

***National
Environmental
Achievement Track
Application Form***

IBM - Burlington

Name of facility

IBM Corporation

Name of parent company (if any)

1000 River Street

Street address

Street address (cont.)

Essex Junction, VT 05452

City/State/Zip code

Give us information about your contact person for the
National Environmental Achievement Track Program.

Name Jay M. Dietrich

Title Manager - Environmental Programs

Phone 802/769-4046

Fax 802/769-4139

E-mail jdietric@us.ibm.com

Section A

Tell us about your facility.

Why do we need this information?

EPA needs background information on your facility to evaluate your application.

What do you need to do?

- Provide background information on your facility.
- Identify your environmental requirements.

1 What do you do or make at your facility?

Semiconductor chips

2 List the Standard Industrial Classification (SIC) code(s) or North American Industrial Classification System (NAICS) codes that you use to classify business at your facility.

SIC
3674

NAICS

3 Does your company meet the Small Business Administration definition of a small business for your sector?

Yes No

4 How many employees (full-time equivalents) currently work at your facility?

- Fewer than 50
 50-99
 100-499
 500-1,000
 More than 1,000

Section A, continued

5 Does your facility have an EPA ID number(s)?

Yes No

If yes, list in the right-hand column.

VTD002084705

6 Identify the environmental requirements that apply to your facility. Use the Environmental Requirements Checklist, at the back of the instructions, as a reference. List your requirements to the right or enclose a completed Checklist with your application.

See attached checklist.

7 Check the appropriate box in the right-hand column.

I've listed the requirements above.

I've enclosed the Checklist with my application.

8 Optional: Is there anything else you would like to tell us about your facility?

Section B
 Tell us about your EMS

Why do we need this information?
 Facilities must have an operating Environmental Management System (EMS) that meets certain requirements.

What do you need to do?

- Confirm that your EMS meets the Achievement Track requirements.
- Tell us if you have completed a self-assessment or have had a third-party assessment of your EMS.

1 Check yes if your EMS meets the requirements for each element below as defined in the instructions.

- a. Environmental policy ----- Yes
- b. Planning ----- Yes
- c. Implementation and operation ----- Yes
- d. Checking and corrective action ----- Yes
- e. Management review ----- Yes

2 Have you completed at least one EMS cycle (plan-do-check-act)? Yes

3 Did this cycle include both an EMS and a compliance audit? Yes

4 Have you completed an objective self-assessment or third-party assessment of your EMS? Yes

If yes, what method of EMS assessment did you use? Self-assessment

IBM Professional Self Assessment - Internal Protocol GEMI Other
 Location internal EMS (ISO 14001) Audits
 Corporate Internal Audit - An independent organization CEMP _____
 within IBM.

Third-party assessment

Most recent surveillance audit 9/99. ISO 14001 Certification

Other _____

Section C

Tell us about your past achievements and future commitments.

Why do we need this information?

Facilities must show that they are committed to improving their environmental performance. This means that you can describe past achievements and will make future commitments.

What do you need to do?

Refer to the Environmental Performance Table in the instructions to answer questions 1 and 2.

- 1 Describe your past achievements for at least two environmental aspects. If you need more space than is provided, attach copies of this page.

Note to small facilities: If you qualify as a small facility as defined in the instructions, you are required to report past achievement for at least one environmental aspect.

First aspect you've selected

What aspect have you selected?	What was the previous level (2 years ago)?		What is the current level?	
	Quantity	Units	Quantity	Units
Energy Consumption				
* Electricity	438,000	MWh	493,000	MWh
* Fuel	880,000	MMBtu	930,000	MMBtu
<p>i. How is the current level an improvement over the previous level?</p> <p>IBM measures energy conservation improvements annually only. IBM compares projected energy usage for a given year against actual usage. Based on this methodology, the improvements in energy conservation each year from 1997 to 1999 were as follows:</p> <p>1997: 6.6%; 1998: 6.8%; 1999: 6.5%.</p>				
<p>ii How did you achieve this improvement?</p> <p>The Burlington Facility has an active energy conservation program, focusing on use reduction, installation of energy-efficient equipment, and use minimization.</p>				

