FUEL TECH, INC.
Form 10-K
March 09, 2011

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SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K

(Mark One)

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]**

For the fiscal year ended: December 31, 2010

OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]**

For the transition period from _____ to _____

Commission File No. 001-33059

Fuel Tech, Inc.
(Exact name of registrant as specified in its charter)

Delaware	20-5657551
(State or other jurisdiction of incorporation of organization)	(I.R.S. Employer Identification Number)

Fuel Tech, Inc.
27601 Bella Vista Parkway
Warrenville, IL 60555-1617
630-845-4500
www.ftek.com
(Address and telephone number of principal executive offices)

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

Common Stock $0.01 par value per share	**The NASDAQ Stock Market, Inc**
(Title of Class)	**(Name of Exchange on Which Registered)**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes o No þ

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes o No þ

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 þ No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes o No o

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 the best of the 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. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, non-accelerated filer or a smaller reporting company (as defined in rule 12b-2 under the Securities Exchange Act of 1934).

Large accelerated filer o	**Accelerated filer þ**	**Non-accelerated filer o**	**Smaller reporting company o**

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes o No þ

The aggregate market value of the voting stock held by non-affiliates of the registrant at June 30, 2010 was approximately $114,758,000. The aggregate market value of the voting stock held by non-affiliates of the registrant at March 4, 2011 was approximately $140,939,000.

Indicate number of shares outstanding of each of the registered classes of Common Stock at March 4, 2011: 24,213,467 shares of Common Stock, $0.01 par value.

Documents incorporated by reference:

Certain portions of the registrant s definitive Proxy Statement for the annual meeting of stockholders to be held in 2011 are incorporated by reference in Parts II, III, and IV hereof.

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TABLE OF DEFINED TERMS

Term	Definition
ABC	American Bailey Corporation
AIG	Ammonia Injection Grid
ASCR	A trademark used to describe Fuel Tech s Advanced SCR process
CAAA	Clean Air Act Amendments of 1990
CAIR	Clean Air Interstate Rule
CASCADE	A trademark used to describe Fuel Tech s combination of SNCR and SCR
CAVR	Clean Air Visibility Rule
CFD	Computational Fluid Dynamics
Common Shares	Shares of the Common Stock of Fuel Tech
Common Stock	Common Stock of Fuel Tech
EPA	The U.S. Environmental Protection Agency
FGC	Flue Gas Conditioning
FUEL CHEM®	A trademark used to describe Fuel Tech s fuel and flue gas treatment processes, including its TIFI® Targeted In-Furnace Injection technology to control slagging, fouling, corrosion and a variety of sulfur trioxide-related issues
GSG	Graduated Straightening Grid
HERT High Energy Reagent Technology	A trademark used to describe a Fuel Tech SNCR process
Loan Notes	Nil-coupon, non-redeemable convertible unsecured loan notes of Fuel Tech
NOx	Oxides of nitrogen
NOxOUT®	A trademark used to describe Fuel Tech s SNCR process for the reduction of NOx
NOxOUT-SCR®	A trademark used to describe Fuel Tech s direct injection of urea as a catalyst reagent
SCR	Selective Catalytic Reduction

SIP Call	State Implementation Plan Regulation
SNCR	Selective Non-Catalytic Reduction
TCI® Targeted Corrosion Inhibition	A FUEL CHEM program designed for high-temperature slag and corrosion control, principally in waste-to-energy boilers
TIFI® Targeted In-Furnace Injection	A proprietary technology that enables the precise injection of a chemical reagent into a boiler or furnace as part of a FUEL CHEM program
ULTRA	A trademark used to describe Fuel Tech s process for generating ammonia for use as SCR reagent

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements, as defined in Section 21E of the Securities Exchange Act of 1934, as amended, that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and reflect our current expectations regarding our future growth, results of operations, cash flows, performance and business prospects, and opportunities, as well as assumptions made by, and information currently available to, our management. We have tried to identify forward-looking statements by using words such as anticipate, believe, plan, expect, intend, will, and similar expressions, but these words are not the exclusive m identifying forward-looking statements. These statements are based on information currently available to us and are subject to various risks, uncertainties, and other factors, including, but not limited to, those discussed herein under the caption Risk Factors that could cause our actual growth, results of operations, financial condition, cash flows, performance and business prospects and opportunities to differ materially from those expressed in, or implied by, these statements. Except as expressly required by the federal securities laws, we undertake no obligation to update such factors or to publicly announce the results of any of the forward-looking statements contained herein to reflect future events, developments, or changed circumstances or for any other reason. Investors are cautioned that all forward-looking statements involve risks and uncertainties, including those detailed in Fuel Tech s filings with the Securities and Exchange Commission. See Risk Factors in Item 1A.

ITEM 1 BUSINESS

As used in this Annual Report on Form 10-K, the terms we, us, our, the Company, and Fuel Tech refer to Fuel T Inc. and our wholly-owned subsidiaries.

Fuel Tech

Fuel Tech is a fully integrated company that uses a suite of advanced technologies to provide boiler optimization, efficiency improvement and air pollution reduction and control solutions to utility and industrial customers worldwide. Originally incorporated in 1987 under the laws of the Netherlands Antilles as Fuel-Tech N.V., Fuel Tech became domesticated in the United States on September 30, 2006, and continues as a Delaware corporation with its corporate headquarters at 27601 Bella Vista Parkway, Warrenville, Illinois, 60555-1617. Fuel Tech maintains an Internet website at www.ftek.com. Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934 are made available through our website as soon as reasonably practical after we electronically file or furnish the reports to the Securities and Exchange Commission. Also available on our website are the Company s Corporate Governance Guidelines and Code of Ethics and Business Conduct, as well as the charters of the audit, compensation and nominating committees of the Board of Directors. All of these documents are available in print without charge to stockholders who request them. Information on our website is not incorporated into this report.

