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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Form 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 30, 2018

or

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

For the transition period from to

Commission file number 001-5075

PerkinElmer, Inc.

(Exact name of registrant as specified in its charter)

Massachusetts	**04-2052042**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
940 Winter Street, Waltham, Massachusetts	**02451**
(Address of Principal Executive Offices)	*(Zip Code)*

(Registrant's telephone number, including area code): (781) 663-6900

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $1 Par Value	New York Stock Exchange

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 ☑ No ☐

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 ☐ No ☑

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or Section 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 ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 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 ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to 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. ☑

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark whether the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

The aggregate market value of the common stock, $1 par value per share, held by non-affiliates of the registrant on June 29, 2018, was $7,944,359,992 based upon the last reported sale of $73.23 per share of common stock on June 29, 2018.

As of February 22, 2019, there were outstanding 110,800,020 shares of common stock, $1 par value per share.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of PerkinElmer, Inc.'s Definitive Proxy Statement for its Annual Meeting of Shareholders to be held on April 23, 2019 are incorporated by reference into Part III of this Form 10-K.

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PART I

Item 1. *Business*

Overview

We are a leading provider of products, services and solutions for the diagnostics, life sciences and applied markets. Through our advanced technologies and differentiated solutions, we address critical issues that help to improve lives and the world around us.

We are a Massachusetts corporation, founded in 1947. Our headquarters are in Waltham, Massachusetts, and we market our products and services in more than 180 countries. As of December 30, 2018, we employed approximately 12,500 employees. Our common stock is listed on the New York Stock Exchange under the symbol "PKI" and we are a component of the S&P 500 Index.

We maintain a website with the address http://www.perkinelmer.com. We are not including the information contained in our website as part of, or incorporating it by reference into, this annual report on Form 10-K. We make available free of charge through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports, as soon as reasonably practicable after we electronically file these materials with, or otherwise furnish them to, the Securities and Exchange Commission.

Our Strategy

Our strategy is to develop and deliver innovative products, services and solutions in high-growth markets that utilize our knowledge and expertise to address customers' critical needs and drive scientific breakthroughs. To execute on our strategy and accelerate revenue growth, we focus on broadening our offerings through both the acquisition of innovative technology and investment in research and development. Our strategy includes:

- Achieving significant growth in both of our core business segments, Discovery & Analytical Solutions and Diagnostics, through strategic acquisitions and licensing;
- Accelerating innovation through both internal research and development and third-party collaborations and alliances;
- Strengthening our position within key markets, by expanding our global product and service offerings and maintaining superior product quality;
- Utilizing our share repurchase programs to help drive shareholder value; and
- Attracting, retaining and developing talented and engaged employees.

Recent Developments

As part of our strategy to grow our core businesses, we have recently taken the following actions:

Acquisitions in Fiscal Year 2018:

We completed the acquisition of four businesses for aggregate consideration of $106.0 million. We reported the operations of these acquisitions within the results of our Discovery & Analytical Solutions or Diagnostics segments, as applicable, from the acquisition dates.

Restructuring:

During fiscal year 2018, we recorded pre-tax restructuring charges of $6.6 million in our Discovery & Analytical Solutions segment and $1.5 million in our Diagnostics segment related to a workforce reduction from restructuring activities. Our management approved these plans to realign resources to emphasize growth initiatives. We also terminated various contractual commitments in connection with certain disposal activities and have recorded charges, to the extent applicable, for the costs of terminating these contracts before the end of their terms and the costs that will continue to be incurred for the remaining terms without economic benefit to us. We recorded pre-tax charges of $5.0 million in the Discovery & Analytical Solutions segment during fiscal year 2018 as a result of these contract terminations.

This pre-tax restructuring activity has been reported as restructuring and contract termination charges and is included as a component of income from continuing operations. We expect no significant impact on future operating results or cash flows from the restructuring activities executed in fiscal year 2018.

Business Segments and Products

We report our business in two segments: Discovery & Analytical Solutions and Diagnostics.

Discovery & Analytical Solutions Segment

Our comprehensive portfolio of technologies helps life sciences researchers better understand diseases and develop treatments. In addition, we enable scientists to detect, monitor and manage contaminants and toxic chemicals that impact our environment and food supply. Our Discovery & Analytical Solutions segment serves the life sciences and applied markets.

Life Sciences Market:

The life sciences market consists of the life sciences research market and laboratory services market. In the life sciences market, we provide a broad suite of solutions including reagents, informatics, and detection and imaging technologies that enable scientists to work smarter, make research breakthroughs and transform those breakthroughs to real-world outcomes. These products, solutions and services support pharmaceutical and biotech companies and academic institutions globally in discovering and developing better treatments and therapeutics to fight disease, faster and more efficiently.

We also provide services designed to help customers in the laboratory services market increase efficiencies and production time while reducing lab maintenance costs. Our OneSource® laboratory service business is aligned with customers' needs, enabling them to accelerate scientific progress and commercial opportunities.

Applied Markets:

The applied markets consist of environmental, food and industrial markets. For the environmental markets, we develop and provide analytical technologies, solutions and services that enable our customers to understand the characterization and health of many aspects of our environment, including air, water and soil. Our solutions are used to detect and help reduce the impact products and industrial processes have on our environment. For example, our solutions help ensure compliance with regulatory standards that protect the purity of the world's water supply by detecting harmful substances, including trace metals such as lead, and organic pollutants such as pesticides and benzene. We provide the tools needed to test functionality, meet quality specifications and safety standards, and innovate for next generation products.

We also offer a variety of solutions that help farmers and food producers provide a growing population with food that is safe, nutritious and appealing, and assist manufacturers with product consistency and maximizing production yield. Our instruments confirm food quality, including the level of moisture in grain or the level of fat in butter, as well as detect the presence of potentially dangerous contaminants, such as lead and mercury in milk. Our solutions can also be used to identify the origin of food products such as olive oil, which helps prevent counterfeiting. Our methods and analyses are transferable throughout the supply chain to enable customers to keep pace with industry standards as well as governmental regulations and certifications.

We also provide analytical instrumentation for the industrial market which includes the chemical, semiconductor and electronics, energy, lubricant, petrochemical and polymer industries. Our technologies for this market are primarily used by customers focusing on quality assurance standards.

Principal Products:

Our principal products and services for Discovery & Analytical Solutions applications include the following:

Life Sciences Market:

- Radiometric detection solutions, including over 1,100 radiochemicals and the Tri-carb® and Quantulus™ GCT families of liquid scintillation analyzers, Wizard²® Gamma counters and MicroBeta²® plate based LSA, which are used for beta, gamma and luminescence counting in microplate and vial formats utilized in research, environmental and drug discovery applications.
- The Opera Phenix® high content screening system, which is used for sensitive and high speed phenotypic drug screening of complex cellular models.
- The Operetta® CLS™ high content analysis system, which enables scientists to reveal fine sub-cellular details from everyday assays as well as more complex studies, for example using live cells, 3D and stem cells.
- The EnSight® multimode plate reader benchtop system, offering well plate imaging alongside labeled detection technologies for target-based and phenotypic assays.
- The EnVision® multimode plate reader, designed for high-throughput screening laboratories, including those using AlphaScreen®, AlphaLISA® and/or AlphaPlex® technologies.

- A wide range of homogeneous biochemical and cell based assay reagents, including LANCE® *Ultra*™ and Alpha™ technology assay platforms used for the detection of drug discovery targets such as G-protein coupled receptors (“GPCR”), kinases, biomarkers and the modification of epigenetic enzymes.
- A broad portfolio of recombinant GPCR and ion channel cell lines, including over 300 products and 120 ready-to-use frozen cell lines for a wide range of disease areas.
- AlphaScreen®, AlphaLISA® and AlphaPlex® research assays, including over 500 no-wash biomarker detection kits for both biotherapeutics and small molecule drug discovery and development in a variety of therapeutic areas including cancer, inflammation, metabolic disorders, neurodegeneration and virology.
- TSA™ Plus biotin kits, which can increase sensitivity of histochemistry and cytochemistry as much as 10 to 20 times.
- In vivo imaging technologies and reagents for preclinical research, including the IVIS® Spectrum™ series for 2D and 3D optical imaging, the FMT® series for 3D optical tomography and the IVIS® Lumina™ series for 2D imaging, along with a suite of bioluminescent and fluorescent imaging agents, cell lines and dyes. These technologies are designed to provide non-invasive longitudinal monitoring of disease progression, cell trafficking and gene expression patterns in living animals and are complemented by a broad portfolio of fluorescent and bioluminescent in vivo imaging reagents that can be useful for identifying, characterizing and quantifying a range of disease biomarkers and therapeutic efficacy in living animal models.
- The G8 PET/CT preclinical imaging system, delivering PET imaging with an intuitive user interface and efficient workflows, ensuring subject monitoring throughout preparation and imaging.
- The Quantum™ GX2 system, which enables in vivo imaging of multiple species across multiple disease areas by delivering industry leading high resolution imaging. Low dose scanning allows subjects to be imaged over time to evaluate disease progression while minimizing the harmful effects of radiation that could impact the biology of the animal. With the Quantum™ GX2 system, data from the IVIS® and FMT® imaging platforms can be seamlessly co-registered with microCT to deliver more information on the disease state.
- OneSource® laboratory services, a comprehensive portfolio of multivendor instrument management, QA/QC, lab relocation and regulatory compliance services. OneSource® programs are tailored to the specific needs and goals of individual customers and offer a series of informatics-based consulting, planning and management offerings to assist in laboratory productivity and the optimization of complex Information Technology platforms.
- OneSource® Dashboard, a TIBCO® Spotfire® technology driven interactive graphical platform, providing visibility to a customer’s global asset population, service event and downtime distribution, as well as key performance indicators to assist in asset operation.
- OneSource® Insights as a Service™, which leverages comprehensive OneSource® analytics and industry data to develop and deliver customer-need driven recommendations to optimize, integrate and accelerate lab operations.
- PerkinElmer Signals Medical Review™ software, empowering medical monitors to detect safety signals faster and reduce overall time to submission by combining innovative medical review workflow with advanced analytics.
- PerkinElmer Signals Lead Discovery™ software, which enables researchers to quickly gain new insights into chemical and biomolecular research data, featuring guided search and analysis workflows and dynamic data visualizations for on-the-fly exploration.
- PerkinElmer Signals™ Notebook, a scientific research data management solution, allowing researchers to record research data and experiments in digital notebooks, drag & drop, store, organize, share, find and filter data easily.
- PerkinElmer Signals™ Translational data management, aggregation and analysis platform, which offers out-of-the-box support for the complete precision medicine workflow from data acquisition to biomarker discovery and validation.

Applied Markets:

- The Clarus® series of gas chromatographs, gas chromatographs/mass spectrometers and the TurboMatrix™ family of sample-handling equipment, which are used to identify and quantify compounds in the environmental, forensics, food and beverage, hydrocarbon processing/biofuels, materials testing, pharmaceutical and semiconductor industries.
- The Flexar™ ultra-high performance liquid chromatography (UHPLC) and Flexar advanced liquid chromatography systems, which provide high throughput and resolution chromatographic separations.
- The QSight® Triple Quad LC/MS/MS, a flow-based mass spectrometry system that provides high sensitivity and enables high levels of efficiency and productivity to meet both standard and regulatory requirements.
- The Torion® T-9 portable GC/MS, a fast person-portable GC/MS system, enabling rapid detection and actionable results to potentially hazardous and emergency environmental conditions.
- Our atomic spectroscopy family of instruments, including the PinAAcle® family of atomic absorption spectrometers, the Avio® family of inductively coupled plasma (“ICP”) optical emission spectrometers and the

NexION® family of ICP mass spectrometers, which are used in the environmental and chemical industries, among others, to determine the elemental content of a sample.
- Our infrared spectroscopy (IR) family of instruments, the Spectrum Two™ IR & NIR spectrometers, which are compact and portable and used for high-speed infrared analysis for unknown substance identification, material qualification or concentration determination in fuel and lubricant analysis, polymer analysis and pharmaceutical and environmental applications. This includes the Frontier™ IR and NIR spectrometers designed to provide high sensitivity and flexibility to address a range of sample types. Spotlight™ IR systems are designed for scientists whose samples demand higher sensitivity and simpler analysis and workflows.
- The LAMBDA™ UV/Vis, a series of spectrophotometers that provide sampling flexibility to enable measurement of a wide range of sample types, including liquids, powders and solid materials, both in regulated industries as well as QC/QA and research applications.
- The 2400 Series II CHNS/O Elemental Analyzer, one of the leading organic elemental analyzers. It is ideal for the rapid determination of carbon, hydrogen, nitrogen, sulfur, and oxygen content in organic and other types of materials.
- Our thermal analysis family, including our Differential Scanning Calorimetry (DSC) series that offers exclusive HyperDSC™ capability for unparalleled sensitivity and new insights into material processes, our Thermogravimetric (TGA) and Simultaneous Thermal Analysis (STA) instruments, which can be coupled to Fourier Transform Infrared (FT-IR), Mass Spectrometry (MS), or Gas Chromatography/Mass Spectrometry (GC/MS) to provide greater analysis power and knowledge.
- Perten's Falling Number® and Glutomatic® instruments, which determine the bread baking quality of wheat and flour, and Perten's DA NIR bench and in process analyzer determine constituent content for use across the food segment from meat to animal feed.
- The Delta™ range of milk quality analyzers, which help ensure the quality of dairy products and are used at Central Milk Testing labs as well as dairy processing facilities around the world.
- The Bioo Scientific® test kits for detection of toxins, veterinary drug residues and contaminants, which enable rapid and easy testing at different steps in the food value chain.

New Products:

New products introduced or acquired for Discovery & Analytical Solutions applications in fiscal year 2018 include the following:

Life Sciences Market:

- A range of new AlphaLISA®, Alpha *SureFire® Ultra* and LANCE® reagents and assay kits across key research and therapeutic areas, including cell signaling, inflammation, oncology, and biotherapeutics.
- ChemDraw® 18 chemical structure drawing and visualization application, which is now available on the cloud.
- Lead Discovery Premium software, which allows scientists to import, filter by, analyze and interpret chemical structures and biosequences alongside other related data in a highly visual and interactive environment for faster insights and better decisions.
- OneSource® Asset Genius™ Monitoring Solution, part of the Asset Genius family, which offers a 360° view of PC-driven laboratory instruments regardless of the manufacturer, correlating instrument usage, age and service data, allowing customers to visually pinpoint under-performing, ideally-performing and over-burdened assets, and to make informed decisions.

Applied Markets:

- The FL 6500™ and FL 8500™ fluorescence spectrophotometers, which address the challenges of bioscience, industrial, chemical, environmental, pharmaceutical, agricultural and academic application. They are designed to improve lab productivity and ensure standard compliance regulations are met. The FL 6500™ provides a high-energy pulsed Xenon light source that preserves sample integrity and the FL 8500™ provides a high-sensitivity source for testing diluted or small samples.
- The QSight® 400 series is a robust, powerful ready-to-implement triple quad LC/MS/MS system providing higher sensitivity and throughput that regulated food, cannabis and environmental testing labs need to meet their most stringent requirements.

Brand Names:

Our Discovery & Analytical Solutions segment offers additional products under various brand names, including:

Life Sciences Market:

AlphaLISA®, AlphaPlex™, AlphaScreen®, Alpha™ SureFire®, AngioSense®, Annexin-Vivo™ , Cell carrier®, cell::explorer®, Chem3D®, ChemDraw®, ChemOffice®, Columbus™ Elements™, EnLite™, EnSight®, EnVision®, FMT®, FolateRSense™, High Content Profiler™, IntegriSense™, IVIS®, LANCE®, Living Image®, Lumina™, MicroBeta2®, MMPSense®, NEN™, OneSource®, Opera Phenix®, Operetta® CLS™, OsteoSense®, PerkinElmer Signals™ for Translational, ProSense®, Quantulus™ GCT, RediJect™, Spectrum™, Transferrin-Vivo™, Tri-Carb®, VICTOR Nivo™, ViewLux™, VivoTag®, Wizard2®, and XenoLight™.

Applied Markets:

Altus®, Aquamatic™, Avio®, AxION®, Clarus®, DairyGuard™, Falling Number®, Frontier™, Glutomatic®, Honigs Regression™, HyperDSC®, Inframatic™, LAMBDA™, NexION®, OilExpress™, OilPrep™, Optima®, Perten®, Perten Instruments®, PinAAcle®, QSight®, Spectrum™, Spectrum Two™, Spotlight™, Supra-clean®, Supra-d™, Supra-poly®, Syngistix™, Torion®, TurboMatrix™ and Ultraspray®.

Diagnostics Segment

We offer instruments, reagents, assay platforms, and software to hospitals, medical labs, clinicians, and medical research professionals to help improve the health of families. Our Diagnostics segment is especially focused on reproductive health, emerging market diagnostics, and applied genomics.

We provide early detection for genetic disorders from pregnancy to early childhood, and infectious disease testing for the diagnostics market. Our screening products are designed to provide early and accurate insights into the health of expectant mothers during pregnancy and into the health of their babies. Diagnostics labs use our instruments, reagents and software for testing and screening genetic abnormalities and certain disorders and diseases, including Down syndrome, hypothyroidism, infertility and various metabolic conditions. We also develop technologies that enable and support genomic workflows using PCR and next-generation DNA sequencing for applications in oncology and drug discovery.

Principal Products:

Our principal products and services for Diagnostics applications include the following:

- The DELFIA® Xpress screening platform, a complete solution for prenatal and maternal health screening, which includes a fast continuous loading system. It is supported by kits for first, second and third trimester analyses for prenatal screening and clinically validated LifeCycle™ software.
- The NeoBase™ non-derivatized MS/MS AAAC kit, which is used to support detection of metabolic disorders in newborns through tandem mass spectrometry. The kit analyzes newborn dry blood spot samples for measurement of amino acids and other metabolic analytes for specific diseases.
- The GSP® Neonatal hTSH, T4 17á-OHP, GALT IRT, BTD, PKU, Total Galactose, CK-MM and G6PD kits, used for screening congenital neonatal conditions from a drop of blood.
- The Specimen Gate® informatics data management solution, designed specifically for newborn screening laboratories.
- ViaCord® umbilical cord blood banking services for the banking of stem cells harvested from umbilical cord blood and cord tissue, for potential therapeutic application in transplant and regenerative medicine.
- An expanded portfolio of molecular-based infectious disease screening technologies for blood bank and clinical laboratory settings in China. The tools include a qualitative 3-in-1 assay for the detection of hepatitis B, hepatitis C and HIV, as well as assays for other communicable diseases.
- The EnLite™ Neonatal TREC™ System, a screening test for Severe Combined Immunodeficiency, consisting of EnLite™ Neonatal TREC™ reagent kits, the Victor EnLite™ instrument and EnLite™ workstation software.
- NeoLSD™ MSMS kit, the first commercial IVD kit for screening of Pompe, MPS-I, Fabry, Gaucher, Niemann-Pick A/B and Krabbe disorders from a single DBS sample.
- QSight® Triple Quad MSMS instrument, which is used for newborn screening.
- TRF based Anti HBs/HCV/TP kits for infectious disease testing.
- The chemagic™ Prime™ instrument, a fully automated, LIMS-compatible solution for primary sample transfer, DNA and RNA isolation, optional normalization, and the setup of PCR and NGS applications.
- Immune fluorescence testing (IFT), enzyme-linked immunosorbent assay (ELISA), chemiluminescence-based immunotesting, immunoblots, molecular microarrays, PCR, liquid handlers and software solutions.
- Autoimmune testing covering rheumatology, hepatology, gastroenterology, endocrinology, neurology, nephrology, dermatology and infertility.

- Infectious disease testing covering bacteria, viruses and parasites.
- IFT, ELISA and EUROLINE™ assays for veterinary medical diagnostics.
- Automated liquid handling platforms (JANUS®, Sciclone® and Zephyr®) that offer a choice of robotic solutions in genomics, biotherapeutics, high throughput screening and high content analysis to assist life science research from bench to clinic.
- JANUS® BioTx™ workstation for automated small scale purification, offering column, tip and plate based chromatography on a single platform.
- The LabChip GXII® Touch™ platform, which provides a means of characterizing multiple protein product attributes for research labs through QC.
- The explorer® automated workstation, which allows integration of multiple laboratory instrumentation using a centralized robotic interface, allowing high throughput and turnkey-application focused solutions.

New Products:

Significant new products introduced or acquired for Diagnostics applications in fiscal year 2018 include the following:

- Vanadis®NIPT, a breakthrough cfDNA technology for use in genetic and biochemistry laboratories for screening common trisomies in pregnant population.
- Allergy testing covering allergen-specifi immunoglobin e (IgE) measuring the level of different IgE antibodies in blood using ELISA and EUROLINE™ assays.
- PG-Seq™ and DOPlify® kits for preimplantation genetic testing.
- New NextFLEX® library prep kits and barcode for next generation sequencing.
- ProteinEXact™ assay for protein quantitation and sizing applications.

Brand Names:

Our Diagnostics segment offers additional products under various brand names, including AutoDELFIA®, BACS-on-Beads®, BIOCHIPs, Bioo Scientific®, BoBs®, chemagic™, Datalytix™, DELFIA®, DELFIA® Xpress, DOPlify®, EUROArray™, EUROIMMUN®, EUROLabWorkstation™, EUROline™, EUROPattern™, Evolution™, explorer™, FragilEase®, Genoglyphix®, GSP®, iLab™, JANUS®, LabChip®, LifeCycle™, LimsLink™, MultiPROBE®, NEXTFLEX®, NextPrep™, Pannoramic™, PG-Seq™, PG-Find™, Protein Clear™, ProteinEXact™, QSight®, Sciclone®, Specimen Gate®, Symbio™, Twister®, Vanadis™, VariSpec™, ViaCord®, and Zephyr®.

Marketing

All of our businesses market their products and services primarily through their own specialized sales forces. As of December 30, 2018, we employed approximately 4,800 sales and service representatives operating in approximately 35 countries and marketing products and services in more than 180 countries. In geographic regions where we do not have a sales and service presence, we utilize distributors to sell our products.

Raw Materials, Key Components and Supplies

Each of our businesses uses a wide variety of raw materials, key components and supplies that are generally available from alternate sources of supply and in adequate quantities from domestic and foreign sources. We generally have multi-year contracts, with no minimum purchase requirements, with our suppliers. For certain critical raw materials, key components and supplies required for the production of some of our principal products, we have qualified only a limited or a single source of supply. We periodically purchase quantities of some of these critical raw materials in excess of current requirements, in anticipation of future manufacturing needs. With sufficient lead times, we believe we would be able to qualify alternative suppliers for each of these raw materials and key components. See the applicable risk factor in "Item 1A. Risk Factors" for an additional description of this risk.

Intellectual Property

We own numerous United States and foreign patents and have patent applications pending in the United States and abroad. We also license intellectual property rights to and from third parties, some of which bear royalties and are terminable in specified circumstances. In addition to our patent portfolio, we possess a wide array of unpatented proprietary technology and know-how. We also own numerous United States and foreign trademarks and trade names for a variety of our product names, and have applications for the registration of trademarks and trade names pending in the United States and abroad. We believe that patents and other proprietary rights are important to the development of both of our reporting segments, but we also rely upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain the

competitive position of both of our reporting segments. We do not believe that the loss of any one patent or other proprietary right would have a material adverse effect on our overall business or on any of our reporting segments.

In some cases, we may participate in litigation or other proceedings to defend against or assert claims of infringement, to enforce our patents or our licensors' patents, to protect our trade secrets, know-how or other intellectual property rights, or to determine the scope and validity of our or third parties' intellectual property rights. Litigation of this type could result in substantial cost to us and diversion of our resources. An adverse outcome in any litigation or proceeding could subject us to significant liabilities or expenses, require us to cease using disputed intellectual property or cease the sale of a product, or require us to license the disputed intellectual property from third parties.

Backlog

We believe that backlog is not a meaningful indicator of future business prospects for either of our business segments due to the short lead time required for a majority of our sales. Therefore, we believe that backlog information is not material to an understanding of our business.

Competition

Due to the range and diversity of our products and services, we face many different types of competition and competitors. Our competitors range from foreign and domestic organizations, which produce a comprehensive array of goods and services and that may have greater financial and other resources than we do, to more narrowly focused firms producing a limited number of goods or services for specialized market segments.

