

 **EPA 20th Annual
RREL
Research
Symposium**

*... Environmental Technology
for Pollution Prevention,
Remediation, and Control*

**March 15-17, 1994
The Westin Hotel
Cincinnati, Ohio**



CONFERENCE HIGHLIGHTS

Tuesday - March 15

8:30 am Plenary Session I
3:00 - 3:30 pm Poster Sessions

Wednesday - March 16

2:30 - 3:30 Poster Sessions

Thursday - March 17

10:30 am Plenary Session II
(New this year) **1:00 pm Tours**

SYMPOSIUM REGISTRATION

(There is no registration fee)

Preregistration Deadline

• **February 23** •

(After February 23, Registration will
take place onsite)

Mail to:

SAIC

Attn: Technology Transfer Dept.
501 Office Center Drive, Suite 420
Ft. Washington, PA 19034

Fax to:

SAIC - (215) 628-8916

Inquires:

SAIC - 1-800-783-3870

in PA (215) 628-9317

1 pm - 3 pm ET, Monday, Wednesday, Friday

HOTEL RESERVATIONS

Deadline • February 23

(After Feb. 23, reservations will be
on a space-available basis only)

Mail to:

The Westin Hotel
at Fountain Square
Cincinnati, OH 45202
Telephone (513) 621-7700

*Please use the symposium and hotel registration forms
in this brochure.*

Objectives of the Symposium

A program of papers, panel discussions, and poster displays will be presented outlining the latest environmental technology advances from EPA-sponsored research in the areas of:

POLLUTION PREVENTION

- Pollution Prevention Demonstrations
- Life Cycle Analysis
- Clean Products Research

REMIEDIATION TECHNOLOGY

- Superfund Innovative Technology Evaluation Program
- RREL Technologies
- Oil Spills

WASTE TECHNOLOGY

- Municipal Solid Waste
- Hazardous Waste

WATER TECHNOLOGY

- Drinking Water
- Wastewater

In addition, this year presentations will be made by the Northeast, Great Plains-Rocky Mountain, Great Lakes and Mid-Atlantic, and South and Southwest Hazardous Substance Research Centers.

In general, papers will report the results of completed projects. Poster displays will cover recently initiated and ongoing research projects. Panel discussions will take place on a variety of research activities.

U.S. Environmental Protection Agency
Region 1 (Chicago Office)
77 West Jackson Boulevard, 12th Floor
Chicago, IL 60604-3590



Printed on Recycled Paper

Who Should Attend

Federal, state and local agency personnel, consultants, researchers, equipment manufacturers, and services suppliers involved in environmental technologies.

Symposium Registration

A registration form is included in this brochure. *There is no registration fee*, but all attendees must register either by mail or onsite. Registration will be held at the hotel on Monday, March 14, 6:00 pm to 8:30 pm, and Tuesday, March 15, beginning at 7:00 am.

Attendees who arrive on Monday are invited to: "Meet the RREL Professional Staff" Reception (cash bar) 6:00 pm to 9:00 pm in the Presidential Ballroom.

Hotel Registration

The Symposium will be held at the Westin Hotel in downtown Cincinnati. These special room rates will be in effect:

Government Rate \$62 (*must show government ID and bring signed tax-exempt status form at check-in*)

Conference Rate \$109

These rates do not include sales tax. Rooms will be assigned on a first-come, first-serve basis from a reserved block. Rooms not assigned from the block by February 23, 1994 will be released, and reservations after that will be handled on a space-available basis.

A hotel reservation form is included in this brochure. By completing this form, and sending it directly to the hotel, your reservations will be guaranteed for late arrival. You may make your reservations by phone (513) 621-7700. If you telephone reservations, be sure to mention that you will be attending the EPA Research Symposium so that you qualify for the special room rate.

Program Overview

The Symposium will be in session from 8:30 am to 5:00 pm on Tuesday, March 15, and Wednesday, March 16, and from 8:30 am to 12:00 noon on Thursday, March 17. There will be two Plenary Sessions.

