COMMODORE APPLIED TECHNOLOGIES INC
Form 10-K
April 15, 2003

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2002

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-11871

Commodore Applied Technologies, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	11-3312952
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
150 East 58th Street, Suite 3238 New York, New York	10155
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code: (212) 308-5800

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common stock, par value $0.001 per share	NASD Over the Counter Bulletin Board (OTCBB)

Securities registered pursuant to Section 12(g) of the Act: Not Applicable

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes X No __

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to be the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any

amendment to this Form 10-K. [ ]

Non-affiliates of the registrant held shares of common stock as of April 9, 2003 with an aggregate market value of approximately $1,228,371.05 (based upon the last sale price of the common stock on April 9, 2003 as reported by the NASD Over the Counter Bulletin Board).

As of April 9, 2003; 79,732,852 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None

COMMODORE APPLIED TECHNOLOGIES, INC.

ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2002

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Preliminary Note Regarding Certain Risks and Forward-Looking Statements

This Annual Report on Form 10-K contains "forward-looking statements." These forward-looking statements can generally be identified as such because the context of the statement will include words such as the Company "believes," "anticipates," "expects" or words of similar import. Similarly, statements that

describe the Company's projected future results, future plans, objectives or goals or future conditions or events are also forward-looking statements. Actual results are inherently difficult to predict. Any such forward-looking statements are subject to the risks and uncertainties that could cause actual results of operations, financial condition, acquisitions, financing transactions, operations, expenditures, expansion and other events to differ materially from those expressed or implied in such forward-looking statements. Any such forward-looking statements would be subject to a number of assumptions regarding, among other things, future economic, competitive and market conditions generally. Such assumptions would be based on facts and conditions as they exist at the time such statements are made as well as predictions as to future facts and conditions, the accurate prediction of which may be difficult and involve the assessment of events beyond the Company's control.

Further, the Company's business is subject to a number of risks and uncertainties that would affect any such forward-looking statements. These risks and uncertainties include, but are not limited to:

- the Company's critical need for additional cash to sustain existing operations and meet existing obligations and capital requirements;
- the ability to generate profitable operations from a large scale remediation project;
- the ability of the Company to renew its nationwide permit to treat PCBs;
- the ability of the Company to implement its waste processing operations, including obtaining commercial waste processing contracts and processing waste under such contracts in a timely and cost effective manner; the timing and award of contracts by the U.S. Department of Energy for the cleanup of waste sites administered by it;
- the Company's ability to integrate acquired companies;
- the acceptance and implementation of the Company's waste treatment technologies in the government and commercial sectors;
- the Company's ability to obtain and perform under other large technical support services projects; developments in environmental legislation and regulation;
- the ability of the Company to obtain future financing on favorable terms; and
- other circumstances affecting anticipated revenues and costs.

These risks and uncertainties could cause actual results of the Company to differ materially from those projected or implied by such forward-looking statements.

PART I

ITEM 1. BUSINESS

GENERAL

Commodore Applied Technologies, Inc. (the "Company") is an environmental solutions company offering a range of engineering and technical services to the public and private sectors related to (i) remediating contamination in soils, liquids and other materials and disposing of or reusing certain waste by-products by utilizing our Solvated Electron Technology

("SET(TM)"), and (ii) providing services related to, environmental management for on-site and off-site identification, investigation remediation and management of hazardous, mixed and radioactive waste.

We believe that SET is the only patented, non-thermal, portable and scalable process that is currently available for treating and decontaminating soils, liquids and other materials containing PCBs, pesticides, dioxins, chemical weapons and warfare agents and other toxic contaminants.

The Company's corporate mission is to serve the environmental remediation market from its primary operating center to profitably provide government and industry with engineering and remediation solutions to legacy waste environmental problems. Our strategy will focus the Company on the unique and high profit niches of hazardous materials conversion and waste remediation.