We compete on the basis of service level, price, technological innovation, operational efficiency, product differentiation, product availability, quality and reliability. Competitors range from multinational organizations with a wide range of products to specialized firms that in some cases have well-established market positions. We expect the proportion of large competitors to increase through the continued consolidation of competitors.

Research and Development

We have a broad product base, and we do not expect any single research and development project to have significant costs. To accelerate our growth initiatives, we directed our research and development efforts in fiscal years 2018, 2017 and 2016 primarily toward our Diagnostics segment, and the life sciences and applied markets within our Discovery & Analytical Solutions segment. We expect to continue our strong investments in research and development to drive growth during fiscal year 2019, and to continue to emphasize the Diagnostics segment, and the life sciences and applied markets within our Discovery & Analytical Solutions segment.

Environmental Matters

Our operations are subject to various foreign, federal, state and local environmental and safety laws and regulations. These requirements include those governing uses, emissions and discharges of hazardous substances, the remediation of contaminated soil and groundwater, the regulation of radioactive materials, and the health and safety of our employees.

We may have liability under the Comprehensive Environmental Response Compensation and Liability Act and comparable state statutes that impose liability for investigation and remediation of contamination without regard to fault, in connection with materials that we or our former businesses sent to various third-party sites. We have incurred, and expect to incur, costs pursuant to these statutes.

We are conducting a number of environmental investigations and remedial actions at our current and former locations and, along with other companies, have been named a potentially responsible party ("PRP") for certain waste disposal sites. We accrue for environmental issues in the accounting period that our responsibility is established and when the cost can be reasonably estimated. We have accrued $7.9 million and $9.4 million as of December 30, 2018 and December 31, 2017, respectively, which represents our management's estimate of the cost of the remediation of known environmental matters, and does not include any potential liability for related personal injury or property damage claims. Our environmental accrual is not discounted and does not reflect the recovery of any material amounts through insurance or indemnification arrangements. The cost estimates are subject to a number of variables, including the stage of the environmental investigations, the magnitude of the possible contamination, the nature of the potential remedies, possible joint and several liability, the time period over which remediation may occur, and the possible effects of changing laws and regulations. For sites where we have been named a PRP, our management does not currently anticipate any additional liability to result from the inability of other significant named

parties to contribute. We expect that the majority of such accrued amounts could be paid out over a period of up to ten years. As assessment and remediation activities progress at each individual site, these liabilities are reviewed and adjusted to reflect additional information as it becomes available. There have been no environmental problems to date that have had, or are expected to have, a material adverse effect on our consolidated financial statements. While it is possible that a loss exceeding the amounts recorded in the consolidated financial statements may be incurred, the potential exposure is not expected to be materially different from those amounts recorded.

We may become subject to new or unforeseen environmental costs or liabilities. Compliance with new or more stringent laws or regulations, stricter interpretations of existing laws, or the discovery of new contamination could cause us to incur additional costs.

Employees

As of December 30, 2018, we employed approximately 12,500 employees. Several of our subsidiaries are parties to contracts with labor unions and workers' councils. As of December 30, 2018, we estimate that we employed an aggregate of approximately 1,700 union and workers' council employees. We consider our relations with our employees to be satisfactory.

Item 1A. *Risk Factors*

The following important factors affect our business and operations generally or affect multiple segments of our business and operations:

If the markets into which we sell our products decline or do not grow as anticipated due to a decline in general economic conditions, or there are uncertainties surrounding the approval of government or industrial funding proposals, or there are unfavorable changes in government regulations, we may see an adverse effect on the results of our business operations.

Our customers include pharmaceutical and biotechnology companies, laboratories, academic and research institutions, public health authorities, private healthcare organizations, doctors and government agencies. Our quarterly revenue and results of operations are highly dependent on the volume and timing of orders received during the quarter. In addition, our revenues and earnings forecasts for future quarters are often based on the expected trends in our markets. However, the markets we serve do not always experience the trends that we may expect. Negative fluctuations in our customers' markets, the inability of our customers to secure credit or funding, restrictions in capital expenditures, general economic conditions, cuts in government funding or unfavorable changes in government regulations would likely result in a reduction in demand for our products and services. In addition, government funding is subject to economic conditions and the political process, which is inherently fluid and unpredictable. Our revenues may be adversely affected if our customers delay or reduce purchases as a result of uncertainties surrounding the approval of government or industrial funding proposals. Such declines could harm our consolidated financial position, results of operations, cash flows and trading price of our common stock, and could limit our ability to sustain profitability.

Our growth is subject to global economic and political conditions, and operational disruptions at our facilities.

Our business is affected by global economic and political conditions as well as the state of the financial markets, particularly as the United States and other countries balance concerns around debt, inflation, growth and budget allocations in their policy initiatives. There can be no assurance that global economic conditions and financial markets will not worsen and that we will not experience any adverse effects that may be material to our consolidated cash flows, results of operations, financial position or our ability to access capital, such as the adverse effects resulting from a prolonged shutdown in government operations both in the United States and internationally. Our business is also affected by local economic environments, including inflation, recession, financial liquidity and currency volatility or devaluation. Political changes, some of which may be disruptive, could interfere with our supply chain, our customers and all of our activities in a particular location.

While we take precautions to prevent production or service interruptions at our global facilities, a major earthquake, fire, flood, power loss or other catastrophic event that results in the destruction or delay of any of our critical business operations could result in our incurring significant liability to customers or other third parties, cause significant reputational damage or have a material adverse effect on our business, operating results or financial condition.

Certain of these risks can be hedged to a limited degree using financial instruments, or other measures, and some of these risks are insurable, but any such mitigation efforts are costly and may not always be fully successful. Our ability to engage in such mitigation efforts has decreased or become even more costly as a result of recent market developments.

If we do not introduce new products in a timely manner, we may lose market share and be unable to achieve revenue growth targets.

We sell many of our products in industries characterized by rapid technological change, frequent new product and service introductions, and evolving customer needs and industry standards. Many of the businesses competing with us in these industries have significant financial and other resources to invest in new technologies, substantial intellectual property portfolios, substantial experience in new product development, regulatory expertise, manufacturing capabilities, and established distribution channels to deliver products to customers. Our products could become technologically obsolete over time, or we may invest in technology that does not lead to revenue growth or continue to sell products for which the demand from our customers is declining, in which case we may lose market share or not achieve our revenue growth targets. The success of our new product offerings will depend upon several factors, including our ability to:

- accurately anticipate customer needs,
- innovate and develop new reliable technologies and applications,
- receive regulatory approvals in a timely manner,
- successfully commercialize new technologies in a timely manner,
- price our products competitively, and manufacture and deliver our products in sufficient volumes and on time, and
- differentiate our offerings from our competitors' offerings.

Many of our products are used by our customers to develop, test and manufacture their products. We must anticipate industry trends and consistently develop new products to meet our customers' expectations. In developing new products, we may be required to make significant investments before we can determine the commercial viability of the new product. If we fail to accurately foresee our customers' needs and future activities, we may invest heavily in research and development of products that do not lead to significant revenue. We may also suffer a loss in market share and potential revenue if we are unable to commercialize our technology in a timely and efficient manner.

In addition, some of our licensed technology is subject to contractual restrictions, which may limit our ability to develop or commercialize products for some applications.

We may not be able to successfully execute acquisitions or divestitures, license technologies, integrate acquired businesses or licensed technologies into our existing businesses, or make acquired businesses or licensed technologies profitable.

We have in the past supplemented, and may in the future supplement, our internal growth by acquiring businesses and licensing technologies that complement or augment our existing product lines, such as our various acquisitions during fiscal year 2018. However, we may be unable to identify or complete promising acquisitions or license transactions for many reasons, such as:

- competition among buyers and licensees,
- the high valuations of businesses and technologies,
- the need for regulatory and other approval, and
- our inability to raise capital to fund these acquisitions.

Some of the businesses we acquire may be unprofitable or marginally profitable, or may increase the variability of our revenue recognition. If, for example, we are unable to successfully commercialize products and services related to significant in-process research and development that we have capitalized, we may have to impair the value of such assets. Accordingly, the earnings or losses of acquired businesses may dilute our earnings. For these acquired businesses to achieve acceptable levels of profitability, we would have to improve their management, operations, products and market penetration. We may not be successful in this regard and may encounter other difficulties in integrating acquired businesses into our existing operations, such as incompatible management, information or other systems, cultural differences, loss of key personnel, unforeseen regulatory requirements, previously undisclosed liabilities or difficulties in predicting financial results. Additionally, if we are not successful in selling businesses we seek to divest, the activity of such businesses may dilute our earnings and we may not be able to achieve the expected benefits of such divestitures. As a result, our financial results may differ from our forecasts or the expectations of the investment community in a given quarter or over the long term.

To finance our acquisitions, we may have to raise additional funds, either through public or private financings. We may be unable to obtain such funds or may be able to do so only on terms unacceptable to us. We may also incur expenses related to

completing acquisitions or licensing technologies, or in evaluating potential acquisitions or technologies, which may adversely impact our profitability.

We may not be successful in adequately protecting our intellectual property.

Patent and trade secret protection is important to us because developing new products, processes and technologies gives us a competitive advantage, although it is time-consuming and expensive. We own many United States and foreign patents and intend to apply for additional patents. Patent applications we file, however, may not result in issued patents or, if they do, the claims allowed in the patents may be narrower than what is needed to protect fully our products, processes and technologies. The expiration of our previously issued patents may cause us to lose a competitive advantage in certain of the products and services we provide. Similarly, applications to register our trademarks may not be granted in all countries in which they are filed. For our intellectual property that is protected by keeping it secret, such as trade secrets and know-how, we may not use adequate measures to protect this intellectual property.

Third parties may also challenge the validity of our issued patents, may circumvent or “design around” our patents and patent applications, or may claim that our products, processes or technologies infringe their patents. In addition, third parties may assert that our product names infringe their trademarks. We may incur significant expense in legal proceedings to protect our intellectual property against infringement by third parties or to defend against claims of infringement by third parties. Claims by third parties in pending or future lawsuits could result in awards of substantial damages against us or court orders that could effectively prevent us from manufacturing, using, importing or selling our products in the United States or other countries.

If we are unable to renew our licenses or otherwise lose our licensed rights, we may have to stop selling products or we may lose competitive advantage.

We may not be able to renew our existing licenses, or licenses we may obtain in the future, on terms acceptable to us, or at all. If we lose the rights to a patented or other proprietary technology, we may need to stop selling products incorporating that technology and possibly other products, redesign our products or lose a competitive advantage. Potential competitors could in-license technologies that we fail to license and potentially erode our market share.

Our licenses typically subject us to various economic and commercialization obligations. If we fail to comply with these obligations, we could lose important rights under a license, such as the right to exclusivity in a market, or incur losses for failing to comply with our contractual obligations. In some cases, we could lose all rights under the license. In addition, rights granted under the license could be lost for reasons out of our control. For example, the licensor could lose patent protection for a number of reasons, including invalidity of the licensed patent, or a third-party could obtain a patent that curtails our freedom to operate under one or more licenses.

If we do not compete effectively, our business will be harmed.

We encounter aggressive competition from numerous competitors in many areas of our business. We may not be able to compete effectively with all of these competitors. To remain competitive, we must develop new products and periodically enhance our existing products. We anticipate that we may also have to adjust the prices of many of our products to stay competitive. In addition, new competitors, technologies or market trends may emerge to threaten or reduce the value of entire product lines.

Our quarterly operating results could be subject to significant fluctuation, and we may not be able to adjust our operations to effectively address changes we do not anticipate, which could increase the volatility of our stock price and potentially cause losses to our shareholders.

Given the nature of the markets in which we participate, we cannot reliably predict future revenue and profitability. Changes in competitive, market and economic conditions may require us to adjust our operations, and we may not be able to make those adjustments or make them quickly enough to adapt to changing conditions. A high proportion of our costs are fixed in the short term, due in part to our research and development and manufacturing costs. As a result, small declines in sales could disproportionately affect our operating results in a quarter. Factors that may affect our quarterly operating results include:

- demand for and market acceptance of our products,
- competitive pressures resulting in lower selling prices,
- changes in the level of economic activity in regions in which we do business,
- changes in general economic conditions or government funding,
- settlements of income tax audits,

- expenses incurred in connection with claims related to environmental conditions at locations where we conduct or formerly conducted operations,
- contract termination and litigation costs,
- differing tax laws and changes in those laws, or changes in the countries in which we are subject to taxation,
- changes in our effective tax rate,
- changes in industries, such as pharmaceutical and biomedical,
- changes in the portions of our revenue represented by our various products and customers,
- our ability to introduce new products,
- our competitors' announcement or introduction of new products, services or technological innovations,
- costs of raw materials, energy or supplies,
- changes in healthcare or other reimbursement rates paid by government agencies and other third parties for certain of our products and services,
- our ability to realize the benefit of ongoing productivity initiatives,
- changes in the volume or timing of product orders,
- fluctuation in the expense related to the mark-to-market adjustment on postretirement benefit plans,
- changes in our assumptions underlying future funding of pension obligations,
- changes in assumptions used to determine contingent consideration in acquisitions, and
- changes in foreign currency exchange rates.

A significant disruption in third-party package delivery and import/export services, or significant increases in prices for those services, could interfere with our ability to ship products, increase our costs and lower our profitability.

We ship a significant portion of our products to our customers through independent package delivery and import/export companies, including UPS and Federal Express in the United States; TNT, UPS and DHL in Europe; and UPS in Asia. We also ship our products through other carriers, including national trucking firms, overnight carrier services and the United States Postal Service. If one or more of the package delivery or import/export providers experiences a significant disruption in services or institutes a significant price increase, we may have to seek alternative providers and the delivery of our products could be prevented or delayed. Such events could cause us to incur increased shipping costs that could not be passed on to our customers, negatively impacting our profitability and our relationships with certain of our customers.

Disruptions in the supply of raw materials, certain key components and other goods from our limited or single source suppliers could have an adverse effect on the results of our business operations, and could damage our relationships with customers.

The production of our products requires a wide variety of raw materials, key components and other goods that are generally available from alternate sources of supply. However, certain critical raw materials, key components and other goods required for the production and sale of some of our principal products are available from limited or single sources of supply. We generally have multi-year contracts with no minimum purchase requirements with these suppliers, but those contracts may not fully protect us from a failure by certain suppliers to supply critical materials or from the delays inherent in being required to change suppliers and, in some cases, validate new raw materials. Such raw materials, key components and other goods can usually be obtained from alternative sources with the potential for an increase in price, decline in quality or delay in delivery. A prolonged inability to obtain certain raw materials, key components or other goods is possible and could have an adverse effect on our business operations, and could damage our relationships with customers.

We are subject to the rules of the Securities and Exchange Commission requiring disclosure as to whether certain materials known as conflict minerals (tantalum, tin, gold, tungsten and their derivatives) that may be contained in our products are mined from the Democratic Republic of the Congo and adjoining countries. As a result of these rules, we may incur additional costs in complying with the disclosure requirements and in satisfying those customers who require that the components used in our products be certified as conflict-free, and the potential lack of availability of these materials at competitive prices could increase our production costs.

The manufacture and sale of products and services may expose us to product and other liability claims for which we could have substantial liability.

We face an inherent business risk of exposure to product and other liability claims if our products, services or product candidates are alleged or found to have caused injury, damage or loss. We may be unable to obtain insurance with adequate levels of coverage for potential liability on acceptable terms or claims of this nature may be excluded from coverage under the terms of any insurance policy that we obtain. If we are unable to obtain such insurance or the amounts of any claims successfully brought against us substantially exceed our coverage, then our business could be adversely impacted.

If we fail to maintain satisfactory compliance with the regulations of the United States Food and Drug Administration and other governmental agencies in the United States and abroad, we may be forced to recall products and cease their manufacture and distribution, and we could be subject to civil, criminal or monetary penalties.

Our operations are subject to regulation by different state and federal government agencies in the United States and other countries, as well as to the standards established by international standards bodies. If we fail to comply with those regulations or standards, we could be subject to fines, penalties, criminal prosecution or other sanctions. Some of our products are subject to regulation by the United States Food and Drug Administration and similar foreign and domestic agencies. These regulations govern a wide variety of product activities, from design and development to labeling, manufacturing, promotion, sales and distribution. If we fail to comply with those regulations or standards, we may have to recall products, cease their manufacture and distribution, and may be subject to fines or criminal prosecution.

We are also subject to a variety of laws, regulations and standards that govern, among other things, the importation and exportation of products, the handling, transportation and manufacture of toxic or hazardous substances, and our business practices in the United States and abroad such as anti-bribery, anti-corruption and competition laws. This requires that we devote substantial resources to maintaining our compliance with those laws, regulations and standards. A failure to do so could result in the imposition of civil, criminal or monetary penalties having a material adverse effect on our operations.

Changes in governmental regulations may reduce demand for our products or increase our expenses.

We compete in markets in which we or our customers must comply with federal, state, local and foreign regulations, such as environmental, health and safety, and food and drug regulations. We develop, configure and market our products to meet customer needs created by these regulations. Any significant change in these regulations could reduce demand for our products or increase our costs of producing these products.

The healthcare industry is highly regulated and if we fail to comply with its extensive system of laws and regulations, we could suffer fines and penalties or be required to make significant changes to our operations which could have a significant adverse effect on the results of our business operations.

The healthcare industry, including the genetic screening market, is subject to extensive and frequently changing international and United States federal, state and local laws and regulations. In addition, legislative provisions relating to healthcare fraud and abuse, patient privacy violations and misconduct involving government insurance programs provide federal enforcement personnel with substantial powers and remedies to pursue suspected violations. We believe that our business will continue to be subject to increasing regulation as the federal government continues to strengthen its position on healthcare matters, the scope and effect of which we cannot predict. If we fail to comply with applicable laws and regulations, we could suffer civil and criminal damages, fines and penalties, exclusion from participation in governmental healthcare programs, and the loss of various licenses, certificates and authorizations necessary to operate our business, as well as incur liabilities from third-party claims, all of which could have a significant adverse effect on our business.

Economic, political and other risks associated with foreign operations could adversely affect our international sales and profitability.

Because we sell our products worldwide, our businesses are subject to risks associated with doing business internationally. Our sales originating outside the United States represented the majority of our total revenue in fiscal year 2018. We anticipate that sales from international operations will continue to represent a substantial portion of our total revenue. In addition, many of our manufacturing facilities, employees and suppliers are located outside the United States. Accordingly, our future results of operations could be harmed by a variety of factors, including:

- changes in actual, or from projected, foreign currency exchange rates,
- changes in a country’s or region’s political or economic conditions, particularly in developing or emerging markets,
- longer payment cycles of foreign customers and timing of collections in foreign jurisdictions,

- trade protection measures including embargoes and tariffs, such as the tariffs recently implemented by the U.S. government on certain imports from China and by the Chinese government on certain imports from the U.S., the extent and impact of which have yet to be fully determined,
- import or export licensing requirements and the associated potential for delays or restrictions in the shipment of our products or the receipt of products from our suppliers,
- policies in foreign countries benefiting domestic manufacturers or other policies detrimental to companies headquartered in the United States,
- differing tax laws and changes in those laws, or changes in the countries in which we are subject to tax,
- adverse income tax audit settlements or loss of previously negotiated tax incentives,
- differing business practices associated with foreign operations,
- difficulty in transferring cash between international operations and the United States,
- difficulty in staffing and managing widespread operations,
- differing labor laws and changes in those laws,
- differing protection of intellectual property and changes in that protection,
- expanded enforcement of laws related to data protection and personal privacy,
- increasing global enforcement of anti-bribery and anti-corruption laws, and
- differing regulatory requirements and changes in those requirements.

If we do not retain our key personnel, our ability to execute our business strategy will be limited.

Our success depends to a significant extent upon the continued service of our executive officers and key management and technical personnel, particularly our experienced engineers and scientists, and on our ability to continue to attract, retain, and motivate qualified personnel. The competition for these employees is intense. The loss of the services of key personnel could have a material adverse effect on our operating results. In addition, there could be a material adverse effect on us should the turnover rates for key personnel increase significantly or if we are unable to continue to attract qualified personnel. We do not maintain any key person life insurance policies on any of our officers or employees.

Our success also depends on our ability to execute leadership succession plans. The inability to successfully transition key management roles could have a material adverse effect on our operating results.

If we experience a significant disruption in, or breach in security of, our information technology systems or those of our customers, suppliers or other third parties, or cybercrime, resulting in inappropriate access to or inadvertent transfer of information or assets, or if we fail to implement new systems, software and technologies successfully, our business could be adversely affected.

We rely on several centralized information technology systems throughout our company to develop, manufacture and provide products and services, keep financial records, process orders, manage inventory, process shipments to customers and operate other critical functions. Our information technology systems may be susceptible to damage, disruptions or shutdowns due to power outages, hardware failures, computer viruses, attacks by computer hackers, telecommunication failures, user errors, catastrophes or other unforeseen events. If we were to experience a prolonged system disruption in the information technology systems that involve our interactions with customers, suppliers or other third parties, it could result in the loss of sales and customers and significant incremental costs, which could adversely affect our business. In addition, security breaches of our information technology systems or cybercrime, resulting in inappropriate access to or inadvertent transfer of information or assets, could result in losses or misappropriation of assets or unauthorized disclosure of confidential information belonging to us or to our employees, partners, customers or suppliers, which could result in our suffering significant financial or reputational damage.

We have a substantial amount of outstanding debt, which could impact our ability to obtain future financing and limit our ability to make other expenditures in the conduct of our business.

We have a substantial amount of debt and other financial obligations. Our debt level and related debt service obligations could have negative consequences, including:

- requiring us to dedicate significant cash flow from operations to the payment of principal and interest on our debt, which reduces the funds we have available for other purposes, such as acquisitions and stock repurchases;
- reducing our flexibility in planning for or reacting to changes in our business and market conditions; and
- exposing us to interest rate risk since a portion of our debt obligations are at variable rates.

In addition, we may incur additional indebtedness in the future to meet future financing needs. If we add new debt, the risks described above could increase.

Restrictions in our senior unsecured revolving credit facility and other debt instruments may limit our activities.

Our senior unsecured revolving credit facility, senior unsecured notes due in April 2021 ("April 2021 Notes"), senior unsecured notes due in November 2021 ("November 2021 Notes") and senior unsecured notes due in 2026 ("2026 Notes") include restrictive covenants that limit our ability to engage in activities that could otherwise benefit our company. These include restrictions on our ability and the ability of our subsidiaries to:

- pay dividends on, redeem or repurchase our capital stock,
- sell assets,
- incur obligations that restrict our subsidiaries’ ability to make dividend or other payments to us,
- guarantee or secure indebtedness,
- enter into transactions with affiliates, and
- consolidate, merge or transfer all, or substantially all, of our assets and the assets of our subsidiaries on a consolidated basis.

We are also required to meet specified financial ratios under the terms of certain of our existing debt instruments. Our ability to comply with these financial restrictions and covenants is dependent on our future performance, which is subject to prevailing economic conditions and other factors, including factors that are beyond our control, such as foreign exchange rates, interest rates, changes in technology and changes in the level of competition. In addition, if we are unable to maintain our investment grade credit rating, our borrowing costs would increase and we would be subject to different and potentially more restrictive financial covenants under some of our existing debt instruments.

Any future indebtedness that we incur may include similar or more restrictive covenants. Our failure to comply with any of the restrictions in our senior unsecured revolving credit facility, the April 2021 Notes, the November 2021 Notes, the 2026 Notes or any future indebtedness may result in an event of default under those debt instruments, which could permit acceleration of the debt under those debt instruments, and require us to prepay that debt before its scheduled due date under certain circumstances.

The United Kingdom's vote in favor of withdrawing from the European Union could adversely impact our results of operations.

Nearly 3% of our net sales from continuing operations in fiscal year 2018 came from the United Kingdom. Following the referendum vote in the United Kingdom in June 2016 in favor of leaving the European Union (commonly referred to as “Brexit”), on March 29, 2017, the country formally notified the European Union of its intention to withdraw. Brexit has involved a process of lengthy negotiations between the United Kingdom and European Union member states to determine the future terms of the United Kingdom’s relationship with the European Union. The potential effects of Brexit remain uncertain. Brexit has caused, and may continue to create, volatility in global stock markets and regional and global economic uncertainty particularly in the United Kingdom financial and banking markets. Weakening of economic conditions or economic uncertainties tend to harm our business, and if such conditions worsen in the United Kingdom or in the rest of Europe, it may have a material adverse effect on our operations and sales.

