

TRANSPORTATION RESEARCH CENTER INC.

2003 Annual Report

ISO 9001 and ISO 14001 Registered



Transportation Research Center Inc. independently manages a transportation research and testing facility, serving the needs of industries, governments, trade associations, and educational organizations worldwide. Transportation Research Center (the Center) is located near East Liberty, Ohio, approximately 40 miles northwest of Columbus. Because much of TRC Inc.'s work is proprietary, many projects are described in general terms. However, the information presented on the following pages will give the reader an appreciation of the extent of TRC Inc.'s capabilities.

History

The Center was developed by the State of Ohio as a transportation research and development proving ground with the purpose of encouraging motor vehicle research and development activities in Ohio. The Center began testing in 1974. In 1979, the State of Ohio's Transportation Research Board entered into a management agreement with The Ohio State University's (University) College of Engineering to oversee the operations of the Center. In 1987, the Center was sold as part of an economic inducement to Honda of America Manufacturing, Inc. to build an automobile plant in Ohio. In order to insure that the business of the Center could be preserved without violating the confidentiality of the Center's customers, the University established Transportation Research Center Inc., a non-profit corporation. TRC Inc. is governed by a Board of Directors chaired by the University's Dean of College of Engineering.

Mission Statement

As the leading independent provider of testing, development and research, TRC helps the transportation industry create safer, improved products. We will accomplish our mission through high-quality services at our world-class facility, while satisfying stakeholders' expectations.

Vision

Customer satisfaction is our competitive advantage.

Quality Policy

We will strive to meet or exceed customer expectations.

Environmental

We will strive to protect the environment and assure safe and healthful working conditions.

***"ISO 9001 and
ISO 14001 Registered"***

Equal Employment Opportunity

It is the policy of Transportation Research Center Inc. to provide equal opportunity in all areas of employment practices, without regard to race, color, religion, national origin, sex, age, disability, veteran status, or any other reason prohibited by law.



President's Message

I am pleased to present, on behalf of our staff, the annual report for Transportation Research Center Inc. (TRC Inc.) for the fiscal year ending June 30, 2003.

Revenue from all sources for Fiscal Year 2003 was \$39.7 million, reflecting a 15% increase from the previous year. This figure rebounded from last year's decrease of 5.2% to produce our highest revenue year on record.

While the effects of the war in Iraq, a stagnant economy, and turbulence in the auto industry through downward cost pressure by the OEM's have been felt by many companies in our industry, TRC Inc. has been able to mitigate the pressure from these economic and political issues. TRC Inc. expects a modest decrease of .1% in revenues in Fiscal Year 2004 with lower margins resulting in an anticipated surplus of \$1.8 million for the coming fiscal year.

TRC Inc. has renewed our involvement as an Automotive News PACE Awards sponsor. "PACE" is the acronym for "Premier Automotive Suppliers' Contribution to Excellence." This sponsorship gives us the opportunity to support our customers by acknowledging their efforts in the marketplace.

I am proud to announce that TRC Inc., through an asset purchase in April 2003, has acquired the equipment and expertise to provide engine and chassis dynamometer-based exhaust emissions, fuel economy, hydrocarbon speciation, and particulate measurement services to our customers. These capabilities will further augment our existing proving ground service offerings.

During Fiscal Year 2003, as a commitment to the environment, TRC Inc. has been registered to the ISO 14001 standard. ISO 14001 is a model for environmental management systems and addresses the management of business activities impacting the environment. Additionally, in order to strengthen the structure of our existing safety program, TRC Inc. has included health and safety in the 14001 framework.

We believe that TRC Inc. provides the highest quality services available in the industry. This level of performance has been achieved and maintained through the teamwork of TRC Inc.'s staff, whose dedication has allowed us to successfully complete another year. I would like to thank our Board of Directors for their guidance and support during the past year, enabling TRC Inc. to continue its role as world class leader in independent automotive research and development testing.

Respectfully,

A handwritten signature in black ink, appearing to read "R. D. Gildow". The signature is fluid and cursive.