Demand for our environmental technologies is anticipated to arise principally from the following sources:

- the need for alternative environmental treatment and disposal methods for toxic substances (such as the SET technology), which involve limited safety risks with respect to air pollution and transportation of hazardous materials and do not result in large volumes of residual waste that require further treatment prior to disposal;

- stricter legislation and regulations mandating new or increased levels of air and water pollution control and solid waste management; and

Our business strategy is to expand our environmental technologies businesses by:

- implementing the SET technology in selected niche markets within certain strategic environmental market segments, such as government mixed waste remediation and chemical weapons demilitarization, where we believe SET offers the greatest value and meets pressing customer needs; and

- establishing additional collaborative joint working and marketing arrangements with established engineering and environmental service organizations to pursue commercial opportunities in the public and private sector.

The Company currently has identified two operating segments. These two segments are as follows: Commodore Advanced Sciences, Inc., which primarily provides various engineering, legal, sampling, and public relations services to Government agencies on a cost plus basis; and Commodore Solutions, Inc., which is commercializing technologies to treat mixed and hazardous wastes.

Through Dispute Resolution Management, Inc. (DRM), a subsidiary acquired August 30, 2000, the Company provided a package of services to help companies recover financial settlements from insurance policies to defray costs associated with environmental liabilities. As of May 16, 2002, the Company no longer owns an 81% interest in DRM. The loss from the disposition of DRM is recorded at $4,134,000 to Applied.

The Company's loss of the DRM subsidiary may have a material adverse effect on the financial condition of the Company and its cash flow problems. The Company currently requires additional cash to sustain existing operations and to

meet current obligations and ongoing capital requirements. The Company's current monthly operating expenses exceed cash revenues by approximately $80,000 at December 31, 2002.

Additional information regarding the business of each segment is set forth below, and the information in Note 18 to the Company's Consolidated Financial Statements included in this Annual Report on Form 10-K is incorporated into this Part I by reference.

The Company was incorporated in Delaware in March 1996. As used in this Annual Report, and except as the context otherwise requires, the "Company" means Commodore Applied Technologies, Inc. and its subsidiaries, including Commodore Solutions, Inc., Commodore CFC Technologies, Inc., and Commodore Advanced Sciences, Inc. The Company's principal executive offices are located at 150 East 58th Street, Suite 3238, New York, New York 10155, and its telephone number at that address is (212) 308-5800.

SOIL DECONTAMINATION--COMMODORE SOLUTION TECHNOLOGIES, INC.

The Company, through Commodore Solutions, Inc. ("Solutions"), has developed and has commercialized its patented process known as SET. Based on the results of its extensive testing and commercial processing activities, the Company believes that SET is capable of effectively treating and decontaminating soils and other materials, including sludges, sediments, oils and other hydrocarbon liquids, metals, clothing and porous and non-porous structures and surfaces, by destroying PCBs, pesticides, dioxins, chlorinated substances and other toxic contaminants to an extent sufficient to satisfy current federal environmental guidelines. The Company also believes that, based on the results of additional tests, SET is capable of neutralizing substantially all known chemical weapons materials and warfare agents, explosives and concentrating certain radioactive wastes for more effective disposal.

The SET process was commercialized during the calendar year 2000. In May 2000, the Company mobilized its S-10 system to Harrisburg, Pennsylvania to begin processing PCB contaminated soils at the Pennsylvania Air National Guard's base located at the Harrisburg International Airport (the "Initial Harrisburg

Contract"). The Company completed the contract in July 2001, remediating approximately 340 tons of excavated soils to levels deemed unregulated for disposal by the U.S. Environmental Protection Agency (the "EPA"). The Company believes this is the first time a non-thermal process has treated PCB-contaminated soils to levels allowing them to be replaced in the original excavation.

Additionally, the Company performed several treatability studies for third party customers during 2000, as well as continued internal testing and process development. At Envirocare of Utah ("Envirocare"), the SET process successfully treated water treatment sludge from a waste stream provided by the Brookhaven National Laboratory (the "Envirocare Study"). Under current treatment processes at Envirocare, this waste could not be treated to meet land disposal regulation requirements. The waste stream was a laboratory mixed waste (radioactive) sludge, contaminated with lead and high levels of RCRA organic compounds. The Envirocare Study waste contained the hazardous waste codes F001, F003, F005, and D008. The Envirocare Study waste stream also contained high water content, approximately 75%. The Company successfully treated the material such that it was suitable for land disposal. The results of the Envirocare Study were presented to the participants of the Waste Management Conference in Tucson, Arizona in February 2001. In the case of third party treatability studies, customer location processing and new patent data set construction, all tests and

processing results were verified by independent laboratories agreed upon by the Company and/or the respective client. In the case of internal Company process development testing, results were verified with Company owned analytical equipment in addition to periodic independent off-site testing.