Any significant weakening of the Great Britain Pound to the U.S. dollar will have an adverse impact on our European revenues due to the importance of our sales in the United Kingdom. Currency exchange rates in the pound sterling and the euro with respect to each other and the U.S. dollar have already been adversely affected by Brexit and that may continue to be the case. In addition, depending on the terms of Brexit, the United Kingdom could lose the benefits of global trade agreements negotiated by the European Union on behalf of its members, which may result in increased trade barriers which could make our doing business in Europe more difficult.

Our results of operations will be adversely affected if we fail to realize the full value of our intangible assets.

As of December 30, 2018, our total assets included $4.2 billion of net intangible assets. Net intangible assets consist principally of goodwill associated with acquisitions and costs associated with securing patent rights, trademark rights, customer relationships, core technology and technology licenses and in-process research and development, net of accumulated amortization. We test certain of these items—specifically all of those that are considered "non-amortizing"—at least annually for potential impairment by comparing the carrying value to the fair market value of the reporting unit to which they are assigned. All of our amortizing intangible assets are also evaluated for impairment should events occur that call into question the value of the intangible assets.

Adverse changes in our business, adverse changes in the assumptions used to determine the fair value of our reporting units, or the failure to grow our Discovery & Analytical Solutions and Diagnostics segments may result in impairment of our intangible assets, which could adversely affect our results of operations.

Our share price will fluctuate.

Over the last several years, stock markets in general and our common stock in particular have experienced significant price and volume volatility. Both the market price and the daily trading volume of our common stock may continue to be subject to significant fluctuations due not only to general stock market conditions but also to a change in sentiment in the market regarding our operations and business prospects. In addition to the risk factors discussed above, the price and volume volatility of our common stock may be affected by:

- operating results that vary from our financial guidance or the expectations of securities analysts and investors,
- the financial performance of the major end markets that we target,
- the operating and securities price performance of companies that investors consider to be comparable to us,
- announcements of strategic developments, acquisitions and other material events by us or our competitors, and
- changes in global financial markets and global economies and general market conditions, such as interest or foreign exchange rates, commodity and equity prices and the value of financial assets.

Dividends on our common stock could be reduced or eliminated in the future.

On October 24, 2018, we announced that our Board had declared a quarterly dividend of $0.07 per share for the fourth quarter of fiscal year 2018 that was paid in February 2019. On January 24, 2019, we announced that our Board had declared a quarterly dividend of $0.07 per share for the first quarter of fiscal year 2019 that will be payable in May 2019. In the future, our Board may determine to reduce or eliminate our common stock dividend in order to fund investments for growth, repurchase shares or conserve capital resources.

Item 1B. ***Unresolved Staff Comments***

Not applicable.

Item 2. ***Properties***

As of December 30, 2018, our continuing operations occupied 3,347,929 square feet in over 215 locations. We own 879,799 square feet of this space, and lease the balance. We conduct our operations in manufacturing and assembly plants, research laboratories, administrative offices and other facilities located in 15 states and 33 foreign countries.

Facilities outside of the United States account for approximately 2,458,302 square feet of our owned and leased property, or approximately 75% of our total occupied space.

Our real property leases are both short-term and long-term. We believe that our properties are well-maintained and are adequate for our present requirements.

The following table indicates the approximate square footage of real property owned and leased attributable to the continuing operations of our reporting segments as of December 30, 2018:

	Owned	Leased	Total
		(In square feet)	
Discovery & Analytical Solutions	158,285	1,319,811	1,478,096
Diagnostics	721,514	1,093,652	1,815,166
Corporate offices	—	54,667	54,667
Continuing operations	879,799	2,468,130	3,347,929

Item 3. ***Legal Proceedings***

We are subject to various claims, legal proceedings and investigations covering a wide range of matters that arise in the ordinary course of our business activities. Although we have established accruals for potential losses that we believe are probable and reasonably estimable, in the opinion of our management, based on its review of the information available at this time, the total cost of resolving these contingencies at December 30, 2018 should not have a material adverse effect on our consolidated financial statements included in this annual report on Form 10-K. However, each of these matters is subject to uncertainties, and it is possible that some of these matters may be resolved unfavorably to us.

Item 4. ***Mine Safety Disclosures***

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Listed below are our executive officers as of February 26, 2019. No family relationship exists between any one of these executive officers and any of the other executive officers or directors.

Name	Position	Age
Robert F. Friel	Chairman and Chief Executive Officer	63
Prahlad Singh	President and Chief Operating Officer	54
James Corbett	Executive Vice President and President, Discovery & Analytical Solutions	56
James M. Mock	Senior Vice President and Chief Financial Officer	42
Joel S. Goldberg	Senior Vice President, Administration, General Counsel and Secretary	50
Daniel R. Tereau	Senior Vice President, Strategy and Business Development	52
Deborah Butters	Senior Vice President, Chief Human Resources Officer	49
Tajinder Vohra	Senior Vice President, Global Operations	53
Andrew Okun	Vice President and Chief Accounting Officer	49

Robert F. Friel, 63. Mr. Friel currently serves as Chairman and Chief Executive Officer of PerkinElmer, having also served as our President from August 2007 through December 2018. Prior to being appointed President and Chief Executive Officer in February 2008 and Chairman in April 2009, Mr. Friel had served as President and Chief Operating Officer since August 2007, and as Vice Chairman and President of our Life and Analytical Sciences unit since January 2006. Mr. Friel was our Executive Vice President and Chief Financial Officer, with responsibility for business development and information technology in addition to his oversight of the finance functions, from October 2004 until January 2006. Mr. Friel joined PerkinElmer in February 1999 as our Senior Vice President and Chief Financial Officer. Prior to joining PerkinElmer, he held several senior management positions with AlliedSignal, Inc., now Honeywell International. He received a Bachelor of Arts degree in economics from Lafayette College and a Master of Science degree in taxation from Fairleigh Dickinson University. Mr. Friel is currently a director of NuVasive, Inc. and Xylem Inc., and previously served as a director of CareFusion Corporation until its acquisition by Becton, Dickinson and Company in March 2015. He also previously served on the national board of trustees for the March of Dimes Foundation.

Prahlad Singh, 54. Dr. Singh was elected President and Chief Operating Officer of PerkinElmer effective January 2019. Dr. Singh joined PerkinElmer as the President of our Diagnostics business in May 2014. He was elected Senior Vice President in September 2016 and Executive Vice President in March 2018. Prior to joining PerkinElmer, Dr. Singh was General Manager of GE Healthcare's Women's Health business from 2012 to 2014, with responsibility for its mammography and bone densitometry businesses. Before that, Dr. Singh held senior executive level roles in strategy, business development and mergers & acquisitions at both GE Healthcare from 2011 to 2012 and Philips Healthcare from 2007 to 2011. From 1995 to 2007, he held leadership roles of increasing responsibility at DuPont Pharmaceuticals and subsequently Bristol-Myers Squibb Medical Imaging, which included managing the Asia Pacific and Middle East region. Dr. Singh holds a doctoral degree in chemistry from the University of Missouri-Columbia and a Master of Business Administration from Northeastern University. His research work has resulted in several issued patents and publications in peer reviewed journals.

James Corbett, 56. Mr. Corbett was appointed President of our Discovery & Analytical Solutions business and Executive Vice President of PerkinElmer in October 2016. Mr. Corbett was appointed President of our Human Health business in March 2014 and a Senior Vice President and officer of PerkinElmer in February 2012. Mr. Corbett was previously appointed President of the Diagnostics business in May 2010 and President of the Life Sciences and Technology business in May 2013. Mr. Corbett joined the Company in October of 2007 through our acquisition of ViaCord, where he served as President. Prior to joining ViaCord, he co-founded CADx Systems, a company focused on the oncology market, where he held the position of Executive Vice President and Director with responsibility for worldwide sales and marketing, technical support and business development. Following the 2004 acquisition of CADx by iCAD, Inc., he was named Chief Commercial Officer. In addition, Mr. Corbett worked for Abbott Laboratories for 14 years in a variety of sales and marketing positions including Worldwide Marketing Manager for Abbott Diagnostics Immunoassay Systems and Region Manager for Abbott Diagnostics. Mr. Corbett holds a Bachelor of Science degree in business from the University of Massachusetts. Mr. Corbett also serves on the national board of trustees for the March of Dimes Foundation and on the board of directors for the Analytical, Life Science & Diagnostics Association.

James M. Mock, 42. Mr. Mock joined PerkinElmer in May 2018 as our Senior Vice President and Chief Financial Officer. Prior to joining us, Mr. Mock served for nearly 20 years in a wide range of financial oversight capacities within General Electric Company (GE). Mr. Mock was most recently Vice President, Corporate Audit Staff, a position in which he served from October 2015 to April 2018, where he worked globally across GE's businesses on controllership reviews and operational excellence projects.

Mr. Mock previously served in a number of progressively responsible leadership positions with GE both in the United States and overseas, including as Vice President and Chief Financial Officer for GE Oil & Gas, Subsea Systems, from 2014 to 2015. Mr. Mock received a Bachelor's degree in Economics from St. Lawrence University.

Joel S. Goldberg, *50*. Mr. Goldberg currently serves as our Senior Vice President, Administration, General Counsel and Secretary, having joined as our Senior Vice President, General Counsel and Secretary in July 2008. Prior to joining us, Mr. Goldberg spent seven years at Millennium Pharmaceuticals, Inc., where he most recently served as Vice President, Chief Compliance Officer and Secretary. During his seven years with Millennium, he focused in the areas of mergers and acquisitions, strategic alliances, investment and financing transactions, securities and healthcare related compliance, and employment law. Previously, he was an associate of the law firm Edwards & Angell, LLP. Mr. Goldberg graduated from the Northeastern University School of Law and also holds a Master of Business Administration from Northeastern University. He completed his undergraduate degree at the University of Wisconsin-Madison.

Daniel R. Tereau, 52. Mr. Tereau was appointed Senior Vice President, Strategy and Business Development in January 2016, having joined the Company in April 2014 as Vice President, Strategy and Business Development. He is responsible for leading PerkinElmer's overall strategic planning and business development activities. Prior to joining PerkinElmer, Mr. Tereau served on Novartis' leadership team as Senior Vice President and Global Head of Strategy, Business Development and Licensing from 2011 to 2014, where he was responsible for global strategy and business development for the Consumer Health division. Prior to 2011, Mr. Tereau held similar roles at Thermo Fisher Scientific and GE Healthcare. Mr. Tereau holds a Bachelor of Science degree in finance from Ferris State University, a Juris Doctorate from Wayne State University, and earned his Master of Business Administration from Yale University.

Deborah Butters, 49. Ms. Butters joined PerkinElmer in July 2016 as Senior Vice President, Chief Human Resources Officer. Prior to joining us, she served as Head of North America Human Resources at IBM, where she led all aspects of the Human Resource function for IBM's largest geography, which included 35,000 employees and was responsible for over $30B of IBM's revenue. During her 17 year career there, she significantly helped shape IBM's HR programs and practices, including leading its enterprise-wide, people transformation strategy to optimize employee engagement and business performance. Ms. Butters was with Lotus Development for eight years prior to its acquisition by IBM. Ms. Butters' experiences working in the United Kingdom and Germany for Lotus Development, and in Switzerland and the United States for IBM, ranged from leading functional roles across workforce planning and talent management, to serving in five HR business partner roles in both software and consulting within IBM and Lotus Development, with the largest being IBM's North America Consulting business. Ms. Butters holds a Bachelor of Science degree from the University of Bath and a diploma in Human Resources from London University.

Tajinder Vohra, 53. Mr. Vohra joined PerkinElmer in October 2015 as Vice President of Global Operations and was appointed Senior Vice President in January 2018. He oversees all of PerkinElmer's global operations, including manufacturing, supply chain, customer care and distribution. Prior to joining PerkinElmer, Mr. Vohra served at ABB as a Country Operations Leader from 2011 to 2015, where he was responsible for India-wide operations and Supply Chains for India, Middle East and Africa. Prior to 2011, Mr. Vohra was a Senior Vice President with Genpact, managing Supply Chain and IT businesses, and held a number of global management operational positions with GE Healthcare. Mr. Vohra received his Bachelor's degree in Mechanical Engineering from the University of Delhi, Master's degree in Industrial Engineering from the University of Alabama and Master's degree in Manufacturing Engineering from Lehigh University. Mr. Vohra is a certified Six Sigma Black Belt, and was trained in lean manufacturing at the Shingijitsu Training Institute in Japan.

Andrew Okun, 49. Mr. Okun serves as our Vice President and Chief Accounting Officer, a position in which he has served since April 2011. Mr. Okun joined us in 2001 and has served in financial and controllership positions of increasing responsibility, including Director of Finance for the Optoelectronics business from 2001 through 2005, Vice President of Finance from 2005 through 2009 and Vice President and Corporate Controller from 2009 through 2011. Prior to joining us, Mr. Okun most recently worked for Honeywell International as a Site Controller as well as for Coopers & Lybrand. Mr. Okun is a Certified Public Accountant and earned his Master of Business Administration from the University of Virginia. He completed his undergraduate degree at the University of California, Santa Barbara.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Common Equity

We only have one class of common stock. Our common stock is listed on the New York Stock Exchange under the symbol "PKI". As of February 22, 2019, we had approximately 3,747 holders of record of our common stock.

Stock Repurchases

The following table provides information with respect to the shares of common stock repurchased by us for the periods indicated.

	Issuer Repurchases of Equity Securities			
Period	Total Number of Shares Purchased(1)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs(2)	Maximum Aggregate Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
October 1, 2018 - October 28, 2018	2,559	$ 93.24	—	$ 250,000,000
October 29, 2018 - November 25, 2018	650,379	80.28	650,000	197,803,699
November 26, 2018 - December 30, 2018	62	86.63	—	197,803,699
Activity for quarter ended December 30, 2018	653,000	$ 80.33	650,000	$ 197,803,699

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(1) Our Board has authorized us to repurchase shares of common stock to satisfy minimum statutory tax withholding obligations in connection with the vesting of restricted stock awards and restricted stock unit awards granted pursuant to our equity incentive plans and to satisfy obligations related to the exercise of stock options made pursuant to our equity incentive plans. During the fourth quarter of fiscal year 2018, we repurchased 3,000 shares of common stock for this purpose at an aggregate cost of $0.3 million. During the fiscal year 2018, we repurchased 66,506 shares of common stock for this purpose at an aggregate cost of $5.2 million. The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value.

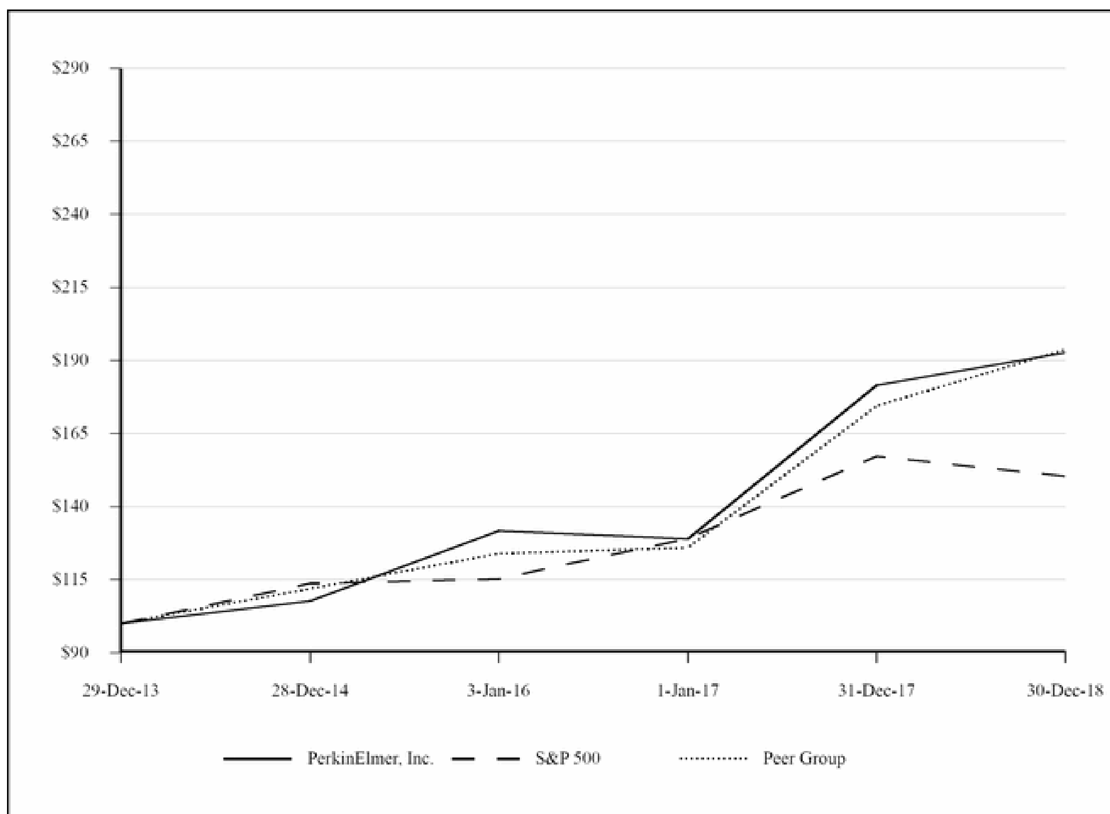
(2) On July 27, 2016, our Board authorized us to repurchase up to 8.0 million shares of common stock under a stock repurchase program (the "Repurchase Program"). On July 23, 2018, our Board authorized us to immediately terminate the Repurchase Program and further authorized us to repurchase shares of common stock for an aggregate amount up to $250.0 million under a new stock repurchase program (the "New Repurchase Program"). The New Repurchase Program will expire on July 23, 2020 unless terminated earlier by our Board and may be suspended or discontinued at any time. During fiscal year 2018, we had no stock repurchases under the Repurchase Program. No shares remain available for repurchase under the Repurchase Program due to its cancellation. During the fourth quarter of fiscal year 2018, we repurchased 650,000 shares of common stock under the New Repurchase Program at an aggregate cost of $52.2 million. As of December 30, 2018, $197.8 million remained available for aggregate repurchases of shares under the New Repurchase Program.

Stock Performance Graph

Set forth below is a line graph comparing the cumulative total shareholder return on our common stock against the cumulative total return of the S&P Composite-500 Index and a Peer Group Index for the five fiscal years from December 29, 2013 to December 30, 2018. Our Peer Group Index consists of Agilent Technologies Inc., Thermo Fisher Scientific Inc., and Waters Corporation. The peer group is the same as the peer group used in the stock performance graph in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Comparison of Five-Year Cumulative Total Return
Among PerkinElmer, Inc. Common Stock, S&P Composite-500 and
Peer Group Index

TOTAL RETURN TO SHAREHOLDERS
(Includes reinvestment of dividends)



	29-Dec-13	28-Dec-14	3-Jan-16	1-Jan-17	31-Dec-17	30-Dec-18
PerkinElmer, Inc.	$ 100.00	$ 107.71	$ 131.70	$ 128.91	$ 181.56	$ 192.59
S&P 500 Index	$ 100.00	$ 113.69	$ 115.26	$ 129.05	$ 157.22	$ 150.33
Peer Group	$ 100.00	$ 111.88	$ 123.82	$ 125.84	$ 174.40	$ 193.72

Item 6. ***Selected Financial Data***

The following table sets forth selected historical financial information as of and for each of the fiscal years in the five-year period ended December 30, 2018. We derived the selected historical financial information for the balance sheets for the fiscal years ended December 30, 2018 and December 31, 2017 and the statement of operations for each of the fiscal years in the three-year period ended December 30, 2018 from our audited consolidated financial statements which are included elsewhere in this annual report on Form 10-K. We derived the selected historical financial information for the statements of operations for the fiscal years ended January 3, 2016 and December 28, 2014 from our audited consolidated financial statements which are not included in this annual report on Form 10-K. We derived the selected historical financial information for the balance sheets as of January 1, 2017, January 3, 2016 and December 28, 2014 from our audited consolidated financial statements which are not included in this annual report on Form 10-K.

Our historical financial information may not be indicative of our future results of operations or financial position.

The following selected historical financial information should be read together with our "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements, including the related notes, included elsewhere in this annual report on Form 10-K.

	Fiscal Years Ended				
	December 30, 2018	December 31, 2017	January 1, 2017	January 3, 2016	December 28, 2014
	(In thousands, except per share data)				
Statement of Operations Data:					
Revenue[1]	$ 2,777,996	$ 2,256,982	$ 2,115,517	$ 2,104,823	$ 2,069,880
Operating income from continuing operations[2][3]	323,884	295,615	294,582	258,517	240,287
Interest and other expense, net[4]	66,201	(1,103)	50,514	49,710	116,419
Income from continuing operations before income taxes	257,683	296,718	244,068	208,807	123,868
Income from continuing operations, net of income taxes[5]	237,475	156,890	215,706	188,785	130,139
Income from discontinued operations and dispositions, net of income taxes[6]	452	135,743	18,593	23,640	27,639
Net income	$ 237,927	$ 292,633	$ 234,299	$ 212,425	$ 157,778
Basic earnings per share:					
Continuing operations	$ 2.15	$ 1.43	$ 1.97	$ 1.68	$ 1.16
Discontinued operations	0.00	1.24	0.17	0.21	0.25
Net income	$ 2.15	$ 2.66	$ 2.14	$ 1.89	$ 1.40
Diluted earnings per share:					
Continuing operations	$ 2.13	$ 1.42	$ 1.96	$ 1.67	$ 1.14
Discontinued operations	0.00	1.22	0.17	0.21	0.24
Net income	$ 2.13	$ 2.64	$ 2.12	$ 1.87	$ 1.39
Weighted-average common shares outstanding:					
Basic:	110,561	109,857	109,478	112,507	112,593
Diluted:	111,534	110,859	110,313	113,315	113,739
Cash dividends declared per common share	$ 0.28	$ 0.28	$ 0.28	$ 0.28	$ 0.28

	As of				
	December 30, 2018	December 31, 2017	January 1, 2017	January 3, 2016	December 28, 2014
	(In thousands)				
Balance Sheet Data:					
Total assets	$ 5,975,522	$ 6,091,463	$ 4,276,683	$ 4,166,295	$ 4,127,576
Short-term debt	14,856	217,306	1,172	1,123	1,075
Long-term debt[4][7]	1,876,624	1,788,803	1,045,254	1,011,762	1,045,393
Stockholders' equity[1][2][8]	2,584,955	2,503,188	2,153,570	2,110,441	2,042,102
Common shares outstanding[8]	110,597	110,361	109,617	112,034	112,481

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(1) At the beginning of fiscal year 2018, we adopted Accounting Standards Codification No. 606, *Revenue from Contracts with Customers* ("ASC 606"), using a modified retrospective approach and as a result, the comparative information has not been restated and is reported under the accounting standards in effect for these years. See Note 1 to the Consolidated Financial Statements for additional information.

(2) Activity related to the mark-to-market adjustment on postretirement benefit plans was a pre-tax loss of $21.4 million in fiscal year 2018, a pre-tax gain of $2.1 million in fiscal year 2017, a pre-tax loss of $15.3 million in fiscal year 2016, a pre-tax loss of $12.4 million in fiscal year 2015 and a pre-tax loss of $75.4 million in fiscal year 2014.

(3) We recorded pre-tax restructuring and contract termination charges, net, of $11.1 million in fiscal year 2018, $12.7 million in fiscal year 2017, $5.1 million in fiscal year 2016, $13.5 million in fiscal year 2015 and $13.3 million in fiscal year 2014.

(4) In fiscal years 2018, 2017, 2016, 2015 and 2014, interest expense was $67.0 million, $43.9 million, $41.5 million, $38.0 million and $36.3 million, respectively.