Section C, continued

- d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.
- | | | |
|-------------------------------------|--|---|
| <input type="checkbox"/> | Absolute value | _____ (Quantity/Units) |
| <input checked="" type="checkbox"/> | Option B:
In terms of units of production or output | 4% Conservation (*)
_____ (Quantity/Units) |
- e. How will you achieve this improvement?
Ongoing energy conservation program.
- | | |
|-------|------------------------------------|
| _____ | (*) 4% conservation each year when |
| _____ | comparing actual usage against |
| _____ | projected usage. |

Second aspect you've selected

- a. What is the aspect?
- b. Is this aspect identified as significant in your EMS?
- c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.
(*) Million metric tons, carbon equivalent.
- d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.
IBM will attempt to reduce PFC emissions 40% (production-indexed from 1995 baseline) as described in its Project XL Final Project Agreement dated July 31, 2,000
- e. How will you achieve this improvement?
Process conversions on Chemical Vapor Deposition Tools.
- | | | |
|-------------------------------------|--|---|
| | | PFC Emissions Reductions |
| | | _____ |
| <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> No |
| <input type="checkbox"/> | Option A:
Absolute value | _____ (Quantity/Units) |
| <input checked="" type="checkbox"/> | Option B:
In terms of units of production or output | 0.096 mmtce (*)
_____ (Quantity/Units) |
| <input type="checkbox"/> | Option A:
Absolute value | _____ (Quantity/Units) |
| <input checked="" type="checkbox"/> | Option B:
In terms of units of production or output | 0.054 mmtce (**)
_____ (Quantity/Units) |
| | | _____ |
| | | (**) Production-indexed from a 1995 baseline. |
| | | _____ |
| | | _____ |

Section C, continued

Third aspect you've selected

- a. What is the aspect?
- b. Is this aspect identified as significant in your EMS?
- c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.
- d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.
- e. How will you achieve this improvement?

Hazardous Waste

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	
<input type="checkbox"/>	Option A:			_____
	Absolute value			(Quantity/Units)
<input checked="" type="checkbox"/>	Option B:			_____
	In terms of units			1252 tons
	of production			(Quantity/Units)
	or output			
<input type="checkbox"/>	Option A:			_____
	Absolute value			(Quantity/Units)
<input checked="" type="checkbox"/>	Option B:			_____
	In terms of units			(*)
	of production			(Quantity/Units)
	or output			
(*) Continuous reduction in production hazardous waste generation year to year , with adjustments for changes in production through source reduction, recycling, and waste minimization.				

Fourth aspect you've selected

- a. What is the aspect?
- b. Is this aspect identified as significant in your EMS?
- c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.
- d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.
- e. How will you achieve this improvement?
 Process optimization and water reuse/recycle.

Water Use

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	(*)
<input checked="" type="checkbox"/>	Option A:			6.3 M m ³
	Absolute value			(Quantity/Units)
<input type="checkbox"/>	Option B:			_____
	In terms of units			(Quantity/Units)
	of production			
	or output			
<input checked="" type="checkbox"/>	Option A:			2% (**)
	Absolute value			(Quantity/Units)
<input type="checkbox"/>	Option B:			_____
	In terms of units			(Quantity/Units)
	of production			
	or output			
(*) Identified as a project within the facility's pollution prevention objective.				
(**) 2% annual reduction in water use				

relative to previous year's consumption.

Why do we need this information?

Facilities must demonstrate their commitment to public outreach and performance reporting. You should have appropriate mechanisms in place to identify community concerns, to communicate with the public, and to provide information on your environmental performance.

What do you need to do?

- Describe your approach to public outreach.
- List three references who are familiar with your facility.

Section D

Tell us about your public outreach and reporting.