Fuel Tech s special focus is the worldwide marketing of its nitrogen oxide (NOx) reduction and FUEL CHEM® technologies. The Air Pollution Control (APC) technology segment reduces NOx emissions in flue gas from boilers, incinerators, furnaces and other stationary combustion sources by utilizing combustion optimization techniques and Low NOx and Ultra Low NOx Burners; NOxOUT® and HERT High Energy Reagent Technology SNCR systems; systems that incorporate ASCR Advanced SCR and CASCADE technologies, ULTRA and NOxOUT-SCR® technologies; and Ammonia Injection Grid (AIG) and Graduated Straightening Grid (GSG) technologies. Fuel Tech s APC technology business is materially dependent on the continued existence and enforcement of worldwide air quality regulations. The FUEL CHEM technology segment improves the efficiency, reliability and environmental status of combustion units by controlling slagging, fouling and corrosion, as well as the formation of sulfur trioxide, ammonium bisulfate, particulate matter ($PM_{2.5}$), carbon dioxide, NOx and unburned carbon in fly ash through the addition of chemicals into the fuel or via TIFI® Targeted In-Furnace Injection programs. Fuel Tech has other technologies, both commercially available and in the development stage, all of which are related to APC and FUEL CHEM processes or are similar in their technological base.

American Bailey Corporation

Douglas G. Bailey, Chairman, Chief Executive Officer, President, and Director of Fuel Tech, and Ralph E. Bailey, Director and Chairman Emeritus of Fuel Tech, are stockholders of American Bailey Corporation (ABC), which is a

related party. Please refer to Note 9 to the consolidated financial statements in this document for information about transactions between Fuel Tech and ABC. Additionally, see the more detailed information relating to this subject under the caption Certain Relationships and Related Transactions in Fuel Tech s definitive Proxy Statement to be distributed in connection with Fuel Tech s 2011 Annual Meeting of Stockholders, which information is incorporated by reference.

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Air Pollution Control

Regulations and Markets

The U.S. air pollution control market, and more specifically federal and state NOx regulations, currently are the primary drivers in Fuel Tech s APC technology segment. This market is dependent on air pollution regulations and their continued enforcement. These regulations are based on the Clean Air Act Amendments of 1990 (the CAAA), which require reductions in NOx emissions on varying timetables with respect to various sources of emissions. Under the State Implementation Plan (SIP) Call, a regulation promulgated under the Amendments (discussed further below), over 1,000 utility and large industrial boilers in 19 states were required to achieve NOx reduction targets by May 31, 2004.

In 1994, governors of 11 Northeastern states, known collectively as the Ozone Transport Region, signed a Memorandum of Understanding requiring utilities to reduce their NOx emissions by 55% to 65% from 1990 levels by May 1999. In 1998, the Environmental Protection Agency (EPA) announced more stringent regulations. The Ozone Transport SIP Call regulation, designed to mitigate the effects of wind-aided ozone transported from the Midwestern and Southeastern U.S. into the Northeastern non-attainment areas, required, following the litigation described below, 19 states to make even deeper aggregate reductions of 85% from 1990 levels by May 31, 2004. Over 1,000 utility and large industrial boilers were affected by these mandates. Additionally, most other states with non-attainment areas were also required to meet ambient air quality standards for ozone by 2007.

Although the SIP Call was the subject of litigation, an appellate court of the D.C. Circuit upheld the validity of this regulation. This court s ruling was later affirmed by the U.S. Supreme Court.

In February 2001, the U.S. Supreme Court, in a unanimous decision, upheld EPA s authority to revise the National Ambient Air Quality Standard (NAAQS) for ozone to 0.080 parts per million averaged through an eight-hour period from the then current 0.120 parts per million for a one-hour period. This more stringent standard provided clarity and impetus for air pollution control efforts well beyond the then current ozone attainment requirement of 2007. In keeping with this trend, the Supreme Court, only days later, denied industry s attempt to stay the SIP Call, effectively exhausting all means of appeal. The ozone NAAQS is currently 0.075 parts per million averaged over an eight-hour period, and EPA is proposing to reduce the Standard to 0.06 or 0.07 parts per million for the most severe non-attainment areas by 2013.

On December 23, 2003, the EPA proposed a new regulation affecting the SIP Call states by specifying more expansive NOx reduction. This rule, under the name Clean Air Interstate Rule (CAIR), was issued by the EPA on March 10, 2005. CAIR specifies that additional annual NOx reduction requirements be extended to most SIP-affected units in 28 eastern states, while permitting a cap and trade format similar to the SIP Call. The Company estimates an additional 1,300 electric generating units using coal and other fuels to be affected by this rule. In an action related to CAIR, on June 15, 2005, the EPA issued the Clean Air Visibility Rule (CAVR), which is a nationwide initiative to improve federally preserved areas through reduction of NOx and other pollutants. CAVR expands the NOx reduction market to Western states unaffected by CAIR or the SIP Call. Compliance begins in 2013 and CAVR will potentially affect an additional 230 western coal-fired electric-generating units. In addition, CAVR, along with the EPA rule for revised eight-hour ozone attainment, have the potential to impact thousands of boilers and industrial units in multiple industries nationwide for units burning coal and other fuels starting in 2013.

On July 11, 2008, the U.S. District Court of Appeals for the District of Columbia Circuit vacated the CAIR regulations under the CAAA under the premise that the EPA exceeded its authority when the rule was created in 2005. The court found more than several fatal flaws in the rule but neither took issue with the concept that NOx emissions are to be controlled nor over the limits and thresholds established by CAIR. In vacating the rule in its entirety, the court remanded to EPA to promulgate a rule consistent with the court s opinion. On September 24, 2008, the EPA filed a petition for the case to be reviewed by the full Court of Appeals, not just the three judge panel that issued the vacatur ruling in July 2008. On October 22, 2008, the EPA was granted a 15-day period to present a basis as to why the court should reconsider its decision. On December 23, 2008, the D.C. Circuit Court granted the EPA s petition only to the extent that it remanded the case without vacatur for EPA to conduct further proceedings consistent with the court s prior opinion. In summary, the court stated that ...allowing CAIR to remain in effect until it is replaced by a rule consistent with our opinion would at least temporarily preserve the environmental values covered by CAIR.

As a proposed replacement for CAIR, EPA issued a draft Transport Rule in July 2010, which is expected to be finalized by July 2011. CAIR required the affected states to be in year-round NOx emission compliance beginning January 1, 2009. The Transport Rule is expected to tighten NOx regulations starting in 2012, with additional reductions required by 2014. The amount of NOx reduction required by individual sources and the level of trading of NOx allowances under the Transport Rule is unknown, but Fuel Tech s wide range of NOx reduction technologies provides opportunities with the current scenarios. While we cannot predict the final form of the Transport Rule or new multi-pollutant legislation under consideration by Congress, any unfavorable outcome could have a material adverse effect on our business, results of operations, cash flows, and financial position. However, the primary driver of the Transport Rule is the Federal Clean Air Act which includes National Ambient Air Quality Standards for criteria pollutants including NOx and ozone with emission requirements that continue to tighten. These continue to remain in effect and states must comply with the requirements of this law.