(5) In fiscal years 2018 and 2017, provision for income tax on continuing operations was $20.2 million and $139.8 million, respectively. The higher provision for income taxes in fiscal year 2017 compared to that of fiscal year 2018 was primarily due to the $106.5 million discrete tax expense related to the Tax Cuts & Jobs Act of 2017. In fiscal years 2016, 2015 and 2014, tax expense (benefit) on continuing operations was $28.4 million, $20.0 million and $(6.3) million, respectively. The tax expense in fiscal years 2016 and 2015 was primarily due to income in high tax rate jurisdictions, partially offset by losses in low tax rate jurisdictions and a tax benefit of $9.6 million in fiscal year 2016 and $6.4 million in fiscal year 2015 related to discrete items. The benefit from income taxes in fiscal year 2014 was primarily due to a tax benefit of $7.1 million related to discrete items and losses in high tax rate jurisdictions, partially offset by provision for income taxes related to profits in low tax rate jurisdictions.

(6) In May 2017, we completed the sale of our Medical Imaging business. We recorded a pre-tax gain of $179.6 million and income tax expense of $43.1 million in fiscal year 2017. We accounted for this business as discontinued operations beginning in 2016 and the financial information relating to fiscal years 2015 and 2014 has been retrospectively adjusted to reflect the inclusion of this business in discontinued operations.

(7) In April 2018, we issued and sold three-year senior notes at a rate of 0.6% with a face value of €300.0 million and received €298.7 million of net proceeds from the issuance. The debt, which matures in April 2021, is unsecured. In July 2016, we issued and sold ten-year senior notes at a rate of 1.875% with a face value of €500.0 million and received €492.3 million of net proceeds from the issuance. The debt, which matures in July 2026, is unsecured.

(8) In fiscal year 2018, we repurchased in the open market 650,000 shares of our common stock at an aggregate cost of $52.2 million, including commissions, under the stock repurchase program authorized by our Board on July 23, 2018. In fiscal years 2018 and 2017, we did not repurchase any shares of our common stock under a stock repurchase program originally announced in July 2017 that was terminated in July 2018. In fiscal year 2016, we repurchased in the open market 3.2 million shares of our common stock at an aggregate cost of $148.2 million, including commissions under a stock repurchase program originally announced in October 2014 that was terminated in July 2016 (the "October 2014 Repurchase Program"). In fiscal year 2015, we repurchased in the open market 1.5 million shares of our common stock at an aggregate cost of $72.0 million, including commissions, under both the October 2014 Repurchase Program and a stock repurchase program originally announced in October 2012 that expired in October 2014 (the "October 2012 Repurchase Program"). In fiscal year 2014, we repurchased in the open market 1.4 million shares of our common stock at an aggregate cost of $61.3 million, including commissions, under the October 2012 Repurchase Program. The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value.

Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

This annual report on Form 10-K, including the following management's discussion and analysis, contains forward-looking information that you should read in conjunction with the consolidated financial statements and notes to consolidated financial statements that we have included elsewhere in this annual report on Form 10-K. For this purpose, any statements contained in this report that are not statements of historical fact may be deemed to be forward-looking statements. Words such as "believes," "plans," "anticipates," "expects," "will" and similar expressions are intended to identify forward-looking statements. Our actual results may differ materially from the plans, intentions or expectations we disclose in the forward-looking statements we make. We have included important factors above under the heading "Risk Factors" in Item 1A above that we believe could cause actual results to differ materially from the forward-looking statements we make. We are not obligated to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

Accounting Period

Our fiscal year ends on the Sunday nearest December 31. We report fiscal years under a 52/53 week format and as a result, certain fiscal years will contain 53 weeks. Each of the fiscal years ended December 30, 2018 ("fiscal year 2018"), December 31, 2017 ("fiscal year 2017") and January 1, 2017 ("fiscal year 2016") included 52 weeks. The fiscal year ending December 29, 2019 will include 52 weeks.

Overview of Fiscal Year 2018

During fiscal year 2018, we continued to see good performance from acquisitions, investments in our ongoing technology and sales and marketing initiatives. Our overall revenue in fiscal year 2018 increased $521.0 million, or 23%, as compared to fiscal year 2017, reflecting an increase of $114.8 million, or 7%, in our Discovery & Analytical Solutions segment revenue and an increase of $406.3 million, or 60%, in our Diagnostics segment revenue. The increase in our Discovery & Analytical Solutions segment during fiscal year 2018 was due to an increase of $73.5 million from our applied markets revenue and an increase of $41.3 million from our life sciences market revenue. The increase in our Diagnostics segment revenue during fiscal year 2018 was primarily due to our acquisition of EUROIMMUN, which contributed $359.4 million in revenue during fiscal year 2018, as well as continued expansion in our reproductive health, genetic testing, applied genomics and immuno-diagnostics solutions.

In our Discovery & Analytical Solutions segment, we experienced growth during fiscal year 2018 driven by successful new product introductions and an improving macro-environment. We also experienced strong demand for industrial, environmental and food offerings. In the life sciences market, we experienced strength in our drug discovery sales and strong performance in our Informatics business.

In our Diagnostics segment, we experienced growth from our acquisition of EUROIMMUN and continued expansion in our reproductive health, genetic testing, applied genomics, and immuno-diagnostics solutions, particularly in the Americas and emerging markets, such as China and India. We saw strong growth in newborn screening as an increased number of offerings helped to offset the effect of decreased birthrates. During fiscal year 2018, we expanded both the extent and reach of our capabilities to enable earlier treatments and better outcomes, both in terms of diseases and geographies. The acquisition of EUROIMMUN has increased our reagent mix, expanded our technical capabilities and positioned us in more attractive markets.

Our consolidated gross margins increased 70 basis points in fiscal year 2018, as compared to fiscal year 2017, primarily due to favorable shift in product mix and continued productivity initiatives to improve our supply chain. Our consolidated operating margin decreased 144 basis points in fiscal year 2018, as compared to fiscal year 2017 primarily due to increased amortization of intangible assets and acquired inventory revaluation, increased costs related to investments in new product development partially offset by lower costs as a result of cost containment and productivity initiatives.

We continue to believe that we are well positioned to take advantage of the spending trends in our end markets and to promote efficiencies in markets where current conditions may increase demand for certain services. Overall, we believe that our strategic focus on diagnostics and discovery and analytical solutions markets, coupled with our deep portfolio of technologies and applications, leading market positions, global scale and financial strength will provide us with a foundation for growth.

Consolidated Results of Continuing Operations

Revenue

2018 Compared to 2017. Revenue for fiscal year 2018 was $2,778.0 million, as compared to $2,257.0 million for fiscal year 2017, an increase of $521.0 million, or 23%, which includes an approximate 14% increase in revenue attributable to acquisitions and divestitures and a 1% increase in revenue attributable to changes in foreign exchange rates. The analysis in the remainder of this paragraph compares segment revenue for fiscal year 2018 as compared to fiscal year 2017 and includes the effect of foreign exchange rate fluctuations, and acquisitions and divestitures. The total increase in revenue reflects an increase in our Diagnostics segment revenue of $406.3 million, or 60%, primarily due to our acquisition of EUROIMMUN, which contributed $359.4 million in revenues during fiscal year 2018, and continued expansion in our reproductive health, genetic testing, applied genomics and immuno-diagnostics solutions. Our Discovery & Analytical Solutions segment revenue increased by $114.8 million, or 7%, due to an increase of $73.5 million from our applied markets revenue and an increase of $41.3 million from our life sciences market revenue. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize $0.8 million of revenue primarily related to our Diagnostics segment for fiscal year 2018 and $0.7 million for fiscal year 2017 that otherwise would have been recorded by the acquired businesses during each of the respective periods.

2017 Compared to 2016. Revenue for fiscal year 2017 was $2,257.0 million, as compared to $2,115.5 million for fiscal year 2016, an increase of $141.5 million, or 7%, which includes an approximate 2% increase in revenue attributable to acquisitions and divestitures and a minimal increase in revenue attributable to changes in foreign exchange rates. The analysis in the remainder of this paragraph compares segment revenue for fiscal year 2017 as compared to fiscal year 2016 and includes the effect of foreign exchange rate fluctuations and acquisitions and divestitures. The total increase in revenue reflects an increase in our Diagnostics segment revenue of $76.0 million, or 13%, due to continued expansion in our newborn and infectious disease screening solutions and strong growth in applied genomics. Our new acquisitions, EUROIMMUN and Tulip, contributed $13.5 million and $38.5 million, respectively, in revenues during fiscal year 2017. Our Discovery & Analytical Solutions segment revenue increased by $65.5 million, or 4%, due to an increase of $36.2 million from our life sciences market revenue and an increase of $29.3 million from our applied markets revenue. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize $0.7 million of revenue primarily related to our Diagnostics segment for each of the fiscal years 2017 and 2016 that otherwise would have been recorded by the acquired businesses during each of the respective periods.

Cost of Revenue

2018 Compared to 2017. Cost of revenue for fiscal year 2018 was $1,437.1 million, as compared to $1,183.2 million for fiscal year 2017, an increase of approximately $253.8 million, or 21%. As a percentage of revenue, cost of revenue decreased to 51.7% in fiscal year 2018 from 52.4% in fiscal year 2017, resulting in an increase in gross margin of approximately 70 basis points to 48.3% in fiscal year 2018 from 47.6% in fiscal year 2017. Amortization of intangible assets increased and was $46.2 million for fiscal year 2018, as compared to $29.3 million for fiscal year 2017. Stock-based compensation expense was $1.5 million for fiscal year 2018, as compared to $1.3 million for fiscal year 2017. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions added an incremental expense of $19.3 million for fiscal year 2018, as compared to $6.2 million for fiscal year 2017. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of $0.1 million for each of fiscal years 2018 and 2017. In addition to the factors noted above, the increase in gross margin was primarily the result of a favorable shift in product mix and benefits from our initiatives to improve our supply chain.

2017 Compared to 2016. Cost of revenue for fiscal year 2017 was $1,183.2 million, as compared to $1,101.2 million for fiscal year 2016, an increase of approximately $82.1 million, or 7%. As a percentage of revenue, cost of revenue increased to 52.4% in fiscal year 2017 from 52.1% in fiscal year 2016, resulting in a decrease in gross margin of approximately 37 basis points to 47.6% in fiscal year 2017 from 47.9% in fiscal year 2016. Amortization of intangible assets decreased and was $29.3 million for fiscal year 2017, as compared to $30.3 million for fiscal year 2016. Stock-based compensation expense was $1.3 million for fiscal year 2017, as compared to $1.0 million for fiscal year 2016. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions was $6.2 million for fiscal year 2017, as compared to $0.4 million for fiscal year 2016. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of $0.1 million for each of fiscal years 2017 and 2016. In addition to the factors noted above, the decrease in gross margin was primarily the result of an unfavorable shift in product mix partially offset by benefits from our initiatives to improve our supply chain.

Selling, General and Administrative Expenses

2018 Compared to 2017. Selling, general and administrative expenses for fiscal year 2018 were $811.9 million, as compared to $626.0 million for fiscal year 2017, an increase of approximately $185.9 million, or 30%. As a percentage of revenue, selling, general and administrative expenses increased to 29.2% in fiscal year 2018 from 27.7% in fiscal year 2017. Amortization of intangible assets increased to $81.8 million for fiscal year 2018, as compared to $44.1 million for fiscal year 2017. Stock-based compensation expense increased to $25.9 million for fiscal year 2018, as compared to $22.8 million for fiscal year 2017. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of $30.5 million for fiscal year 2018 as compared to $29.0 million for fiscal year 2017. During fiscal year 2018, legal costs for significant litigation matters were $5.5 million, as compared to $2.7 million for fiscal year 2017. In addition to the above items, the increase in selling, general and administrative expenses was primarily due to our acquisition of EUROIMMUN, which was partially offset by lower costs as a result of cost containment and productivity initiatives.

2017 Compared to 2016. Selling, general and administrative expenses for fiscal year 2017 were $626.0 million, as compared to $590.5 million for fiscal year 2016, an increase of approximately $35.5 million, or 6%. As a percentage of revenue, selling, general and administrative expenses decreased to 27.7% in fiscal year 2017, compared to 27.9% in fiscal year 2016. Amortization of intangible assets increased and was $44.1 million for fiscal year 2017, as compared to $40.7 million for fiscal year 2016. Stock-based compensation expense increased and was $22.8 million for fiscal year 2017, as compared to $15.2 million for fiscal year 2016. During fiscal year 2017, we recorded $2.7 million in legal costs for a particular case. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of $29.0 million for fiscal year 2017 as compared to $17.5 million for fiscal year 2016. In addition to the above items, the increase in selling, general and administrative expenses was primarily the result of costs related to growth investments, which was partially offset by the result of lower costs as a result of cost containment and productivity initiatives.

Research and Development Expenses

2018 Compared to 2017. Research and development expenses for fiscal year 2018 were $194.0 million, as compared to $139.5 million for fiscal year 2017, an increase of $54.5 million, or 39%. As a percentage of revenue, research and development expenses increased to 7.0% in fiscal year 2018, as compared to 6.2% in fiscal year 2017. Amortization of intangible assets was $7.9 million in fiscal year 2018, as compared to $0.3 million in fiscal year 2017. Stock-based compensation expense was $1.4 million in each of fiscal years 2018 and 2017. In addition to the above items, the increase in research and development expenses was primarily the result of investments in new product development and our acquisition of EUROIMMUN, which were partially offset by lower costs as a result of cost containment and productivity initiatives.

2017 Compared to 2016. Research and development expenses for fiscal year 2017 were $139.5 million, as compared to $124.2 million for fiscal year 2016, an increase of $15.3 million, or 12%. As a percentage of revenue, research and development expenses increased to 6.2% in fiscal year 2017, as compared to 5.9% in fiscal year 2016. Amortization of intangible assets was $0.3 million for each of fiscal years 2017 and 2016. Stock-based compensation expense increased and was $1.4 million for fiscal year 2017, as compared to $0.9 million for fiscal year 2016. In addition to the above items, the increase in research and development expenses was in large part the result of investments in new product development, primarily our investments in Vanadis' non-invasive prenatal screening and ionics mass spectrometry's food and environmental safety applications. This was partially offset by lower costs as a result of cost containment and productivity initiatives.

Restructuring and Contract Termination Charges, Net

We have undertaken a series of restructuring actions related to the impact of acquisitions and divestitures, the alignment of our operations with our growth strategy, the integration of our business units and productivity initiatives. Restructuring and contract termination charges for fiscal year 2018 were $11.1 million, as compared to $12.7 million for fiscal year 2017 and $5.1 million for fiscal year 2016.

We implemented a restructuring plan in each of the first, third and fourth quarters of fiscal year 2018 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q1 2018 Plan", "Q3 2018 Plan" and "Q4 2018 Plan", respectively). We implemented a restructuring plan in each of the fourth and third quarters of fiscal year 2017 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q4 2017 Plan and "Q3 2017 Plan", respectively). We implemented a restructuring plan in the first quarter of fiscal year 2017 consisting of workforce reductions and the closure of excess facility space principally intended to focus resources on higher growth end markets (the "Q1 2017 Plan"). We implemented a restructuring plan in the third quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth product lines (the "Q3 2016 Plan"). We implemented a restructuring plan in the second quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth end markets (the "Q2 2016 Plan"). All other previous restructuring plans were workforce reductions or the closure of excess facility space principally intended to integrate our businesses in order to realign

operations, reduce costs, achieve operational efficiencies and shift resources into geographic regions and end markets that are more consistent with our growth strategy (the "Previous Plans").

The following table summarizes the number of employees reduced, the initial restructuring or contract termination charges by operating segment, and the dates by which payments were substantially completed, or the expected dates by which payments will be substantially completed, for restructuring actions implemented during fiscal years 2018, 2017 and 2016 in continuing operations:

	Workforce Reductions			Closure of Excess Facility			(Expected) Date Payments Substantially Completed by	
	Headcount Reduction	Diagnostics	Discovery & Analytical Solutions	Diagnostics	Discovery & Analytical Solutions	Total	Severance	Excess Facility
	(In thousands, except headcount data)							
Q4 2018 Plan	1	$ —	$ 348	$ —	$ —	$ 348	Q1 FY2019	—
Q3 2018 Plan	61	618	1,146	—	—	1,764	Q2 FY2019	—
Q1 2018 Plan	47	902	5,096	—	—	5,998	Q2 FY2019	—
Q4 2017 Plan	29	255	1,680	—	—	1,935	Q1 FY2019	—
Q3 2017 Plan	27	1,021	1,321	—	—	2,342	Q4 FY2018	—
Q1 2017 Plan	90	1,631	5,000	33	33	6,697	Q2 FY2018	Q2 FY2018
Q3 2016 Plan	22	41	1,779	—	—	1,820	Q4 FY2017	—
Q2 2016 Plan	72	561	4,106	—	—	4,667	Q3 FY2017	—

We expect to make payments under the Previous Plans for remaining residual lease obligations, with terms varying in length, through fiscal year 2022.

We also have terminated various contractual commitments in connection with certain disposal activities and have recorded charges, to the extent applicable, for the costs of terminating these contracts before the end of their terms and the costs that will continue to be incurred for the remaining terms without economic benefit to us. We recorded additional pre-tax charges of $5.0 million, $3.6 million and $0.1 million in the Discovery & Analytical Solutions segment during fiscal years 2018, 2017 and 2016, respectively, and $0.5 million during fiscal year 2017 in the Diagnostics segment as a result of these contract terminations.

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At December 30, 2018, we had $6.2 million recorded for accrued restructuring and contract termination charges, of which $4.8 million was recorded in short-term accrued restructuring and $1.4 million was recorded in long-term liabilities. At December 31, 2017, we had $14.0 million recorded for accrued restructuring and contract termination charges, of which $8.8 million was recorded in short-term accrued restructuring, $2.3 million was recorded in long-term liabilities and $2.9 million was recorded in other reserves. The following table summarizes our restructuring accrual balances and related activity by restructuring plan, as well as contract termination accrual balances and related activity, during fiscal years 2018, 2017 and 2016 in continuing operations:

	Balance at January 3, 2016	2016 Charges and Changes in Estimates, Net	2016 Amounts Paid	Balance at January 1, 2017	2017 Charges and Changes in Estimates, Net	2017 Amounts Paid	Balance at December 31, 2017	2018 Charges and Changes in Estimates, Net	2018 Amounts Paid	Balance at December 30, 2018
		(In thousands)								
Severance:										
Q4 2018 Plan	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ 348	$ —	$ 348
Q3 2018 Plan	—	—	—	—	—	—	—	2,054	(639)	1,415
Q1 2018 Plan	—	—	—	—	—	—	—	5,998	(4,389)	1,609
Q4 2017 Plan[1]	—	—	—	—	1,935	(16)	1,919	(381)	(1,538)	—
Q3 2017 Plan[2]	—	—	—	—	2,342	(270)	2,072	(1,204)	(868)	—
Q1 2017 Plan[3]	—	—	—	—	6,631	(4,133)	2,498	(983)	(1,232)	283
Q3 2016 Plan	—	1,820	(612)	1,208	(202)	(1,006)	—	—	—	—
Q2 2016 Plan	—	4,667	(3,231)	1,436	(829)	(607)	—	232	(156)	76
Facility:										
Q1 2017 Plan	—	—	—	—	66	(33)	33	—	(33)	—
Previous Plans	22,018	(1,451)	(12,787)	7,780	(537)	(2,844)	4,399	338	(2,425)	2,312
Restructuring	22,018	5,036	(16,630)	10,424	9,406	(8,909)	10,921	6,402	(11,280)	6,043
Contract Termination	132	88	(103)	117	3,251	(320)	3,048	4,742	(7,653)	137
Total Restructuring and Contract Termination	$ 22,150	$ 5,124	$ (16,733)	$ 10,541	$ 12,657	$ (9,229)	$ 13,969	$ 11,144	$ (18,933)	$ 6,180

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[1] During fiscal year 2018, we recognized pre-tax restructuring reversals of $0.2 million each in the Discovery & Analytical Solutions and Diagnostics segments, related to lower than expected costs associated with workforce reductions for the Q4 2017 Plan.

[2] During fiscal year 2018, we recognized pre-tax restructuring reversals of $0.8 million in the Discovery & Analytical Solutions segment and $0.4 million in the Diagnostics segment, related to lower than expected costs associated with workforce reductions for the Q3 2017 Plan.

[3] During fiscal year 2018, we recognized pre-tax restructuring reversals of $1.0 million in the Discovery & Analytical Solutions segment, related to lower than expected costs associated with workforce reductions for the Q1 2017 Plan.

Interest and Other Expense, Net

Interest and other expense, net, consisted of the following:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Interest income	$ (1,141)	$ (2,571)	$ (702)
Interest expense	66,976	43,940	41,528
(Gain) loss on disposition of businesses and assets, net	(12,844)	309	(5,562)
Other expense (income) , net	13,210	(42,781)	15,250
Total interest and other expense, net	$ 66,201	$ (1,103)	$ 50,514

2018 Compared to 2017. Interest and other expense, net, for fiscal year 2018 was an expense of $66.2 million, as compared to income of $1.1 million for fiscal year 2017, an increase of $67.3 million. The increase in interest and other expense, net, in fiscal year 2018 as compared to fiscal year 2017 was largely due to an increase in other expense, net of $56.0 million resulting from a one-time non-recurring net foreign exchange gain of $36.5 million in fiscal year 2017 related to remeasurement and settlement of EUROIMMUN pre-acquisition hedges, combined with an increase in pension-related expenses of $20.7 million in fiscal year 2018 as compared to fiscal year 2017. Interest expense increased by $23.0 million in fiscal year 2018 as compared to fiscal year 2017 primarily due to a higher outstanding total debt balance, beginning in the fourth quarter of fiscal year 2017, related to financing for the EUROIMMUN acquisition. Gain on disposition of businesses and assets, net increased $13.2 million in fiscal year 2018 as compared to fiscal year 2017 primarily due to sale of our multi-spectral imaging business in fiscal year 2018. Interest income decreased $1.4 million in fiscal year 2018 as compared to fiscal year 2017 due to the deployment of the cash proceeds realized from the sale of our Medical Imaging business in the second quarter of fiscal year 2017 that were initially invested, and subsequently utilized in the fourth quarter of fiscal year 2017 to support the settlement of the EUROIMMUN acquisition. A more complete discussion of our liquidity is set forth below under the heading “Liquidity and Capital Resources.”

2017 Compared to 2016. Interest and other expense, net, for fiscal year 2017 was income of $1.1 million, as compared to an expense of $50.5 million for fiscal year 2016, a decrease of $51.6 million. The decrease in interest and other expense, net, in fiscal year 2017 as compared to fiscal year 2016 was largely due to a decrease in other expense, net by $58.0 million, which consists primarily of net foreign exchange gain of $36.5 million in fiscal year 2017 related to remeasurement and settlement of the EUROIMMUN pre-acquisition hedges, combined with a decrease in pension-related expenses of $20.7 million in fiscal year 2017 as compared to fiscal year 2016, and an increase in interest income of $1.9 million in fiscal year 2017 as compared to fiscal year 2016. Interest income increased primarily due to investing the proceeds from the sale of our Medical Imaging business in money market mutual funds. This was partially offset by a net loss on disposition of businesses and assets, net of $0.3 million in fiscal year 2017 as compared to a net gain of $5.6 million in fiscal year 2016 and an increase in interest expense of $2.4 million in fiscal year 2017 as compared to fiscal year 2016 due to the issuance of the 2026 Notes, the proceeds of which were deployed to paydown our lower cost debt outstanding on our previous senior unsecured revolving credit facility.