1 How do you identify and respond to community concerns?

The Site Communications Department receives

inquiries from the community, consults with

Environmental Programs, and responds to these

requests. Annually, Environmental Programs

personnel review the environmental aspects of operation at the Burlington site in accordance with the site's ISO 14001-certified Environmental Management System and communicate any findings which could potentially impact the community.

See attached: Community Outreach Mechanisms.

2 How do you inform community members of important matters that affect them?

3 How will you make the Achievement Track Annual Performance Report available to the public?

Website www.ibm.com/ibm/Environment/

Newspaper

Open Houses

Other

Section D, continued

4 Are there any ongoing citizen suits against your facility? Yes No

If yes, describe briefly in the right-hand column.

5 List references below.

	Organization	Name	Phone number
<i>Representative of a Community/Citizen Group</i>	Lake Champlain Basin Program	Bill Howland	802/655-6382
	Lake Champlain Committee	Lori Fisher	802/658-1414
<i>State/Local regulator</i>	Vermont Agency of Natural Resources	Gary Gulka	802/241-3626
<i>Other community/local reference</i>	Essex Junction Wastewater Treatment Plant	Jim Jutras	802/878-6943

Section E

Application and Participation Statement.

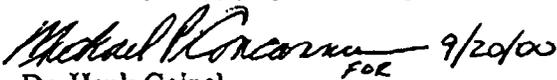
On behalf of IBM Essex Junction Vermont

I certify that

- I have read and agree to the terms and conditions, as specified in the *National Environmental Achievement Track Program Description* and in the *Application Instructions*;
- I have personally examined and am familiar with the information contained in this Application (including, if attached, the Environmental Requirements Checklist). The information contained in this Application is, to the best of my knowledge and based on reasonable inquiry, true, accurate, and complete, and I have no reason to believe the facility would not meet all program requirements;
- My facility has an environmental management system (EMS), as defined in the Achievement Track EMS requirements, including systems to maintain compliance with all applicable federal, state, tribal, and local environmental requirements, in place at the facility, and the EMS will be maintained for the duration of the facility's participation in the program;
- My facility has conducted an objective assessment of its compliance with all applicable federal, state, tribal, and local environmental requirements, and the facility has corrected all identified instances of potential or actual noncompliance;
- Based on the foregoing compliance assessment and subsequent corrective actions (if any were necessary), my facility is, to the best of my knowledge and based on reasonable inquiry, currently in compliance with applicable federal, state, tribal, and local environmental requirements.

I agree that EPA's decision whether to accept participants into or remove them from the National Environmental Achievement Track is wholly discretionary, and I waive any right that may exist under any law to challenge EPA's acceptance or removal decision.

I am the senior facility manager and fully authorized to execute this statement on behalf of the corporation or other legal entity whose facility is applying to this program.

Signature/Date  9/20/00
Printed Name/Title Dr. Hank Geipel FOR
Facility Name IBM Essex Junction Vermont

Facility Street Address 1000 River Road Essex Junction, Vermont 05452
Facility ID Numbers VTD002084705

National Environmental Achievement Track

Environmental Requirements Checklist

The following *Checklist* is provided to assist facilities in answering *Section A, Tell us about Your facility, Question 6*. The *Checklist* is given to help facilities identify the major federal, state, tribal, and local environmental requirements applicable at their facilities. The *Checklist* is not intended to be an exhaustive list of all environmental requirements that may be applicable at an individual facility.

If you use this *Checklist* and choose to submit it with your application, fill in your facility information below and enclose the completed *Checklist* with your application (see instructions).

Facility Name: IBM - Burlington
1000 River Street
Essex Junction, VT 05452

Facility Location: _____

Facility ID Number(s) VTD002084705
(attach additional sheets if necessary)

Check All
That Apply

Air Pollution Regulations

- | | |
|---|---|
| 1. National Emission Standards for Hazardous Air Pollutants (40 CFR 61) | |
| 2. Permits and Registration of Air Pollution Sources | X |
| 3. General Emission Standards, Prohibitions and Restrictions | X |
| 4. Control of Incinerators | |
| 5. Process Industry Emission Standards | |
| 6. Control of Fuel Burning Equipment | X |
| 7. Control of VOCs | X |
| 8. Sampling, Testing and Reporting | X |
| 9. Visible Emissions Standards | X |
| 10. Control of Fugitive Dust | |
| 11. Toxic Air Pollutants Control | X |
| 12. Vehicle Emissions Inspections and Testing | |