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Fuel Tech also sells NOx control systems outside the United States, specifically in Europe and in the Pacific Rim, including the People s Republic of China (China). Under European Union Directives, certain power plants must come into compliance with specified NOx reduction targets by 2016.

China also represents attractive opportunities for Fuel Tech as the government has set pollution control and energy conservation and efficiency improvements as top priorities. Fuel Tech has viable technologies to help achieve these objectives. China has taken initial steps to reduce NOx emissions on new electric utility units (principally Low NOx Burners and Over-Fire Air systems and Selective Catalytic Reduction (SCR)), and on-going research and demonstration projects are generating cost and performance data for use in tightened standards that are targeted for the near future, both for new and retrofit units. China s dominant reliance on coal as an energy resource is not expected to change in the foreseeable future. Clean air has been and will continue to be a pressing issue, especially with China s robust economic growth, expected growth in thermal power production (4% average annual increase through 2020), and an increasingly expanded role in international events and organizations. As part of the Twelfth Five-Year Plan that will be finalized before the end of the first quarter of 2011, China will tighten the pollution control standards for their existing fleet of fossil plants as well as for fossil plants to be built in the future.

In anticipation of the finalization of this plan, China s Ministry of Environmental Protection has issued several documents describing the specific nature of the regulations to be implemented as part of the Twelfth Five-Year Plan in support of reducing harmful pollutants and further defining the technologies recommended to achieve the reductions. The most recent documents define the regulations for NOx as applying to all thermal power units that have a steaming rate of 65 tons per hour (12 megawatts (MW)) or larger. Newly constructed units and existing units that were approved subsequent to December 31, 2003, must meet the same stringent emission standard, while certain existing units approved prior to December 31, 2003 must meet a standard that is less stringent. In addition, all units that are in Key Regions must achieve the same standard as the newly constructed units. Key Regions are defined as those areas that are highly developed or highly populated and are sensitive to environmental overloading. All existing coal and oil-fired thermal units must comply with the proposed regulation by January 1, 2014 while all new units must comply by January 1, 2012.

These same documents recommend that NOx reduction should be achieved via the use of Low NOx Burners and Over-Fire Air systems in combination with Selective Non-Catalytic Reduction (SNCR) or SCR where appropriate to achieve required emissions levels. The combination of SNCR and SCR technologies in tandem is also considered as a viable technology choice.

While the current documents do not specifically comment on the use of urea as the preferred reducing reagent in the NOx control process in high population density areas, Fuel Tech believes that technologies to convert urea to ammonia will be deployed in Key Regions in support of safety objectives, and this practice has already been implemented in major cities such as Beijing, Guangzhou and Shanghai.

Fuel Tech has established a market position in NOx control resulting from the initial national demonstration projects utilizing CASCADE technology at Jiangsu Kanshan (two new 600 MW units), NOxOUT Selective Non-Catalytic Reduction technology at Jiangyin Ligang (four new 600 MW units) and Inner Mongolia (two new 600 MW units), and ULTRA technology on projects in Beijing (multiple projects on units of varying sizes including two district heating units), Zhejiang (four 1000 MW retrofit units), Shannxi (two 660 MW new units) and Liaoning (two 330 MW new units). These projects have established Fuel Tech s NOx control technologies as being acceptable for use in reducing NOx emissions and have resulted in additional contracts in China. The regulations that will ultimately be established in support of the NOx standards that will be defined as part of the Twelfth Five-Year Plan will offer potential business opportunities for Fuel Tech and its suite of NOx technologies.

The key market dynamic for this product line is the continued use of coal as the principal fuel source for global electricity production. Coal accounts for approximately 50% of all U.S. electricity generation and roughly 80% of Chinese electricity generation. Approximately 75% of the three billion tons of coal consumed annually in China today are used for thermal combustion. Coal s share of global electricity generation is forecast to be approximately 41% by 2030. Major coal consumers include China, the United States and India.

Products

Fuel Tech s NOx reduction technologies are installed worldwide on over 640 combustion units, including utility, industrial and municipal solid waste applications. Our products include customized NOx control systems and our patented ULTRA™ technology, which converts urea-to-ammonia on site which provides safe reagent for use in Selective Catalytic Reduction (SCR) systems.

Low NOx Burners and Ultra Low NOx Burners (LNB and ULNB) are available for coal-, oil-, and gas-fired industrial and utility units. Each system application is specifically designed to maximize NOx reduction. Computational fluid dynamics combustion modeling is used to validate the design prior to fabrication of equipment. NOx reductions can range from 40%-60% depending on the fuel type. Over-Fire Air (OFA) systems stage combustion for enhanced NOx reduction. Additional NOx reductions, beyond Low NOx Burners, of 35% - 50% are possible on different boiler configurations on a range of fuel types. Combined overall reductions range from 50% - 70%, with overall capital costs ranging from $10 - $20/kW and levelized total costs ranging from $300 - $1,500/ton of NOx removed, depending on the scope.

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Fuel Tech s NOxOUT and HERT SNCR processes use non-hazardous urea as the reagent rather than ammonia. Both the NOxOUT and HERT processes on their own are capable of reducing NOx by up to 25% 50% for utilities and by potentially significantly greater amounts for industrial units in many types of plants with capital costs ranging from $5 $20/kW for utility boilers and with total annualized operating costs ranging from $1,000 $2,000/ton of NOx removed.

Fuel Tech s Advanced Selective Catalytic Reduction (ASCR) systems include LNB, OFA, and SNCR components, along with a downsized SCR catalyst, Ammonia Injection Grid (AIG), and Graduated Straightening Grid (GSG) systems to provide up to 90% NOx reduction at significantly lower capital and operating costs than conventional SCR systems while providing greater operational flexibility to plant operators. The capital costs for ASCR systems can range from $30 $150/kW depending on boiler size and configuration, which is significantly less than that of conventional SCRs, which can cost $300/kW or more, while operating costs are competitive with those experienced by SCR systems. The CASCADE and NOxOUT-SCR® processes are basic types of ASCR systems which use just SNCR and SCR catalyst components. The CASCADE systems can achieve 60% 70% NOx reduction, with capital costs being a portion of the ASCR values defined above. Fuel Tech s NOxOUT-SCR process utilizes urea as the SCR catalyst reagent to achieve NOx reductions of up to 85% from smaller stationary combustion sources with capital and operating costs competitive with equivalently sized, standard SCR systems.