Provision for Income Taxes

The effective tax rates on continuing operations were 7.8%, 47.1% and 11.6% for fiscal years 2018, 2017 and 2016, respectively. Certain of our subsidiaries have, at various times, been granted tax relief in their respective countries, resulting in lower income taxes than would otherwise be the case under ordinary tax rates. A reconciliation of income tax expense at the U.S. federal statutory income tax rate to the recorded tax provision is as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Tax at statutory rate	$ 54,114	$ 103,851	$ 85,424
Non-U.S. rate differential, net	(27,281)	(65,836)	(52,648)
U.S. taxation of multinational operations	7,047	5,408	6,941
State income taxes, net	2,028	1,810	1,509
Prior year tax matters	(6,034)	(7,955)	(9,621)
Federal tax credits	(3,738)	(8,249)	(7,189)
Change in valuation allowance	(759)	1,951	(2,755)
Non-deductible acquisition expense	—	—	5,701
Impact of federal tax reform	(2,025)	106,538	—
Others, net	(3,144)	2,310	1,000
Total	$ 20,208	$ 139,828	$ 28,362

The variation in our effective tax rate for each year is primarily a result of the recognition of earnings in foreign jurisdictions, predominantly Singapore, Finland and The Netherlands, which are taxed at rates lower than the U.S. federal statutory rate, resulting in a benefit from income taxes of $18.7 million in fiscal year 2018, $55.9 million in fiscal year 2017 and $48.2 million in fiscal year 2016. These amounts include $10.3 million in fiscal year 2018, $10.1 million in fiscal year 2017 and $11.4 million in fiscal year 2016 of benefits derived from tax holidays in China and Singapore. The effect of these benefits derived from tax holidays on basic and diluted earnings per share for fiscal year 2018 was $0.09 and $0.09, respectively, for fiscal year 2017 was $0.09 and $0.09, respectively, and for fiscal year 2016 was $0.10 and $0.10, respectively. The tax holiday in one of our subsidiaries in China expired in 2017 and the tax holiday in one other subsidiary in China is scheduled to expire in fiscal year 2019. The tax holiday in one of our subsidiaries in Singapore is scheduled to expire in fiscal year 2023.

On December 22, 2017, the President of the United States signed into law tax reform legislation, known as the Tax Cuts and Jobs Act (the "Tax Act"), which makes broad and complex changes to the U.S. Internal Revenue Code. Changes include, but are not limited to: (1) the lowering of the U.S. corporate tax rate from 35% to 21%; (2) the transition of U.S. international taxation from a worldwide tax system to a modified territorial system with a one-time transition tax on the deemed repatriation of cumulative foreign earnings as of December 31, 2017; (3) a new provision designed to tax global intangible low-taxed income (GILTI); (4) the creation of the base erosion anti-abuse tax (BEAT), which is effectively a new minimum tax; (5) the deduction for foreign-derived intangible income (FDII); (6) a new limitation on deductible interest expense; (7) the repeal of the domestic production activity deduction; and (8) limitations on the deductibility of certain executive compensation. The impacts of the Tax Act have been recorded in tax expense from continuing operations, and the details are discussed more fully in Note 8, *Income Taxes,* in the Notes to Consolidated Financial Statements.

Disposition of Businesses and Assets

As part of our continuing efforts to focus on higher growth opportunities, we have discontinued certain businesses. When the discontinued operations represented a strategic shift that will have a major effect on our operations and financial statements, we accounted for these businesses as discontinued operations and accordingly, have presented the results of operations and related cash flows as discontinued operations. Any business deemed to be a discontinued operation prior to the adoption of Accounting Standards Update 2014-08, *Reporting Discontinued Operations and Disclosures of Disposals of Components of An Entity,* continues to be reported as a discontinued operation, and the results of operations and related cash flows are presented as discontinued operations for all periods presented. Any remaining assets and liabilities of these businesses have been presented separately, and are reflected within assets and liabilities from discontinued operations in the accompanying consolidated balance sheets as of December 30, 2018 and December 31, 2017.

We recorded the following pre-tax gains and losses, which have been reported as a net gain or loss on disposition of discontinued operations during the three fiscal years included below:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
(Loss) gain on disposition of the Medical Imaging business	$ (793)	$ 179,615	$ —
Gain on disposition of Technical Services business	—	—	1,753
Loss on disposition of Fluid Sciences Segment	(66)	—	(1,134)
(Loss) gain on disposition of discontinued operations before income taxes	$ (859)	$ 179,615	$ 619

On May 1, 2017 (the "Closing Date"), we completed the sale of our Medical Imaging business to Varex Imaging Corporation ("Varex") pursuant to the terms of the Master Purchase and Sale Agreement, dated December 21, 2016 (the “Agreement”), by and between us and Varian Medical Systems, Inc. ("Varian") and the subsequent Assignment and Assumption Agreement, dated January 27, 2017, between Varian and Varex, pursuant to which Varian assigned its rights under the Agreement to Varex. On the Closing Date, we received consideration of approximately $277.4 million for the sale of the Medical Imaging business. During fiscal year 2017, we paid Varex $4.2 million to settle a post-closing working capital adjustment. During fiscal year 2017, we recorded a pre-tax gain of $179.6 million and income tax expense of $43.1 million related to the sale of the Medical Imaging business in discontinued operations and dispositions. The corresponding tax liability was recorded within the other tax liabilities in the consolidated balance sheet, and we expect to utilize tax attributes to minimize the tax liability. Following the closing, we provided certain customary transitional services during a period of up to 12 months. Commercial transactions between the parties following the closing of the transaction were not significant.

During the third quarter of fiscal year 2018, we completed the sale of substantially all of the assets and liabilities related to our multispectral imaging business for aggregate consideration of $37.3 million, recognizing a pre-tax gain of $13.0 million. The pre-tax gain is included in interest and other expense, net in the consolidated statement of operations. The multispectral imaging business was a component of our Discovery & Analytical Solutions segment. The divestiture of the multispectral imaging business has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on our operations and financial statements.

During fiscal year 2017, we sold Suzhou PerkinElmer Medical Laboratory Co., Ltd. for aggregate consideration of $2.3 million, recognizing a pre-tax loss of $1.1 million. The pre-tax loss recognized in fiscal year 2017 is included in interest and other expense, net in the consolidated statement of operations. Suzhou PerkinElmer Medical Laboratory Co., Ltd. was a component of our Diagnostics segment. The divestiture of Suzhou PerkinElmer Medical Laboratory Co., Ltd. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on our operations and financial statements.

During fiscal year 2016, we sold PerkinElmer Labs, Inc. for cash consideration of $20.0 million, recognizing a pre-tax gain of $7.1 million. The sale generated a capital loss for tax purposes of $7.3 million, which resulted in an income tax benefit of $2.5 million that was recognized as a discrete benefit during the second quarter of 2016. During fiscal year 2017, we recognized an additional pre-tax gain of $1.1 million relating to the earn-out consideration received from the buyer. PerkinElmer Labs, Inc. was a component of our Diagnostics segment. The pre-tax gain recognized in fiscal years 2017 and 2016 is included in interest and other expense, net in the consolidated statements of operations. The divestiture of PerkinElmer Labs, Inc. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on our operations and financial statements.

In August 1999, we sold the assets of our Technical Service business. We recorded a pre-tax gain of $1.8 million in fiscal year 2016 for a contingency related to this business. This was recognized as a gain on disposition of discontinued operations before income taxes.

The summary pre-tax operating results of the discontinued operations were as follows during the three fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Revenue	$ —	$ 44,343	$ 146,217
Cost of revenue	—	32,933	95,395
Selling, general and administrative expenses	—	5,869	13,657
Research and development expenses	—	4,891	14,368
Restructuring and contract termination charges, net	—	—	568
Income from discontinued operations before income taxes	$ —	$ 650	$ 22,229

We recorded a (benefit from) provision for income taxes of $(1.3) million, $44.5 million and $4.3 million on discontinued operations and dispositions in fiscal years 2018, 2017 and 2016.

Business Combinations

Acquisitions in fiscal year 2018

During fiscal year 2018, we completed the acquisition of four businesses for aggregate consideration of $106.0 million. The excess of the purchase price over the fair value of the acquired businesses' net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. We reported the operations for these acquisitions within the results of our Diagnostics and Discovery & Analytical Solutions segments, as applicable, from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 11.2 years.

Acquisitions in fiscal year 2017

Acquisition of EUROIMMUN Medizinische Labordiagnostika AG. During fiscal year 2017, we completed the acquisition of 99.98% of the outstanding stock of EUROIMMUN Medizinische Labordiagnostika AG (“EUROIMMUN”) for aggregate consideration of €1.2 billion (equivalent to $1.4 billion at December 19, 2017, the time of closing). The purchase price was funded by borrowings from our senior unsecured revolving credit facility and senior unsecured term loan credit facility of $710.0 million and $200.0 million, respectively, and available cash on hand of $503.1 million. The excess of the purchase price over the fair value of the acquired net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforce acquired. As a result of the acquisition, we recorded goodwill of $591.3 million, which is not tax deductible, and intangible assets of $907.4 million. We reported the operations for this acquisition within the results of our Diagnostics segment from the acquisition date. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of this acquisition had a weighted average amortization period of 16.1 years.

Other acquisitions in 2017. During fiscal year 2017, we also completed the acquisition of two other businesses for aggregate consideration of $142.0 million. The acquired businesses were Tulip Diagnostics Private Limited (“Tulip”), which was acquired for total consideration of $127.3 million in cash and one other business acquired for total consideration of $14.7 million in cash. At the time of closing, we had a potential obligation to pay the former shareholders of Tulip up to INR1.6 billion in additional consideration over a two year period, equivalent to $25.2 million, and is accounted for as compensation expense in our financial statements over a two year period and is excluded from the purchase price allocation shown below. The excess of the purchase prices over the fair values of the acquired businesses' net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. We reported the operations of Tulip within the results of our Diagnostics segment and the other acquired business within the results of our Discovery & Analytical Solutions segment from the acquisition date. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 11.8 years.

During fiscal year 2018, we paid the former shareholders of Tulip a portion of the additional consideration amounting to INR716.3 million (equivalent to $11.3 million). As of December 30, 2018, we may have to pay the former shareholders of Tulip additional consideration of up to INR803.6 million (currently equivalent to $11.4 million) in the first quarter of fiscal year 2019.

Acquisitions in fiscal year 2016

During fiscal year 2016, we completed the acquisition of two businesses for total consideration of $72.3 million in cash. The acquired businesses were Bioo Scientific Corporation, which was acquired for total consideration of $63.5 million in cash and one other business acquired for total consideration of $8.8 million in cash. The excess of the purchase prices over the fair values of each of the acquired businesses' net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforces acquired. As a result of the acquisitions, we recorded goodwill of $43.1 million, which is not tax deductible, and intangible assets of $22.1 million. We have reported the operations for these acquisitions within the results of our Diagnostics and Discovery & Analytical Solutions segments from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 9.4 years.

We do not consider the acquisitions completed during fiscal years 2018, 2017 and 2016, with the exception of the EUROIMMUN acquisition, to be material to our consolidated results of operations; therefore, we are only presenting pro forma financial information of operations for the EUROIMMUN acquisition. The aggregate revenue and the results of operations for the acquisitions completed during fiscal year 2018 for the period from their acquisition dates to December 30, 2018 were not material. The aggregate revenue for the acquisitions, with the exception of EUROIMMUN, completed during fiscal year 2017 for the period from their acquisition dates to December 31, 2017 was $38.5 million and the results of operations were not material. The aggregate revenue and results of operations for the acquisitions completed during fiscal year 2016 for the period from their respective acquisition dates to January 1, 2017 were minimal. We also determined that the presentation of the results of operations for each of those acquisitions, from the date of acquisition, is impracticable due to the integration of the operations upon acquisition.

As of December 30, 2018, the allocations of purchase prices for acquisitions completed in fiscal years 2017 and 2016 were final. The preliminary allocations of the purchase prices for acquisitions completed in fiscal year 2018 were based upon initial valuations. Our estimates and assumptions underlying the initial valuations are subject to the collection of information necessary to complete our valuations within the measurement periods, which are up to one year from the respective acquisition dates. The primary areas of the preliminary purchase price allocations that are not yet finalized relate to the fair value of certain tangible and intangible assets acquired and liabilities assumed, assets and liabilities related to income taxes and related valuation allowances, and residual goodwill. We expect to continue to obtain information to assist in determining the fair values of the net assets acquired at the acquisition dates during the measurement periods. During the measurement periods, we will adjust assets or liabilities if new information is obtained about facts and circumstances that existed as of the acquisition dates that, if known, would have resulted in the recognition of those assets and liabilities as of those dates. These adjustments will be made in the periods in which the amounts are determined and the cumulative effect of such adjustments will be calculated as if the adjustments had been completed as of the acquisition dates. All changes that do not qualify as adjustments made during the measurement periods are also included in current period earnings.

During fiscal year 2018, we obtained information relevant to determining the fair values of certain tangible and intangible assets acquired, and liabilities assumed, related to recent acquisitions and adjusted our purchase price allocations. Based on this information, for the EUROIMMUN acquisition, we recognized an increase in intangible assets of $10.0 million, an increase in other assets of $21.7 million, an increase in liabilities assumed of $12.3 million, a decrease in property and equipment of $20.1 million, a decrease in deferred tax liabilities of $23.6 million, and a decrease in goodwill of $23.5 million.

Allocations of the purchase price for acquisitions are based on estimates of the fair value of the net assets acquired and are subject to adjustment upon finalization of the purchase price allocations. The accounting for business combinations requires estimates and judgments as to expectations for future cash flows of the acquired business, and the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair values for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. Contingent consideration is measured at fair value at the acquisition date, based on the probability that revenue thresholds or product development milestones will be achieved during the earnout period, with changes in the fair value after the acquisition date affecting earnings to the extent it is to be settled in cash. Increases or decreases in the fair value of contingent consideration liabilities primarily result from changes in the estimated probabilities of achieving revenue thresholds or product development milestones during the earnout period.

As of December 30, 2018, we may have to pay contingent consideration, related to acquisitions with open contingency periods, of up to $76.5 million. As of December 30, 2018, we have recorded contingent consideration obligations of $69.7 million, of which $67.0 million was recorded in accrued expenses and other current liabilities, and $2.7 million was recorded in long-term liabilities. As of December 31, 2017, we have recorded contingent consideration obligations of $65.3 million, of which $52.2 million was recorded in accrued expenses and other current liabilities, and $13.1 million was recorded in long-

term liabilities. The expected maximum earnout period for acquisitions with open contingency periods does not exceed 1.78 years from December 30, 2018, and the remaining weighted average expected earnout period at December 30, 2018 was 5 months. If the actual results differ from the estimates and judgments used in these fair values, the amounts recorded in the consolidated financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of definite-lived intangible assets or the recognition of additional contingent consideration which would be recognized as a component of operating expenses from continuing operations.

In connection with the purchase price allocations for acquisitions, we estimate the fair value of deferred revenue assumed with our acquisitions. The estimated fair value of deferred revenue is determined by the legal performance obligation at the date of acquisition, and is generally based on the nature of the activities to be performed and the related costs to be incurred after the acquisition date. The fair value of an assumed liability related to deferred revenue is estimated based on the current market cost of fulfilling the obligation, plus a normal profit margin thereon. The estimated costs to fulfill the deferred revenue are based on the historical direct costs related to providing the services. We do not include any costs associated with selling effort, research and development, or the related margins on these costs. In most acquisitions, profit associated with selling effort is excluded because the acquired businesses would have concluded the selling effort on the support contracts prior to the acquisition date. The estimated research and development costs are not included in the fair value determination, as these costs are not deemed to represent a legal obligation at the time of acquisition. The sum of the costs and operating income approximates, in theory, the amount that we would be required to pay a third-party to assume the obligation.

Contingencies, Including Tax Matters

We are conducting a number of environmental investigations and remedial actions at our current and former locations and, along with other companies, have been named a potentially responsible party ("PRP") for certain waste disposal sites. We accrue for environmental issues in the accounting period that our responsibility is established and when the cost can be reasonably estimated. We have accrued $7.9 million and $9.4 million as of December 30, 2018 and December 31, 2017, respectively, in accrued expenses and other current liabilities, which represents our management's estimate of the cost of the remediation of known environmental matters, and does not include any potential liability for related personal injury or property damage claims. Our environmental accrual is not discounted and does not reflect the recovery of any material amounts through insurance or indemnification arrangements. The cost estimates are subject to a number of variables, including the stage of the environmental investigations, the magnitude of the possible contamination, the nature of the potential remedies, possible joint and several liability, the time period over which remediation may occur, and the possible effects of changing laws and regulations. For sites where we have been named a PRP, our management does not currently anticipate any additional liability to result from the inability of other significant named parties to contribute. We expect that the majority of such accrued amounts could be paid out over a period of up to ten years. As assessment and remediation activities progress at each individual site, these liabilities are reviewed and adjusted to reflect additional information as it becomes available. There have been no environmental problems to date that have had, or are expected to have, a material adverse effect on our consolidated financial statements. While it is possible that a loss exceeding the amounts recorded in the consolidated financial statements may be incurred, the potential exposure is not expected to be materially different from those amounts recorded.

Various tax years after 2010 remain open to examination by certain jurisdictions in which we have significant business operations, such as Finland, Germany, Italy, Netherlands, Singapore, the United Kingdom and the United States. The tax years under examination vary by jurisdiction. We regularly review our tax positions in each significant taxing jurisdiction in the process of evaluating our unrecognized tax benefits. We make adjustments to our unrecognized tax benefits when: (i) facts and circumstances regarding a tax position change, causing a change in management's judgment regarding that tax position; (ii) a tax position is effectively settled with a tax authority; and/or (iii) the statute of limitations expires regarding a tax position.

We are subject to various claims, legal proceedings and investigations covering a wide range of matters that arise in the ordinary course of our business activities. Although we have established accruals for potential losses that we believe are probable and reasonably estimable, in our opinion, based on our review of the information available at this time, the total cost of resolving these contingencies at December 30, 2018 should not have a material adverse effect on our consolidated financial statements included in this annual report on Form 10-K. However, each of these matters is subject to uncertainties, and it is possible that some of these matters may be resolved unfavorably to us.

Reporting Segment Results of Continuing Operations

Discovery & Analytical Solutions

2018 Compared to 2017. Revenue for fiscal year 2018 was $1,693.2 million, as compared to $1,578.5 million for fiscal year 2017, an increase of $114.8 million, or 7%, which includes an approximate 1% increase in revenue attributable to changes in foreign exchange rates. The analysis in the remainder of this paragraph compares revenue by end-market for fiscal year 2018, as compared to fiscal year 2017, and includes the effect of foreign exchange fluctuations and acquisitions and

divestitures. The increase in revenue in our Discovery & Analytical Solutions segment was a result of an increase of $73.5 million from our applied markets revenue, and an increase of $41.3 million from our life sciences market revenue. The increase in our applied markets revenue was driven by strength in sales of industrial, environmental and food offerings. The increase in our life sciences market revenue was driven by strength in our drug discovery sales and strong performance in our Informatics business.

Operating income from continuing operations for fiscal year 2018 was $230.5 million, as compared to $205.3 million for fiscal year 2017, an increase of $25.2 million, or 12%. Amortization of intangible assets decreased to $46.1 million for fiscal year 2018 as compared to $50.7 million for fiscal year 2017. Restructuring and contract termination charges, net decreased to $10.0 million for fiscal year 2018 as compared to $10.4 million for fiscal year 2017. Acquisition and divestiture-related costs, contingent consideration and other costs added an incremental expense of $3.1 million for fiscal year 2018, as compared to $0.4 million for fiscal year 2017. Legal costs for significant litigation matters were $5.3 million for fiscal year 2018, as compared to $2.7 million for fiscal year 2017. In addition to the factors noted above, operating income increased for fiscal year 2018 as compared to fiscal year 2017, as we continued to realize the benefits from our cost containment initiatives partially offset by higher costs in research and development expenses.

2017 Compared to 2016. Revenue for fiscal year 2017 was $1,578.5 million, as compared to $1,513.0 million for fiscal year 2016, an increase of $65.5 million, or 4%, which includes an approximate 0.3% increase in revenue attributable to favorable changes in foreign exchange rates with minimal impact from acquisitions and divestitures. The analysis in the remainder of this paragraph compares revenue by end-market for fiscal year 2017, as compared to fiscal year 2016, and includes the effect of foreign exchange fluctuations and acquisitions and divestitures. The increase in revenue in our Discovery & Analytical Solutions segment was due to an increase of $36.2 million from our life sciences market revenue, and an increase of $29.3 million from our applied markets revenue. The increase in our life sciences market revenue was primarily driven by increased demand for our OneSource laboratory service business, partially offset by continued decline in sales of radioactive reagents in our radio-nucleotide business. In our applied markets, we experienced higher growth in our industrial, environmental and food offerings, as a result of increased government regulation of soil and water and increased focus on food safety laws.

Operating income from continuing operations for fiscal year 2017 was $205.3 million, as compared to $196.5 million for fiscal year 2016, an increase of $8.8 million, or 4%. Amortization of intangible assets decreased and was $50.7 million for fiscal year 2017 as compared to $53.3 million for fiscal year 2016. Restructuring and contract termination charges, net increased and were $10.4 million for fiscal year 2017 as compared to $4.7 million for fiscal year 2016. Acquisition and divestiture-related costs, contingent consideration and other costs added an incremental expense of $0.4 million for fiscal year 2017, as compared to $0.6 million for fiscal year 2016. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions added an incremental expense of $0.4 million in fiscal year 2016. Legal costs for significant litigation matters were $2.7 million for fiscal year 2017. In addition to the factors noted above, operating income increased for fiscal year 2017 as compared to fiscal year 2016, as we continued to see the benefits from our cost containment initiatives partially offset by higher costs in research and development expenses and a shift in product mix, with an increase in sales of lower gross margin product offerings.

Diagnostics

2018 Compared to 2017. Revenue for fiscal year 2018 was $1,084.8 million, as compared to $678.5 million for fiscal year 2017, an increase of $406.3 million, or 60%, which includes an approximate 49% increase in revenue attributable to acquisitions. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize $0.8 million of revenue primarily related to our Diagnostics segment for fiscal year 2018 and $0.7 million for fiscal year 2017. In our diagnostics market, we experienced growth primarily due to our acquisition of EUROIMMUN, which contributed $359.4 million in revenues during fiscal year 2018, and continued expansion of our reproductive health, applied genomics, genetic testing and immuno-diagnostics solutions, particularly in the Americas and emerging markets, such as China and India.

Operating income from continuing operations for fiscal year 2018 was $153.2 million, as compared to $146.9 million for fiscal year 2017, an increase of $6.3 million, or 4%. Amortization of intangible assets increased and was $89.8 million for fiscal year 2018 as compared to $23.0 million for fiscal year 2017. Restructuring and contract termination charges, net decreased and were $1.2 million for fiscal year 2018 as compared to $2.2 million for fiscal year 2017. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of $28.2 million in fiscal year 2018, as compared to an incremental expense of $29.4 million for fiscal year 2017. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions added an incremental expense of $19.3 million in fiscal year 2018, as compared to $6.2 million for fiscal year 2017. Legal costs for significant litigation matters were $0.2 million for fiscal

year 2018. In addition to the factors noted above, operating income increased during fiscal year 2018, as compared to fiscal year 2017, primarily the result of higher sales volume, strong reproductive health sales and benefits from our initiatives to improve our supply chain.

2017 Compared to 2016. Revenue for fiscal year 2017 was $678.5 million, as compared to $602.5 million for fiscal year 2016, an increase of $76.0 million or 13%, which includes an approximate 6% increase in revenue attributable to acquisitions and divestitures and 0.5% increase in revenue attributable to changes in foreign exchange rates. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize $0.7 million of revenue primarily related to our Diagnostics segment for each of the fiscal years 2017 and 2016 that otherwise would have been recorded by the acquired businesses during each of the respective periods. In our diagnostics market, we experienced growth from continued expansion of our newborn and infectious disease screening solutions in key regions outside the United States, particularly in emerging markets such as China and India, and strong growth in applied genomics. EUROIMMUN and Tulip contributed $13.5 million and $38.5 million, respectively, in revenues during fiscal year 2017.

Operating income from continuing operations for fiscal year 2017 was $146.9 million, as compared to $148.0 million for fiscal year 2016, a decrease of $1.1 million, or 1%. Amortization of intangible assets increased and was $23.0 million for fiscal year 2017 as compared to $18.1 million for fiscal year 2016. Restructuring and contract termination charges, net increased and were $2.2 million for fiscal year 2017 as compared to $0.4 million for fiscal year 2016. Acquisition and divestiture-related expenses and other costs added an incremental expense of $29.4 million in fiscal year 2017, as compared to decreasing expenses by $17.7 million for fiscal year 2016. Excluding the impact of the above items, operating income increased during fiscal year 2017, as compared to fiscal year 2016 primarily due to strong reproductive health sales and benefits from our initiatives to improve our supply chain.