In January 2001 the Company entered into a contract with Waste Control Specialists, LLC ("WCS") for the treatment of various mixed waste streams stored at the WCS facility near Andrews, Texas. This work employed the Company's SL-2 SET system and was completed in August 2001.

In November 2001 the Company entered into a contract with American Ecology Recycle Center ("AERC", Oak Ridge, Tennessee) for the treatment of 32 drums of Freon still bottom mixed wastes, as well as consultation regarding the regulatory requirements for the treatment. Work commenced in November, employing the Company's SL-2 SET system, and was essentially completed in 2002. As an adjunct to that work, the Company entered into a contract with the University of California (prime contractor for the Department of Energy's Los Alamos National Laboratory) to dispose approximately 12,000 pounds of activated sodium remaining from tests involving the Clinch River Breeder Reactor performed by Rensselaer Polytechnic Institute twenty five years ago. The Company believes this is the first time activated sodium (Na22) has been employed as a reactant to treat other regulated waste materials (the AERC still bottoms).

In July 2002 the Company acquired all the SET equipment formerly associated with the Teledyne-Commodore LLC. The Company plans to utilize this equipment for treating Department of Energy ("DOE") legacy mixed waste materials for disposal at major DOE sites in the United States.

The Company has generated aggregate revenues of less than $900,000 from the implementation of the SET technology since 1999.

The SET Technology

The SET technology, which is based upon solvated electron chemistry, mixes anhydrous liquid ammonia and/or other similar solvents with reactive metals and contaminated elements to effect the selective destruction or neutralization of organic compounds (such as PCBs, pesticides and dioxins). The Company has demonstrated that SET can achieve consistently high levels of contaminant destruction when working with PCBs, dioxins and pesticides. SET has treated soils containing up to 10,000 ppm of contaminants, and oils containing up to 250,000 ppm, leaving residual soils and oils with contamination levels of less than one ppm. In addition, SET has been successfully applied to other PCB-contaminated surfaces such as concrete. The SET process can be used in conjunction with selected post-treatment processes such that no hazardous or toxic residues will result from the use of SET, nor will there be any toxic emissions into the air, water, soils or other surfaces. For example, most contaminated soils treated with SET can (subject, in some instances, to re-blending the soil with organic matter) be used subsequently for planting or for any other use for which non-contaminated soils are appropriate.

Equipment utilized in the SET process consists of tanks, pumps and piping to handle anhydrous ammonia and other solvents in liquid and vapor forms, and treatment vessels for holding contaminated materials and for the introduction of solvating solutions. The system can be transported to field sites and configured in numerous sizes.

The SET process requires placing the contaminated materials into a treatment vessel where they are mixed with a solvent and charged with a base metal (e.g. sodium). The chemical reaction produces metal salts such as calcium

chloride, calcium hydroxide and non-halogenated inert organics. The ammonia within the treatment vessel is then removed to a discharge tank for later reuse. The materials are removed, sampled for residual traces of PCB or other halogenated organic compounds, and placed in storage for disposal. In many cases, the decontaminated soil and metals can be replaced in their original location, recycled or reused. The solvents do not enter the chemical reaction, but merely serve as dissolving liquids for the solvated electron solution.

