waste can be estimated to be 664 kg per day.**

The hospital has a bed capacity of 526, and current bed complement of 488. The average occupancy is approximately 70%. This year to date, the average has been 68%. For the same period last year it was 75%.

Therefore the rate of generation per bed each day is estimated to be = $664/(0.7 \times 488) = 1.94$ kg/bed/day

This data is at best preliminary and the UHWI would need to set up a system to more accurately determine the quantity of medical waste generated on an annual basis.

Waste from Pathology

Waste from Pathology based on information obtained from the hospital is estimated to be three 40 gallon bins and three 20 gallon bins with a few boxes of sharps each week (7 days).

Total waste for 7 days is approximately 200 gallons

Waste generated on a daily basis is $200/7 = 28.6$ gallons

This is equivalent to 3.74 ft³

Density of infectious waste¹ is 4 lbs/ft³

Quantity of waste generated = 4 lbs/ft³ X 3.74 ft³ /day = 15 lbs/day = 6.8 kg/day

10 kg/day will be used as the quantity of waste generated by Pathology.

Total quantity of waste to be incinerated = 700 kg/day

Projected expansion of hospital in the next 10 to 20 years should not exceed 20%².

The incinerator should be designed to take (1.2 X 700 kg/day) of waste = 840 kg/day.

¹ This figure was obtained from information on West Virginia Medical Waste Program

² Based on information received from the hospital

APPENDIX 5

SCREEN MODEL RUNS

This section shows the tables of the results from the various model runs.

A. Arsenic

Predicted Ambient Concentrations for Arsenic

09/26/03

23:16:30

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .611000E-05
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 9.5166
 STACK GAS TEMP (K) = 755.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M⁴/S³; MOM. FLUX = 2.345 M⁴/S².

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR HT (M)	MAX 24-HR DIST (M)	CONC (UG/M ³)	PLUME HT CONC (UG/M ³)	PLUME HT ABOVE STK BASE (M)	CONC (UG/M ³)	PLUME HT ABOVE STK HGT (M)	U10M SC	USTK (M/S)
12.	457.	.2416E-03	.5038E-04	44.5	.2416E-03	38.1	6	1.0 1.0
20.	548.	.2169E-03	.5152E-04	44.5	.2169E-03	38.1	6	1.0 1.0
30.	1524.	.7261E-04	.1172E-04	44.5	.7261E-04	38.1	6	1.0 1.0
70.	1524.	.1186E-04	.1186E-04	44.5	.0000	.0	0	.0 .0
70.	2286.	.6171E-05	.6171E-05	44.5	.0000	.0	0	.0 .0
110.	1524.	.1186E-04	.1186E-04	44.5	.0000	.0	0	.0 .0
1000.	2286.	.6171E-05	.6171E-05	44.5	.0000	.0	0	.0 .0

09/26/03
23:16:30

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .611000E-05
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	.1289E-02	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	.8315E-03	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	.5173E-03	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .1289E-02 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.4343E-03	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.4413E-03	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.4988E-03	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .4996E-03 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.5423E-03	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.5235E-03	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.4700E-03	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .5423E-03 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.4988E-03	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.4363E-03	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.3825E-03	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .4988E-03 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M/S)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.3825E-03	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	.3374E-03	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	.2998E-03	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .3825E-03 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M/S)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.2998E-03	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	.2684E-03	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	.2420E-03	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .2998E-03 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M/S)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.2420E-03	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	.2197E-03	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	.2007E-03	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .2420E-03 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.2016E-03	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.1851E-03	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .2016E-03 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.1246E-02	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.8079E-03	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.3764E-03	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.5423E-03	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.1289E-02	61.	4.

COMPLEX TERRAIN .2416E-03 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

B. Cadmium

Predicted Ambient Concentrations for Cadmium

09/26/03
23:17:44

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .138000E-03
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5
DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT				
HT (M)	DIST (M)	CONC (UG/M**3)	CONC (UG/M**3)	ABOVE STK BASE (M)	CONC (UG/M**3)	ABOVE STK HGT (M)	U10M USTK SC (M/S)
12.	457.	.5457E-02	.1138E-02	44.5	.5457E-02	38.1	6 1.0 1.0
20.	548.	.4899E-02	.1164E-02	44.5	.4899E-02	38.1	6 1.0 1.0
30.	1524.	.1640E-02	.2647E-03	44.5	.1640E-02	38.1	6 1.0 1.0
70.	1524.	.2679E-03	.2679E-03	44.5	.0000	.0	0 .0 .0
70.	2286.	.1394E-03	.1394E-03	44.5	.0000	.0	0 .0 .0
110.	1524.	.2679E-03	.2679E-03	44.5	.0000	.0	0 .0 .0
1000.	2286.	.1394E-03	.1394E-03	44.5	.0000	.0	0 .0 .0

09/26/03
23:17:44

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .138000E-03
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	.2911E-01	4	8.0	8.1	2560.0	10.86	9.74	8.57 HS
100.	.1878E-01	4	4.5	4.6	1440.0	18.10	16.04	14.19 HS
200.	.1168E-01	4	2.5	2.5	800.0	28.65	31.44	27.92 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .2911E-01 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.9808E-02	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.9966E-02	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.1126E-01	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .1128E-01 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1225E-01	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.1182E-01	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.1061E-01	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .1225E-01 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.1126E-01	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.9855E-02	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.8639E-02	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .1126E-01 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.8639E-02	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	.7620E-02	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	.6771E-02	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .8639E-02 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.6771E-02	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	.6062E-02	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	.5467E-02	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .6771E-02 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.5467E-02	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	.4963E-02	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	.4533E-02	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .5467E-02 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.4554E-02	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.4182E-02	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .4554E-02 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.2815E-01	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.1825E-01	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.8500E-02	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1225E-01	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.2911E-01	61.	4.

COMPLEX TERRAIN .5457E-02 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

C. Chlorinated Dibenzo-p-dioxins (CDD)

Predicted Ambient Concentrations for Chlorinated Dibenzo-p-Dioxin

09/27/03
21:40:10

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality - CDDs

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .538000E-06
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5
DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.2127E-04	.4436E-05	44.5	.2127E-04	38.1	6	1.0	1.0			
20.	548.	.1910E-04	.4537E-05	44.5	.1910E-04	38.1	6	1.0	1.0			
30.	1524.	.6394E-05	.1032E-05	44.5	.6394E-05	38.1	6	1.0	1.0			
70.	1524.	.1044E-05	.1044E-05	44.5	.0000	.0	0	.0	.0			
70.	2286.	.5434E-06	.5434E-06	44.5	.0000	.0	0	.0	.0			
110.	1524.	.1044E-05	.1044E-05	44.5	.0000	.0	0	.0	.0			
1000.	2286.	.5434E-06	.5434E-06	44.5	.0000	.0	0	.0	.0			

09/27/03
21:40:10

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality - CDDs

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .538000E-06
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S)= 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	.1135E-03	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	.7321E-04	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	.4555E-04	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .1135E-03 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.3824E-04	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.3885E-04	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.4392E-04	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .4399E-04 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.4775E-04	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.4610E-04	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.4138E-04	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .4775E-04 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.4392E-04	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.3842E-04	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.3368E-04	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .4392E-04 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.3368E-04	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	.2971E-04	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	.2640E-04	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .3368E-04 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.2640E-04	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	.2363E-04	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	.2131E-04	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .2640E-04 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.2131E-04	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	.1935E-04	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	.1767E-04	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .2131E-04 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.1776E-04	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.1630E-04	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .1776E-04 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.7114E-04	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.3314E-04	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.1097E-03	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.4775E-04	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.1135E-03	61.	4.