Liquidity and Capital Resources

We require cash to pay our operating expenses, make capital expenditures, make strategic acquisitions, service our debt and other long-term liabilities, repurchase shares of our common stock and pay dividends on our common stock. Our principal sources of funds are from our operations and the capital markets, particularly the debt markets. We anticipate that our internal operations will generate sufficient cash to fund our operating expenses, capital expenditures, smaller acquisitions, interest payments on our debt and dividends on our common stock. However, we expect to use external sources to satisfy the balance of our debt when due, any larger acquisitions and other long-term liabilities, such as contributions to our postretirement benefit plans.

Principal factors that could affect the availability of our internally generated funds include:

- changes in sales due to weakness in markets in which we sell our products and services, and
- changes in our working capital requirements.

Principal factors that could affect our ability to obtain cash from external sources include:

- financial covenants contained in the financial instruments controlling our borrowings that limit our total borrowing capacity,
- increases in interest rates applicable to our outstanding variable rate debt,
- a ratings downgrade that could limit the amount we can borrow under our senior unsecured revolving credit facility and our overall access to the corporate debt market,
- increases in interest rates or credit spreads, as well as limitations on the availability of credit, that affect our ability to borrow under future potential facilities on a secured or unsecured basis,
- a decrease in the market price for our common stock, and
- volatility in the public debt and equity markets.

Cash Flows

Fiscal Year 2018

Operating Activities. Net cash provided by continuing operations was $311.2 million for fiscal year 2018, as compared to net cash provided by continuing operations of $292.2 million for fiscal year 2017, an increase of $19.1 million. The cash provided by operating activities for fiscal year 2018 was principally a result of income from continuing operations of $237.5

million, and non-cash charges, including depreciation and amortization of $180.6 million, stock based compensation expense of $28.8 million, change in fair value of contingent consideration of $14.6 million, a non-cash expense of $11.9 million related to our postretirement benefit plans, including the mark-to-market adjustment in the fourth quarter of fiscal year 2018, restructuring and contract termination charges, net, of $11.1 million, and amortization of deferred debt issuance costs and accretion of discounts of $3.3 million. These amounts were partially offset by a net increase in working capital of $115.8 million, deferred tax benefit of $51.1 million, a net increase of $3.7 million in accrued expenses, other assets and liabilities and other items, a gain from disposition of businesses and assets, net of $12.8 million, and a gain on sale of investments, net of $0.6 million. The change in accrued expenses, other assets and liabilities and other items increased cash provided by operating activities by $3.7 million for fiscal year 2018, primarily related to the timing of payments for pension, taxes, restructuring, royalties and salary and benefits. During fiscal year 2018, we made contributions of $8.5 million, in the aggregate, to pension plans outside of the United States and $15.0 million to our defined benefit pension plan in the United States for the plan year 2017. Contributing to the net increase in working capital for fiscal year 2018, excluding the effect of foreign exchange rate fluctuations, was an increase in accounts receivable of $94.5 million and an increase in inventory of $30.2 million, which were partially offset by an increase in accounts payable of $8.9 million. The increase in accounts receivable was a result of higher sales volume late in the fourth quarter of fiscal year 2018. The increase in inventory was primarily a result of overseas production moves to further increase our manufacturing localization and added inventory needed for our distribution center strategy. The increase in accounts payable was primarily a result of the timing of disbursements during the fourth quarter of fiscal year 2018.

Investing Activities. Net cash used in the investing activities of our continuing operations was $159.9 million for fiscal year 2018, as compared to net cash used in the investing activities of our continuing operations of $1,539.4 million for fiscal year 2017, a decrease of $1,379.5 million. For fiscal year 2018, we used $97.7 million of net cash for acquisitions, as compared to $1,527.2 million used in fiscal year 2017. Capital expenditures for fiscal year 2018 were $93.3 million, primarily for manufacturing equipment and other capital equipment purchases, as compared to $39.1 million for fiscal year 2017. During fiscal year 2018, we made equity investments that are accounted for using the cost method of accounting, amounting to $7.0 million as compared to $10.8 million in fiscal year 2017. These items were partially offset by $38.0 million in proceeds from disposition of investments and $0.1 million in proceeds from the surrender of life insurance policies in fiscal year 2018.

Financing Activities. Net cash used in the financing activities of our continuing operations was $179.2 million for fiscal year 2018, as compared to net cash provided by the financing activities of our continuing operations of $782.8 million for fiscal year 2017, an increase of $962.0 million. The cash used in financing activities in fiscal year 2018 was as a result of payments on borrowings, repurchases of our common stock, settlement of forward foreign exchange contracts, payments of dividends, net payments on other credit facilities, and payments for acquisition-related contingent consideration. During fiscal year 2018, payments on our senior unsecured revolving credit facility totaled $1,264.0 million, which was partially offset by proceeds from our senior unsecured revolving credit facility of $857.0 million and proceeds from the sale of our 0.6% senior unsecured notes due in 2021 of $369.3 million offset by debt issuance costs totaling $2.6 million. This compares to borrowings from our senior unsecured revolving credit facility of $1,061.0 million, which was partially offset by debt payments of $236.0 million in fiscal year 2017. During fiscal year 2018, we repurchased 650,000 shares of our common stock, in addition to repurchasing 66,506 shares of our common stock pursuant to our equity incentive plans, for a total cost of $57.4 million, including commissions. This compares to repurchases of 78,644 shares of our common stock pursuant to our equity incentive plans, for a total cost of $3.8 million during fiscal year 2017. During fiscal year 2018, we paid $34.1 million for the settlement of forward foreign exchange contracts, as compared to $13.8 million in fiscal year 2017. During each of the fiscal years 2018 and 2017, we paid $31.0 million in dividends. We had net payments on other credit facilities of $28.4 million during fiscal year 2018, as compared to $2.8 million during fiscal year 2017. We made $12.8 million in payments during fiscal year 2018 for acquisition-related contingent consideration, as compared to $8.9 million in fiscal year 2017. Cash used in financing activities in fiscal year 2018 was partially offset by proceeds from the issuance of common stock under stock plans of $24.8 million, as compared to proceeds from the issuance of common stock under stock plans of $18.0 million in fiscal year 2017.

Fiscal Year 2017

Operating Activities. Net cash provided by continuing operations was $292.2 million for fiscal year 2017, as compared to net cash provided by continuing operations of $323.8 million for fiscal year 2016, a decrease of $31.6 million. The cash provided by operating activities for fiscal year 2017 was principally a result of income from continuing operations of $156.9 million, and non-cash charges, including depreciation and amortization of $105.0 million, deferred taxes expense of $28.9 million, stock based compensation expense of $25.4 million, restructuring and contract termination charges, net, of $12.7 million, amortization of deferred debt issuance costs and accretion of discounts of $2.6 million, change in fair value of contingent consideration of $2.2 million, and a loss from disposition of businesses and assets, net of $0.3 million. These amounts were partially offset by a net decrease of $11.1 million in accrued expenses, other assets and liabilities and other items, a net increase in working capital of $20.2 million, and a non-cash gain related to our postretirement benefit plans, including the

mark-to-market adjustment in the fourth quarter of fiscal year 2017, of $10.4 million. The change in accrued expenses, other assets and liabilities and other items decreased cash provided by operating activities by $11.1 million for fiscal year 2017, primarily related to the timing of payments for taxes, defined benefit pension plans, royalties, restructuring, and salary and benefits. During fiscal year 2017, we made contributions of $8.4 million, in the aggregate, to pension plans outside of the United States. Contributing to the net increase in working capital for fiscal year 2017, excluding the effect of foreign exchange rate fluctuations, was an increase in accounts receivable of $36.6 million and an increase in inventory of $17.9 million, which were partially offset by an increase in accounts payable of $34.3 million. The increase in accounts receivable was a result of higher sales volume late in the fourth quarter of fiscal year 2017. The increase in inventory was primarily a result of expanding the amount of inventory held at sales locations within our Discovery & Analytical Solutions and Diagnostics segments to improve responsiveness to customer requirements and to facilitate the introduction of new products. The increase in accounts payable was primarily a result of the timing of disbursements during the fourth quarter of fiscal year 2017.

Investing Activities. Net cash used in the investing activities of our continuing operations was $1,539.4 million for fiscal year 2017, as compared to net cash used in the investing activities of our continuing operations of $82.6 million for fiscal year 2016, an increase of $1,456.8 million. For fiscal year 2017, we used $1,527.2 million of net cash for acquisitions, as compared to $71.9 million used in fiscal year 2016. The increase of $1,455.3 million in net cash for acquisitions primarily related to the acquisition of EUROIMMUN and Tulip during fiscal year 2017. Capital expenditures for fiscal year 2017 were $39.1 million, primarily for manufacturing equipment and other capital equipment purchases, as compared to $31.7 million for fiscal year 2016. During fiscal year 2017, we made an equity investment that is accounted for using the cost method of accounting, amounting to $10.8 million. In addition, we received $36.5 million from the settlement of acquisition-related foreign currency forward contracts, and $1.1 million from disposition of businesses in fiscal year 2017.

Financing Activities. Net cash provided by the financing activities of our continuing operations was $782.8 million for fiscal year 2017, as compared to net cash used in the financing activities of our continuing operations of $115.0 million for fiscal year 2016, an increase of $897.8 million. During fiscal year 2017, borrowings from our senior unsecured revolving credit facility totaled $1,061.0 million, which was partially offset by debt payments of $236.0 million. This compares to borrowings from our senior unsecured revolving credit facility of $420.5 million, which was more than offset by debt payments of $902.5 million in fiscal year 2016. During fiscal year 2017, proceeds from the issuance of common stock under stock plans was $18.0 million. This compares to proceeds from the issuance of common stock under stock plans of $14.4 million in fiscal year 2016. This cash provided by financing activities in fiscal year 2017 was partially offset by payments of dividends, settlement of forward foreign exchange contracts, payments for acquisition-related contingent consideration, repurchases of our common stock, and net payments on other credit facilities. During each of the fiscal years 2017 and 2016, we paid $30.8 million in dividends. During fiscal year 2017, we paid $13.8 million for the settlement of forward foreign exchange contracts, as compared to $1.9 million in fiscal year 2016. During fiscal year 2017, we made $8.9 million in payments for acquisition-related contingent consideration, as compared to $0.2 million in fiscal year 2016. During fiscal year 2017, we repurchased 78,644 shares of our common stock pursuant to our equity incentive plans, for a total cost of $3.8 million. This compares to repurchases of 3.2 million shares of our common stock, including 75,198 shares of our common stock pursuant to our equity incentive plans, for a total cost of $151.8 million, including commissions, during fiscal year 2016. We had net payments on other credit facilities of $2.8 million during fiscal year 2017, as compared to $1.1 million during fiscal year 2016.

Borrowing Arrangements

Senior Unsecured Revolving Credit Facility. Our senior unsecured revolving credit facility provides for $1.0 billion of revolving loans and has an initial maturity of August 11, 2021. As of December 30, 2018, undrawn letters of credit in the aggregate amount of $11.4 million were treated as issued and outstanding when calculating the borrowing availability under the senior unsecured revolving credit facility. As of December 30, 2018, we had $570.6 million available for additional borrowing under the facility. We use the senior unsecured revolving credit facility for general corporate purposes, which may include working capital, refinancing existing indebtedness, capital expenditures, share repurchases, acquisitions and strategic alliances. The interest rates under the senior unsecured revolving credit facility are based on the Eurocurrency rate or the base rate at the time of borrowing, plus a margin. The base rate is the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. The Eurocurrency margin as of December 30, 2018 was 110 basis points. The weighted average Eurocurrency interest rate as of December 30, 2018 was 2.51%, resulting in a weighted average effective Eurocurrency rate, including the margin, of 3.61%, which was the interest applicable to the borrowings outstanding under the Eurocurrency rate as of December 30, 2018. As of December 30, 2018, the senior unsecured revolving credit facility had outstanding borrowings of $418.0 million, and $2.4 million of unamortized debt issuance costs. As of December 31, 2017, the senior unsecured revolving credit facility had $625.0 million outstanding borrowings, and $3.3 million of unamortized debt issuance costs. The credit agreement for the facility contains affirmative, negative and financial covenants and events of default. The financial covenants include a debt-to-capital ratio that remains applicable for so long as our debt is rated as investment grade. In the event that our debt is not rated as investment grade, the debt-to-capital ratio covenant is replaced with

a maximum consolidated leverage ratio covenant and a minimum consolidated interest coverage ratio covenant. We were in compliance with all applicable covenants as of December 30, 2018.

Senior Unsecured Term Loan Credit Facility. We entered into a senior unsecured term loan credit facility on August 11, 2017 that provided for $200.0 million of term loans and had an initial maturity of twelve months from December 19, 2017, the date of the initial draw. We utilized the senior unsecured term loan facility for the acquisition of EUROIMMUN. The interest rates under the senior unsecured term loan credit facility were based on the Eurocurrency rate or the base rate at the time of the borrowing, plus a margin. The base rate was the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. In April 2018, we paid in full the outstanding balance of $200.0 million on our senior unsecured term loan credit facility, from the proceeds of the 0.6% senior unsecured notes due in 2021 that were issued in April 2018.

5% *Senior Unsecured Notes due in 2021.* On October 25, 2011, we issued $500.0 million aggregate principal amount of senior unsecured notes due in 2021 (the "November 2021 Notes") in a registered public offering and received $493.6 million of net proceeds from the issuance. The November 2021 Notes were issued at 99.4% of the principal amount, which resulted in a discount of $3.1 million. As of December 30, 2018, the November 2021 Notes had an aggregate carrying value of $497.4 million, net of $1.1 million of unamortized original issue discount and $1.6 million of unamortized debt issuance costs. As of December 31, 2017, the November 2021 Notes had an aggregate carrying value of $496.6 million, net of $1.4 million of unamortized original issue discount and $2.0 million of unamortized debt issuance costs. The November 2021 Notes mature in November 2021 and bear interest at an annual rate of 5%. Interest on the November 2021 Notes is payable semi-annually on May 15th and November 15th each year. Prior to August 15, 2021 (three months prior to their maturity date), we may redeem the November 2021 Notes in whole or in part, at our option, at a redemption price equal to the greater of (i) 100% of the principal amount of the November 2021 Notes to be redeemed, plus accrued and unpaid interest, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the November 2021 Notes being redeemed, discounted on a semi-annual basis, at the Treasury Rate plus 45 basis points, plus accrued and unpaid interest. At any time on or after August 15, 2021 (three months prior to their maturity date), we may redeem the November 2021 Notes, at our option, at a redemption price equal to 100% of the principal amount of the November 2021 Notes to be redeemed plus accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the November 2021 Notes) and a contemporaneous downgrade of the November 2021 Notes below investment grade, each holder of November 2021 Notes will have the right to require us to repurchase such holder's November 2021 Notes for 101% of their principal amount, plus accrued and unpaid interest.

1.875% Senior Unsecured Notes due 2026. On July 19, 2016, we issued €500.0 million aggregate principal amount of senior unsecured notes due in 2026 (the "2026 Notes") in a registered public offering and received approximately €492.3 million of net proceeds from the issuance. The 2026 Notes were issued at 99.118% of the principal amount, which resulted in a discount of €4.4 million. The 2026 Notes mature in July 2026 and bear interest at an annual rate of 1.875%. Interest on the 2026 Notes is payable annually on July 19th each year. The proceeds from the 2026 Notes were used to pay in full the outstanding balance of our previous senior unsecured revolving credit facility. As of December 30, 2018, the 2026 Notes had an aggregate carrying value of $564.5 million, net of $4.0 million of unamortized original issue discount and $3.8 million of unamortized debt issuance costs. As of December 31, 2017, the 2026 Notes had an aggregate carrying value of $591.7 million, net of $4.7 million of unamortized original issue discount and $4.3 million of unamortized debt issuance costs.

Prior to April 19, 2026 (three months prior to their maturity date), we may redeem the 2026 Notes in whole at any time or in part from time to time, at our option, at a redemption price equal to the greater of (i) 100% of the principal amount of the 2026 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the 2026 Notes being redeemed, discounted on an annual basis, at the applicable Comparable Government Bond Rate (as defined in the indenture governing the 2026 Notes) plus 35 basis points; plus, in each case, accrued and unpaid interest. In addition, at any time on or after April 19, 2026 (three months prior to their maturity date), we may redeem the 2026 Notes, at our option, at a redemption price equal to 100% of the principal amount of the 2026 Notes due to be redeemed plus accrued and unpaid interest.

Upon a change of control (as defined in the indenture governing the 2026 Notes) and a contemporaneous downgrade of the 2026 Notes below investment grade, we will, in certain circumstances, make an offer to purchase the 2026 Notes at a price equal to 101% of their principal amount plus any accrued and unpaid interest.

0.6% Senior Unsecured Notes due in 2021. On April 11, 2018, we issued €300.0 million aggregate principal amount of senior unsecured notes due in 2021 (the "April 2021 Notes") in a registered public offering and received approximately €298.7 million of net proceeds from the issuance. The April 2021 Notes were issued at 99.95% of the principal amount, which resulted in a discount of €0.2 million. As of December 30, 2018, the April 2021 Notes had an aggregate carrying value of $341.3 million, net of $0.1 million of unamortized original issue discount and $2.0 million of unamortized debt issuance costs. The

April 2021 Notes mature in April 2021 and bear interest at an annual rate of 0.6%. Interest on the April 2021 Notes is payable annually on April 9th each year. The proceeds from the April 2021 Notes were used to pay in full the outstanding balance of our senior unsecured term loan credit facility, and a portion of the outstanding senior unsecured revolving credit facility, and in each case the borrowings were incurred to pay a portion of the purchase price for our acquisition of EUROIMMUN, which closed on December 19, 2017. Prior to the maturity date of the April 2021 Notes, we may redeem them in whole at any time or in part from time to time, at our option, at a redemption price equal to the greater of (i) 100% of the principal amount of the April 2021 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the April 2021 Notes being redeemed, discounted on an annual basis, at the applicable Comparable Government Bond Rate (as defined in the indenture governing the April 2021 Notes) plus 15 basis points; plus, in each case, accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the April 2021 Notes) and a contemporaneous downgrade of the April 2021 Notes below investment grade, we will, in certain circumstances, make an offer to purchase the April 2021 Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest.

Other Debt Facilities. Our other debt facilities include Euro-denominated bank loans with an aggregate carrying value of $32.1 million (or €28.0 million) and $57.2 million (or €47.6 million) as of December 30, 2018 and December 31, 2017, respectively. These bank loans are primarily utilized for financing fixed assets and are repaid in monthly or quarterly installments with maturity dates extending to 2028. Of these bank loans, loans in the aggregate amount of $31.9 million bear fixed interest rates between 1.1% and 5.5% and a loan in the amount of $0.2 million bears a variable interest rate based on the Euribor rate plus a margin of 1.5%. An aggregate amount of $4.8 million of the bank loans are secured by mortgages on real property and the remaining $27.3 million are unsecured. Certain credit agreements for the unsecured bank loans include financial covenants which are based on an equity ratio or an equity ratio and minimum interest coverage ratio. We were in compliance with all applicable covenants as of December 30, 2018.

In addition, we had other unsecured revolving credit facilities and a secured bank loan in the amount of $5.8 million and $0.3 million, respectively, as of December 30, 2018 and $2.7 million and $0.3 million, respectively, as of December 31, 2017. The unsecured revolving debt facilities bear fixed interest rates between 2.3% and 17.6%. The secured bank loan of $0.3 million bears a fixed annual interest rate of 2.0% and is repaid in monthly installments until 2027.

Financing Lease Obligations. In fiscal year 2012, we entered into agreements with the lessors of certain buildings that we are currently occupying and leasing to expand those buildings. We provided a portion of the funds needed for the construction of the additions to the buildings, and as a result we were considered the owner of the buildings during the construction period. At the end of the construction period, we were not reimbursed by the lessors for all of the construction costs. We are therefore deemed to have continuing involvement and the leases qualify as financing leases under sale-leaseback accounting guidance, representing debt obligations for us and non-cash investing and financing activities. As a result, we capitalized $29.3 million in property, plant and equipment, net, representing the fair value of the buildings with a corresponding increase to debt. We have also capitalized $11.5 million in additional construction costs necessary to complete the renovations to the buildings, which were funded by the lessors, with a corresponding increase to debt. At December 30, 2018, we had $34.5 million recorded for these financing lease obligations, of which $1.5 million was recorded as short-term debt and $33.0 million was recorded as long-term debt. At December 31, 2017, we had $35.9 million recorded for these financing lease obligations, of which $1.4 million was recorded as short-term debt and $34.5 million was recorded as long-term debt. The buildings are being depreciated on a straight-line basis over the terms of the leases to their estimated residual values, which will equal the remaining financing obligation at the end of the lease term. At the end of the lease term, the remaining balances in property, plant and equipment, net and debt will be reversed against each other.

Dividends

Our Board declared a regular quarterly cash dividend of $0.07 per share in each quarter of fiscal years 2018 and 2017, resulting in an annual dividend rate of $0.28 per share. At December 30, 2018, we had accrued $7.7 million for a dividend declared on October 24, 2018 for the fourth quarter of fiscal year 2018 that was paid in February 2019. On January 24, 2019, we announced that our Board had declared a quarterly dividend of $0.07 per share for the first quarter of fiscal year 2019 that will be payable in May 2019. In the future, our Board may determine to reduce or eliminate our common stock dividend in order to fund investments for growth, repurchase shares or conserve capital resources.

Contractual Obligations

The following table summarizes our contractual obligations at December 30, 2018 for continuing and discontinued operations. Purchase commitments are minimal and have been excluded from this table:

	Operating Leases	Sr. Unsecured Revolving Credit Facility Maturing 2021[1]	November 2021 Notes[2]	April 2021 Notes[3]	2026 Notes[4]	Other Debt Facilities[5]	Financing Lease Obligations[6]	Employee Benefit Payments[7]	Unrecognized Tax Benefits[8]	Total
	(In thousands)									
2019	$ 56,430	$ —	$ 25,000	$ 2,060	$ 10,732	$ 13,763	$ 1,532	$ 30,223	$ —	$ 139,740
2020	46,621	—	25,000	2,060	10,732	8,818	1,597	30,751	—	125,579
2021	33,490	418,000	521,772	343,981	10,732	8,388	1,665	31,544	—	1,369,572
2022	22,129	—	—	—	10,732	4,027	1,657	31,804	—	70,349
2023	15,591	—	—	—	10,732	2,729	1,681	32,207	—	62,940
2024 and thereafter	67,582	—	—	—	599,622	1,475	4,698	163,910	—	837,287
Total	$ 241,843	$ 418,000	$ 571,772	$ 348,101	$ 653,282	$ 39,200	$ 12,830	$ 320,439	$ —	$ 2,605,467

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(1) The credit facility borrowings carry variable interest rates. As of December 30, 2018, the senior unsecured revolving credit facility had a carrying value of $415.6 million.

(2) The November 2021 Notes include interest obligations of $71.8 million. As of December 30, 2018, the November 2021 Notes had a carrying value of $497.4 million.

(3) The April 2021 Notes include interest obligations of $4.7 million. As of December 30, 2018, the April 2021 Notes had a carrying value of $341.3 million.

(4) The 2026 Notes include interest obligations of $80.9 million. As of December 30, 2018, the 2026 Notes had a carrying value of $564.5 million.

(5) The other debt facilities include interest obligations of $1.0 million. As of December 30, 2018, the other debt facilities had a carrying value of $38.2 million.

(6) The financing lease obligations do not include interest obligations.

(7) Employee benefit payments only include obligations through fiscal year 2028.

(8) We do not expect to cash settle any uncertain positions during fiscal year 2019. We have excluded $1.0 million, including accrued interest, net of tax benefits, and penalties, from our uncertain tax positions, as we cannot make a reasonably reliable estimate of the amount and period of related future payments.

As of December 30, 2018, we may have to pay the former shareholders of certain of our acquisitions contingent consideration of up to $76.5 million. The table above does not reflect any of these obligations as the timing and amounts are uncertain. For further information related to our contingent consideration obligations, see Note 23 to our consolidated financial statements included in this annual report on Form 10-K.

