COMMODORE APPLIED TECHNOLOGIES INC
Form 10-K
April 16, 2001

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

FOR ANNUAL AND TRANSITION REPORTS
PURSUANT TO SECTIONS 13 OR 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934

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

For the fiscal year ended December 31, 2000

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.)
2121 Jamieson Street, Suite 1406 Alexandria, Virginia	22314
(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	American Stock Exchange
Redeemable Common Stock Purchase Warrants	American Stock Exchange

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 March 15, 2001 with an aggregate market value of approximately $4,045,220 (based upon the last sale price of the Common Stock on March 15, 2001 as reported by the American Stock Exchange).

As of March 15, 2001; 51,018,778 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, 2000

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PART I

ITEM 1. BUSINESS

GENERAL

Commodore Applied Technologies, Inc. (the "Company") is an environmental solutions company providing a range of engineering, technical, and financial 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)"), (ii) the settlement of complex, long-tail and latent insurance claims by utilizing a series of tools including an internally developed risk modeling program ("FOCUS(TM)"), and (iii) 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. Furthermore, we believe that the proprietary FOCUS program developed by Dispute Resolution Management, Inc., ("DRM") is the only automated risk management system that fully incorporates all of the variables necessary to determine accurately the liability and settlement targeting necessary to negotiate appropriate insurance recoveries.

The Company's corporate mission is to serve the environmental remediation market from two primary operating centers: (a) to profitably provide government and industry with engineering and remediation solutions to legacy waste environmental problems, and (b) to profitably negotiate and settle complex, long-tail environmental claims domestically and internationally. Our strategy will focus the Company on the unique and high profit niches of environmental claims settlement and recovery, hazardous materials conversion and waste remediation.

Demand for our environmental technology and financial services 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;

- the need to obtain available insurance recoveries in a negotiated manner (utilizing the FOCUS process) to compensate clients for a portion of their past, current and anticipated obligations, while minimizing the costs and time associated in a litigated recovery environment;

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

- the need to provide appropriate risk management tools and mechanisms associated with present and future remediation risks on impaired properties and facilities.

Our business strategy is to expand our environmental technology and financial services businesses by:

- implementing the SET technology on 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;

- focusing DRM's marketing efforts with aggressive joint working alliances and marketing arrangements with established associations and representatives of Fortune 1000 companies worldwide;

- developing strategic insurance brokerage arrangements and collaborations through joint venture or acquisition, to further expand the business offerings and services of DRM to their existing and future clientele; 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 has identified three operating segments. These three 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; Commodore Solutions, Inc., which is commercializing technologies to treat mixed and hazardous waste; and Dispute Resolution Management, Inc., which provides a package of services to help companies recover financial settlements from insurance policies to defray costs associated with environmental liabilities. 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 2121 Jamieson Avenue, Suite 1406, Alexandria, Virginia 22314, and its telephone number at that address is (703) 567-1284.

SOIL DECONTAMINATION--COMMODORE SOLUTION TECHNOLOGIES, INC.

The Company, through Commodore Solutions, Inc. ("Solutions"), has developed and is in the process of commercializing 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 substantially completed the base contract in 2000, remediating approximately 260 tons of excavated soils to levels deemed unregulated for disposal by the U.S. Environmental Protection Agency (the "EPA"). The contract has since been modified to add another 50 tons of soils. In November 2000, the Company demonstrated the S-10 system to the EPA at the Harrisburg site, and has been advised informally by an EPA representative that the system will be added to our existing nationwide permit for chemical destruction of PCBs. This is the Company's fourth system to be so permitted.

In February 2001, the Company announced a multi-year contract with Waste Control Specialists, LLC (the "WCS Contract") for the establishment of a fixed facility utilizing the SET technology and the S-10 system for the treatment of radioactive mixed waste. SET safely and effectively treats mixed wastes, a mixture of radioactive materials and hazardous wastes, by destroying the hazardous elements. The Company utilizes SET to remove Resource Conservation and Recovery Act ("RCRA") and Toxic Substances Control Act ("TSCA") regulated compounds from low-level mixed wastes, making the waste acceptable for on-site disposal. Waste Control Specialists, LLC ("WCS") operates a broad-based waste treatment, storage and disposal facility in Andrews County, Texas. The WCS facility includes 11.2 million cubic yards permitted disposal, a 5,000-drum capacity warehouse, a 150-bin container storage building, truck and rail unloading capabilities and laboratory facilities. The Company believes that the WCS facility will be one of the premier mixed waste treatment and disposal facilities in the country.

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 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.

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. Additionally, 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 is expected to issued by September 15, 2001.

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.

The Nationwide Permit expires in September 2001, and may be renewed subject to providing any requested additional information to the EPA at the time of renewal. The Nationwide Permit imposes certain continuing obligations on the Company, including notification of all job sites, periodic reporting to the EPA as to activities at the job sites, prior notification to and approval by the EPA with respect to any single-site centralized remediation facility that the Company may seek to establish, and certain restrictions on the disposal of by-products from the use of SET. The Nationwide Permit further specifies that

the Company must continue to comply with all otherwise applicable federal, state

and local laws regarding the handling and disposition of hazardous substances. There can be no assurance that the Company will be able to comply with the conditions to maintain and/or secure renewal of the Nationwide Permits.

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.

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		