COMPLEX TERRAIN .2127E-04 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

D. Carbon Monoxide

Predicted Ambient Concentrations for Carbon Monoxide
23:06:41

09/26/03

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .745000E-01
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5
DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR HT (M)	MAX 24-HR DIST (M)	CONC (UG/M**3)	PLUME HT CONC (UG/M**3)	PLUME HT ABOVE STK BASE (M)	PLUME HT CONC (UG/M**3)	PLUME HT ABOVE STK HGT (M)	U10M USTK SC	USTK (M/S)	
12.	457.	2.946	.6142	44.5	2.946	38.1	6	1.0	1.0
20.	548.	2.645	.6282	44.5	2.645	38.1	6	1.0	1.0
30.	1524.	.8854	.1429	44.5	.8854	38.1	6	1.0	1.0
70.	1524.	.1446	.1446	44.5	.0000	.0	0	.0	.0
70.	2286.	.7524E-01	.7524E-01	44.5	.0000	.0	0	.0	.0
110.	1524.	.1446	.1446	44.5	.0000	.0	0	.0	.0
1000.	2286.	.7524E-01	.7524E-01	44.5	.0000	.0	0	.0	.0

09/26/03
23:06:41

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .745000E-01
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	15.71	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	10.14	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	6.307	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. 15.71 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	5.295	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	5.380	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	6.081	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. 6.091 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	6.612	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	6.384	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	5.730	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. 6.612 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	6.081	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	5.320	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	4.664	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. 6.081 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	4.664	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	4.114	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	3.655	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. 4.664 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	3.655	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	3.273	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	2.951	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. 3.655 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	2.951	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	2.679	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	2.447	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. 2.951 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	2.459	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	2.258	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. 2.459 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	15.20	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	9.851	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	4.589	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	6.612	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	15.71	61.	4.

COMPLEX TERRAIN 2.946 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

E. Combined Controlled CDD (wet scrubber/fabric filter APC device)

Predicted Ambient Concentrations for Chlorinated Dibenzo-p-dioxin with Combined APC Device

09/30/03

20:02:18

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Combined Controlled Emissions - CDDs

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .869000E-08
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 5.2870
 STACK GAS TEMP (K) = 533.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 1.443 M**4/S**3; MOM. FLUX = 1.025 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 35.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.5017E-06	.9581E-07	35.5	.5017E-06	28.1	6	1.0	1.0			
20.	548.	.4156E-06	.8689E-07	35.5	.4156E-06	28.1	6	1.0	1.0			
30.	1524.	.1116E-06	.1694E-07	35.5	.1116E-06	28.1	6	1.0	1.0			
70.	1524.	.1694E-07	.1694E-07	35.5	.0000	.0	0	.0	.0			
70.	2286.	.8801E-08	.8801E-08	35.5	.0000	.0	0	.0	.0			
110.	1524.	.1694E-07	.1694E-07	35.5	.0000	.0	0	.0	.0			
1000.	2286.	.8801E-08	.8801E-08	35.5	.0000	.0	0	.0	.0			

09/30/03
20:02:18

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Controlled Emissions - CDDs

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .869000E-08
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 5.2870
STK GAS EXIT TEMP (K) = 533.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = 5.0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 1.443 M**4/S**3; MOM. FLUX = 1.025 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	36.01	.71	.68	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.4035E-05	5	5.0	5.1	10000.0	11.56	6.81	7.01	HS
100.	.2288E-05	4	2.5	2.5	800.0	17.65	16.01	14.16	HS
200.	.1463E-05	4	1.0	1.0	320.0	34.37	31.81	28.34	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .4035E-05 5 5.0 5.1 10000.0 11.56 6.81 7.01 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.1292E-05	6	1.0	1.0	10000.0	32.55	29.71	20.12	NO
300.	.1294E-05	6	1.0	1.0	10000.0	32.55	32.20	21.48	NO
400.	.1173E-05	6	1.0	1.0	10000.0	32.55	41.63	26.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
288. .1296E-05 6 1.0 1.0 10000.0 32.55 31.15 20.91 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1153E-05	6	1.0	1.0	10000.0	30.55	46.91	29.28	NO
500.	.1063E-05	6	1.0	1.0	10000.0	30.55	50.84	31.28	NO
600.	.8827E-06	6	1.0	1.0	10000.0	30.55	59.81	35.73	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .1153E-05 6 1.0 1.0 10000.0 30.55 46.91 29.28 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.9237E-06	6	1.0	1.0	10000.0	28.55	59.81	35.73	NO
700.	.7686E-06	6	1.0	1.0	10000.0	28.55	68.53	39.92	NO
800.	.6503E-06	6	1.0	1.0	10000.0	28.55	77.01	43.89	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .9237E-06 6 1.0 1.0 10000.0 28.55 59.81 35.73 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.6503E-06	6	1.0	1.0	10000.0	28.55	77.01	43.89	NO
900.	.5587E-06	6	1.0	1.0	10000.0	28.55	85.27	47.65	NO
1000.	.4866E-06	6	1.0	1.0	10000.0	28.55	93.31	51.23	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .6503E-06 6 1.0 1.0 10000.0 28.55 77.01 43.89 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.4866E-06	6	1.0	1.0	10000.0	28.55	93.31	51.23	NO
1100.	.4289E-06	6	1.0	1.0	10000.0	28.55	101.15	54.65	NO
1200.	.3820E-06	6	1.0	1.0	10000.0	28.55	108.80	57.93	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .4866E-06 6 1.0 1.0 10000.0 28.55 93.31 51.23 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.3820E-06	6	1.0	1.0	10000.0	28.55	108.80	57.93	NO
1300.	.3432E-06	6	1.0	1.0	10000.0	28.55	116.26	61.08	NO
1400.	.3109E-06	6	1.0	1.0	10000.0	28.55	123.56	64.11	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .3820E-06 6 1.0 1.0 10000.0 28.55 108.80 57.93 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. 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
1400.	.3119E-06	6	1.0	1.0	10000.0	28.05	123.56	64.11	NO
1500.	.2844E-06	6	1.0	1.0	10000.0	28.05	130.69	67.04	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .3119E-06 6 1.0 1.0 10000.0 28.05 123.56 64.11 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

 *** SCREEN DISCRETE 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
61.	.1913E-05	5	5.0	5.1	10000.0	15.56	6.81	7.01	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. 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
366.	.9899E-06	6	1.0	1.0	10000.0	36.55	38.45	24.85	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. 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
91.	.2980E-05	5	4.5	4.6	10000.0	12.16	10.10	9.20	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1153E-05	6	1.0	1.0	10000.0	30.55	46.91	29.28	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.4035E-05	61.	4.