R. D. "Rick" Gildow
President



Aerial View of The Center

Introduction

Transportation Research Center (the Center) is the world's leading vehicular testing facility. This reputation has been maintained, not only because of the quality of the services offered, but also because the challenges that each year brings are viewed as new and exciting opportunities for growth.

Since the Center began operations in 1974, new programs have been developed for customers in the areas of collision avoidance, energy absorption, fuel economy, emissions, durability, performance, noise, crash simulation, and crashworthiness. Test programs evaluate the performance of passenger cars, trucks, airplanes, tracked vehicles, off-road vehicles, recreational vehicles, buses, motorcycles, electric vehicles, and automotive components. TRC Inc. schedules and monitors all facilities with primary importance placed on the safety and security of each customer.

TRC Inc. is continually improving and adapting to meet changing customer needs. To enhance the Center and TRC Inc.'s overall service offerings, new facilities have been designed in order to assist customers in developing safe and marketable products. To complement our new facilities, TRC Inc.'s employees have worked hard this past fiscal year to acquire our ISO 14001 registration and to maintain our ISO 9001 registration. These registrations demonstrate TRC Inc.'s continuing commitment to our employees, and to meeting or exceeding the expectations of our customers. We will continue to measure and improve the quality of the services we provide.

The following pages of this report are dedicated to describing each of TRC Inc.'s primary business areas — Contract Services, Durability & Dynamics Operations, and Impact Laboratory Operations — and a brief review of their activities and accomplishments during the past year.

The Facilities and Equipment

Under terms of a management agreement, Transportation Research Center Inc. (TRC Inc.) exclusively schedules the facilities and equipment of the Center. In addition to managing the Center, TRC Inc. maintains the facilities and buildings, which includes approximately 120 lane-miles of improved and unimproved road surfaces and 328,000 square feet of building space.



Noise Testing Equipment

TRC Inc. makes annual, extensive facility improvements through maintenance and repair, acquisition of equipment, and facility construction based on customer survey feedback.

Fiscal Year 2003 brought about the acquisition of emissions testing laboratory equipment from Automotive Testing Laboratories, Inc. (ATL), of East Liberty, Ohio. This acquisition further expands our full-service proving grounds testing capabilities to include chassis dynamometer, gasoline and diesel fuel evaporative emissions, chemical speciation, particulate measurement, and engine-stand testing. This addition to our service offering is one of our largest since the building of the crash barrier in the late 1970's and should be an additional benefit to revenue streams.



Calibration Laboratory Equipment

The Impact Laboratory Operations (ILO) also developed another source of revenue with the addition of a full-service calibration laboratory.

The photographic capabilities of the Impact Laboratory were improved with the purchase of nine high-speed digital cameras to supplement the current supply of twelve.

Durability and Dynamics Operations (DDO) purchased noise test equipment and additional data recorders for use in durability programs.

TRC Inc. has always been concerned with understanding our customers' expectations. In response to customer demands during this past year, a crosswind generation facility, capable of generating winds of up to 50 mph, has been constructed. With this addition, the Center becomes the only testing facility in North America to provide automotive crosswind testing for commercial use.



Crosswind Generator

The Organization

Durability and Dynamics Operations



Chassis Dynamometer Testing

Durability and Dynamics Operations (DDO) continued the growth it experienced during the fourth quarter of Fiscal Year 2002. Revenues for the year were up 25% with 79% originating from 18 vehicle manufacturers. Test driving is the main focus for DDO. Test driver hours (256,512) increased 31% this year surpassing its previous high by 6.5%. With the increase in test driving, the Technical Support area had sizable gains. Technical Support's chargeable hours increased by 41% over last year and 30% over its previous high. The following table describes DDO's percentage of business by industry classification.

Industry Classification	FY 2003
Vehicle Manufacturers	79%
Component Manufacturers	10%
Fuels & Lubes	5%
Independent Labs	2%
State and Federal Organizations	2%
Litigation/Engineering Firms	1%
Other	1%

The majority of facility testing involves powertrain, rough road, chassis, corrosion, and fuel additive durability. In addition, DDO conducts brake, fuel economy, skid truck correlation and vehicle handling testing to Federal Motor Vehicle Safety Standards, SAE and American Society of Testing Materials standards. DDO maintains a 24-hour-a-day, 7-day-a-week operation for rapid, but safe, mileage accumulation.