The first Plenary Session will be held on Tuesday morning, followed by concurrent sessions for Papers (Sessions A & B) and Panel Discussions and Papers (Session C). The second Plenary Session will take place on Thursday morning, following the last session.

Posters will be on display for the duration of the Symposium but will be showcased at two Poster Sessions scheduled from 3:00 - 3:30 pm on Tuesday and from 2:30 - 3:30 pm Wednesday. During the poster sessions, researchers will be on hand to discuss their projects with interested attendees.



Note Change This Year



The tours will be held on Thursday afternoon, after the second Plenary Session, to give all attendees an opportunity to participate without missing paper sessions.

Optional Dinner and Movie at Union Terminal

On Tuesday, March 15, an evening social event is planned at Union Terminal, an art deco train station/multiple museum complex. Dinner will be served in a private dining room used by the Cincinnati Railroad Barons.

Following dinner, participants will have the option of seeing "Tropical Rainforest" at the Omnimax Theatre housed at the Terminal. The cash bar begins at 6:00 pm and dinner will be served at 6:30 pm. The movie begins at 8:00 pm.

The cost of the dinner is \$25 (includes tax and gratuity). This includes a full-course dinner with

and hazardous wastes in soils, air and liquid matrices. Cooperative research efforts with private and public sector organizations can be effected through several different cooperative agreement or contract arrangements.

The fee for each tour is \$6.00, which includes transportation. This fee will be collected onsite when you register at the tour sign-up desk. More information will be provided at the symposium.

Other Special Activities

During the Symposium EPA exhibits and databases will be on display including the Pollution Prevention Information Clearinghouse (PPIC), Alternative Treatment Technology Information Center (ATTIC), and the Superfund Innovative Technology Evaluation (SITE) Program. Videotapes will be shown on special topics and a publication order form will be available to order EPA documents.

Attendees may use a designated hotel conference room for small meetings (up to 12 people). A sign-up sheet for scheduling will be available onsite.

Abstract Proceedings

An Abstract Proceedings will be produced and each registered attendee will receive a copy. If you will not be attending the Symposium, but would like a copy of the Abstract Proceedings, check the appropriate box on the Registration Form.

Symposium Registration to SAIC*Preregistration Deadline - February 23, 1994**(There is no registration fee)***Hotel Reservations to the Westin Hotel***Deadline - February 23, 1994*

Hotel Rates

\$62 - Government

\$109 - Conference

Monday, March 14*Registration, Gibson Foyer - 6:00-8:30 pm**Cocktail Reception (Cash Bar),**Presidential Ballroom - 6:00-9:00 pm***Tuesday, March 15***Registration, Gibson Foyer - begins at 7:00 am**Plenary Session I - 8:30 am**Poster Session, Presidential Ballroom -**3:00 - 3:30 pm**Dinner at Union Terminal (optional)**6:00 pm - \$25.00**"Tropical Rainforest" Omnimax Movie, at**Union Terminal (optional), 8:00 pm - \$5.50***Wednesday, March 16***Poster Session, Presidential Ballroom -**2:30 - 3:30 pm***Thursday, March 17***Plenary Session II - 10:30 am**Meeting Adjourns - Noon**Tours of Cincinnati Water Works Treatment**Plant, and EPA's T&E and Center Hill**Facilities - 1:00 pm*



**Driving Directions to Westin Hotel -
Cincinnati, OH**

From Dayton Area: Take I-75 South to the Vine Street exit (exits right at 3rd Street). Vine Street is one way going North. Pass 4th Street going North on Vine. The hotel is on the right side of Vine Street just before 5th Street.

From Airport/Kentucky: Take I-75 North; after crossing the I-75/71 bridge to Cincinnati, stay in the right hand lane and take the Vine Street exit. Take Vine Street (one way going North). Pass 4th Street. The hotel is on the right side of Vine Street just before 5th Street.

From Cleveland/Columbus: Take I-71 South through the tunnel in Downtown Cincinnati to the Vine Street exit (exits left). Vine Street is one way going North. Pass 4th Street. The hotel is on the right side of Vine Street just before 5th Street.