COMPLEX TERRAIN .5017E-06 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

F. Controlled CDD (wet scrubber only)

Predicted Ambient Concentrations for Chlorinated Dibenzo-p-dioxin with wet scrubber

09/30/03

19:48:24

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Controlled Emissions - CDDs

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .465000E-07
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 5.2870
 STACK GAS TEMP (K) = 533.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 1.443 M**4/S**3; MOM. FLUX = 1.025 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 35.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.2684E-05	.5127E-06	35.5	.2684E-05	28.1	6	1.0	1.0			
20.	548.	.2224E-05	.4649E-06	35.5	.2224E-05	28.1	6	1.0	1.0			
30.	1524.	.5972E-06	.9067E-07	35.5	.5972E-06	28.1	6	1.0	1.0			
70.	1524.	.9067E-07	.9067E-07	35.5	.0000	.0	0	.0	.0			
70.	2286.	.4709E-07	.4709E-07	35.5	.0000	.0	0	.0	.0			
110.	1524.	.9067E-07	.9067E-07	35.5	.0000	.0	0	.0	.0			
1000.	2286.	.4709E-07	.4709E-07	35.5	.0000	.0	0	.0	.0			

09/30/03
19:48:24

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Controlled Emissions - CDDs

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .465000E-07
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 5.2870
STK GAS EXIT TEMP (K) = 533.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = 5.0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 1.443 M**4/S**3; MOM. FLUX = 1.025 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	36.01	.71	.68	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.2159E-04	5	5.0	5.1	10000.0	11.56	6.81	7.01	HS
100.	.1225E-04	4	2.5	2.5	800.0	17.65	16.01	14.16	HS
200.	.7831E-05	4	1.0	1.0	320.0	34.37	31.81	28.34	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .2159E-04 5 5.0 5.1 10000.0 11.56 6.81 7.01 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.6914E-05	6	1.0	1.0 10000.0	32.55	29.71	20.12	NO
300.	.6922E-05	6	1.0	1.0 10000.0	32.55	32.20	21.48	NO
400.	.6277E-05	6	1.0	1.0 10000.0	32.55	41.63	26.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
288. .6933E-05 6 1.0 1.0 10000.0 32.55 31.15 20.91 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.6169E-05	6	1.0	1.0 10000.0	30.55	46.91	29.28	NO
500.	.5689E-05	6	1.0	1.0 10000.0	30.55	50.84	31.28	NO
600.	.4723E-05	6	1.0	1.0 10000.0	30.55	59.81	35.73	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .6169E-05 6 1.0 1.0 10000.0 30.55 46.91 29.28 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.4942E-05	6	1.0	1.0 10000.0	28.55	59.81	35.73	NO
700.	.4113E-05	6	1.0	1.0 10000.0	28.55	68.53	39.92	NO
800.	.3480E-05	6	1.0	1.0 10000.0	28.55	77.01	43.89	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .4942E-05 6 1.0 1.0 10000.0 28.55 59.81 35.73 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.3480E-05	6	1.0	1.0	10000.0	28.55	77.01	43.89 NO
900.	.2990E-05	6	1.0	1.0	10000.0	28.55	85.27	47.65 NO
1000.	.2604E-05	6	1.0	1.0	10000.0	28.55	93.31	51.23 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .3480E-05 6 1.0 1.0 10000.0 28.55 77.01 43.89 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.2604E-05	6	1.0	1.0	10000.0	28.55	93.31	51.23 NO
1100.	.2295E-05	6	1.0	1.0	10000.0	28.55	101.15	54.65 NO
1200.	.2044E-05	6	1.0	1.0	10000.0	28.55	108.80	57.93 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .2604E-05 6 1.0 1.0 10000.0 28.55 93.31 51.23 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.2044E-05	6	1.0	1.0	10000.0	28.55	108.80	57.93 NO
1300.	.1837E-05	6	1.0	1.0	10000.0	28.55	116.26	61.08 NO
1400.	.1663E-05	6	1.0	1.0	10000.0	28.55	123.56	64.11 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .2044E-05 6 1.0 1.0 10000.0 28.55 108.80 57.93 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.1669E-05	6	1.0	1.0	10000.0	28.05	123.56	64.11	NO
1500.	.1522E-05	6	1.0	1.0	10000.0	28.05	130.69	67.04	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .1669E-05 6 1.0 1.0 10000.0 28.05 123.56 64.11 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

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.1024E-04	5	5.0	5.1	10000.0	15.56	6.81	7.01	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.5297E-05	6	1.0	1.0	10000.0	36.55	38.45	24.85	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.1595E-04	5	4.5	4.6	10000.0	12.16	10.10	9.20	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.6169E-05	6	1.0	1.0	10000.0	30.55	46.91	29.28	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.2159E-04	61.	4.

COMPLEX TERRAIN .2684E-05 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

G. Controlled TCDD (wet scrubber only)

Predicted Ambient Concentration for TCDD with wet scrubber

09/30/03

19:42:54

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Controlled Emissions - TCDDs

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .674000E-09
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 5.2870
 STACK GAS TEMP (K) = 533.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 1.443 M**4/S**3; MOM. FLUX = 1.025 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 35.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.3891E-07	.7431E-08	35.5	.3891E-07	28.1	6	1.0	1.0			
20.	548.	.3224E-07	.6739E-08	35.5	.3224E-07	28.1	6	1.0	1.0			
30.	1524.	.8657E-08	.1314E-08	35.5	.8657E-08	28.1	6	1.0	1.0			
70.	1524.	.1314E-08	.1314E-08	35.5	.0000	.0	0	.0	.0			
70.	2286.	.6826E-09	.6826E-09	35.5	.0000	.0	0	.0	.0			
110.	1524.	.1314E-08	.1314E-08	35.5	.0000	.0	0	.0	.0			
1000.	2286.	.6826E-09	.6826E-09	35.5	.0000	.0	0	.0	.0			

09/30/03
19:42:54

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Controlled Emissions - CDDs

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .674000E-09
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 5.2870
STK GAS EXIT TEMP (K) = 533.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = 5.0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 1.443 M**4/S**3; MOM. FLUX = 1.025 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	36.01	.71 .68	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.3129E-06	5	5.0	5.1	10000.0	11.56	6.81 7.01	HS
100.	.1775E-06	4	2.5	2.5	800.0	17.65	16.01 14.16	HS
200.	.1135E-06	4	1.0	1.0	320.0	34.37	31.81 28.34	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .3129E-06 5 5.0 5.1 10000.0 11.56 6.81 7.01 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.1002E-06	6	1.0	1.0 10000.0	32.55	29.71	20.12	NO
300.	.1003E-06	6	1.0	1.0 10000.0	32.55	32.20	21.48	NO
400.	.9098E-07	6	1.0	1.0 10000.0	32.55	41.63	26.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
288. .1005E-06 6 1.0 1.0 10000.0 32.55 31.15 20.91 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.8942E-07	6	1.0	1.0 10000.0	30.55	46.91	29.28	NO
500.	.8246E-07	6	1.0	1.0 10000.0	30.55	50.84	31.28	NO
600.	.6846E-07	6	1.0	1.0 10000.0	30.55	59.81	35.73	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .8942E-07 6 1.0 1.0 10000.0 30.55 46.91 29.28 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.7164E-07	6	1.0	1.0 10000.0	28.55	59.81	35.73	NO
700.	.5961E-07	6	1.0	1.0 10000.0	28.55	68.53	39.92	NO
800.	.5044E-07	6	1.0	1.0 10000.0	28.55	77.01	43.89	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .7164E-07 6 1.0 1.0 10000.0 28.55 59.81 35.73 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.5044E-07	6	1.0	1.0	10000.0	28.55	77.01	43.89 NO
900.	.4333E-07	6	1.0	1.0	10000.0	28.55	85.27	47.65 NO
1000.	.3774E-07	6	1.0	1.0	10000.0	28.55	93.31	51.23 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .5044E-07 6 1.0 1.0 10000.0 28.55 77.01 43.89 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.3774E-07	6	1.0	1.0	10000.0	28.55	93.31	51.23 NO
1100.	.3327E-07	6	1.0	1.0	10000.0	28.55	101.15	54.65 NO
1200.	.2963E-07	6	1.0	1.0	10000.0	28.55	108.80	57.93 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .3774E-07 6 1.0 1.0 10000.0 28.55 93.31 51.23 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.2963E-07	6	1.0	1.0	10000.0	28.55	108.80	57.93 NO
1300.	.2662E-07	6	1.0	1.0	10000.0	28.55	116.26	61.08 NO
1400.	.2411E-07	6	1.0	1.0	10000.0	28.55	123.56	64.11 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .2963E-07 6 1.0 1.0 10000.0 28.55 108.80 57.93 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.2419E-07	6	1.0	1.0	10000.0	28.05	123.56	64.11	NO
1500.	.2206E-07	6	1.0	1.0	10000.0	28.05	130.69	67.04	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .2419E-07 6 1.0 1.0 10000.0 28.05 123.56 64.11 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

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.1484E-06	5	5.0	5.1	10000.0	15.56	6.81	7.01	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.7678E-07	6	1.0	1.0	10000.0	36.55	38.45	24.85	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.2311E-06	5	4.5	4.6	10000.0	12.16	10.10	9.20	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.8942E-07	6	1.0	1.0	10000.0	30.55	46.91	29.28	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.3129E-06	61.	4.