Capital Expenditures

During fiscal year 2019, we expect to invest an amount for capital expenditures similar to that in fiscal year 2018, primarily to introduce new products, to improve our operating processes, to shift the production capacity to lower cost locations, and to develop information technology. We expect to use our available cash and internally generated funds to fund these expenditures.

Other Potential Liquidity Considerations

At December 30, 2018, we had cash and cash equivalents of $163.1 million, of which $149.4 million was held by our non-U.S. subsidiaries, and we had $570.6 million of additional borrowing capacity available under a senior unsecured revolving credit facility. We had no other liquid investments at December 30, 2018.

We utilize a variety of tax planning and financing strategies to ensure that our worldwide cash is available in the locations in which it is needed. The Tax Act requires us to pay a one-time transition tax on the unremitted earnings of foreign subsidiaries. Based on available information, we estimated the tax on the deemed repatriation of our foreign earnings and recorded a tax expense of $85.0 million in continuing operations at December 31, 2017. During the fiscal year ended December 30, 2018, we refined our calculations of the one-time transition tax based on newly issued guidance from the Internal Revenue Service. As a result, we recorded a benefit of $4.6 million in continuing operations related to the one-time transition

tax. In addition, during fiscal year 2018, we determined that previously undistributed earnings of certain international subsidiaries no longer met the requirements of indefinite reinvestment and therefore recognized $2.9 million of income tax expense during the year. Our intent is to continue to reinvest the remaining undistributed earnings of our international subsidiaries indefinitely. No additional income tax expense has been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations.

On July 27, 2016, our Board authorized us to repurchase up to 8.0 million shares of common stock under a stock repurchase program (the "Repurchase Program"). On July 23, 2018, our Board authorized us to immediately terminate the Repurchase Program and further authorized us to repurchase shares of common stock for an aggregate amount up to $250.0 million under a new stock repurchase program (the "New Repurchase Program"). The New Repurchase Program will expire on July 23, 2020 unless terminated earlier by our Board and may be suspended or discontinued at any time. During fiscal year 2018, we had no stock repurchases under the Repurchase Program. No shares remain available for repurchase under the Repurchase Program due to its cancellation. During the fourth quarter of fiscal year 2018, we repurchased 650,000 shares of common stock under the New Repurchase Program at an aggregate cost of $52.2 million. As of December 30, 2018, $197.8 million remained available for aggregate repurchases of shares under the New Repurchase Program.

In addition, our Board has authorized us to repurchase shares of common stock to satisfy minimum statutory tax withholding obligations in connection with the vesting of restricted stock awards and restricted stock unit awards granted pursuant to our equity incentive plans and to satisfy obligations related to the exercise of stock options made pursuant to our equity incentive plans. During the fiscal year 2018, we repurchased 66,506 shares of common stock for this purpose at an aggregate cost of $5.2 million. During fiscal year 2017, we repurchased 78,644 shares of common stock for this purpose at an aggregate cost of $4.4 million. During fiscal year 2016, we repurchased 75,198 shares of common stock for this purpose at an aggregate cost of $3.6 million.

The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value. Any repurchased shares will be available for use in connection with corporate programs. If we continue to repurchase shares, the New Repurchase Program will be funded using our existing financial resources, including cash and cash equivalents, and our existing senior unsecured revolving credit facility.

Distressed global financial markets could adversely impact general economic conditions by reducing liquidity and credit availability, creating increased volatility in security prices, widening credit spreads and decreasing valuations of certain investments. The widening of credit spreads may create a less favorable environment for certain of our businesses and may affect the fair value of financial instruments that we issue or hold. Increases in credit spreads, as well as limitations on the availability of credit at rates we consider to be reasonable, could affect our ability to borrow under future potential facilities on a secured or unsecured basis, which may adversely affect our liquidity and results of operations. In difficult global financial markets, we may be forced to fund our operations at a higher cost, or we may be unable to raise as much funding as we need to support our business activities.

Our pension plans have not experienced a material impact on liquidity or counterparty exposure due to the volatility and uncertainty in the credit markets. With respect to plans outside of the United States, we expect to contribute $8.3 million in the aggregate during fiscal year 2019. During fiscal year 2018, we contributed $8.5 million, in the aggregate, to pension plans outside of the United States and $15.0 million to our defined benefit pension plan in the United States for plan year 2017. During fiscal year 2017, we made contributions of $8.4 million, in the aggregate, to plans outside of the United States. During fiscal year 2016, we contributed $9.6 million, in the aggregate, to plans outside of the United States. We could potentially have to make additional funding payments in future periods for all pension plans. We expect to use existing cash and external sources to satisfy future contributions to our pension plans.

Effects of Recently Issued and Adopted Accounting Pronouncements

See Note 1, *Nature of Operations and Accounting Policies,* in the Notes to Consolidated Financial Statements for a summary of recently adopted and issued accounting pronouncements.

Application of Critical Accounting Policies and Estimates

The preparation of consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, warranty costs, bad debts, inventories, accounting for business combinations and dispositions, long-lived assets, pensions and other postretirement benefits,

restructuring, income taxes, contingencies and litigation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect our more significant judgments and estimates used in preparation of our consolidated financial statements.

Revenue recognition. We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. We recognize revenue in an amount that reflects the consideration we expect to receive in exchange for the promised products or services when a performance obligation is satisfied by transferring control of those products or services to customers.

Taxes that are collected by us from a customer and assessed by a governmental authority, that are both imposed on and concurrent with a specific revenue-producing transaction, are excluded from revenue.

The majority of our sales relate to specific manufactured products or units rather than long-term customized projects, therefore we generally do not experience significant changes in original estimates. Further, we have not experienced any significant refunds or promotional allowances that require significant estimation.

Warranty costs. We provide for estimated warranty costs for products at the time of their sale. Warranty liabilities are estimated using expected future repair costs based on historical labor and material costs incurred during the warranty period.

Allowances for doubtful accounts. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We generally compute our allowance for doubtful accounts by (i) applying specific percentage reserves on accounts that are past due and deemed uncollectible; and (ii) specifically reserving for customers known to be in financial difficulty. Therefore, if the financial condition of our customers were to deteriorate beyond our estimates, we may have to increase our allowance for doubtful accounts. This would reduce our earnings. Accounts are written-off only when all methods of recovery have been exhausted.

Inventory valuation. We value inventory at the lower of cost or market. Inventories are accounted for using the first-in, first-out method. We periodically review these values to ascertain that market value of the inventory continues to exceed its recorded cost. Generally, reductions in value of inventory below cost are caused by our maintenance of stocks of products in excess of demand, or technological obsolescence of the inventory. We regularly review inventory quantities on hand and, when necessary, record provisions for excess and obsolete inventory based on either our estimated forecast of product demand and production requirements, or historical trailing usage of the product. If our sales do not materialize as planned or at historic levels, we may have to increase our reserve for excess and obsolete inventory. This would reduce our earnings. If actual market conditions are more favorable than anticipated, inventory previously written down may be sold, resulting in lower costs of sales and higher income from operations than expected in that period.

Business combinations. Business combinations are accounted for at fair value. Acquisition costs are expensed as incurred and recorded in selling, general and administrative expenses; previously held equity interests are valued at fair value upon the acquisition of a controlling interest; in-process research and development (“IPR&D”) is recorded at fair value as an intangible asset at the acquisition date; restructuring costs associated with a business combination are expensed subsequent to the acquisition date; and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date affect income tax expense. Measurement period adjustments are made in the period in which the amounts are determined and the current period income effect of such adjustments will be calculated as if the adjustments had been completed as of the acquisition date. All changes that do not qualify as measurement period adjustments are also included in current period earnings. The accounting for business combinations requires estimates and judgment as to expectations for future cash flows of the acquired business, and the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair value for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management’s estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. If the actual results differ from the estimates and judgments used in these estimates, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of finite-lived intangible assets, or the recognition of additional consideration which would be expensed. The fair value of contingent consideration is remeasured each period based on relevant information and changes to the fair value are included in the operating results for the period.

Value of long-lived assets, including goodwill and other intangibles. We carry a variety of long-lived assets on our consolidated balance sheets including property and equipment, investments, identifiable intangible assets, and goodwill. We periodically review the carrying value of all of these assets based, in part, upon current estimated market values and our projections of anticipated future cash flows. We undertake this review (i) on an annual basis for assets such as goodwill and non-amortizing intangible assets and (ii) on a periodic basis for other long-lived assets when facts and circumstances suggest that cash flows related to those assets may be diminished. Any impairment charge that we record reduces our earnings. The test consists of the comparison of the fair value to the carrying value of the reporting unit to determine if the carrying value exceeds the fair value. If the carrying value of the reporting unit exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of goodwill. We perform the annual impairment assessment on the later of January 1 or the first day of each fiscal year. This same impairment test will be performed at other times during the course of the year should an event occur which suggests that the recoverability of goodwill should be reconsidered. We completed the annual goodwill impairment test using a measurement date of January 1, 2018, and concluded that there was no goodwill impairment. At January 1, 2018, the fair value exceeded the carrying value by more than 20.0% for each reporting unit, except for our Informatics reporting unit. The range of the long-term terminal growth rates for the reporting units was 3.0% to 5.0% for the fiscal year 2018 impairment analysis. The range for the discount rates for the reporting units was 9.0% to 15.0%. Keeping all other variables constant, a 10.0% change in any one of these input assumptions for the various reporting units, except for our Informatics reporting unit, would still allow us to conclude that there was no impairment of goodwill.

We consistently employed the income approach to estimate the current fair value when testing for impairment of goodwill. A number of significant assumptions and estimates are involved in the application of the income approach to forecast operating cash flows, including markets and market share, sales volumes and prices, costs to produce, tax rates, capital spending, discount rates and working capital changes. Cash flow forecasts are based on approved business unit operating plans for the early years' cash flows and historical relationships in later years. The income approach is sensitive to changes in long-term terminal growth rates and the discount rates. The long-term terminal growth rates are consistent with our historical long-term terminal growth rates, as the current economic trends are not expected to affect our long-term terminal growth rates. We corroborate the income approach with a market approach.

Our Informatics reporting unit, which had a goodwill balance of $217.2 million at January 1, 2018, had a fair value that was less than 20% but greater than 10% more than its carrying value. Informatics is at increased risk of an impairment charge given its ongoing weakness due to a highly competitive industry. Despite the increased risk associated with this reporting unit, we do not believe there will be a significant change in the key estimates or assumptions driving the fair value of this reporting unit that would lead to a material impairment charge. While we believe that our estimates of current value are reasonable, if actual results differ from the estimates and judgments used including such items as future cash flows and the volatility inherent in markets which we serve, impairment charges against the carrying value of those assets could be required in the future.

Non-amortizing intangibles are also subject to an annual impairment test. We consistently employed the relief from royalty model to estimate the current fair value when testing for impairment of non-amortizing intangible asset. The impairment test consists of a comparison of the fair value of the non-amortizing intangible asset with its carrying amount. If the carrying amount of a non-amortizing intangible asset exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of the amortizing intangible asset. In addition, we evaluate the remaining useful life of our non-amortizing intangible asset at least annually to determine whether events or circumstances continue to support an indefinite useful life. If events or circumstances indicate that the useful life of our non-amortizing intangible asset is no longer indefinite, the asset will be tested for impairment. This intangible asset will then be amortized prospectively over their estimated remaining useful life and accounted for in the same manner as other intangible assets that are subject to amortization.

We performed our annual impairment testing as of January 1, 2018, and concluded that there was no impairment of non-amortizing intangible asset. An assessment of the recoverability of amortizing intangible assets takes place when events have occurred that may give rise to an impairment. No such events occurred during fiscal year 2018.

Employee compensation and benefits. We sponsor both funded and unfunded U.S. and non-U.S. defined benefit pension plans and other postretirement benefits. Retirement and postretirement benefit plans are a significant cost of doing business, and represent obligations that will be ultimately settled far in the future, and therefore are subject to estimation. Retirement and postretirement benefit plan expenses are allocated to cost of revenue, research and development, and selling, general and administrative expenses, in our consolidated statements of operations. We immediately recognize actuarial gains and losses in operating results in the year in which the gains and losses occur. Actuarial gains and losses are measured annually as of the calendar month-end that is closest to our fiscal year end and accordingly will be recorded in the fourth quarter, unless we are required to perform an interim remeasurement.

We recognized a loss of $11.9 million in fiscal year 2018, income of $10.4 million in fiscal year 2017 and a loss of $14.5 million in fiscal year 2016 for our retirement and postretirement benefit plans, which includes the charge or benefit for the

mark-to-market adjustment for the postretirement benefit plans, which was recorded in the fourth quarter of each fiscal year. The loss or income related to the mark-to-market adjustment on postretirement benefit plans was a pre-tax loss of $21.4 million in fiscal year 2018, a pre-tax gain of $2.1 million in fiscal year 2017 and a pre-tax loss of $15.3 million in fiscal year 2016. We expect income of approximately $1.2 million in fiscal year 2019 for our retirement and postretirement benefit plans, excluding the charge for or benefit from the mark-to-market adjustment. It is difficult to reliably calculate and predict whether there will be a mark-to-market adjustment in fiscal year 2019. Mark-to-market adjustments are primarily driven by events and circumstances beyond our control, including changes in interest rates, the performance of the financial markets and mortality assumptions. To the extent the discount rates decrease or the value of our pension and postretirement investments decrease, mark-to market charges to operations will be recorded in fiscal year 2019. Conversely, to the extent the discount rates increase or the value of our pension and postretirement investments increase more than expected, mark-to market income will be recorded in fiscal year 2019. Pension accounting is intended to reflect the recognition of future benefit costs over the employee's approximate service period based on the terms of the plans and the investment and funding decisions made. We are required to make assumptions regarding such variables as the expected long-term rate of return on assets, the discount rate applied and mortality assumptions, to determine service cost and interest cost, in order to arrive at expected pension income or expense for the year. Beginning in fiscal year 2016, the approach we use to calculate the service and interest components of net periodic benefit cost for certain non-U.S. benefit plans was changed to provide a more precise measurement of service and interest costs. Prior to fiscal year 2016, we calculated these service and interest components utilizing a single weighted-average discount rate derived from a yield curve used to measure the benefit obligation at the beginning of the period. Beginning in fiscal year 2016, we have elected to utilize an approach that discounts the individual expected cash flows using the applicable spot rates derived from a yield curve over the projected cash flow period.

As of December 30, 2018, we estimate the expected long-term rate of return on assets in our pension and other postretirement benefit plans in the United States to be 7.25% and to be 5.30% for all plans outside the United States. In addition, as of December 30, 2018, we estimate the discount rate for our pension and other postretirement benefit plans in the United States to be 4.05% and to be 2.07% for all plans outside the United States. During fiscal year 2016, for the plans in the United States, the Society of Actuaries issued an updated projection scale, MP-2016, which reduced the life expectancy used to determine the projected benefit obligation. We adopted MP-2016 as of January 1, 2017. The adoption of the updated projection scale resulted in a $5.5 million decrease to the projected benefit obligation at January 1, 2017. We adopted a further updated projection scale, MP-2017, as of December 31, 2017. The adoption of MP-2017 resulted in a $2.6 million decrease to the projected benefit obligation at December 31, 2017. During fiscal year 2018, the Society of Actuaries issued MP-2018 mortality improvement rates to replace MP-2017 rates for use with the RP-2014 mortality table, which incorporates an additional year (2016) of U.S. population. We adopted MP-2018 as of December 30, 2018. The adoption of MP-2018 resulted in a $1.0 million decrease to the projected benefit obligation at December 30, 2018. We have analyzed the rates of return on assets used and determined that these rates are reasonable based on the plans' historical performance relative to the overall markets in the countries where we invest the assets, as well as our current expectations for long-term rates of returns for our pension and other postretirement benefit assets. Our management will continue to assess the expected long-term rate of return on plan assets assumptions for each plan based on relevant market conditions, and will make adjustments to the assumptions as appropriate. Discount rate assumptions have been, and continue to be, based on the prevailing market long-term interest rates corresponding with expected benefit payments at the measurement date.

If any of our assumptions were to change as of December 30, 2018, our pension plan expenses would also change.

		Increase (Decrease) at December 30, 2018	
	Percentage Point Change	**Non-U.S.**	**U.S.**
Pension plans discount rate	+0.25	(11,836)	(6,969)
	-0.25	12,591	7,278
Rate of return on pension plan assets	+1.00	(1,592)	(2,343)
	-1.00	1,592	2,343
Postretirement medical plans discount rate	+0.25	N/A	(81)
	-0.25	N/A	85
Rate of return on postretirement medical plan assets	+1.00	N/A	(163)
	-1.00	N/A	163

We have reduced the volatility in our healthcare costs provided to our retirees by adopting a defined dollar plan feature in fiscal year 2001. Under the defined dollar plan feature, our total annual liability for healthcare costs to any one retiree is

limited to a fixed dollar amount, regardless of the nature or cost of the healthcare needs of that retiree. Our maximum future liability, therefore, cannot be increased by future changes in the cost of healthcare.

Restructuring activities. Our consolidated financial statements detail specific charges relating to restructuring activities as well as the actual spending that has occurred against the resulting accruals. Our pre-tax restructuring charges are estimates based on our preliminary assessments of (i) severance benefits to be granted to employees, based on known benefit formulas and contractual agreements, (ii) costs to abandon certain facilities based on known lease costs of sub-rental income and (iii) impairment of assets as discussed above under "Value of long-lived assets, including goodwill and other intangibles." Because these accruals are estimates, they are subject to change as a result of deviations from initial restructuring plans or subsequent information that may come to our attention. For example, actual severance costs may be less than anticipated if employees voluntarily leave prior to the time at which they would be entitled to severance, or if anticipated legal hurdles in foreign jurisdictions prove to be less onerous than expected. In addition, unanticipated successes or difficulties in terminating leases and other contractual obligations may lead to changes in estimates. When such changes in estimates occur, they are reflected in our consolidated financial statements on our consolidated statements of operations line entitled "restructuring and contract termination charges, net."

Dispositions. When we record the disposition of an asset or discontinuance of an operation, which meets the criteria to be reported as a discontinued operation, we make an estimate relative to the amount we expect to realize on the sale or disposition. This estimate is based on a variety of factors, including current interest in the market, alternative markets for the assets, and other relevant factors. If anticipated proceeds are less than the current carrying amount of the asset or operation, we record a loss. If anticipated proceeds are greater than the current carrying amount of the asset or operation, we recognize a gain net of expected contingencies when the transaction has been consummated. Accordingly, we may realize amounts different than were first estimated. Any such changes decrease or increase current earnings. During the fiscal year ended December 30, 2018, we had no disposition of discontinued operations.

Income taxes. Our business operations are global in nature, and we are subject to taxes in numerous jurisdictions. Tax laws and tax rates vary substantially in these jurisdictions, and are subject to change given the political and economic climate in those countries. We report and pay income tax based on operational results and applicable law. Our tax provision contemplates tax rates currently in effect to determine our current tax provision as well as enacted tax rates expected to apply to taxable income in the fiscal years in which those temporary differences are expected to be recovered or settled to determine our deferred tax provision. Any significant fluctuation in rates or changes in tax laws could cause our estimates of taxes we anticipate either paying or recovering in the future to change. Such changes could lead to either increases or decreases in our effective tax rate.

The Tax Act makes broad and complex changes to the U.S. Internal Revenue Code, which include reducing the corporate income tax rate from 35% to 21% and implementing a modified territorial tax system that includes a one-time transition tax on deemed repatriated earnings of foreign subsidiaries. The end of the measurement period for purposes of Staff Accounting Bulletin No. 118 was December 22, 2018. We have completed the analysis based on legislative updates relating to the Tax Act currently available and has recorded the impact in tax expense from continuing operations. The details are discussed more fully in Note 8, *Income Taxes*, in the Notes to Consolidated Financial Statements.

We will be subject to the new Global Intangible Low Tax Income ("GILTI") tax rules that are part of the modified territorial tax system imposed by the Tax Act. Under U.S. GAAP, we are allowed to make an accounting policy choice of either (1) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred (the "period cost method") or (2) factoring such amounts into our measurement of deferred taxes (the "deferred method"). We decided to adopt the period cost method and thus have not recorded any potential deferred tax effects related to GILTI and FDII in our financial statements for the fiscal year ended December 30, 2018.

Significant judgment is required in determining our worldwide provision for income taxes and recording the related tax assets and liabilities. In the ordinary course of our business, there are operational decisions, transactions, facts and circumstances, and calculations for which the ultimate tax determination is not certain. Furthermore, our tax positions are periodically subject to challenge by taxing authorities throughout the world. Every quarter we review our tax positions in each significant taxing jurisdiction in the process of evaluating our unrecognized tax benefits. Adjustments are made to our unrecognized tax benefits when: (i) facts and circumstances regarding a tax position change, causing a change in our judgment regarding that tax position; (ii) a tax position is effectively settled with a tax authority at a differing amount; and/or (iii) the statute of limitations expires regarding a tax position. Any significant impact as a result of changes in underlying facts, law, tax rates, tax audit, or review could lead to adjustments to our income tax expense, our effective tax rate, or our cash flow.

Additionally, we have established valuation allowances against a variety of deferred tax assets, including state net operating loss carryforwards, state income tax credit carryforwards, and certain foreign tax attributes. Valuation allowances

take into consideration our ability to use these deferred tax assets and reduce the value of such items to the amount that is deemed more likely than not to be recoverable. In evaluating our ability to recover our deferred tax assets within the jurisdiction from which they arise, we consider all available positive and negative evidence, including reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies, and results of recent operations. In projecting future taxable income, we begin with historical results adjusted for the results of discontinued operations and incorporate assumptions about the future pretax operating income adjusted for items that do not have tax consequences. These assumptions about future taxable income require significant judgment and are consistent with the plans and estimates we are using to manage the underlying business. Changes in our assumptions regarding the appropriate amount for valuation allowances could result in the increase or decrease in the valuation allowance, with a corresponding charge or benefit to our tax provision.

Historically, deferred income tax expense has not been provided on the cumulative undistributed earnings of our international subsidiaries. During fiscal year 2018, we determined that previously undistributed earnings of certain international subsidiaries of approximately $1.0 billion no longer met the requirements of indefinite reinvestment and therefore we recognized $2.9 million of income tax expense in fiscal year 2018. Our intent is to continue to reinvest the remaining undistributed earnings of our international subsidiaries indefinitely. While federal income tax expense has been recognized as a result of the Tax Act, we have not provided any additional deferred taxes with respect to items such as foreign withholding taxes, state income tax or foreign exchange gain or loss. As of December 30, 2018, the amount of foreign earnings that we have the intent and ability to keep invested outside the U.S. indefinitely and for which no additional incremental U.S. tax cost has been provided, other than the $80.4 million from the one-time transition tax on deemed repatriation, was approximately $652.1 million. It is not practicable to calculate the unrecognized deferred tax liability related to such incremental tax costs on those earnings.

Item 7A. *Quantitative and Qualitative Disclosures About Market Risk*

Quantitative and Qualitative Disclosures about Market Risk

Financial Instruments

Financial instruments that potentially subject us to concentrations of credit risk consist principally of temporary cash investments, derivatives, marketable securities and accounts receivable. We believe we had no significant concentrations of credit risk as of December 30, 2018.

We use derivative instruments as part of our risk management strategy only, and include derivatives utilized as economic hedges that are not designated as hedging instruments. By nature, all financial instruments involve market and credit risks. We enter into derivative instruments with major investment grade financial institutions and have policies to monitor the credit risk of those counterparties. We do not enter into derivative contracts for trading or other speculative purposes, nor do we use leveraged financial instruments. Approximately 70% of our business is conducted outside of the United States, generally in foreign currencies. As a result, fluctuations in foreign currency exchange rates can increase the costs of financing, investing and operating the business.

In the ordinary course of business, we enter into foreign exchange contracts for periods consistent with our committed exposures to mitigate the effect of foreign currency movements on transactions denominated in foreign currencies. The intent of these economic hedges is to offset gains and losses that occur on the underlying exposures from these currencies, with gains and losses resulting from the forward currency contracts that hedge these exposures. Transactions covered by hedge contracts include intercompany and third-party receivables and payables. The contracts are primarily in European and Asian currencies, have maturities that do not exceed 12 months, have no cash requirements until maturity, and are recorded at fair value on our consolidated balance sheets. The unrealized gains and losses on our foreign currency contracts are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from operating activities within our consolidated statements of cash flows.