Fuel Tech s ULTRAprocess is designed to convert urea to ammonia safely and economically for use as a reagent in the SCR process for NOx reduction. Recent local objections in the ammonia permitting process have raised concerns regarding the safety of ammonia shipment and storage in quantities sufficient to supply SCR. In addition, the Department of Homeland Security has characterized anhydrous ammonia as a Toxic Inhalation Hazard (TIH) commodity. This is contributing to new restrictions by rail carriers on the movement of anhydrous ammonia and to an escalation in associated rail transport and insurance rates. Overseas, new coal-fired power plants incorporating SCR systems are expected to be constructed at a rapid rate in China, and Fuel Tech s ULTRA process is believed to be a market leader for the safe conversion of urea to ammonia just prior to injection into the flue gas duct, which is particularly important near densely populated cities, major waterways, harbors or islands, or where the transport of anhydrous or aqueous ammonia is a safety concern.

Under an exclusive licensing agreement with FGC Corporation, Fuel Tech sells Flue Gas Conditioning systems incorporating FGC Corporation technology for utility applications in all geographies outside the United States and Canada. Flue Gas Conditioning systems improve the efficiency of particulate collectors, including electrostatic precipitators (ESPs) and fabric filters. These conditioning systems represent a far lower capital cost approach to improving ash particulate capture versus the alternative of installing larger ESPs or fabric filter technology to meet opacity levels.

Fuel Tech s SCR management group provides process design optimization, performance testing and improvement, and catalyst selection services for SCR systems on coal-fired boilers. In addition, other related services, including start-ups, maintenance support and general consulting services for SCR systems, Ammonia Injection Grid design and tuning to help optimize catalyst performance, and catalyst management services to help optimize catalyst life, are now offered to customers around the world. Fuel Tech also specializes in both physical experimental models, which involve construction of scale models through which fluids are tested, and computational fluid dynamics models, which simulate fluid flow by generating a virtual replication of real-world geometry and operating inputs. Fuel Tech designs flow corrective devices, such as turning vanes, ash screens, static mixers and our patent pending Graduated Straightening Grid GSG. Fuel Tech s models help clients optimize performance in flow critical equipment, such as selective catalytic reactors in SCR systems, where the effectiveness and longevity of catalysts are of utmost concern. The Company s modeling capabilities are also applied to other power plant systems where proper flow distribution and mixing are important for performance, such as flue gas desulphurization scrubbers, electrostatic precipitators, air heaters, exhaust stacks and carbon injection systems for mercury removal.

Sales of the NOx reduction technologies were $40.9 million, $34.7 million, and $44.4 million for the years ended December 31, 2010, 2009 and 2008, respectively.

NOx Reduction Competition

Competition with Fuel Tech s NOx reduction suite of products may be expected from companies supplying urea SNCR systems, combustion modification products, SCR systems and ammonia SNCR systems. In addition, Fuel Tech experiences competition in the urea-to-ammonia conversion market.

Combustion modifications, including Low NOx Burners and Over-Fire Air systems, can be fitted to most types of boilers with cost and effectiveness varying with specific boilers. Combustion modifications may yield up to 20% - 60% NOx reduction economically with capital costs ranging from $10 - $20/kW and levelized total costs ranging from $300 - $1,500/ton of NOx removed. The modifications are designed to reduce the formation of NOx and are typically the first NOx reduction efforts employed. Companies such as Alstom, Foster Wheeler Corporation, The Babcock & Wilcox Company, Combustion Components Associates, Inc., Siemens, and Babcock Power, Inc. are active competitors in the Low NOx Burner business. Once NOx is formed, then the SCR process is an effective and proven method of control for removal of NOx up to 90%. SCR systems have a high capital cost of $300+/kW on retrofit coal applications. Such companies as Alstom, The Babcock & Wilcox Company, Hitachi, Foster Wheeler Corporation, Peerless Manufacturing Company, and Babcock Power, Inc., are active SCR system providers, or providers of the catalyst itself.

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The use of ammonia as the reagent for the SNCR process can reduce NOx by 30% 70% on incinerators, but has limited applicability in the utility industry. Ammonia system capital costs range from $5 - $20/kW, with annualized operating costs ranging from $1,000 $3,000/ton of NOx removed. These systems require the use of either anhydrous or aqueous ammonia, both of which are hazardous substances.

In addition to or in lieu of using the foregoing processes, certain customers may elect to close or de-rate plants, purchase electricity from third-party sources, switch from higher to lower NOx-emitting fuels or purchase NOx emission allowances.

Lastly, with respect to urea-to-ammonia conversion technologies, a competitive approach to Fuel Tech s controlled urea decomposition system is available from Wahlco, Inc., which manufactures a system that hydrolyzes urea under high temperature and pressure.

APC BACKLOG

Consolidated APC segment backlog at December 31, 2010 was $19.3 million versus backlog at December 31, 2009 of approximately $22.0 million. Substantially all of the backlog as of December 31, 2010 should be recognized as revenue in fiscal 2011, although the timing of such revenue recognition in 2011 is subject to the timing of the expenses incurred on existing projects.

FUEL CHEM

Product and Markets

The FUEL CHEM® technology segment revolves around the unique application of specialty chemicals to improve the efficiency, reliability and environmental status of plants operating in the electric utility, industrial, pulp and paper, waste-to-energy, university and district heating markets. FUEL CHEM programs are currently in place on combustion units in North America, Europe, China, and India, treating a wide variety of solid and liquid fuels, including coal, heavy oil, biomass and municipal waste.

Central to the FUEL CHEM approach is the introduction of chemical reagents, such as magnesium hydroxide, to combustion units via in-body fuel application (pre-combustion) or via direct injection (post-combustion) utilizing Fuel Tech s proprietary TIFI® technology. By attacking performance-hindering problems, such as slagging, fouling and corrosion, as well as the formation of sulfur trioxide (SO_3), ammonium bisulfate (ABS), particulate matter ($PM_{2.5}$), carbon dioxide (CO_2), NOx and unburned carbon in fly ash, the Company s programs offer numerous operational, financial and environmental benefits to owners of boilers, furnaces and other combustion units.

The key market dynamic for this product line is the continued use of coal as the principal fuel source for global electricity production. Coal accounts for approximately 50% of all U.S. electricity generation. Coal s share of global electricity generation is forecast to be approximately 41% by 2030. Major coal consumers include the United States, China and India.