From Indianapolis: Take I-74 to I-75 South and follow directions above from Dayton.

Tuesday, March 15

8:30 am

PLENARY SESSION I

**"Federal Government's Role in
Environmental Technology
Development &
Commercialization"**

OPENING REMARKS

E. Timothy Oppelt

Director

Risk Reduction

Engineering Laboratory

U.S. Environmental Protection

Agency

Dr. Robert Watson

Associate Director for Environment

Office of Science and

Technology Policy

Executive Office of the President

QUESTION & ANSWER PERIOD

10:00 am Coffee Break

The Symposium will conclude on Thursday, March 17 with Plenary Session II, "Developing Partnerships and Strategies for Environmental Technology Innovation, Commercialization, and Export", scheduled from 10:30 - Noon.

Tuesday**Session A
Source Reduction/P2**

10:30 Using Life-Cycle Assessment to Evaluate
Pollution Prevention Options
Mary Ann Curran
U.S. EPA, RREL

11:00 The Product Side of Hazardous Waste
Reduction: Chemical Ranking for Potential
Human Health & Environmental Impacts

Gary Davis
University of Tennessee

11:30 NMP-Based Coatings Remover at Tooele
Army Depot

Johnny Springer
U.S. EPA, RREL

**Session B
Biotreatment**

Using Fourier Transform Infra-red Spectro-
scopy (FT-IR) to Monitor the Progress of
Plant Based Bioremediation Efforts

Larry Davis
Kansas State University

Field Scale Evaluation of Grass-Enhanced
Bioremediation of PAH Contaminated Soils

Darwin Sorensen
Utah State University

Isolation of Pollutants Using a Biobarrier
Technology

J. William Costerton
Montana State University

**Session C
Metals & Wastewater Treatment**

Remediation of Metal Contaminated Soil by
Electric Fields

Ronald Probststein
Mass Institute of Technology

Individual Metal Removal/Recovery by a
Novel Hollow Fiber Membrane-based
Synergistic Extraction Technique

Kamlesh Sirkar
New Jersey Institute of Technology

Fate of Terpenes in the Activated Sludge
Process

Franklin Alvarez
U.S. EPA, RREL

noon LUNCH

Tuesday

	Session A Pollution Prevention	Session B Biotreatment	Session C Panel Discussion
1:00	Selected Technology Assessments and Evaluations under the WREAFS Program <i>Ken Stone U.S. EPA, RREL</i>	Kinetics of Biodegradation, Sorption and Desorption of Phenol, Substituted Phenols and PAHs in Soil Slurry Systems <i>Henry Tabak U.S. EPA, RREL</i>	Dioxin Formation and/or Control from the Incineration of Wastes <i>George Huffman U.S. EPA, RREL</i>
1:30	Recycling Nickel Electroplating Rinse Waters by Low Temperature Evaporation and Reverse Osmosis <i>Paul Randall U.S. EPA, RREL</i>	Membrane Biofiltration in Anaerobic/Aerobic Applications <i>Amit Pandit U.S. EPA, RREL</i>	
2:00	Source Reduction in the Pulp and Paper Industry <i>Thomas J. Holdsworth U.S. EPA, RREL</i>	Recent Advances in Biofiltration <i>Rakesh Govind U.S. EPA, RREL</i>	
2:30	Pesticide Treatability Database Version 3.0 <i>T. David Ferguson U.S. EPA, RREL</i>	Remediation of Contaminants with Biological Activated Carbon Systems <i>Thomas C. Voice Michigan State University</i>	

Place
Stamp
Here

The Westin Hotel
at Fountain Square
Cincinnati, OH 45202

Hotel Registration Form

Hotel Registration Form

20th Annual RREL Research Symposium

By filling out this form completely you can guarantee your reservations for late arrival. Although you must supply credit card information, you may pay your account with cash - just advise the front desk clerk at check-in time. **CHECK-IN TIME - 3:00 PM CHECK-OUT TIME - 1:00 PM**
Reservations will not be held beyond 6 pm unless guaranteed by credit card or advanced deposit.