Fiscal Year 2003 was a busy year for DDO with the expansion into emissions testing. It will augment our service offering to include:

- Gasoline, Diesel, and Alternative Fuel Engine Performance and Emissions Evaluation
- Light-Duty Vehicle (LDV) and Motorcycle Performance and Emissions Evaluation
- Engine Stand Testing for Powerplants Ranging from Lawn and Garden Utility to HD Diesel
- Fuel, Fuel Additive, Lubricant and Aftermarket Parts Performance and Improvement Validation.

For vehicle and component manufacturers, industry organizations and government agencies, TRC Inc. is now available as a prime contractor for fuels, lubricants and emissions testing. Testing is conducted in accordance with Environmental Protection Agency, California Air Resources Board, Mining Safety & Health Administration, Coordinating Research Council, SAE, and ASTM procedures.

Additionally, facility tracking software has been added for improved monitoring of test vehicles as they are driven on the facilities. Another expansion of a data acquisition system for recording driving cycles was updated this past year to include GPS mapping. This will help TRC Inc. assure proper correlation of test programs to real-world customer driving cycles.

With the improved economy in the fourth quarter of Fiscal Year 2003, the expansion into emissions testing, the installation of new facilities and systems to meet customers' ever-increasing needs, a moderate increase in both test driving hours and overall revenue for Durability and Dynamics Operations is expected in Fiscal Year 2004.



All-Terrain Vehicle Testing

Impact Laboratory Operations



Side Impact Testing

The Impact Laboratory Operations (ILO) crash testing rebounded from the prior year while impact simulation testing declined. A total of 346 crash tests were performed in Fiscal Year 2003, up 40% from Fiscal Year 2002. In contrast, 195 impact simulation tests were performed in Fiscal Year 2003, a decline of 17% from Fiscal Year 2002. The majority of Impact Laboratory Operations' testing involves development and certification of automobiles and light trucks to meet occupant protection requirements established by the Federal and Canadian Motor Vehicle Safety Standards, European Economic Community or manufacturers.

ILO continued to support government contracts for the National Highway Traffic Safety Administration, Vehicle Research and Test Center (NHTSA/VRTC) and Volpe National Transportation Systems Center. Government crash testing for front and side occupant protection and fuel system integrity, sled simulation testing, static fixture structural integrity, and crash dummy and standards development research programs comprised 23% of ILO's activity. The following table describes the percent of business by industry classification:

Industry Classification	Fiscal Year 2003
Vehicles Manufacturers	70%
Government Agencies	23%
Engineering/Litigation	4%
Component Manufacturers	3%

ILO strives to understand customer expectations and respond accordingly. As a result, ILO continues to improve data quality from high-speed images and electronic instruments. By adding nine new high-speed digital cameras to the crash and impact simulation test facilities, superior image quality is achieved, the customer can view test images within minutes after the test has been conducted, and the use of hazardous chemicals is reduced. Another equipment procurement included a new event distribution system that provides a single time-zero signal to several data collection devices. This synchronizes the digital cameras, film cameras, electronic data acquisition systems, and airbag firing systems with respect to first contact in a crash test.

Due to changing customer expectations to more quickly provide final reports, ILO Project Operations has been working with a local software supplier since 1999 to implement automated report generating software. As a result, the final report generation process has shrunk from an average of 47 days in Fiscal Year 1997 to 20 days in Fiscal Year 2002. This process change has allowed us to decrease the customer-expected delivery date from 28 days to 21 days.

Contract Services

Customers of Contract Services include automotive manufacturers, component manufacturers, and the federal government. The mission of Contract Services is to provide customers with high quality engineering and technical support to improve the safety, quality and competitiveness of their products.

Contract Services is comprised of technical personnel whose services are dedicated to specific customers on a full-time basis. Their work predominantly involves research and development testing, including vehicle components, crashworthiness, crash avoidance, bio-mechanics, research analysis, and test device and procedure development. The personnel in these groups include engineering technicians, mechanical and electrical technicians, engineering assistants, photographers, designers, research engineers and research scientists.