The principal markets for this product line are electric power plants burning coals with slag-forming constituents such as sodium, iron and high levels of sulfur. Sodium is typically found in the Powder River Basin (PRB) coals of Wyoming and Montana. Iron is typically found in coals produced in the Illinois Basin (IB) region. High sulfur content is typical of IB coals and certain Appalachian coals. High sulfur content can give rise to unacceptable levels of SO_3 formation in plants with SCR systems and flue gas desulphurization units (scrubbers).

The combination of slagging coals and SO_3-related issues, such as blue plume formation, air pre-heater fouling and corrosion, SCR fouling and the proclivity to suppress certain mercury removal processes, represents attractive market potential for Fuel Tech.

Internationally, market opportunities exist in Europe and in the Asia-Pacific region, particularly in China, where high-slagging coals are fueling a large and growing fleet of power plants. To address the Chinese market, where particular emphasis is being placed on energy efficiency, Fuel Tech had extended its exclusive teaming agreement with ITOCHU Hong Kong Ltd., a subsidiary of ITOCHU Corporation, through February 28, 2010. While the exclusivity portion of this agreement expired on this date, the relationship with Itochu continues under modified terms with emphasis on improving the strategy for addressing the Chinese FUEL CHEM market. Additionally, Fuel Tech has an alliance with a Chinese company to enhance its opportunities in the FUEL CHEM market. TIFI initiatives are aimed at energy efficiency improvements that result from maintaining better cleanliness on heat transfer equipment in particular at coal, oil, municipal solids waste, and biomass fired combustion facilities. FUEL CHEM benefits are

characterized by generating more power and steam using the same fuel, capability of burning lower grade fuels, reduction of environmental toxic release, reduction of operation and maintenance cost, safe and more stable operations, as well as in reduced CO_2 emissions, which potentially can be monetized under provisions of the Kyoto Protocol. Fuel Tech has two demonstrations currently in process, one on a 350 MW unit in northern China and a second on a district heating unit in northeast China where TIFI is being evaluated both on a stand-alone basis, and in conjunction with SNCR technology. Both demonstrations are to be completed in the first half of 2011.

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A potentially large fuel treatment market exists in Mexico, where high-sulfur, low-grade fuel oil containing vanadium and nickel is a major source for electricity production. The presence of these metallic constituents promotes slag build-up, and the fuel properties can result in acid gas and particulate emissions in local combustion units. Fuel Tech has successfully treated such units with its TIFI technology. To capitalize on this market opportunity, the Company signed a ten-year license implementation agreement with Energy Marine Services, S.A. de C.V. (EMS), a private Mexican corporation, to implement our TIFI program for utility and industrial end user customers in Mexico. In 2009, our TIFI program was in continuous use on three boilers at CFE s Punta Prieta power plant (110 MW generating capacity). In addition, EMS s partner company was awarded a project to install TIFI equipment on three boilers at a different power plant (610 MW) also owned by CFE. Chemical consumption is expected to begin in the second quarter of 2011 on the first of these three units and in the third quarter of 2011 on the remaining two units. CFE is Mexico s largest state power company with greater than 50 GW of installed capacity.

Sales of the FUEL CHEM products were $40.9 million, $36.7 million and $36.7 million for the years ended December 31, 2010, 2009 and 2008, respectively.

Competition

Competition for Fuel Tech s FUEL CHEM product line includes chemicals sold by specialty chemical and combustion engineering companies, such as GE Infrastructure, Ashland Inc., and Environmental Energy Services, Inc. No substantive competition currently exists for Fuel Tech s TIFI technology, which is designed primarily for slag control and SO_3 abatement, but there can be no assurance that such lack of substantive competition will continue.

INTELLECTUAL PROPERTY

The majority of Fuel Tech s products are protected by U.S. and non-U.S. patents. Fuel Tech owns 75 granted patents worldwide and has 10 patent applications pending in the United States and 86 pending in non-U.S. jurisdictions. These patents and applications cover some 31 inventions, 18 associated with the NOx reduction business, eight associated with the FUEL CHEM business and five associated with non-commercialized technologies. Our patents have expiration dates ranging from January 11, 2011 to November 10, 2029. The average remaining duration of our patents is approximately seven years. Thirteen patents are due to expire in 2011 which cover three inventions. Two of these patents are US patents.

Fuel Tech believes that the protection provided by the numerous claims in the above referenced patents or patent applications is substantial, and affords Fuel Tech a significant competitive advantage in its business. Accordingly, any significant reduction in the protection afforded by these patents or any significant development in competing technologies could have a material adverse effect on Fuel Tech s business.

EMPLOYEES

At December 31, 2010, Fuel Tech had 161 employees, 136 in North America, 17 in China and 8 in Europe. Fuel Tech enjoys good relations with its employees and is not a party to any labor management agreement.

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ITEM 1A RISK FACTORS

Investors in Fuel Tech should be mindful of the following risk factors relative to Fuel Tech s business.

(i) Lack of Diversification

Fuel Tech has two broad technology segments that provide advanced engineering solutions to meet the pollution control, efficiency improvement, and operational optimization needs of energy-related facilities worldwide. They are as follows:

- The Air Pollution Control technology segment includes technologies to reduce NOx emissions in flue gas from boilers, incinerators, furnaces and other stationary combustion sources. These include Low and Ultra Low NOx Burners (LNB and ULNB), Over-Fire Air (OFA) systems, NOxOUT® and HERT Selective Non-Catalytic Reduction (SNCR) systems, and Advanced Selective Catalytic Reduction (ASCR) systems. The ASCR system includes ULNB, OFA, and SNCR components, along with a downsized SCR catalyst, Ammonia Injection Grid (AIG), and Graduated Straightening Grid (GSG) systems to provide high NOx reductions at significantly lower capital and operating costs than conventional SCR systems. The CASCADE and NOxOUT-SCR® processes are basic types of ASCR systems, using just SNCR and SCR catalyst components. ULTRA technology creates ammonia at a plant site using safe urea for use with any SCR application. Flue Gas Conditioning systems are chemical injection systems offered in markets outside the U.S. and Canada to enhance electrostatic precipitator and fabric filter performance in controlling particulate emissions.
- The FUEL CHEM® technology segment, which uses chemical processes in combination with advanced Computational Fluid Dynamics (CFD) and Chemical Kinetics Modeling (CKM) boiler modeling, for the control of slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in furnaces and boilers through the addition of chemicals into the furnace using TIFI® Targeted In-Furnace Injection technology.