COMPLEX TERRAIN .3891E-07 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

H. Chromium

Predicted Ambient Concentration for Chromium

09/26/03

23:19:06

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .200000E-04
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT							
HT (M)	DIST (M)	CONC (UG/M**3)	CONC (UG/M**3)	ABOVE STK BASE (M)	CONC (UG/M**3)	ABOVE STK HGT (M)	SC	U10M	USTK	(M/S)
12.	457.	.7909E-03	.1649E-03	44.5	.7909E-03	38.1	6	1.0	1.0	
20.	548.	.7100E-03	.1687E-03	44.5	.7100E-03	38.1	6	1.0	1.0	
30.	1524.	.2377E-03	.3836E-04	44.5	.2377E-03	38.1	6	1.0	1.0	
70.	1524.	.3882E-04	.3882E-04	44.5	.0000	.0	0	.0	.0	
70.	2286.	.2020E-04	.2020E-04	44.5	.0000	.0	0	.0	.0	
110.	1524.	.3882E-04	.3882E-04	44.5	.0000	.0	0	.0	.0	
1000.	2286.	.2020E-04	.2020E-04	44.5	.0000	.0	0	.0	.0	

09/26/03
23:19:06

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .200000E-04
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S)= 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	.4218E-02	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	.2722E-02	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	.1693E-02	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .4218E-02 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.1421E-02	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.1444E-02	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.1633E-02	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .1635E-02 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1775E-02	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.1714E-02	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.1538E-02	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .1775E-02 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.1633E-02	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.1428E-02	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.1252E-02	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .1633E-02 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.1252E-02	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO
900.	.1104E-02	6	1.0	1.0	10000.0	38.56	85.59	48.21	NO
1000.	.9813E-03	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .1252E-02 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.9813E-03	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO
1100.	.8786E-03	6	1.0	1.0	10000.0	38.56	101.42	55.14	NO
1200.	.7923E-03	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .9813E-03 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.7923E-03	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO
1300.	.7193E-03	6	1.0	1.0	10000.0	38.56	116.50	61.52	NO
1400.	.6570E-03	6	1.0	1.0	10000.0	38.56	123.78	64.53	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .7923E-03 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.6601E-03	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.6060E-03	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .6601E-03 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.4079E-02	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.2645E-02	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.1232E-02	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1775E-02	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.4218E-02	61.	4.

COMPLEX TERRAIN .7909E-03 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

I. Copper

Predicted Ambient Concentration for Copper

09/26/03

23:20:31

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .316000E-03
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT							
HT (M)	DIST (M)	CONC (UG/M**3)	CONC (UG/M**3)	ABOVE STK BASE (M)	CONC (UG/M**3)	ABOVE STK HGT (M)	SC	U10M	USTK	(M/S)
12.	457.	.1250E-01	.2605E-02	44.5	.1250E-01	38.1	6	1.0	1.0	
20.	548.	.1122E-01	.2665E-02	44.5	.1122E-01	38.1	6	1.0	1.0	
30.	1524.	.3755E-02	.6062E-03	44.5	.3755E-02	38.1	6	1.0	1.0	
70.	1524.	.6134E-03	.6134E-03	44.5	.0000	.0	0	.0	.0	
70.	2286.	.3191E-03	.3191E-03	44.5	.0000	.0	0	.0	.0	
110.	1524.	.6134E-03	.6134E-03	44.5	.0000	.0	0	.0	.0	
1000.	2286.	.3191E-03	.3191E-03	44.5	.0000	.0	0	.0	.0	

09/26/03
23:20:31

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .316000E-03
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.6665E-01	4	8.0	8.1	2560.0	10.86	9.74	8.57 HS
100.	.4300E-01	4	4.5	4.6	1440.0	18.10	16.04	14.19 HS
200.	.2675E-01	4	2.5	2.5	800.0	28.65	31.44	27.92 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .6665E-01 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.2246E-01	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.2282E-01	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.2580E-01	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .2584E-01 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2805E-01	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.2708E-01	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.2431E-01	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .2805E-01 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.2580E-01	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.2257E-01	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.1978E-01	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .2580E-01 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.1978E-01	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	.1745E-01	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	.1550E-01	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .1978E-01 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.1550E-01	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	.1388E-01	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	.1252E-01	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .1550E-01 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.1252E-01	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	.1136E-01	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	.1038E-01	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .1252E-01 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. 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
1400.	.1043E-01	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.9576E-02	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .1043E-01 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. 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
91.	.6445E-01	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE 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
61.	.4179E-01	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. 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
366.	.1946E-01	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2805E-01	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.6665E-01	61.	4.

COMPLEX TERRAIN .1250E-01 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

J. Mercury

Predicted Ambient Concentration for Mercury

09/26/03

23:21:37

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .270200E-02
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT						
HT (M)	DIST (M)	CONC (UG/M**3)	CONC (UG/M**3)	ABOVE STK BASE (M)	CONC (UG/M**3)	ABOVE STK HGT (M)	SC	U10M (M/S)	USTK (M/S)
12.	457.	.1068	.2228E-01	44.5	.1068	38.1	6	1.0	1.0
20.	548.	.9592E-01	.2278E-01	44.5	.9592E-01	38.1	6	1.0	1.0
30.	1524.	.3211E-01	.5183E-02	44.5	.3211E-01	38.1	6	1.0	1.0
70.	1524.	.5245E-02	.5245E-02	44.5	.0000	.0	0	.0	.0
70.	2286.	.2729E-02	.2729E-02	44.5	.0000	.0	0	.0	.0
110.	1524.	.5245E-02	.5245E-02	44.5	.0000	.0	0	.0	.0
1000.	2286.	.2729E-02	.2729E-02	44.5	.0000	.0	0	.0	.0

09/26/03
23:21:37

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .270200E-02
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.5699	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	.3677	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	.2288	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .5699 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.1920	4	1.5	1.5	480.0	41.41	42.93	38.35 NO
300.	.1951	6	1.0	1.0	10000.0	42.56	33.02	22.70 NO
400.	.2206	6	1.0	1.0	10000.0	42.56	42.28	27.54 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .2209 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2398	6	1.0	1.0	10000.0	40.56	47.48	30.19 NO
500.	.2315	6	1.0	1.0	10000.0	40.56	51.37	32.13 NO
600.	.2078	6	1.0	1.0	10000.0	40.56	60.26	36.48 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .2398 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.2206	6	1.0	1.0	10000.0	38.56	60.26	36.48 NO
700.	.1930	6	1.0	1.0	10000.0	38.56	68.92	40.60 NO
800.	.1692	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .2206 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.1692	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	.1492	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	.1326	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .1692 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.1326	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	.1187	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	.1070	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .1326 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.1070	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	.9718E-01	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	.8876E-01	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .1070 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.8917E-01	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.8188E-01	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .8917E-01 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.5511	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.3573	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.1664	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2398	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.5699	61.	4.