Other Federal, State, Tribal or Local Air Pollution Regulations Not Listed Above
(identify)

13. Vermont Agency of Natural Resources

14. _____

Hazardous Waste Management Regulations

- | | | |
|----|--|---|
| 1. | Identification and Listing of Hazardous Waste (40 CFR 261) | |
| | - Characteristic Waste | X |
| | - Listed Waste | X |
| 2. | Standards Applicable to Generators of Hazardous Waste (40 CFR 262) | |
| | - Manifesting | X |
| | - Pre-transport requirements | X |
| | - Record keeping/reporting | X |
| 3. | Standards Applicable to Transporters of Hazardous Waste (40 CFR 263) | |
| | - Transfer facility requirements | |
| | - Manifest system and record-keeping | |
| | - Hazardous waste discharges | |
| 4. | Standards for Owners and Operators of TSD Facilities (40 CFR 264) | |
| | - General facility standards | X |
| | - Preparedness and prevention | X |
| | - Contingency plan and emergency procedures | X |
| | - Manifest system, Record keeping and reporting | X |
| | - Groundwater protection | X |
| | - Financial requirements | X |
| | - Use and management of containers | X |
| | - Tanks | X |
| | - Waste piles | X |
| | - Land treatment | X |
| | - Incinerators | X |
| 5. | Interim Status Standards for TSD Owners and Operators (40 CFR 265) | X |
| 6. | Interim Standards for Owners and Operators of New Hazardous Waste
Land Disposal Facilities (40 CFR 267) | X |
| 7. | Administered Permit Program (Part B) (40 CFR 270) | X |

Other Federal, State, Tribal or Local Hazardous Waste Management Regulations Not Listed Above (*identify*)

- | | | |
|-------|-------------------------------------|--|
| 8. | Vermont Agency of Natural Resources | |
| <hr/> | | |
| 9. | | |
| <hr/> | | |

Hazardous Materials Management

- | | | |
|----|---|---|
| 1. | Control of Pollution by Oil and Hazardous Substances (33 CFR 153) | X |
| 2. | Designation of Reportable Quantities and Notification of Hazardous Materials Spill (40 CFR 302) | X |
| 3. | Hazardous Materials Transportation Regulations (49 CFR 172-173) | X |
| 4. | Worker Right-to-Know Regulations (29 CFR 1910.1200) | X |
| 5. | Community Right-to-Know Regulations (40 CFR 350-372) | X |

Other Federal, State, Tribal or Local Hazardous Waste Management Regulations Not Listed Above (*identify*)

6. Vermont Agency of Natural Resources
7. _____

Solid Waste Management

1. Criteria for Classification of Solid Waste Disposal Facilities and Practices (40 CFR 257)
2. Permit Requirements for Solid Waste Disposal Facilities
3. Installation of Systems of Refuse Disposal
4. Solid Waste Storage and Removal Requirements
5. Disposal Requirements for Special Wastes

Other Federal, State, Tribal or Local Hazardous Waste Management Regulations Not Listed Above (*identify*)