An adverse development in Fuel Tech s advanced engineering solution business as a result of competition, technological change, government regulation, or any other factor could have a significantly greater impact than if Fuel Tech maintained more diverse operations.

(ii) Competition

Competition in the Air Pollution Control market comes from competitors utilizing their own NOx reduction processes, including SNCR systems, Low NOx Burners, Over-Fire Air systems, flue gas recirculation, ammonia SNCR, SCR and, with respect to particular uses of urea not infringing Fuel Tech s patents (see Item 1 Intellectual Property). Competition will also come from business practices such as the purchase rather than the generation of electricity, fuel switching, closure or de-rating of units, and sale or trade of pollution credits and emission allowances. Utilization by customers of such processes or business practices or combinations thereof may adversely affect Fuel Tech s pricing and participation in the NOx control market if customers elect to comply with regulations by methods other than the purchase of Fuel Tech s suite of Air Pollution Control products. See Item 1 *Products* and *NOx Reduction Competition* in the *Air Pollution Control* segment overview.

Competition in the FUEL CHEM markets includes chemicals sold by specialty chemical and combustion engineering companies, such as GE Infrastructure, Ashland Inc. and Environmental Energy Services, Inc. As noted previously, no significant competition currently exists for Fuel Tech s patented TIFI technology, which is designed primarily for slag control and SO_3 abatement. However, there can be no assurance that such lack of significant competition will continue.

(iii) Dependence on and Change in Air Pollution Control Regulations and Enforcement

Fuel Tech s business is significantly impacted by and dependent upon the regulatory environment surrounding the electricity generation market. Our business will be adversely impacted to the extent that regulations are repealed or amended to significantly reduce the level of required NOx reduction, or to the extent that regulatory authorities delay or otherwise minimize enforcement of existing laws. Additionally, long-term changes in environmental regulation that threaten or preclude the use of coal or other fossil fuels as a primary fuel source for electricity production, based on the theory that gases emitted therefrom impact climate change through a greenhouse effect, and result in the reduction or closure of a significant number of fossil fuel-fired power plants, may adversely affect the Company s business, financial condition and results of operations. See Item 1 above under the caption *Regulations and Markets* in the *Air Pollution Control* segment overview.

(iv) Protection of Patents and Proprietary Rights

Fuel Tech holds licenses to or owns a number of patents for our products and processes. In addition, we also have numerous patents pending. There can be no assurance that pending patent applications will be granted or that outstanding patents will not be challenged or circumvented by competitors. Certain critical technology relating to our products is protected by trade secret laws and by confidentiality and licensing agreements. There can be no assurance that such protection will prove adequate or that we will have adequate remedies against contractual counterparties for disclosure of our trade secrets or violations of Fuel Tech s intellectual property rights. See Item 1 Intellectual Property.

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(v) Foreign Operations

In 2007, we expanded our operations into China by establishing a wholly-owned subsidiary in Beijing. The Asia-Pacific region, particularly China, offers significant market opportunities for Fuel Tech as nations in this region look to establish regulatory policies for improving their environment and utilizing fossil fuels, especially coal, efficiently and effectively. The future business opportunities in these markets are dependent on the continued implementation of regulatory policies that will benefit our technologies, the acceptance of Fuel Tech s engineering solutions in such markets, and the ability of potential customers to utilize Fuel Tech s technologies on a cost-effective basis.

(vi) Product Pricing and Operating Results

The onset of significant competition for either of the technology segments might have an adverse impact on product pricing and a resulting adverse impact on realized gross margins and operating profitability.

(vii) Raw Material Supply and Pricing

The FUEL CHEM technology segment is dependent, in part, upon a supply of magnesium hydroxide. Any adverse change in the availability of this chemical will likely have an adverse impact on ongoing operation of our FUEL CHEM programs. On March 4, 2009, we entered into a Restated Product Supply Agreement (PSA) with Martin Marietta Magnesia Specialties, LLC (MMMS) in order to assure the continuance of a stable supply from MMMS of magnesium hydroxide products for our requirements in the United States and Canada until December 31, 2013, the date of the expiration of the PSA. Magnesium hydroxide products are a significant component of the FUEL CHEM programs. Pursuant to the PSA, MMMS supplies us with magnesium hydroxide products manufactured pursuant to our specifications and we have agreed to purchase from MMMS, and MMMS has agreed to supply, 100% of our requirements for such magnesium hydroxide products for our customers who purchase such products for delivery in the United States and Canada. There can be no assurance that Fuel Tech will be able to obtain a stable source of magnesium hydroxide in markets outside the United States.

(viii) Customer Access to Capital Funds

Uncertainty about current economic conditions in the United States and globally poses risk that Fuel Tech s customers may postpone spending for capital improvement projects in response to tighter credit markets, negative financial news and/or decline in demand for electricity generated by combustion units, all of which could have a material negative effect on demand for the Fuel Tech s products and services.

(ix) Customer Concentration

A small number of customers have historically accounted for a material portion of Fuel Tech s revenues (see note 1 *Organization and Significant Accounting Policies,* under the caption *Risk Concentrations*). There can be no assurance that Fuel Tech s current customers will continue to place orders, that orders by existing customers will continue at the levels of previous periods, or that Fuel Tech will be able to obtain orders from new customers. The loss of one or more of our customers could have a material adverse effect on our sales and operating results.

(x) Domestic Credit Facility

Fuel Tech is party to a $25 million revolving credit agreement with JPMorgan Chase Bank, N.A. As of December 31, 2010, there were no outstanding borrowings on this facility and Fuel Tech was in compliance with all financial covenants contained in the agreement. Nevertheless, in the event of any default on the part of Fuel Tech under this agreement, the lender is entitled to accelerate payment of any amounts outstanding and may, under certain circumstances, cancel the facility. If the Company were unable to obtain a waiver for a breach of covenant and the lender accelerated the payment of any outstanding amounts, such acceleration may cause the Company s cash position to significantly deteriorate or, if cash on hand were insufficient to satisfy the payment due, may require the Company to obtain alternate financing. See Liquidity and Sources of Capital under Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations.