COMPLEX TERRAIN .1068 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

K. Nickel

Predicted Ambient Concentration for Nickel

09/27/03
21:33:52

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality - Nickel

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .150000E-04
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5
DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.5931E-03	.1237E-03	44.5	.5931E-03	38.1	6	1.0	1.0			
20.	548.	.5325E-03	.1265E-03	44.5	.5325E-03	38.1	6	1.0	1.0			
30.	1524.	.1783E-03	.2877E-04	44.5	.1783E-03	38.1	6	1.0	1.0			
70.	1524.	.2911E-04	.2911E-04	44.5	.0000	.0	0	.0	.0			
70.	2286.	.1515E-04	.1515E-04	44.5	.0000	.0	0	.0	.0			
110.	1524.	.2911E-04	.2911E-04	44.5	.0000	.0	0	.0	.0			
1000.	2286.	.1515E-04	.1515E-04	44.5	.0000	.0	0	.0	.0			

09/27/03
21:33:52

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality - Nickel

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .150000E-04
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.3164E-02	4	8.0	8.1	2560.0	10.86	9.74	8.57 HS
100.	.2041E-02	4	4.5	4.6	1440.0	18.10	16.04	14.19 HS
200.	.1270E-02	4	2.5	2.5	800.0	28.65	31.44	27.92 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .3164E-02 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.1066E-02	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.1083E-02	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.1224E-02	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .1226E-02 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1331E-02	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.1285E-02	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.1154E-02	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .1331E-02 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.1224E-02	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.1071E-02	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.9391E-03	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .1224E-02 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.9391E-03	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO
900.	.8282E-03	6	1.0	1.0	10000.0	38.56	85.59	48.21	NO
1000.	.7360E-03	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .9391E-03 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.7360E-03	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO
1100.	.6589E-03	6	1.0	1.0	10000.0	38.56	101.42	55.14	NO
1200.	.5942E-03	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .7360E-03 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.5942E-03	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO
1300.	.5395E-03	6	1.0	1.0	10000.0	38.56	116.50	61.52	NO
1400.	.4928E-03	6	1.0	1.0	10000.0	38.56	123.78	64.53	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .5942E-03 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.4950E-03	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.4545E-03	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .4950E-03 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.1983E-02	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.9239E-03	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.3060E-02	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1331E-02	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.3164E-02	61.	4.

COMPLEX TERRAIN .5931E-03 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

L. Polychlorinated Biphenyls (PCBs)

Predicted Ambient Concentration for PCBs

09/26/03

23:13:47

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .117000E-05
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 9.5166
 STACK GAS TEMP (K) = 755.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.4627E-04	.9646E-05	44.5	.4627E-04	38.1	6	1.0	1.0			
20.	548.	.4153E-04	.9866E-05	44.5	.4153E-04	38.1	6	1.0	1.0			
30.	1524.	.1390E-04	.2244E-05	44.5	.1390E-04	38.1	6	1.0	1.0			
70.	1524.	.2271E-05	.2271E-05	44.5	.0000	.0	0	.0	.0			
70.	2286.	.1182E-05	.1182E-05	44.5	.0000	.0	0	.0	.0			
110.	1524.	.2271E-05	.2271E-05	44.5	.0000	.0	0	.0	.0			
1000.	2286.	.1182E-05	.1182E-05	44.5	.0000	.0	0	.0	.0			

09/26/03
23:13:47

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .117000E-05
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.2468E-03	4	8.0	8.1	2560.0	10.86	9.74	8.57 HS
100.	.1592E-03	4	4.5	4.6	1440.0	18.10	16.04	14.19 HS
200.	.9905E-04	4	2.5	2.5	800.0	28.65	31.44	27.92 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .2468E-03 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.8315E-04	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.8450E-04	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.9551E-04	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .9566E-04 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1038E-03	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.1003E-03	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.9000E-04	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .1038E-03 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.9551E-04	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.8355E-04	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.7325E-04	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .9551E-04 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.7325E-04	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO
900.	.6460E-04	6	1.0	1.0	10000.0	38.56	85.59	48.21	NO
1000.	.5740E-04	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .7325E-04 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.5740E-04	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO
1100.	.5140E-04	6	1.0	1.0	10000.0	38.56	101.42	55.14	NO
1200.	.4635E-04	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .5740E-04 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.4635E-04	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO
1300.	.4208E-04	6	1.0	1.0	10000.0	38.56	116.50	61.52	NO
1400.	.3844E-04	6	1.0	1.0	10000.0	38.56	123.78	64.53	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .4635E-04 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. 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
1400.	.3861E-04	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.3545E-04	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .3861E-04 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. 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
91.	.2386E-03	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE 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
61.	.1547E-03	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. 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
366.	.7207E-04	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.1038E-03	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.2468E-03	61.	4.

COMPLEX TERRAIN .4627E-04 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

M. Particulate Matter

Predicted Ambient Concentration for Particulate Matter

09/26/03

22:59:42

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .118000
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 9.5166
 STACK GAS TEMP (K) = 755.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(UG/M**3)	HGT (M)	SC	(M/S)			
12.	457.	4.666	.9729	44.5	4.666	38.1	6	1.0	1.0		
20.	548.	4.189	.9950	44.5	4.189	38.1	6	1.0	1.0		
30.	1524.	1.402	.2264	44.5	1.402	38.1	6	1.0	1.0		
70.	1524.	.2290	.2290	44.5	.0000	.0	0	.0	.0		
70.	2286.	.1192	.1192	44.5	.0000	.0	0	.0	.0		
110.	1524.	.2290	.2290	44.5	.0000	.0	0	.0	.0		
1000.	2286.	.1192	.1192	44.5	.0000	.0	0	.0	.0		

09/26/03
22:59:42

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .118000
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	24.89	4	8.0	8.1	2560.0	10.86	9.74	8.57 HS
100.	16.06	4	4.5	4.6	1440.0	18.10	16.04	14.19 HS
200.	9.990	4	2.5	2.5	800.0	28.65	31.44	27.92 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. 24.89 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	8.387	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	8.522	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	9.632	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. 9.648 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	10.47	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	10.11	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	9.076	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. 10.47 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	9.632	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	8.427	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	7.387	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. 9.632 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	7.387	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	6.516	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	5.790	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. 7.387 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	5.790	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	5.183	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	4.674	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. 5.790 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	4.674	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	4.244	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	3.876	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. 4.674 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	3.894	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	3.576	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. 3.894 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	24.07	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	15.60	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	7.268	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	10.47	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	24.89	61.	4.

COMPLEX TERRAIN 4.666 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

N. Antimony

Predicted Ambient Concentration for Antimony

09/26/03

23:15:15

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .323000E-03
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 9.5166
 STACK GAS TEMP (K) = 755.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.1277E-01	.2663E-02	44.5	.1277E-01	38.1	6	1.0	1.0			
20.	548.	.1147E-01	.2724E-02	44.5	.1147E-01	38.1	6	1.0	1.0			
30.	1524.	.3839E-02	.6196E-03	44.5	.3839E-02	38.1	6	1.0	1.0			
70.	1524.	.6269E-03	.6269E-03	44.5	.0000	.0	0	.0	.0			
70.	2286.	.3262E-03	.3262E-03	44.5	.0000	.0	0	.0	.0			
110.	1524.	.6269E-03	.6269E-03	44.5	.0000	.0	0	.0	.0			
1000.	2286.	.3262E-03	.3262E-03	44.5	.0000	.0	0	.0	.0			