6. Chittenden Solid Waste District - Solid Waste Management Ordinance
7. Vermont Agency of Natural Resources

Water Pollution Control Requirements

- | | | |
|-----|--|---|
| 1. | Oil Spill Prevention Control and Countermeasures (SPCC) (40 CFR 112) | X |
| 2. | Designation of Hazardous Substances (40 CFR 116) | X |
| 3. | Determination of Reportable Quantities for Hazardous Substances
(40 CFR 117) | X |
| 4. | NPDES Permit Requirements (40 CFR 122) | X |
| 5. | Toxic Pollutant Effluent Standards (40 CFR 129) | X |
| 6. | General Pretreatment Regulations for Existing and New Sources (40 CFR 403) | |
| 7. | Organic Chemicals Manufacturing Point Source Effluent Guidelines
And Standards (40 CFR 414) | |
| 8. | Inorganic Chemicals Manufacturing Point Source Effluent Guidelines
and Standards (40 CFR 415) | |
| 9. | Plastics and Synthetics Point Source Effluent Guidelines and Standards
(40 CFR 416) | |
| 10. | Water Quality Standards | X |
| 11. | Effluent Limitations for Direct Dischargers | X |
| 12. | Permit Monitoring/Reporting Requirements | X |
| 13. | Classifications and Certifications of Operators and Superintendents
of Industrial Wastewater Plants | X |
| 14. | Collection, Handling, Processing of Sewage Sludge | X |
| 15. | Oil Discharge Containment, Control and Cleanup | X |
| 16. | Standards Applicable to Indirect Discharges (Pretreatment) | |

Other Federal, State, Tribal or Local Water Pollution Control Regulations Not Listed Above (*identify*)

17. Vermont Agency of Natural Resources
-

18.

Drinking Water Regulations

1. Underground Injection and Control Regulations, Criteria and Standards
(40 CFR 144, 146)
2. National Primary Drinking Water Standards (40 CFR 141)
3. Community Water Systems, Monitoring and Reporting Requirements
(40 CFR 141)
4. Permit Requirements for Appropriation /Use of Water from Surface or
Subsurface Sources
5. Underground Injection Control Requirements
6. Monitoring, Reporting and Record keeping Requirements for Community
Water Systems

Other Federal, State, Tribal or Local Drinking Water Regulations Not Listed Above (*identify*)

7. _____

8. _____

Toxic Substances

- | | |
|--|---|
| 1. Manufacture and Import of Chemicals, Record keeping and Reporting Requirements (40 CFR 704) | X |
| 2. Import and Export of Chemicals (40 CFR 707) | X |
| 3. Chemical Substances Inventory Reporting Requirements (40 CFR 710) | |
| 4. Chemical Information Rules (40 CFR 712) | |
| 5. Health and Safety Data Reporting (40 CFR 716) | |
| 6. Pre-Manufacture Notifications (40 CFR 720) | |
| 7. PCB Distribution Use, Storage and Disposal (40 CFR 761) | X |
| 8. Regulations on Use of Fully Halogenated Chlorofluoroalkanes (40 CFR 762) | |
| 9. Storage and Disposal of Waste Material Containing TCDD (40 CFR 775) | |

Other Federal, State, Tribal or Local Toxic Substances Regulations Not Listed Above (identify)

10. Vermont Agency of Natural Resources

11. _____

Pesticide Regulations

- | | |
|--|---|
| 1. FTFRA Pesticide Use Classification (40 CFR 162) | |
| 2. Procedures for Disposal and Storage of Pesticides and Containers (40 CFR 165) | X |
| 3. Certification of Pesticide Applications (40 CFR 17 1) | X |
| 4. Pesticide Licensing Requirements | |
| 5. Labeling of Pesticides | |
| 6. Pesticide Sales, Permits, Records, Application and Disposal Requirements | X |
| 7. Disposal of Pesticide Containers | X |
| 8. Restricted Use and Prohibited Pesticides | X |

Other Federal, State, Tribal or Local Pesticides Regulations Not Listed Above (identify)

9. Vermont Agency of Natural Resources

10. Vermont Department of Agriculture

Environmental Clean-Up, Restoration, Corrective Action

1. Comprehensive Environmental Response, Compensation and Liability Act (Superfund) (*identify*)

2. RCRA Corrective Action (*identify*) X
Corrective Action Permit issued by EPA Region I, Section B of Facility Certification (VTD002084705). Currently administered by Vermont Agency of Natural Resources.

Other Federal, State, Tribal or Local Environmental Clean-Up, Restoration, Corrective Action Regulations Not Listed Above (*identify*)

3. Vermont Agency of Natural Resources

- 4.