Name _____
Affiliation/Co. _____
Address _____
City, State, Zip _____
Telephone _____ Fax _____
Signature _____

Government ID must be shown in order to obtain the government rate. A third person sharing the room will be an additional \$20. Children under 18 free when sharing room with adult. Reservations received after February 23, 1994 will be accepted on a space-available basis.

**SAIC
501 Office Center Drive
Suite 420
Fort Washington, PA 19034**

**Place
Stamp
Here**

**SAIC
(Attn. Technology Transfer Dept.)
501 Office Center Drive
Suite 420
Fort Washington, PA 19034**

Symposium Registration Form

Symposium Registration Form

20th Annual RREL Research Symposium

Please print clearly or attach a business card; this information will be used to make up your name badge and attendees list.

Name _____
Affiliation/Co. _____
Address _____
City, State, Zip _____
Telephone _____ Fax _____

I cannot attend, but please send me a copy of the Abstract Proceedings.
There is no Registration Fee.

Your check payable to SAIC must accompany this form if the optional dinner/Omnimax is chosen, and must arrive no later than February 23. You will be sent a receipt with a letter confirming your Symposium registration. Confirmations will be sent within 10 days of receipt of your registration form. Mail to:

SAIC (Technology Transfer Dept.)
501 Office Center Drive, Suite 420,
Fort Washington, PA 19034
Telephone (800) 783-3870 or (215) 628-9317 (in PA) -
Fax (215) 628-8916

*For additional information call between 1pm and 3pm ET,
Monday, Wednesday, or Friday*

Please accept my reservation for the following optional functions:

Tuesday, March 15

of People Total \$

Dinner at Union Terminal @ \$25.00 x _____ = _____

Choose one entree:

Chicken with peppers, mushrooms, and onions

Roast Pork Loin in mustard sauce

Omnimax Movie "Tropical Rainforest"

at Union Terminal (after dinner) @ \$5.50 x _____ = _____

I am enclosing my
check for a total of \$ _____

**EPA's 20th Annual RREL Research Symposium -
Symposium Registration**

(No.)	Single (one person)	Arrival Date _____	Credit Card _____
_____	\$109 Conference Rate,	_____	_____
_____	\$62 Government Rate	Arrival Time _____	Card # _____
	Double (two persons)	Departure Date _____	Expires _____
_____	\$109 Conference Rate,	_____	_____
_____	\$109 Government Rate	_____	_____

Name of person(s) sharing room: _____

FOR HOTEL USE ONLY:

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**EPA's 20th Annual RREL Research Symposium -
Hotel Registration**

3:00 - 3:30 POSTER SESSION

Tuesday

**Session A
SITE Demos/Thermal Treatment**

**Session B
Biotreatment**

**Session C
Modeling Studies/Contaminant Fate**

3:30 The EcoLogic Gas-Phase Chemical Reduction Process

*Gerry Sudell
Foster Wheeler Enviresponse*

Soil Slurry Bioreactor Treatability Studies with PAH-Contaminated Soil

*John A. Glaser
U.S. EPA, RREL*

Experimental and Modeling Studies of Pyrolysis and Oxidation of Chlorocarbon/ Hydrocarbon Systems

*Robert Barat
New Jersey Institute of Technology*

4:00 Waste Vitrification Through Electric Melting

*Emilio Spinosa
Ferro Corporation*

Use of Composting Techniques to Remediate Contaminated Soils and Sludges

*James H. Johnson, Jr.
Howard University*

Release of Chlorinated Organic Compounds from a Contaminated Estuarine Sediment

*Spyros Pavlostathis
Georgia Institute of Technology*

4:30 Photothermal Destruction of Off-Gas from SVE and Thermal Desorption Treatment Processes