09/26/03
23:15:15

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .323000E-03
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	.6812E-01	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	.4396E-01	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	.2735E-01	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .6812E-01 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.2296E-01	4	1.5	1.5	480.0	41.41	42.93	38.35 NO
300.	.2333E-01	6	1.0	1.0	10000.0	42.56	33.02	22.70 NO
400.	.2637E-01	6	1.0	1.0	10000.0	42.56	42.28	27.54 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .2641E-01 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2867E-01	6	1.0	1.0	10000.0	40.56	47.48	30.19 NO
500.	.2768E-01	6	1.0	1.0	10000.0	40.56	51.37	32.13 NO
600.	.2484E-01	6	1.0	1.0	10000.0	40.56	60.26	36.48 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .2867E-01 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.2637E-01	6	1.0	1.0	10000.0	38.56	60.26	36.48 NO
700.	.2307E-01	6	1.0	1.0	10000.0	38.56	68.92	40.60 NO
800.	.2022E-01	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .2637E-01 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.2022E-01	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO
900.	.1783E-01	6	1.0	1.0	10000.0	38.56	85.59	48.21	NO
1000.	.1585E-01	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .2022E-01 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.1585E-01	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO
1100.	.1419E-01	6	1.0	1.0	10000.0	38.56	101.42	55.14	NO
1200.	.1280E-01	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .1585E-01 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.1280E-01	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO
1300.	.1162E-01	6	1.0	1.0	10000.0	38.56	116.50	61.52	NO
1400.	.1061E-01	6	1.0	1.0	10000.0	38.56	123.78	64.53	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .1280E-01 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.1066E-01	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.9788E-02	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .1066E-01 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.6588E-01	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.4271E-01	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.1990E-01	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2867E-01	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.6812E-01	61.	4.

COMPLEX TERRAIN .1277E-01 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

O. Sulphur Dioxide

Predicted Ambient Concentration for Sulphur Dioxide

09/26/03

23:10:31

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .184800
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 9.5166
 STACK GAS TEMP (K) = 755.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR HT (M)	MAX 24-HR DIST (M)	CONC (UG/M**3)	PLUME HT CONC (UG/M**3)	PLUME HT ABOVE STK BASE (M)	PLUME HT CONC (UG/M**3)	PLUME HT ABOVE STK HGT (M)	U10M SC	USTK (M/S)
12.	457.	7.308	1.524	44.5	7.308	38.1	6	1.0
20.	548.	6.560	1.558	44.5	6.560	38.1	6	1.0
30.	1524.	2.196	.3545	44.5	2.196	38.1	6	1.0
70.	1524.	.3587	.3587	44.5	.0000	.0	0	.0
70.	2286.	.1866	.1866	44.5	.0000	.0	0	.0
110.	1524.	.3587	.3587	44.5	.0000	.0	0	.0
1000.	2286.	.1866	.1866	44.5	.0000	.0	0	.0

09/26/03
23:10:31

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .184800
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S)= 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	38.98	4	8.0	8.1	2560.0	10.86	9.74	8.57 HS
100.	25.15	4	4.5	4.6	1440.0	18.10	16.04	14.19 HS
200.	15.65	4	2.5	2.5	800.0	28.65	31.44	27.92 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. 38.98 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	13.13	4	1.5	1.5	480.0	41.41	42.93	38.35 NO
300.	13.35	6	1.0	1.0	10000.0	42.56	33.02	22.70 NO
400.	15.09	6	1.0	1.0	10000.0	42.56	42.28	27.54 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. 15.11 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	16.40	6	1.0	1.0	10000.0	40.56	47.48	30.19 NO
500.	15.83	6	1.0	1.0	10000.0	40.56	51.37	32.13 NO
600.	14.21	6	1.0	1.0	10000.0	40.56	60.26	36.48 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. 16.40 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	15.09	6	1.0	1.0	10000.0	38.56	60.26	36.48 NO
700.	13.20	6	1.0	1.0	10000.0	38.56	68.92	40.60 NO
800.	11.57	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. 15.09 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	11.57	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	10.20	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	9.067	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. 11.57 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	9.067	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	8.118	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	7.321	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. 9.067 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	7.321	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	6.646	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	6.071	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. 7.321 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	6.099	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	5.600	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. 6.099 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	37.69	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	24.44	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	11.38	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	16.40	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	38.98	61.	4.

COMPLEX TERRAIN 7.308 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

P. Tetra-chlorinated Dibenzo-p-dioxins (TCDD)

Predicted Ambient Concentration for TCDD without APC device

09/27/03

21:37:41

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality - TCDD

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .253000E-07
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 9.5166
 STACK GAS TEMP (K) = 755.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.1000E-05	.2086E-06	44.5	.1000E-05	38.1	6	1.0	1.0			
20.	548.	.8981E-06	.2133E-06	44.5	.8981E-06	38.1	6	1.0	1.0			
30.	1524.	.3007E-06	.4853E-07	44.5	.3007E-06	38.1	6	1.0	1.0			
70.	1524.	.4911E-07	.4911E-07	44.5	.0000	.0	0	.0	.0			
70.	2286.	.2555E-07	.2555E-07	44.5	.0000	.0	0	.0	.0			
110.	1524.	.4911E-07	.4911E-07	44.5	.0000	.0	0	.0	.0			
1000.	2286.	.2555E-07	.2555E-07	44.5	.0000	.0	0	.0	.0			

09/27/03
21:37:41

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality - TCDD

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .253000E-07
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	.5336E-05	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	.3443E-05	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	.2142E-05	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
61. .5336E-05 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.1798E-05	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.1827E-05	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.2065E-05	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
416. .2069E-05 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2245E-05	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.2168E-05	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.1946E-05	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
457. .2245E-05 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.2065E-05	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.1807E-05	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.1584E-05	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
600. .2065E-05 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.1584E-05	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO
900.	.1397E-05	6	1.0	1.0	10000.0	38.56	85.59	48.21	NO
1000.	.1241E-05	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .1584E-05 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.1241E-05	6	1.0	1.0	10000.0	38.56	93.60	51.75	NO
1100.	.1111E-05	6	1.0	1.0	10000.0	38.56	101.42	55.14	NO
1200.	.1002E-05	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .1241E-05 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.1002E-05	6	1.0	1.0	10000.0	38.56	109.05	58.39	NO
1300.	.9099E-06	6	1.0	1.0	10000.0	38.56	116.50	61.52	NO
1400.	.8311E-06	6	1.0	1.0	10000.0	38.56	123.78	64.53	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .1002E-05 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.8350E-06	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.7666E-06	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .8350E-06 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.3345E-05	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.1558E-05	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	.5160E-05	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.2245E-05	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	.5336E-05	61.	4.

COMPLEX TERRAIN .1000E-05 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

Q. Volatile Organic Carbons (VOCs)

Predicted Ambient Concentration for Volatile Organic Carbons

09/26/03

23:12:21

*** SCREEN3 MODEL RUN ***

*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .755000E-02
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 9.5166
 STACK GAS TEMP (K) = 755.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 44.5

DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK
(M)	(M)	(UG/M**3)	(UG/M**3)	BASE (M)	(M)	(UG/M**3)	(UG/M**3)	HGT (M)	(UG/M**3)	HGT (M)	SC	(M/S)
12.	457.	.2985	.6225E-01	44.5	.2985	38.1	6	1.0	1.0			
20.	548.	.2680	.6367E-01	44.5	.2680	38.1	6	1.0	1.0			
30.	1524.	.8973E-01	.1448E-01	44.5	.8973E-01	38.1	6	1.0	1.0			
70.	1524.	.1465E-01	.1465E-01	44.5	.0000	.0	0	.0	.0			
70.	2286.	.7625E-02	.7625E-02	44.5	.0000	.0	0	.0	.0			
110.	1524.	.1465E-01	.1465E-01	44.5	.0000	.0	0	.0	.0			
1000.	2286.	.7625E-02	.7625E-02	44.5	.0000	.0	0	.0	.0			

09/26/03
23:12:21

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

Impact of New UWI Incinerator on Ambient Air Quality

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .755000E-02
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	1.592	4	8.0	8.1	2560.0	10.86	9.74	8.57	HS
100.	1.027	4	4.5	4.6	1440.0	18.10	16.04	14.19	HS
200.	.6392	4	2.5	2.5	800.0	28.65	31.44	27.92	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
 61. 1.592 4 8.0 8.1 2560.0 10.86 9.74 8.57 HS

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	.5366	4	1.5	1.5	480.0	41.41	42.93	38.35	NO
300.	.5453	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	.6163	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
 416. .6173 6 1.0 1.0 10000.0 42.56 43.83 28.33 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.6701	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	.6469	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	.5807	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
 457. .6701 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	.6163	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	.5392	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	.4727	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
 600. .6163 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	.4727	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	.4169	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	.3704	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. .4727 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	.3704	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	.3317	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	.2991	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. .3704 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	.2991	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	.2715	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	.2480	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. .2991 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.2492	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	.2288	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .2492 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	1.540	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	.9984	3	4.5	4.5	1440.0	18.87	13.47	12.43	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	.4651	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	.6701	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
6.	91.	--
0.	61.	--
2.	366.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	1.592	61.	4.