VALUE ADDED OPERATIONS OUT METHODOLOGY

(Reference Section C, Aspect 3)

ANY OPERATION THAT USES MATERIAL AND IS CHANGING THE PHYSICAL CHARACTERISTICS OF THE WAFERS IS CONSIDERED **A VALUE ADDED OPERATION OUT**. STEPS LIKE MEASUREMENTS, INSPECTIONS ARE CONSIDERED NON-VALUE ADDED OPERATIONS.

A VAOO IS ONE WAFER PROCESSED THRU A PROCESS TOOL (NOT A MEASUREMENT, INSPECTION, TEST, GATING..ETC). SO 25 WAFERS PROCESSED THROUGH A WET STATION COUNTS AS 25 VAOO'S.

RAW WAFER STARTS DO NOT CAPTURE THE PROCESS COMPLEXITY AND CORRESPONDINGLY DO NOT CORRELATE TO THE AMOUNT OF CHEMICAL USED/WASTE GENERATED AS MORE WAFERS PROCESSED THROUGH A LINE DOES NOT NECESSARILY MEAN MORE CHEMICAL USAGE. WHEN WAFER STARTS ARE LOW, WAFERS ARE RUN FASTER AND CHEMICAL USAGE REMAINS HIGH.

IT IS THE NUMBER OF VALUE ADDED OPERATIONS OUT (VAOO) THAT ARE BEING RUN THROUGH THE LINE THAT HAVE A DIRECT CORRELATION TO CHEMICAL USAGE I.E. MORE VAOO'S SHOULD MEAN MORE WAFER PROCESSING IS HAPPENING DURING A GIVEN TIME FRAME AND SO THERE SHOULD BE MORE CHEMICAL USAGE/WASTE GENERATION DURING THAT TIME FRAME.

PRODUCTION INDEX CALCULATION

PRODUCTION INDEX = CURRENT YEAR PRODUCTION IN VAOO/PREVIOUS YEAR PRODUCTION IN VAOO

Example:

Current Year VAOO =	150,000
Previous Year VAOO =	125,000
Production Index =	$150,000/125,000 = 1.2$

THE PRODUCTION IN THE CURRENT YEAR IS UP BY 20% COMPARED TO THE PREVIOUS YEAR.

COMPARING PRODUCTION HAZARDOUS WASTE GENERATION YEAR TO YEAR:

THE PROJECTED PRODUCTION WASTE QUANTITY FOR THE CURRENT YEAR RESULT OF THE CHANGE IN PRODUCTION IS THE PRODUCT OF THE PREVIOUS YEAR ACTUAL WASTE X PRODUCTION INDEX.

Example:

Previous Year Waste =	1,200 Tons
Projected Current Year Waste =	$1.2 \times 1,200 \text{ Tons} = 1,440 \text{ Tons}$

If the Actual Current Year Waste is 1,300 Tons then the Current Year waste reduction is;

$$\text{PERCENT REDUCTION} = \text{PQ} - \text{AQ} / \text{PQ} \times 100$$

WHERE

PQ = PROJECTED QUANTITY

AQ = ACTUAL QUANTITY

$$(1,440 - 1,300) / 1,440 \times 100 = 9.7\% \text{ Reduction in Production Hazardous Waste}$$

Community Outreach Mechanisms

(Reference Section D, Question 2)

- University and Local public school tours
- New England Board of Higher Education (NEBHE) summer environmental internship program
- Hazardous waste permit modification mailings (regulatory requirement)
- Hazardous waste contingency plan updates/mailings (regulatory requirement)
- Project XL - 'Delisting' of copper electroplating sludges
- Vermont Agency of Development and Community Affairs environmental presentations and tours (*)
- CAA 112r off-site impact briefing provided emergency response agencies (regulatory requirement) (*)
- IBM Emergency Services personnel participation on State and Local emergency planning committees
- SIA/Sematech
- Press articles (Burlington Free Press)
- Corrective Action Permit document repository at Essex Free Library
- Vermont Governor's Awards

(*) One-time event.