The staff holds memberships in professional societies, such as the Society of Automotive Engineers (SAE) and plays major roles in various technical committees. Over 50 technical papers were authored or co-authored by our personnel and over 20 presentations were made over the past year. The affiliations, committee work, and published writings bring recognition and industry/professional exposure to TRC Inc.

Although a decline in staffing has been experienced during this fiscal year due to cost pressures in the automotive industry, Contract Services expects to maintain or increase staffing over the next year.



Side Curtain Airbag Testing

The Activities

Quality Planning, Assurance, Improvement, and Control

TRC Inc.'s Quality Policy:

We will strive to meet or exceed customer expectations.

TRC Inc. is committed to providing services that meet or exceed the expectations of its customers and is dedicated to a quality policy which is understood, implemented, and maintained at all levels of the organization.

Each of TRC Inc.'s five Primary Business Functions (Crash, Sled, Durability, Dynamics, Contract Services) has its own quality system process definition (SPD) team, which has determined the expectations of its customers and the technical requirements necessary to meet those expectations. Based on these expectations and requirements, performance goals and objectives have been established and are monitored throughout the organization and through customer surveys. Performance ratings and internal process measurement results are reviewed on a regular basis and potential performance issues and preventive actions are managed through a formal corrective and preventive action system.

ISO 9001 Registration

As part of TRC Inc.'s commitment to customer satisfaction and continual improvement, the organization acquired registration to the ISO 9001:1994 in May 2000 and successfully acquired/upgraded registration to the ISO 9001:2000 revision of the Standard in May, 2002. The ISO 9001 Standard is an international model for quality management systems. Organizations are required to identify and document best business practices, and to implement these practices to achieve consistent quality services to meet and exceed customer expectations.

Following registration, the registrar conducts surveillance audits to ensure continuing compliance to the Standard. Since the initial registration, TRC Inc. has maintained compliance through five surveillance audits. The 9001:2000 version includes a process-based quality management system model with an increased focus on customer satisfaction and continual improvement. For TRC Inc., the process of upgrading to the 9001:2000 Standard included streamlining the internal audit process and utilizing process data to further drive improvements. TRC Inc. will continue to be dedicated to providing quality service to our customers through completion of our company-wide quality objectives of accurate services, timely services, and well-planned and organized services.

ISO 14001 Registration

TRC Inc. received its ISO 14001 registration in October 2002. ISO 14001 is a model for environmental management systems and addresses the management of business activities impacting the environment. Although not required by the ISO 14001 Standard, TRC Inc. has incorporated health and safety into our environmental management system. Efforts to consolidate the Environmental Health & Safety (EH&S) elements with the Quality elements into one overall management system are near completion. TRC Inc.'s external registrar will conduct its next surveillance audit in October 2003.

Environmental, Health and Safety (EH&S) Policy

TRC Inc.'s EH&S Policy Statement:

We will strive to protect the environment and assure safe and healthful working conditions.