ITEM 1B UNRESOLVED STAFF COMMENTS

None

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ITEM 2 PROPERTIES

Fuel Tech owns an office building in Warrenville, Illinois, which has served as our corporate headquarters since June 23, 2008. This facility, with approximately 40,000 square feet of office space, was purchased for approximately $6,000,000 and subsequently built out and furnished for an additional cost of approximately $5,500,000. This facility will meet our growth requirements for the foreseeable future.

Fuel Tech and its subsidiaries also operate from leased office facilities in Stamford, Connecticut; Durham, North Carolina; Gallarate, Italy and Beijing, China. Fuel Tech does not segregate any of its leased facilities by operating business segment. The terms of the Company s four material lease arrangements are as follows:

- The Stamford, Connecticut building lease term, for approximately 6,440 square feet, runs from February 1, 2010 to December 31, 2019. The facility houses certain administrative functions such as Investor Relations and certain APC sales functions. This lease replaces the prior facility lease for a separate location in Stamford which expired on January 31, 2010.
- The Beijing, China building lease term, for approximately 5,800 square feet, runs from September 1, 2010 to August 31, 2011. This facility serves as the operating headquarters for our Beijing Fuel Tech operation. Fuel Tech has the option to extend the lease term at a market rate to be agreed upon between Fuel Tech and the lessor.
- The Durham, North Carolina building lease term, for approximately 16,000 square feet, runs from November 1, 2005 to April 30, 2014. Fuel Tech has no option to extend the lease.
- The Gallarate, Italy building lease term, for approximately 1,300 square feet, runs from July 1, 2005 to April 30, 2013. This facility serves as the operating headquarters for our Italy operations.

ITEM 3 LEGAL PROCEEDINGS

We are from time to time involved in litigation incidental to our business. We are not currently involved in any litigation in which we believe an adverse outcome would have a material effect on our business, financial conditions, results of operations, or prospects.

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PART II

ITEM 5 MARKET FOR REGISTRANT S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASE OF EQUITY SECURITIES

Market

Fuel Tech s Common Shares have been traded since September 1993 on The NASDAQ Stock Market, Inc. The trading symbol is FTEK.

Prices

The table below sets forth the high and low sales prices during each calendar quarter since January 2009.

2010	High	Low
Fourth Quarter	$10.04	$5.95
Third Quarter	6.81	5.36
Second Quarter	8.41	5.15
First Quarter	9.29	5.27

2009	High	Low
Fourth Quarter	$12.65	$7.51
Third Quarter	12.55	7.90
Second Quarter	14.15	9.28
First Quarter	12.23	7.01

Dividends

Fuel Tech has never paid cash dividends on its common stock and has no current plan to do so in the foreseeable future. The declaration and payment of dividends on the Common Stock are subject to the discretion of the Company s Board of Directors. The decision of the Board of Directors to pay future dividends will depend on general business conditions, the effect of a dividend payment on our financial condition, and other factors the Board of Directors may consider relevant. The current policy of the Company s Board of Directors is to reinvest earnings in operations to promote future growth.

Share Repurchase Program

Fuel Tech purchased no equity securities during the quarter and year ended December 31, 2010.

Holders

Based on information from the Company s Transfer Agent and from banks and brokers, the Company estimates that, as of February 23, 2011, there were approximately 17,500 beneficial holders and 228 registered stockholders of Fuel Tech s Common Shares.

Transfer Agent

The Transfer Agent and Registrar for the Common Shares is BNY Mellon Shareowner Services, 480 Washington Boulevard, Jersey City, New Jersey 07310-1900.

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Performance Graph

The following line graph compares (i) Fuel Tech s total return to stockholders per share of Common Stock for the five years ended December 31, 2010 to that of (ii) the NASDAQ Composite index, and (iii) the WilderHill Clean Energy Index for the period December 31, 2005 through December 31, 2010.

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ITEM 6 SELECTED FINANCIAL DATA

Selected financial data are presented below as of the end of and for each of the fiscal years in the five-year period ended December 31, 2010. The selected financial data should be read in conjunction with the audited consolidated financial statements as of and for the year ended December 31, 2010, and Management s Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this report and the schedules thereto. As a result of the acquisitions of substantially all of the assets of ACT in the first quarter of 2009, and Tackticks, LLC and FlowTack, LLC in the fourth quarter of 2008, the Company s condensed consolidated results for the periods presented are not directly comparable.

ONSOLIDATED STATEMENT of OPERATIONS DATA

n thousands of dollars, except for share nd per- share data)	For the years ended December 31 2010	2009	2008	2007	2006
evenues	$ 81,795	$ 71,397	$ 81,074	$ 80,297	$ 75,11
ost of sales	46,821	42,444	44,345	42,471	38,42
elling, general and administrative and other costs and expenses	31,037	32,034	30,502	27,087	25,95
perating income (loss)	3,937	(3,081)	6,227	10,739	10,73
et income (loss)	1,753	(2,306)	3,360	7,243	6,82
asic income (loss) per common share	$ 0.07	$ (0.10)	$ 0.14	$ 0.33	$ 0.3
iluted income (loss) per common share	$ 0.07	$ (0.10)	$ 0.14	$ 0.29	$ 0.2
Veighted-average basic shares outstanding	24,213,000	24,148,000	23,608,000	22,280,000	21,491,00
Veighted-average diluted shares outstanding	24,405,000	24,148,000	24,590,000	24,720,000	24,187,00

CONSOLIDATED BALANCE SHEET DATA (in thousands of dollars)	December 31 2010	2009	2008	2007	2006
Working capital	$ 36,645	$30,578	$43,956	$45,143	$38,715
Total assets	103,203	92,262	88,631	87,214	65,660
Long-term obligations	1,482	2,196	1,389	1,255	500
Total liabilities	19,293	14,040	15,056	23,975	18,005
Stockholders equity (1)	83,910	78,222	73,575	63,239	47,655

Notes:

(1) Stockholders equity includes the principal amount of nil coupon non-redeemable perpetual loan notes. See Note 5 to the consolidated financial statements.