COMPLEX TERRAIN .2985 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

01/08/04
16:33:35

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

HCl

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .846000
STACK HT (M) = 10.5000
STACK DIAMETER (M) = .5080
STACK VELOCITY (M/S) = 9.5166
STACK GAS TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 3.604 M⁴/S³; MOM. FLUX = 2.345 M⁴/S².

FINAL STABLE PLUME HEIGHT (M) = 44.5
DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR	MAX 24-HR	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT	PLUME HT
HT	DIST	CONC	CONC	ABOVE STK	CONC	ABOVE STK	U10M	USTK	U10M	USTK
(M)	(M)	(UG/M ³)	(UG/M ³)	BASE (M)	(UG/M ³)	HGT (M)	SC	(M/S)	(M)	(M/S)
12.	457.	33.45	6.975	44.5	33.45	38.1	6	1.0	1.0	1.0
20.	548.	30.03	7.134	44.5	30.03	38.1	6	1.0	1.0	1.0
30.	1524.	10.05	1.623	44.5	10.05	38.1	6	1.0	1.0	1.0
70.	1524.	1.642	1.642	44.5	.0000	.0	0	.0	.0	.0
70.	2286.	.8544	.8544	44.5	.0000	.0	0	.0	.0	.0
110.	1524.	1.642	1.642	44.5	.0000	.0	0	.0	.0	.0
1000.	2286.	.8544	.8544	44.5	.0000	.0	0	.0	.0	.0

01/08/04
16:33:35

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

HCl

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .846000
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S)= 9.5166
STK GAS EXIT TEMP (K) = 755.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = 5.0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 3.604 M**4/S**3; MOM. FLUX = 2.345 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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
1.	.0000	1	1.0	1.0	320.0	63.64	1.00	.97	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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
61.	257.5	5	5.0	5.1	10000.0	13.99	6.97	7.16	HS
100.	137.7	5	5.0	5.1	10000.0	16.92	11.19	9.97	HS
200.	71.80	4	2.0	2.0	640.0	34.18	31.79	28.32	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
 61. 257.5 5 5.0 5.1 10000.0 13.99 6.97 7.16 HS

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	60.71	6	1.0	1.0	10000.0	42.56	30.61	21.42	NO
300.	64.79	6	1.0	1.0	10000.0	42.56	33.02	22.70	NO
400.	70.62	6	1.0	1.0	10000.0	42.56	42.28	27.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
 400. 70.62 6 1.0 1.0 10000.0 42.56 42.28 27.54 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	75.90	6	1.0	1.0	10000.0	40.56	47.48	30.19	NO
500.	73.00	6	1.0	1.0	10000.0	40.56	51.37	32.13	NO
600.	65.22	6	1.0	1.0	10000.0	40.56	60.26	36.48	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
 457. 75.90 6 1.0 1.0 10000.0 40.56 47.48 30.19 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	69.13	6	1.0	1.0	10000.0	38.56	60.26	36.48	NO
700.	60.37	6	1.0	1.0	10000.0	38.56	68.92	40.60	NO
800.	52.88	6	1.0	1.0	10000.0	38.56	77.36	44.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
 600. 69.13 6 1.0 1.0 10000.0 38.56 60.26 36.48 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	52.88	6	1.0	1.0	10000.0	38.56	77.36	44.50 NO
900.	46.62	6	1.0	1.0	10000.0	38.56	85.59	48.21 NO
1000.	41.42	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. 52.88 6 1.0 1.0 10000.0 38.56 77.36 44.50 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	41.42	6	1.0	1.0	10000.0	38.56	93.60	51.75 NO
1100.	37.08	6	1.0	1.0	10000.0	38.56	101.42	55.14 NO
1200.	33.44	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. 41.42 6 1.0 1.0 10000.0 38.56 93.60 51.75 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	33.44	6	1.0	1.0	10000.0	38.56	109.05	58.39 NO
1300.	30.36	6	1.0	1.0	10000.0	38.56	116.50	61.52 NO
1400.	27.74	6	1.0	1.0	10000.0	38.56	123.78	64.53 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. 33.44 6 1.0 1.0 10000.0 38.56 109.05 58.39 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	27.87	6	1.0	1.0	10000.0	38.06	123.78	64.53	NO
1500.	25.59	6	1.0	1.0	10000.0	38.06	130.90	67.45	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. 27.87 6 1.0 1.0 10000.0 38.06 123.78 64.53 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

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	123.7	3	4.0	4.0	1280.0	19.91	13.53	12.49	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	54.25	6	1.0	1.0	10000.0	46.56	39.14	25.92	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	202.6	5	5.0	5.1	10000.0	14.28	10.22	9.33	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	75.90	6	1.0	1.0	10000.0	40.56	47.48	30.19	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	257.5	61.	4.

COMPLEX TERRAIN 33.45 457. 12. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

*** SCREEN3 MODEL RUN ***
 *** VERSION DATED 95250 ***

HCl

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .250000E-01
 STACK HT (M) = 10.5000
 STACK DIAMETER (M) = .5080
 STACK VELOCITY (M/S) = 5.2870
 STACK GAS TEMP (K) = 533.0000
 AMBIENT AIR TEMP (K) = 303.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN

BUOY. FLUX = 1.443 M⁴/S³; MOM. FLUX = 1.025 M⁴/S².

FINAL STABLE PLUME HEIGHT (M) = 35.5
 DISTANCE TO FINAL RISE (M) = 203.6

VALLEY 24-HR CALCS **SIMPLE TERRAIN 24-HR CALCS**

TERR HT (M)	MAX 24-HR DIST (M)	CONC (UG/M ³)	PLUME HT CONC (UG/M ³)	PLUME HT ABOVE STK BASE (M)	CONC (UG/M ³)	PLUME HT ABOVE STK HGT (M)	U10M SC	USTK (M/S)
12.	457.	1.443	.2756	35.5	1.443	28.1	6	1.0
20.	548.	1.196	.2500	35.5	1.196	28.1	6	1.0
30.	1524.	.3211	.4875E-01	35.5	.3211	28.1	6	1.0
70.	1524.	.4875E-01	.4875E-01	35.5	.0000	.0	0	.0
70.	2286.	.2532E-01	.2532E-01	35.5	.0000	.0	0	.0
110.	1524.	.4875E-01	.4875E-01	35.5	.0000	.0	0	.0
1000.	2286.	.2532E-01	.2532E-01	35.5	.0000	.0	0	.0