*Chen Chien
U.S. EPA, RREL*

Hydraulic Fracturing and Electrokinetics to Improve In Situ Remediation

*Mike Roulier
U.S. EPA, RREL*

Flume Studies on the Detachment of Kaolinite Clay from a Coarse Sediment

*T.W. Sturm
Georgia Institute of Technology*

Wednesday

	Session A Drinking Water/Groundwater Treatment	Session B Oil Spills	Session C Panel Discussion
8:30	Membrane Technology Applied to Drinking Water Treatment <i>Jeffery Adams</i> U.S. EPA, RREL	Use of Chemical Dispersants for Oil Spills in Marine Waters <i>Daniel Sullivan</i> U.S. EPA, RREL	New Directions for Emerging Technologies <i>Norma Lewis</i> U.S. EPA, RREL
9:00	Potential Application and Limitations of Titanium Dioxide as a Photocatalyst for the Inactivation of Waterborne Pathogens <i>James Owens</i> U.S. EPA, RREL	Nutrient Application Strategies for Oil Spill Bioremediation in the Field <i>Albert D. Venosa</i> U.S. EPA, RREL	
9:30	SITE Demonstration of the Colloid Polishing Filter Method (CPFM) Technology <i>Annette Gatchett</i> U.S. EPA, RREL	Bioventing of a Jet Fuel Spill in a Cold Climate with Soil Warming: A Field Evaluation <i>Gregory D. Sayles</i> U.S. EPA, RREL	

10:00 BREAK

Wednesday**Session A****Drinking Water/Small Systems**

10:30 Controlling Copper, Lead and Iron in Small Systems

Darren Lytle
U.S. EPA, RREL

11:00 Membrane Research for Small System Applications

James Goodrich
U.S. EPA, RREL

11:30 Point-of-Use-Treatment for Arsenic Removal

Kim Fox
U.S. EPA, RREL

Session B**Physical/Chemical Treatment**

Pneumatic Fracturing/Soil Vapor Extraction SITE Demonstration

Uwe Frank
U.S. EPA, RREL

Base Catalyzed Decomposition of PCP and Dioxins at the Koppers Wood Preserving Superfund Site

Terry Lyons
U.S. EPA, RREL

Case Study of the Application of SVE/Air Sparging to Technologies LUST Site

Evan Fan
U.S. EPA, RREL

Session C**Panel Discussion**

Technical Considerations Regarding the End Point of SVE Operations

Frank Freestone
U.S. EPA, RREL

noon **LUNCH**

Wednesday

**Session A -
Thermal Treatment**

1:00 The Effectiveness of Sorbents for Solid-Bed Metal Capture in an Incinerator: Screening Tests at the Incineration Research Facility

*Greg Carroll
U.S. EPA, RREL*

1:30 The Incineration of Unsymmetrical Dimethyl Hydrazine: Pilot-Scale Results

*Donald Oberacker
U.S. EPA, RREL*

2:00 The Application of a Direct Fired Rotary Kiln Incinerator as a Low Temperature Thermal Desorber

*Justice Manning
U.S. EPA, CERL*

**Session B
SITE Demos-Physical/Chemical Treatment**

Particle Separation (Soil Washing) Process for the Treatment of Contaminated Soils

*Peter Wood
Warren Springs Laboratory*

Demonstration of Steam Injection/Vacuum Extraction Process at the Rainbow Disposal Site

*Paul dePercin
U.S. EPA, RREL*

Electrokinetic Soil Remediation - A SITE Study

*Yalcin Acar
LA State University*

**Session C
Panel Discussion**

Titanium Dioxide (TiO₂) Photocathalysis for Environmental Remediation Technology Status and U.S. EPA Perspectives

*John Ireland
U.S. EPA, RREL*

2:30 - 3:30 POSTER SESSION

Wednesday

**Session A
Solid Waste Management**

**Session B - SITE Demos- Physical/
Chemical Treatment**

**Session C
Panel Discussion**

- 3:30 Results of the MITE Material Recovery Facility (MRF) Evaluations
*Lynnann Hitchens
U.S. EPA, RREL*
- 4:00 Full-Scale Leachate-Recirculating MSW Landfill Bioreactor Assessments
*David Carson
U.S. EPA, RREL*
- 4:30 New Approaches to Estimation of Solid Waste Quantity and Composition
*Al Klee
U.S. EPA, RREL*
- COGNIS Terramet Lead Extraction Process
*William Fristad
COGNIS, Inc.*
- Results of an Acid Extraction Treatment System (AETS) for Removal of Lead from Soils
*Steve Pfaff
CHMR*
- Treatment of Organic Wastes by X-Ray
*Esperanza Renard
U.S. EPA, RREL*
- University Environmental Research Centers
*Steven Riter
Center for Environmental Resource Management
University of Texas at El Paso*