Operational Characteristics. Substantially all existing systems in use for the destruction of PCBs and other halogenated compounds involve incineration or other thermal processes, and either the permanent installation of highly complex and expensive incinerators and waste disposal equipment at the affected site, or the removal of contaminated materials to off-site facilities. The Company believes that SET represents an approach to resolving serious environmental remediation issues that does not create or entail the safety risks of air pollution and transportation of hazardous materials. The Company believes that SET is more effective than incineration and other destruction processes for toxic substances in that:

- SET does not emit toxic fumes into the atmosphere, as is sometimes the case with thermal or incineration methods;

- SET is portable and can be moved directly to the contaminated site, thereby reducing the risk of off-site contamination;

- SET equipment can be customized and configured to address various treatment applications;

- SET's reaction time is substantially less than that of alternative processes, such as thermal destruction and other forms of chemical treatment;

- SET equipment can be installed and operated inside industrial plant facilities to treat hazardous wastes on line as a continuation of the manufacturing process;

- SET, when used to treat soils, yields nitrogen-enriched soils that can be reused on-site, avoiding replacement and the post-treatment costs of off-site disposal; and

- SET has been shown to neutralize or destroy all chemical weapons material and warfare agents in the United States stockpile, and Lewisite (the primary chemical weapons material and warfare agent of the former Soviet Union), in tests conducted by an independent, federally certified surety laboratory.

The Company believes that SET is the only technology currently available that possesses all of these features and is capable of treating a wide variety of contaminants. The above characteristics (non-thermal, no air emissions, mobile) are particularly applicable when dealing with mixed waste. Wastes that contain radioactive material and hazardous waste regulated by RCRA and TSCA are particularly difficult to treat and have extremely limited disposal options. By applying the SET process to remove the RCRA and TSCA components, leaving only radioactive waste material, disposal options expand. SET not only removes the hazardous components but also does so by an efficient, non-thermal process that can control and contain the radioactive material so that it remains in the treated material and does not enter the environment in an uncontrolled fashion.

EPA Nationwide Permit. In order to treat PCBs within the United States on all non-Superfund sites, a treating entity must obtain a permit from the EPA. Most EPA permits granted to date for PCB destruction are solely for single-site incineration treatment centers. In August 1995, SET was demonstrated to the EPA in order to obtain the Nationwide Permit, which was issued to the Company in March 1996. The Nationwide Permit allows the Company to use SET on-site to treat PCB-contaminated soil at any location in the United States. In addition to soil treatment, the Nationwide Permit allows the Company to treat PCB contaminated metallic surfaces and waste oils, as well as wastewater (the wastewater is treated by a non-SET process). The Company has also successfully demonstrated SET as a treatment process for organic materials contaminated with PCBs and radionuclides and has received a draft revised EPA permit for these matrices. This permit revision covers the destruction of PCBs in soils, waste oils, organic materials, water, and on metallic surfaces.

The Nationwide Permit expired in September 2001, and may be renewed subject to providing any requested additional information to the EPA at the time of renewal. The Company is in the process of obtaining a permit revision for its commercial SET processing system, the S-10. The S-10 system is capable of processing up to 10 tons of contaminated material daily. Various revisions to the equipment and process parameters are being made to the existing permit. The revised permit will be issued pending the final site selection for the full or

part-time operation of any SET system for the treatment of PCB wastes. The revised permit will require the Company to fund closure costs associated with the implementation of any SET system for the treatment of PCB wastes. The closure costs are calculated on a site-by-site basis and are funded accordingly by the Company.

Based on currently published lists of EPA national operating permits, the Company believes that it possesses the only non-thermal PCB treatment technology for multiple applications permitted under the EPA's Alternate Destruction Technology Program. EPA regulations governing permitting have been in effect for more than 15 years, and according to the latest EPA published list of non-thermal destructive processes, only seven companies have met EPA's stringent requirements for commercial operation. Of these, only the Company is permitted for the chemical destruction of such a wide range of PCB contaminated materials. The EPA's Alternative Destruction Technology Program is designed to encourage remediation technologies as an alternative to incineration.

Test Results. In more than 1,500 tests using SET, various high levels of contaminants, including PCBs, were reduced to levels approaching non-detectable with the destruction process occurring in a matter of minutes. The following table lists selected results of these tests.

The following table displays selected test results from 1996-2001. These tests were conducted on limited quantities of contaminated material, and there can be no assurance that SET will be able to replicate any of these test results on a large-scale commercial basis or on any specific project.

Analyte	Material Type	Pre Treatment (ppm)	Post-Treatment (ppm))	Destruc Efficie (%)

PCB**	Sand, clay	777