11/13/03
16:58:34

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

HCl

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .250000E-01
STACK HEIGHT (M) = 10.5000
STK INSIDE DIAM (M) = .5080
STK EXIT VELOCITY (M/S) = 5.2870
STK GAS EXIT TEMP (K) = 533.0000
AMBIENT AIR TEMP (K) = 303.0000
RECEPTOR HEIGHT (M) = 5.0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = 5.1000
MIN HORIZ BLDG DIM (M) = 10.6000
MAX HORIZ BLDG DIM (M) = 12.2000

BUOY. FLUX = 1.443 M**4/S**3; MOM. FLUX = 1.025 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 3. 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	
1.	.0000	1	1.0	1.0	320.0	36.01	.71	.68	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
1. .0000 0 .0 .0 .0 .00 .00 .00

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 4. 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	
61.	11.61	5	5.0	5.1	10000.0	11.56	6.81	7.01	HS
100.	6.584	4	2.5	2.5	800.0	17.65	16.01	14.16	HS
200.	4.210	4	1.0	1.0	320.0	34.37	31.81	28.34	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 61. M:
 61. 11.61 5 5.0 5.1 10000.0 11.56 6.81 7.01 HS

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
274.	3.717	6	1.0	1.0	10000.0	32.55	29.71	20.12	NO
300.	3.721	6	1.0	1.0	10000.0	32.55	32.20	21.48	NO
400.	3.375	6	1.0	1.0	10000.0	32.55	41.63	26.54	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 274. M:
 288. 3.727 6 1.0 1.0 10000.0 32.55 31.15 20.91 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	3.317	6	1.0	1.0	10000.0	30.55	46.91	29.28	NO
500.	3.059	6	1.0	1.0	10000.0	30.55	50.84	31.28	NO
600.	2.539	6	1.0	1.0	10000.0	30.55	59.81	35.73	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 457. M:
 457. 3.317 6 1.0 1.0 10000.0 30.55 46.91 29.28 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)		U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
600.	2.657	6	1.0	1.0	10000.0	28.55	59.81	35.73	NO
700.	2.211	6	1.0	1.0	10000.0	28.55	68.53	39.92	NO
800.	1.871	6	1.0	1.0	10000.0	28.55	77.01	43.89	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 600. M:
 600. 2.657 6 1.0 1.0 10000.0 28.55 59.81 35.73 NO

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
800.	1.871	6	1.0	1.0	10000.0	28.55	77.01	43.89 NO
900.	1.607	6	1.0	1.0	10000.0	28.55	85.27	47.65 NO
1000.	1.400	6	1.0	1.0	10000.0	28.55	93.31	51.23 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 800. M:
800. 1.871 6 1.0 1.0 10000.0 28.55 77.01 43.89 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	1.400	6	1.0	1.0	10000.0	28.55	93.31	51.23 NO
1100.	1.234	6	1.0	1.0	10000.0	28.55	101.15	54.65 NO
1200.	1.099	6	1.0	1.0	10000.0	28.55	108.80	57.93 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:
1000. 1.400 6 1.0 1.0 10000.0 28.55 93.31 51.23 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 10. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1200.	1.099	6	1.0	1.0	10000.0	28.55	108.80	57.93 NO
1300.	.9874	6	1.0	1.0	10000.0	28.55	116.26	61.08 NO
1400.	.8943	6	1.0	1.0	10000.0	28.55	123.56	64.11 NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1200. M:
1200. 1.099 6 1.0 1.0 10000.0 28.55 108.80 57.93 NO

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1400.	.8974	6	1.0	1.0	10000.0	28.05	123.56	64.11	NO
1500.	.8181	6	1.0	1.0	10000.0	28.05	130.69	67.04	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1400. M:
 1400. .8974 6 1.0 1.0 10000.0 28.05 123.56 64.11 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

 *** SCREEN DISCRETE DISTANCES ***

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

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
61.	5.504	5	5.0	5.1	10000.0	15.56	6.81	7.01	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
366.	2.848	6	1.0	1.0	10000.0	36.55	38.45	24.85	NO

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 6. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
91.	8.574	5	4.5	4.6	10000.0	12.16	10.10	9.20	HS

 *** SCREEN DISCRETE DISTANCES ***

*** TERRAIN HEIGHT OF 8. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX (M/S)	HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
457.	3.317	6	1.0	1.0	10000.0	30.55	46.91	29.28	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 TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
3.	1.	61.
4.	61.	274.
6.	274.	457.
8.	457.	600.
10.	600.	800.
10.	800.	1000.
10.	1000.	1200.
10.	1200.	1400.
11.	1400.	1500.
0.	61.	--
2.	366.	--
6.	91.	--
8.	457.	--

*** CAVITY CALCULATION - 1 *** *** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.65 CAVITY HT (M) = 5.46
 CAVITY LENGTH (M) = 13.36 CAVITY LENGTH (M) = 12.21
 ALONGWIND DIM (M) = 10.60 ALONGWIND DIM (M) = 12.20

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

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO TERRAIN MAX (M)	HT (M)
SIMPLE TERRAIN	11.61	61.	4.

COMPLEX TERRAIN 1.443 457. 12. (24-HR CONC)

APPENDIX 6

**UWI Hospital Incinerator
Social Survey**

ID#

1. Age group (in years): 0 – 20; 21-30; 31 – 40; 41 – 50; 51 – 60; >61
 2. Area group:
 - a. Hospital Staff Quarters
 - b. Hospital Staff
 - c. Hospital Visitor
 - d. On UWI Campus Residential Quarters –
 - i. Taylor Hall
 - ii. Chancellor Hall
 - iii. Mary Seacole Hall
 - iv. Irvine Hall
 - v. Preston Hall
 - vi. Rex Nettleford Hall
 - e. Mona Commons
 - f. Settlement in front of the hospital's main gate
 3. How many years have you resided/worked here? <1; 1-3; 4-6; 7-9; >10
 4. How many hours do you spend in this area daily? <6; 6-8; 8-12; >12
 5. Do you know that the hospital has an incinerator? YES / NO
 6. Do you know where it is? YES / NO
 7. Do you know when it is operated? YES / NO
 8. Are you troubled by its operation? YES / NO
 - a. If yes, how so – smell, coughing, wheezing, watery eyes, soot, other

 - b. How long has this been going on? _____
 9. Do you think they should build a more efficient incinerator? YES/NO
 - a. If No, why not _____

 10. Do you think another method should be used to treat and dispose of the hospital's waste?
YES / NO
-

Question	Results
1. Age group (in years):	
0 -20	6
21 - 30	17
31 - 40	9
41 - 50	5
51 - 60	0
> 61	0
2. Area group:	
a. Hospital Staff Quarters	4
b. Hospital Staff/Visitor	12
c. On UWI Campus Residential Quarters –	
i. Taylor Hall	4
ii. Chancellor Hall	3
iii. Mary Seacole Hall	2
iv. Irvine Hall	1
v. Preston Hall	3
vi. Rex Nettleford Hall	2
d. Mona Commons	3
e. Settlement in front of the hospital's main gate	3
3. How many years have you resided/worked here?	
<1	5
1-3	21
4-6	10
7-9	1
>10	0
4. How many hours do you spend in this area daily?	
<6	1
6 - 8	16
8 - 12	10
>12	10
5. Do you know that the hospital has an incinerator?	
YES	26
NO	11
6. Do you know where it is?	
YES	18
NO	19
7. Do you know when it is operated?	
YES	15
NO	22

8. Are you troubled by its operation?		
YES		18
NO		19
a. If yes, how so –		
smell,		17
coughing,		5
wheezing,		0
watery eyes,		5
soot,		13
other		1
b. How long has this been going on?		
< 1 year		0
> 1 year		14
9. Do you think they should build a more efficient incinerator?		
YES		28
NO		4
a. If No, why not		
10. Do you think another method should be used to treat and dispose of the hospital's waste?		
YES		9
NO		17