Thursday

**Session A SITE Demos-Bioremediation/
Economics of Innovative Technologies**

**Session B
Physical/Chemical Treatment**

- 8:30 Results of a Microaerophile Bioremediation
SITE Demonstration at Williams AFB
Scott Beckman
SAIC
- 9:00 Results of the Fungal Treatment SITE
Demonstration on PAH- and PCP-
Contaminated Soils
Kim Kreiton
U.S. EPA, RREL
- 9:30 The Economics of Innovative Technologies
Gordon Evans
U.S. EPA, RREL
- Temperature Effects on Bioremediation of
Contaminated Soils
Wendy Davis-Hoover
U.S. EPA, RREL
- Separation of Lead Species by a Chelation/
Membrane Process
Ron Turner
U.S. EPA, RREL
- Laser Photodegradation of PCB's and
Related Compounds
Marilyn Barger
Hofstra University

10:00 BREAK

Thursday, March 17

10:30 am

PLENARY SESSION II

**"Developing Partnerships and
Strategies for Environmental
Technology Innovation,
Commercialization, and
Export"**

Noon

Adjourn

1:00 pm

Tours of

- Cincinnati Water Works
- EPA's Center Hill Research Facility
- EPA's Test and Evaluation Facility

POSTERS • POSTERS • POSTERS

The Incineration Research Facility

Bob Thurnau
U.S. EPA, RREL

Four Year Study of Asbestos in NJ Public Schools

Thomas J. Powers
U.S. EPA, RREL

The Product Side of Hazardous Waste Reduction: Evaluating the Potential for Safe Substitutes

Lori Kincaid
University of Tennessee

P2 Technology Transfer through Research Briefs

Ken Stone
U.S. EPA, RREL

Update of the Full-Scale Debris Washing System

Naomi Barkley
U.S. EPA, RREL

Mutagenicity of Drinking Water Samples Prepared Using UV-TiO₂ Technology

Kathleen S. Patterson
U.S. EPA, RREL

Practical Pollution Prevention for Small Business

John Konefes
Small Business Pollution Prevention Center
University of N. Iowa

P2 in the South

Mike Elliott
Georgia Institute of Technology

RREL Site Remediation Technical Support Activities

Ben Blaney
U.S. EPA, RREL

EPA's Innovative Technology Council (ITC) Environmental Technology Initiative (ETI)

Norman Kulujian
U.S. EPA, Region III

Evaluation of In-Vessel Composter Designs for Hazardous Waste Treatment

John A. Glaser
U.S. EPA, RREL

Acoustic Location of Leaks in Underground Pipelines

Robert Hillger
U.S. EPA, RREL

POSTERS • POSTERS • POSTERS

- Biological Treatment for Identification of
Didegradation Products for a Textile Wastewater
Containing Reactive Azo Dyes
Andrea M. Dietrich
Virginia Polytechnic Institute
- Application of the Electron Beam Process to Multi-
Source Hazardous Waste Leachate Treatment
William Cooper
High Voltage Environmental Applications Inc.
- Plunging Water Jets for Controlling Spilled Oil in High
Currents
John S. Farlow
U.S. EPA, RREL
- Photolysis/Biodegradation of PCB Contaminated Soils
Ed Alperin
IT Corporation
- U.S. EPA - DOE Joint Assessment Program
Emma Lou George
U.S. EPA, RREL
- Decision-Making Software for Soil Vapor Extraction
Applications
Evan Fan
U.S. EPA, RREL
- Removal of Organic Compounds from Drinking Water
Using Membrane Technology
Carol Fronk
U.S. EPA, RREL
- Package-Plant Evaluations of Small Drinking Water
Systems
Susan Campbell
U.S. EPA, RREL
- RREL Drinking Water Technology Activities
Clois Slocum & Walter Feige
U.S. EPA, RREL
- Detection of Bacteriophages in Water
Janet C. Blannon & Criston J. Hurst
U.S. EPA, RREL
- Pollution Prevention Research Branch's Program
Emma Lou George
U.S. EPA, RREL
- Using Data Quality Objectives (DQOs) to Search for
Hot Spots
Esperanza P. Renard & John Warren
U.S. EPA, QAM