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ITEM 7 MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS *(amounts in thousands of dollars)*

Background

Fuel Tech, Inc. (Fuel Tech) has two broad technology segments that provide advanced engineered solutions to meet the pollution control, efficiency improvement and operational optimization needs of energy-related facilities worldwide. They are as follows:

Air Pollution Control Technologies

The Air Pollution Control technology segment includes technologies to reduce NOx emissions in flue gas from boilers, incinerators, furnaces and other stationary combustion sources. These include Low and Ultra Low NOx Burners (LNB and ULNB), Over-Fire Air (OFA) systems, NOxOUT® and HERT Selective Non-Catalytic Reduction (SNCR) systems, and Advanced Selective Catalytic Reduction (ASCR) systems. The ASCR system includes ULNB, OFA, and SNCR components, along with a downsized SCR catalyst, Ammonia Injection Grid (AIG), and Graduated Straightening Grid (GSG) systems to provide high NOx reductions at significantly lower capital and operating costs than conventional SCR systems. The CASCADE™ and NOxOUT-SCR® processes are basic types of ASCR systems, using just SNCR and SCR catalyst components. ULTRA technology creates ammonia at a plant site using safe urea for use with any SCR application. Flue Gas Conditioning systems are chemical injection systems offered in markets outside the U.S. and Canada to enhance electrostatic precipitator and fabric filter performance in controlling particulate emissions. Fuel Tech distributes its products through its direct sales force and agents.

FUEL CHEM Technologies

The FUEL CHEM® technology segment, which uses chemical processes in combination with advanced CFD and CKM boiler modeling, for the control of slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in furnaces and boilers through the addition of chemicals into the furnace using TIFI® Targeted In-Furnace Injection technology. Fuel Tech sells its FUEL CHEM program through its direct sales force and agents to industrial and utility power-generation facilities. FUEL CHEM programs are installed on combustion units in North America, Europe, China, and India, treating a wide variety of solid and liquid fuels, including coal, heavy oil, biomass and municipal waste. The FUEL CHEM program improves the efficiency, reliability and environmental status of plants operating in the electric utility, industrial, pulp and paper, waste-to-energy, university and district heating markets and offers numerous operational, financial and environmental benefits to owners of boilers, furnaces and other combustion units.

The key market dynamic for both technology segments is the continued use of fossil fuels, especially coal, as the principal fuel source for global electricity production. Coal accounts for approximately 50% of all U.S. electricity generation. Coal s share of global electricity generation is forecast to be approximately 41% by 2030. Major coal consumers include China, the United States and India.

Critical Accounting Policies and Estimates

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America, which require us to make estimates and assumptions. We believe that of our accounting policies (see Note 1 to the consolidated financial statements), the following involve a higher degree of judgment and complexity and are deemed critical. We routinely discuss our critical accounting policies with the Company s Audit Committee.

Revenue Recognition

Revenues from the sales of chemical products are recorded when title transfers, either at the point of shipment or at the point of destination, depending on the contract with the customer.

Fuel Tech uses the percentage of completion method of accounting for equipment construction and license contracts that are sold within the Air Pollution Control technology segment. Under the percentage of completion method, revenues are recognized as work is performed based on the relationship between actual construction costs incurred and total estimated costs at completion. Construction costs include all direct costs such as materials, labor, and subcontracting costs, and indirect costs allocable to the particular contract such as indirect labor, tools and equipment, supplies, and depreciation. Revisions in completion estimates and contract values are made in the period in which the facts giving rise to the revisions become known and can influence the timing of when revenues are recognized under the percentage of completion method of accounting. Such revisions have historically not had a material effect on the

amount of revenue recognized. Provisions are made for estimated losses on uncompleted contracts in the period in which such losses are determined. As of December 31, 2010, Fuel Tech had no construction contracts in progress that were identified as loss contracts. As of December 31, 2009, Fuel Tech had one construction contract in progress that was identified as a loss contract in the amount of $166.

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Fuel Tech s APC contracts are typically eight to sixteen months in length. A typical contract will have three or four critical operational measurements that, when achieved, serve as the basis for us to invoice the customer via progress billings. At a minimum, these measurements will include the generation of engineering drawings, the shipment of equipment and the completion of a system performance test.

As part of most of its contractual APC project agreements, Fuel Tech will agree to customer-specific acceptance criteria that relate to the operational performance of the system that is being sold. These criteria are determined based on mathematical modeling that is performed by Fuel Tech personnel, which is based on operational inputs that are provided by the customer. The customer will warrant that these operational inputs are accurate as they are specified in the binding contractual agreement. Further, the customer is solely responsible for the accuracy of the operating condition information; all performance guarantees and equipment warranties granted by us are void if the operating condition information is inaccurate or is not met.

Accounts receivable includes unbilled receivables, representing revenues recognized in excess of billings on uncompleted contracts under the percentage of completion method of accounting. At December 31, 2010 and December 31, 2009, unbilled receivables were approximately $6,800 and $7,814, respectively, and are included in accounts receivable on the consolidated balance sheet. Billings in excess of costs and estimated earnings on uncompleted contracts were $650 and $316 at December 31, 2010 and December 31, 2009, respectively, and are included in other accrued liabilities on the consolidated balance sheet.

Fuel Tech has installed over 640 units with APC technology and normally provides performance guarantees to our customers based on the operating conditions for the project. As part of the project implementation process, we perform system start-up and optimization services that effectively serve as a test of actual project performance. We believe that this test, combined with the accuracy of the modeling that is performed, enables revenue to be recognized prior to the receipt of formal customer acceptance.

Allowance for Doubtful Accounts

The allowance for doubtful accounts is the Company s best estimate of the amount of credit losses in accounts receivable. In order to control and monitor the credit risk associated with our customer base, we review the credit worthiness of customers on a recurring basis. Factors influencing the level of scrutiny include the level of business the customer has with Fuel Tech, the customer s payment history and the customer s financial stability. Receivables are considered past due if payment is not received by the date agreed upon with the customer, which is normally 30 days. Representatives of our management team review all past due accounts on a weekly basis to assess collectability. At the end of each reporting period, the allowance for doubtful accounts balance is reviewed relative to management s collectability assessment and is adjusted if deemed necessary through a corresponding charge or credit to bad debts expense, which is included in selling, general, and administrative expenses in the consolidated statements of operations. Bad debt write-offs are made when management believes it is probable a receivable will not be recovered. Our historical credit loss has been insignificant.

Assessment of Potential Impairments of Goodwill and Intangible Assets

Goodwill and indefinite-lived intangible assets are no longer amortized, but rather are reviewed annually (in the fourth quarter) or more frequently if indicators arise, for impairment. The Company does not have any indefinite-lived intangible assets other than goodwill. Such indicators include a decline in expected cash flows, a significant adverse change in legal factors or in the business climate, unanticipated competition, a decrease in our market capitalization to an amount less than the carrying value of our assets, or slower growth rates, among others.