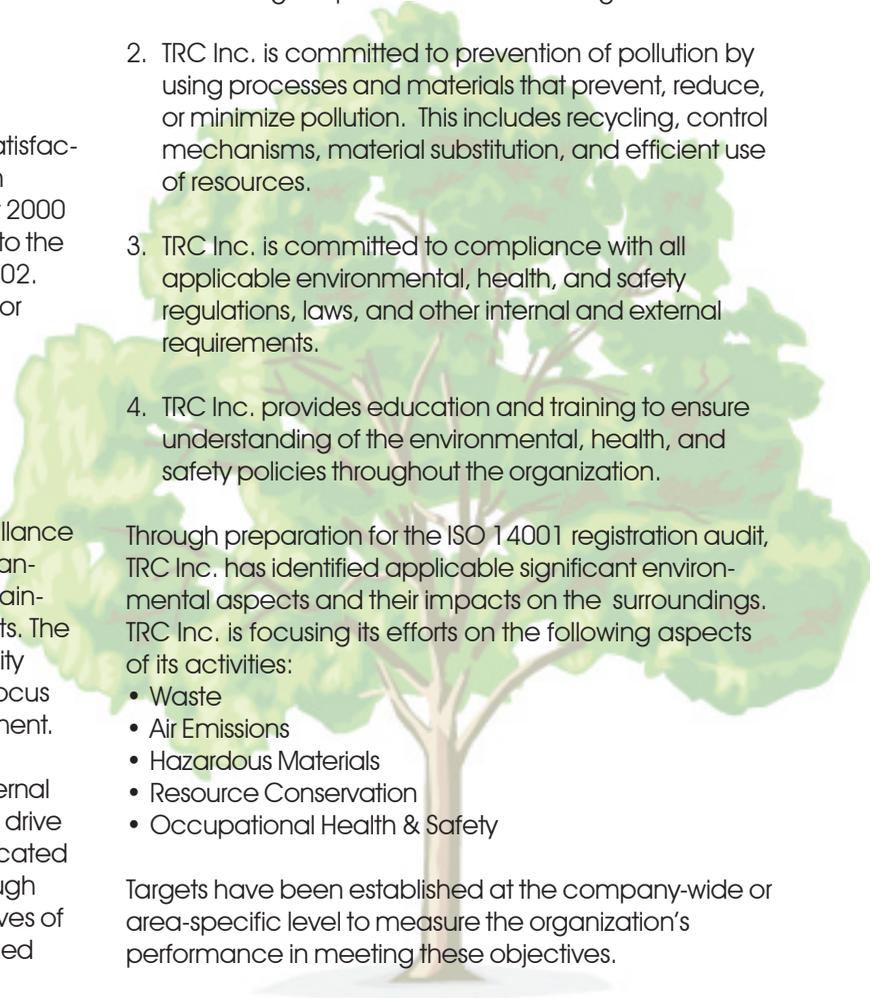
TRC Inc.'s EH&S Policy Principals:

1. TRC Inc. is committed to continual improvement in TRC Inc.'s environmental, health, and safety program by setting objectives and targets and by evaluating our performance to those goals.
2. TRC Inc. is committed to prevention of pollution by using processes and materials that prevent, reduce, or minimize pollution. This includes recycling, control mechanisms, material substitution, and efficient use of resources.
3. TRC Inc. is committed to compliance with all applicable environmental, health, and safety regulations, laws, and other internal and external requirements.
4. TRC Inc. provides education and training to ensure understanding of the environmental, health, and safety policies throughout the organization.

Through preparation for the ISO 14001 registration audit, TRC Inc. has identified applicable significant environmental aspects and their impacts on the surroundings. TRC Inc. is focusing its efforts on the following aspects of its activities:

- Waste
- Air Emissions
- Hazardous Materials
- Resource Conservation
- Occupational Health & Safety

Targets have been established at the company-wide or area-specific level to measure the organization's performance in meeting these objectives.



Automotive News PACE Awards Sponsorship Activities

Transportation Research Center Inc. (TRC Inc.) is proud to announce that we have renewed our sponsorship of



the *Automotive News* PACE Awards. PACE is the acronym for Premier Automotive Suppliers' Contribution to Excellence. Established in 1994 by *Automotive News* and Cap Gemini Ernst & Young, the PACE Awards honors automotive suppliers who have embraced innovation or adapted and reinvented themselves to meet the demands of the OEM customer. This prestigious award sets the standard for innovation and excellence and has become a significant industry credential.

Annually, hundreds of automotive suppliers around the globe apply to win this distinguished award.

The winners, selected by a panel of independent judges consisting of former automotive industry executives, earn the distinction of joining the automotive world's list of "Who's Who."

The PACE Awards sponsorship has been a natural tie-in the past two years as many of the innovations featured are ultimately validated at our proving ground. Through this sponsorship we have had, and will continue to have, the opportunity to support our customers and their efforts in the marketplace by acknowledging their hard work.

Staff Activities/Community Service

Transportation Research Center Inc. believes in maintaining its role as a good corporate citizen in the community. TRC Inc. provides financial support through payrolls, payroll taxes, local procurement of goods and services, and sponsorships.