Sightseeing Opportunities

There are several Sightseeing Opportunities in Cincinnati for attendees and spouses.

Sightseeing and dining guides will be available at the registration desk. The following is a partial listing of some highlights.

Union Terminal - 1301 Western Avenue, (513) 287-7000. Art Deco train station/multiple museum complex which features the Cincinnati Historical Society, Natural History Museums, and an Omnimax Theatre.

Tower Place - Carew Tower, 4th and Race Streets, (513) 2410-7700. A renovated Art Deco "mixed-use urban center" combining restaurants, stores, offices, and a hotel under one roof.

Taft Museum - 316 Pike Street, (513) 241-0343. Former home of Anna Sinton and Charles Phelps Taft built in 1820, paintings, porcelains, and enamels. Open Monday-Saturday, 10:00 am- 5:00 pm.

Sawyer Point - Bicentennial Commons, Pete Rose Way. A major city park along the waterfront. For information on upcoming activities call (513) 352-4000. Open every day.

Cincinnati Symphony - 1241 Elm Street, (513) 621-1919. Jesus Lopez-Cobos, Music Director, September through May in Music Hall. For information and tickets call (513) 381-3300.

Cincinnati Art Museum - Eden Park, (513) 721-5204. Offering the visitor over 100 galleries reviewing the visual arts through art exhibitions. Open daily except Monday and major holidays.

Krohn Conservatory - Eden Park Drive, (513) 352-4086. Contains 1,500 labeled specimens of tropical plants and seasonal floral displays. One of the largest public greenhouses in the world.

Cincinnati Zoo - 3400 Vine Street, (513) 281-4700. Nation's first Insect World exhibit. Outdoor gorilla display, floral display, and Big Cat Canyon. Home of rare white Bengal tigers.

Parking

Fountain Square South: On Vine Street between 4th and 5th, next to the Vine Street entrance of the Westin Hotel. Open 24 hours.

Fountain Square North: On Vine Street between 5th and 6th, underneath Fountain Square. Open 24 hours.

Westin Hotel: Vine Street entrance. Valet parking available.

Walnut Garage: 626 Walnut Street, (513) 721-6140. Open Monday-Saturday 6:00-1:00 am. Closed Sunday and holidays.

Limousine from Airport

Jetport Express: (606) 283-3702. Regularly scheduled limousine service to and from downtown Cincinnati and the airport.

United States
Environmental Protection Agency
Center for Environmental Research Information
Cincinnati, OH 45268

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Parking

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United States
Environmental Protection Agency
Center for Environmental Research Information
Cincinnati, OH 45268

Official Business
Penalty for Private Use
\$300

EPA/600/F-93/053

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Parking

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Limousine from Airport

Jetport Express: (606) 283-3702. Regularly scheduled limousine service to and from downtown Cincinnati and the airport.

Other Hotels Within Walking Distance

Omni Netherland Plaza: 35 West 5th Street, (513) 421-9100.

Clarion Hotel: 141 West 6th Street, (513) 352-2100.

United States
Environmental Protection Agency
Center for Environmental Research Information
Cincinnati, OH 45268

Official Business
Penalty for Private Use
\$300

EPA/600/F-93/053

FIRST CLASS
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PERMIT No G 35

U.S. Environmental Protection Agency
Region 5
77 West Jackson
Chicago, IL 60604
12th Floor