TRC Inc.'s "Partnership in Technology Scholarship" program provides \$1,000 renewable scholarships to high school seniors majoring in a two- or four-year automotive-related field. This year's recipients were Lance Kelly of Bellefontaine, who will attend the University of Cincinnati; Joseph Sweeny of Marysville, who will attend Miami University; and Brian Stricklin of Delaware, who will attend The Ohio State University. The second year recipients of the renewable scholarship are Abigail Moyer, who is majoring in Mechanical Engineering at Purdue University and Jennifer Sankey,

who is majoring in Mechanical Engineering at The Ohio State University. The third year recipient of the renewable scholarship is Leslie Bowsher, who is majoring in Mechanical Engineering at The University of Dayton.

TRC Inc.'s Child Seat Awareness Program continues to promote child seat safety. This program provides employee reimbursement for the purchase of child restraints for their children. TRC Inc. also provides child seats for local health departments, who distribute the seats to local families, along with training for their proper usage.

TRC Inc.'s Volunteers in Partnership (VIP) Program continues to provide financial support to organizations for which employees volunteer. These are just some of the organizations included in the VIP program in Fiscal Year 2003:

- March of Dimes
- American Diabetes Association
- Logan County Children's Services
- Tricare Hospice Braveheart Day Camp
- Bellefontaine Exchange Club Safety Town
- Indian Lake Music Boosters
- Union County Humane Society
- Highpoint and Union County Fraternal Orders of Police
- Mary Rutan Hospital Auxiliary
- Leukemia Association
- Muscular Dystrophy Association
- National Multiple Sclerosis Society
- Adopt-a-Highway
- Local 4-H clubs, YMCA's, Brownie troops, Cub Scout packs, and local volunteer fire departments

TRC Inc. offered assistance to The American Red Cross by sponsoring blood drives twice during the past fiscal year, supplying over 30 units of blood at each drive.

On May 30, 2003, the Logan County Clean Committee presented TRC Inc. with the "Janie S. James Environmental Impact Award." This award is given to companies who display outstanding environmental methods impacting today's society for future generations. TRC Inc. would like to thank its employees for their efforts in applying sound recycling principles.

Annually, employees are given the opportunity to pledge a portion of their pay to United Way, with TRC Inc. giving a matching corporate gift. The United Way is the only charitable organization for which TRC Inc. solicits funds. The United Way was selected because of the flexibility it gives the employees to donate within their home community and to the United Way supported charities that they choose.

Governance

Board of Directors



Mr. George Arnold
Attorney at Law
TRC Inc. Vice Chairman of the Board



Dr. Thomas J. Rosol
Interim Vice President for Research
The Ohio State University



Ms. Greta J. Russell
University Controller
The Ohio State University



Dr. James C. Williams
Dean of the College of Engineering
The Ohio State University
TRC Inc. Chairman of the Board



Mr. Rick D. Gildow
Director
Transportation Research Center Inc.
TRC Inc. President

Board Changes

During the past year, Board Member Dr. Keith Alley resigned his position as The Ohio State University Senior Associate Vice President for Research to accept an administrative position at the University of California at Merced in June 2002. Dr. Alley was replaced by Dr. C. Bradley Moore, The Ohio State University Vice President for Research. In April 2003, Dr. Moore resigned his position to accept a similar position at Northwestern University. Dr. Moore was replaced by Dr. Thomas J. Rosol, The Ohio State University Interim Vice President for Research, in May 2003. The TRC Inc. Board has one vacancy in the appointed class of Directors.

Other Officers



Mr. Shawn T. Ahern, C.P.A.
TRC Inc. Vice President
Treasurer of the Board



Mr. Milton J. Dunlop
TRC Inc. Vice President



Ms. Jill R. Macy
TRC Inc. Vice President



Mr. John W. Phillips
TRC Inc. Vice President



Mr. Stacy Weislogel
Associate Dean
College of Engineering
The Ohio State University
TRC Inc. Board Secretary

General Counsel

Mr. John S. DeLibera

Independent Auditors

Deloitte & Touche LLP

Transportation Research Center Inc.

P. O. Box B-67, 10820 S.R. 347
East Liberty Ohio, 43319-0367
(937) 666-2011
www.trcpg.com