Principal hedged currencies include the British Pound, Euro, Swedish Krona, Chinese Yuan and Singapore Dollar. We held forward foreign exchange contracts, designated as economic hedges, with U.S. dollar equivalent notional amounts totaling $223.3 million at December 30, 2018, $212.1 million at December 31, 2017, and $137.5 million at January 1, 2017, and the fair value of these foreign currency derivative contracts was insignificant. The gains and losses realized on these foreign currency derivative contracts are not material. The duration of these contracts was generally 30 days or less during each of fiscal years 2018, 2017 and 2016.

In addition, in connection with certain intercompany loan agreements utilized to finance our acquisitions and stock repurchase program, we enter into forward foreign exchange contracts intended to hedge movements in foreign exchange rates prior to settlement of such intercompany loans denominated in foreign currencies. We record these hedges at fair value on our

consolidated balance sheets. The unrealized gains and losses on these hedges, as well as the gains and losses associated with the remeasurement of the intercompany loans, are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from financing activities within our consolidated statement of cash flows.

The outstanding forward exchange contracts designated as economic hedges, which were intended to hedge movements in foreign exchange rates prior to the settlement of certain intercompany loan agreements, included combined Euro notional amounts of €37.3 million and combined U.S. Dollar notional amounts of $5.7 million as of December 30, 2018, combined Euro notional amounts of €57.2 million and combined U.S. Dollar notional amounts of $1.3 billion as of December 31, 2017, and combined Euro notional amounts of €58.6 million, combined U.S. Dollar notional amounts of $8.7 million and combined Swedish Krona notional amounts of kr969.5 million as of January 1, 2017. The net gains and losses on these derivatives, combined with the gains and losses on the remeasurement of the hedged intercompany loans were not material for each of the fiscal years 2018 and 2017. We paid $34.1 million and $13.8 million during the fiscal years 2018 and 2017, respectively, from the settlement of these hedges.

During fiscal year 2018, we entered into a series of foreign currency forward contracts with a notional amount of €298.7 million to hedge our investments in certain foreign subsidiaries. Realized and unrealized translation adjustments from these hedges were included in the foreign currency translation component of accumulated other comprehensive income ("AOCI"), which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. The foreign currency forward contracts were settled during the second quarter of 2018 and we recorded a net realized foreign exchange loss in AOCI of $2.6 million for the fiscal year ended December 30, 2018.

During fiscal year 2016, we designated the 2026 Notes to hedge our investments in certain foreign subsidiaries. In January 2018, we removed the hedging relationship of our 2026 Notes and investments in certain foreign subsidiaries and recognized $2.1 million of unrealized foreign exchange gain in AOCI. In April 2018, we designated a portion of the 2026 Notes to hedge our investments in certain foreign subsidiaries. Unrealized translation adjustments from a portion of the 2026 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the 2026 Notes that was designated to hedge investments in foreign subsidiaries was €216.0 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was $9.3 million for the fiscal year ended December 30, 2018.

During fiscal year 2018, we designated the April 2021 Notes to hedge our investments in certain foreign subsidiaries. Unrealized translation adjustments from the April 2021 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the April 2021 Notes that was designated to hedge investments in foreign subsidiaries was €298.7 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was $27.5 million for the fiscal year ended December 30, 2018.

Market Risk

Market Risk. We are exposed to market risk, including changes in interest rates and currency exchange rates. To manage the volatility relating to these exposures, we enter into various derivative transactions pursuant to our policies to hedge against known or forecasted market exposures.

Foreign Exchange Risk. The potential change in foreign currency exchange rates offers a substantial risk to us, as approximately 70% of our business is conducted outside of the United States, generally in foreign currencies. Our risk management strategy currently uses forward contracts to mitigate certain balance sheet foreign currency transaction exposures. The intent of these economic hedges is to offset gains and losses that occur on the underlying exposures, with gains and losses resulting from the forward contracts that hedge these exposures. Moreover, we are able to partially mitigate the impact that fluctuations in currencies have on our net income as a result of our manufacturing facilities located in countries outside the United States, material sourcing and other spending which occur in countries outside the United States, resulting in natural hedges.

Although we attempt to manage our foreign currency exchange risk through the above activities, when the U.S. dollar weakens against other currencies in which we transact business, sales and net income will in general be positively but not proportionately impacted. Conversely, when the U.S. dollar strengthens against other currencies in which we transact business, sales and net income will in general be negatively but not proportionately impacted.

Foreign Currency Risk—Value-at-Risk Disclosure. We utilize a Value-at-Risk model to determine the potential earning/fair value exposures presented by our foreign currency related financial instruments. As discussed above, we seek to minimize this exposure through our hedging program. Our Value-at-Risk computation is based on the Monte Carlo simulation, utilizing a 95% confidence interval and a holding period of 30 days. As of December 30, 2018, this computation estimated that there is a 5% chance that the market value of the underlying exposures and the corresponding derivative instruments either increase or decrease due to foreign currency fluctuations by more than $0.1 million. This Value-At-Risk measure is consistent with our financial statement disclosures relative to our foreign currency hedging program. Specifically, during each of the four quarters ended in fiscal year 2018, the Value-At-Risk ranged between $0.1 million and $1.1 million, with an average of approximately $0.5 million.

Interest Rate Risk. As of December 30, 2018, we had $418.0 million in outstanding borrowings under our senior unsecured revolving credit facility. As described above in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources," amounts drawn under our senior unsecured revolving credit facility bear interest at variable rates. Our cash and cash equivalents, for which we receive interest at variable rates, were $163.1 million at December 30, 2018. Fluctuations in interest rates can therefore have a direct impact on both our short-term cash flows, as they relate to interest, and our earnings. To manage the volatility relating to these exposures, we periodically enter into various derivative transactions pursuant to our policies to hedge against known or forecasted interest rate exposures.

Interest Rate Risk—Sensitivity. Our current earnings exposure for changes in interest rates can be summarized as follows:

(i) Changes in interest rates can cause our cash flows to fluctuate. An increase of 10%, or approximately 36 basis points, in current interest rates would cause our cash outflows to increase by $1.5 million for fiscal year 2019.

(ii) Changes in interest rates can cause our interest income and cash flows to fluctuate.

Item 8. ***Financial Statements and Supplemental Data***

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of PerkinElmer, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of PerkinElmer, Inc. and subsidiaries (the "Company") as of December 30, 2018 and December 31, 2017, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 30, 2018, the related notes, and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 30, 2018 and December 31, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 30, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 30, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2019 expressed an unqualified opinion on the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 1 to the financial statements, the Company adopted Accounting Standards Codification Topic 606, "Revenue from Contracts with Customers," using the modified retrospective adoption method on January 1, 2018.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 26, 2019

We have served as the Company's auditor since 2002.

CONSOLIDATED STATEMENTS OF OPERATIONS

For the Fiscal Years Ended

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands, except per share data)		
Revenue			
Product revenue	$ 1,935,493	$ 1,477,414	$ 1,396,896
Service revenue	842,503	779,568	718,621
Total revenue	2,777,996	2,256,982	2,115,517
Cost of product revenue	908,228	707,962	663,795
Cost of service revenue	528,829	475,266	437,361
Selling, general and administrative expenses	811,913	626,018	590,471
Research and development expenses	193,998	139,464	124,184
Restructuring and contract termination charges, net	11,144	12,657	5,124
Operating income from continuing operations	323,884	295,615	294,582
Interest and other expense, net	66,201	(1,103)	50,514
Income from continuing operations before income taxes	257,683	296,718	244,068
Provision for income taxes	20,208	139,828	28,362
Income from continuing operations	237,475	156,890	215,706
Income from discontinued operations before income taxes	—	650	22,229
(Loss) gain on disposition of discontinued operations before income taxes	(859)	179,615	619
(Benefit from) provision for income taxes on discontinued operations and dispositions	(1,311)	44,522	4,255
Income from discontinued operations and dispositions	452	135,743	18,593
Net income	$ 237,927	$ 292,633	$ 234,299
Basic earnings per share:			
Income from continuing operations	$ 2.15	$ 1.43	$ 1.97
Income from discontinued operations and dispositions	0.00	1.24	0.17
Net income	$ 2.15	$ 2.67	$ 2.14
Diluted earnings per share:			
Income from continuing operations	$ 2.13	$ 1.42	$ 1.96
Income from discontinued operations and dispositions	0.00	1.22	0.17
Net income	$ 2.13	$ 2.64	$ 2.12

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

For the Fiscal Years Ended

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Net income	$ 237,927	$ 292,633	$ 234,299
Other comprehensive (loss) income			
Foreign currency translation adjustments, net of tax	(123,388)	54,341	(54,077)
Reclassification of taxes on foreign currency translation adjustments to earnings upon adoption of ASU 2018-02	(6,489)	—	—
Unrecognized prior service costs, net of tax	(77)	(77)	(860)
Unrealized (losses) gains on securities, net of tax	(9)	79	32
Other comprehensive (loss) income	(129,963)	54,343	(54,905)
Comprehensive income	$ 107,964	$ 346,976	$ 179,394

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEETS

As of the Fiscal Years Ended

	December 30, 2018	December 31, 2017
	(In thousands, except share and per share data)	
Current assets:		
Cash and cash equivalents	$ 163,111	$ 202,134
Accounts receivable, net	632,669	552,304
Inventories	338,347	351,675
Other current assets	100,507	93,842
Total current assets	1,234,634	1,199,955
Property, plant and equipment, net	318,590	298,066
Intangible assets, net	1,199,667	1,346,940
Goodwill	2,952,608	3,002,198
Other assets, net	270,023	244,304
Total assets	$ 5,975,522	$ 6,091,463
Current liabilities:		
Current portion of long-term debt	$ 14,856	$ 217,306
Accounts payable	220,949	222,093
Accrued restructuring and contract termination charges	4,834	8,759
Accrued expenses and other current liabilities	528,827	500,642
Current liabilities of discontinued operations	2,165	2,102
Total current liabilities	771,631	950,902
Long-term debt	1,876,624	1,788,803
Long-term liabilities	742,312	848,570
Total liabilities	3,390,567	3,588,275
Commitments and contingencies (see Notes 15 and 18)		
Stockholders' equity:		
Preferred stock—$1 par value per share, authorized 1,000,000 shares; none issued or outstanding	—	—
Common stock—$1 par value per share, authorized 300,000,000 shares; issued and outstanding 110,597,000 and 110,361,000 shares at December 30, 2018 and December 31, 2017, respectively	110,597	110,361
Capital in excess of par value	48,772	58,828
Retained earnings	2,602,067	2,380,517
Accumulated other comprehensive loss	(176,481)	(46,518)
Total stockholders' equity	2,584,955	2,503,188
Total liabilities and stockholders' equity	$ 5,975,522	$ 6,091,463

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

For the Three Fiscal Years Ended December 30, 2018

	Common Stock Amount	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
			(In thousands)		
Balance, January 3, 2016	$ 112,034	$ 52,932	$ 1,991,431	$ (45,956)	$ 2,110,441
Adjustment to recognize prior year's unrecognized excess tax benefits upon adoption of ASU 2016-09	—	177	14,051	—	14,228
Net income	—	—	234,299	—	234,299
Other comprehensive loss	—	—	—	(54,905)	(54,905)
Dividends	—	—	(30,629)	—	(30,629)
Exercise of employee stock options and related income tax benefits	576	13,842	—	—	14,418
Issuance of common stock for employee stock purchase plans	50	2,413	—	—	2,463
Purchases of common stock	(3,275)	(58,058)	(90,468)	—	(151,801)
Issuance of common stock for long-term incentive program	232	10,193	—	—	10,425
Stock compensation	—	4,631	—	—	4,631
Balance, January 1, 2017	$ 109,617	$ 26,130	$ 2,118,684	$ (100,861)	$ 2,153,570
Net income	—	—	292,633	—	292,633
Other comprehensive income	—	—	—	54,343	54,343
Dividends	—	—	(30,800)	—	(30,800)
Exercise of employee stock options and related income tax benefits	578	17,426	—	—	18,004
Issuance of common stock for employee stock purchase plans	37	2,430	—	—	2,467
Purchases of common stock	(79)	(4,288)	—	—	(4,367)
Issuance of common stock for long-term incentive program	208	12,145	—	—	12,353
Stock compensation	—	4,985	—	—	4,985
Balance, December 31, 2017	$ 110,361	$ 58,828	$ 2,380,517	$ (46,518)	$ 2,503,188
Cumulative effect of adopting ASC 606	—	—	10,209	—	10,209
Impact of adopting ASU 2016-16	—	—	(2,062)	—	(2,062)
Impact of adopting ASU 2018-02	—	—	6,489	(6,489)	—
Net income	—	—	237,927	—	237,927
Other comprehensive loss	—	—	—	(123,474)	(123,474)
Dividends	—	—	(31,013)	—	(31,013)
Exercise of employee stock options and related income tax benefits	709	24,124	—	—	24,833
Issuance of common stock for employee stock purchase plans	21	1,464	—	—	1,485
Purchases of common stock	(717)	(56,676)	—	—	(57,393)
Issuance of common stock for long-term incentive program	223	15,650	—	—	15,873
Stock compensation	—	5,382	—	—	5,382
Balance, December 30, 2018	$ 110,597	$ 48,772	$ 2,602,067	$ (176,481)	$ 2,584,955

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the Fiscal Years Ended

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Operating activities:			
Net income	$ 237,927	$ 292,633	$ 234,299
Income from discontinued operations and dispositions, net of income taxes	(452)	(135,743)	(18,593)
Income from continuing operations	237,475	156,890	215,706
Adjustments to reconcile income from continuing operations to net cash provided by continuing operations:			
Restructuring and contract termination charges, net	11,144	12,657	5,124
Depreciation and amortization	180,588	105,000	99,972
Stock-based compensation	28,767	25,421	17,158
Pension and other postretirement expense (benefits)	11,915	(10,439)	14,511
Change in fair value of contingent consideration	14,639	2,162	16,183
Deferred taxes	(51,103)	28,854	(6,526)
Contingencies and non-cash tax matters	(671)	182	(291)
Amortization of deferred debt issuance costs and accretion of discounts	3,341	2,592	2,137
(Gain) loss on disposition of businesses and assets, net	(12,844)	309	(5,562)
Amortization of acquired inventory revaluation	19,272	6,188	396
Gain on sale of investments, net	(557)	—	—
Changes in assets and liabilities which provided (used) cash, excluding effects from companies acquired:			
Accounts receivable, net	(94,512)	(36,633)	(18,960)
Inventories	(30,183)	(17,923)	6,752
Accounts payable	8,900	34,331	30,716
Accrued expenses and other	(14,933)	(17,436)	(53,540)
Net cash provided by operating activities of continuing operations	311,238	292,155	323,776
Net cash (used in) provided by operating activities of discontinued operations	(200)	(3,702)	26,839
Net cash provided by operating activities	311,038	288,453	350,615
Investing activities:			
Capital expenditures	(93,253)	(39,089)	(31,702)
Settlement of cash flow hedges	—	36,541	—
Purchases of investments	(7,019)	(10,783)	—
Proceeds from disposition of businesses	38,027	1,100	21,000
Proceeds from surrender of life insurance policies	72	45	44
Activity related to acquisitions, net of cash and cash equivalents acquired	(97,686)	(1,527,183)	(71,924)
Net cash used in investing activities of continuing operations	(159,859)	(1,539,369)	(82,582)
Net cash provided by (used in) investing activities of discontinued operations	—	272,779	(1,302)
Net cash used in investing activities	(159,859)	(1,266,590)	(83,884)
Financing activities:			
Payments on borrowings	(1,264,000)	(235,965)	(902,507)
Proceeds from borrowings	857,000	1,060,952	420,507
Proceeds from sale of senior debt	369,340	—	546,190
Payments of debt financing costs	(2,634)	—	(7,868)
Net payments on other credit facilities	(28,383)	(2,831)	(1,096)
Settlement of cash flow hedges	(34,132)	(13,824)	(1,900)
Payments for acquisition-related contingent consideration	(12,800)	(8,940)	(155)
Proceeds from issuance of common stock under stock plans	24,833	18,004	14,418
Purchases of common stock	(57,445)	(3,834)	(151,801)
Dividends paid	(31,009)	(30,793)	(30,799)
Net cash (used in) provided by financing activities of continuing operations	(179,230)	782,769	(115,011)
Net cash used in financing activities of discontinued operations	—	(533)	—
Net cash (used in) provided by financing activities	(179,230)	782,236	(115,011)

Effect of exchange rate changes on cash, cash equivalents and restricted cash	(8,004)	21,703	(13,422)
Net (decrease) increase in cash, cash equivalents and restricted cash	(36,055)	(174,198)	138,298
Cash, cash equivalents and restricted cash at beginning of year	202,370	376,568	238,270
Cash, cash equivalents and restricted cash at end of year	$ 166,315	$ 202,370	$ 376,568
Supplemental disclosures of cash flow information			
Reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total shown in the consolidated statements of cash flows:			
Cash and cash equivalents	163,111	202,134	359,265
Restricted cash included in other current assets	3,204	236	17,303
Total cash, cash equivalents and restricted cash shown in the consolidated statements of cash flows	$ 166,315	$ 202,370	$ 376,568
Cash paid during the year for:			
Interest	$ 56,451	$ 35,780	$ 30,718
Income taxes	$ 59,844	$ 77,607	$ 43,549

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1: Nature of Operations and Accounting Policies

Nature of Operations: PerkinElmer, Inc. is a leading provider of products, services and solutions to the diagnostics, life sciences and applied markets. Through its advanced technologies and differentiated solutions, critical issues are addressed that help to improve lives and the world around us.

The consolidated financial statements include the accounts of PerkinElmer, Inc. and its subsidiaries (the "Company"). All intercompany balances and transactions have been eliminated in consolidation.

The Company has two operating segments: Discovery & Analytical Solutions and Diagnostics. The Company's Discovery & Analytical Solutions segment focuses on service and innovating for customers spanning the life sciences and applied markets. The Company's Diagnostics segment is targeted towards meeting the needs of clinically-oriented customers, especially within the growing areas of reproductive health, emerging market diagnostics and applied genomics.

The Company's fiscal year ends on the Sunday nearest December 31. The Company reports fiscal years under a 52/53 week format and as a result, certain fiscal years will contain 53 weeks. Each of the fiscal years ended December 30, 2018 ("fiscal year 2018"), December 31, 2017 ("fiscal year 2017") and January 1, 2017 ("fiscal year 2016") included 52 weeks. The fiscal year ending December 29, 2019 will include 52 weeks.

Accounting Policies and Estimates: The preparation of consolidated financial statements in accordance with United States ("U.S.") Generally Accepted Accounting Principles ("GAAP") requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, the Company evaluates its estimates. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

Revenue Recognition: The Company enters into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. The Company recognizes revenue in an amount that reflects the consideration the Company expects to receive in exchange for the promised products or services when a performance obligation is satisfied by transferring control of those products or services to customers.

Taxes that are collected by the Company from a customer and assessed by a governmental authority, that are both imposed on and concurrent with a specific revenue-producing transaction, are excluded from revenue.

Warranty Costs: The Company provides for estimated warranty costs for products at the time of their sale. Warranty liabilities are estimated using expected future repair costs based on historical labor and material costs incurred during the warranty period.

Shipping and Handling Costs: The Company reports shipping and handling revenue in revenue, to the extent they are billed to customers, and the associated costs in cost of product revenue.

Inventories: Inventories, which include material, labor and manufacturing overhead, are valued at the lower of cost or market. Inventories are accounted for using the first-in, first-out method of determining inventory costs. Inventory quantities on-hand are regularly reviewed, and where necessary, provisions for excess and obsolete inventory are recorded based primarily on the Company's estimated forecast of product demand and production requirements.

Income Taxes: The Company uses the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases. This method also requires the recognition of future tax benefits such as net operating loss carryforwards, to the extent that realization of such benefits is more likely than not. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the fiscal years in which those temporary differences are expected to be recovered or settled. A valuation allowance is established for any deferred tax asset for which realization is not more likely than not. With respect to earnings expected to be indefinitely reinvested offshore, the Company does not accrue tax for the repatriation of such foreign earnings. When the Company determines during the period that previously undistributed earnings of certain international subsidiaries no longer meet the requirements of indefinite reinvestment, the Company recognizes the income tax expense in that period.

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions and other issues. These reserves are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more likely than not to be realized following resolution of any potential contingencies present related to the tax benefit. Potential interest and penalties associated with such uncertain tax positions is recorded as a component of income tax expense. See Note 8 below for additional details.

The Company uses an individual unit of account approach for releasing the income tax effects of unrealized gains and losses from Accumulated Other Comprehensive Income ("AOCI").

Property, Plant and Equipment: The Company depreciates property, plant and equipment using the straight-line method over its estimated useful lives, which generally fall within the following ranges: buildings- 10 to 40 years; leasehold improvements-estimated useful life or remaining term of lease, whichever is shorter; and machinery and equipment- 3 to 8 years. Certain tooling costs are capitalized and amortized over a 3-year life, while repairs and maintenance costs are expensed.

Asset Retirement Obligations: The Company records obligations associated with its lease obligations, the retirement of tangible long-lived assets and the associated asset retirement costs in accordance with authoritative guidance on asset retirement obligations. The Company reviews legal obligations associated with the retirement of long-lived assets that result from contractual obligations or the acquisition, construction, development and/or normal use of the assets. If it is determined that a legal obligation exists, regardless of whether the obligation is conditional on a future event, the fair value of the liability for an asset retirement obligation is recognized in the period in which it is incurred, if a reasonable estimate of fair value can be made. The fair value of the liability is added to the carrying amount of the associated asset, and this additional carrying amount is depreciated over the life of the asset. The difference between the gross expected future cash flow and its present value is accreted over the life of the related lease as interest expense. The amounts recorded in the consolidated financial statements are not material to any year presented.

Pension and Other Postretirement Benefits: The Company sponsors both funded and unfunded U.S. and non-U.S. defined benefit pension plans and other postretirement benefits. The Company immediately recognizes actuarial gains and losses in operating results in the year in which the gains and losses occur. Actuarial gains and losses are measured annually as of the calendar month-end that is closest to the Company's fiscal year end and accordingly will be recorded in the fourth quarter, unless the Company is required to perform an interim remeasurement. The remaining components of pension expense, primarily service and interest costs and assumed return on plan assets, are recorded on a quarterly basis. The Company’s funding policy provides that payments to the U.S. pension trusts shall at least be equal to the minimum funding requirements of the Employee Retirement Income Security Act of 1974. Non-U.S. plans are accrued for, but generally not fully funded, and benefits are paid from operating funds.

Translation of Foreign Currencies: For foreign operations, asset and liability accounts are translated at current exchange rates; income and expenses are translated using weighted average exchange rates for the reporting period. Resulting translation adjustments, as well as translation gains and losses from certain intercompany transactions considered permanent in nature, are reported in accumulated other comprehensive (loss) income, a separate component of stockholders’ equity. Gains and losses arising from transactions and translation of period-end balances denominated in currencies other than the functional currency are included in other expense, net.

Business Combinations: Business combinations are accounted for at fair value. Acquisition costs are expensed as incurred and recorded in selling, general and administrative expenses; previously held equity interests are valued at fair value upon the acquisition of a controlling interest; in-process research and development (“IPR&D”) is recorded at fair value as an intangible asset at the acquisition date; restructuring costs associated with a business combination are expensed subsequent to the acquisition date; and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date affect income tax expense. Measurement period adjustments are made in the period in which the amounts are determined and the current period income effect of such adjustments will be calculated as if the adjustments had been completed as of the acquisition date. All changes that do not qualify as measurement period adjustments are also included in current period earnings. The accounting for business combinations requires estimates and judgment as to expectations for future cash flows of the acquired business, and the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair value for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management’s estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. If the actual results differ from the estimates and judgments used in these estimates, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of finite-lived intangible assets, or the recognition of additional consideration which would be expensed.

Goodwill and Other Intangible Assets: The Company's intangible assets consist of (i) goodwill, which is not being amortized; (ii) indefinite lived intangibles, which consist of a trade name that is not subject to amortization; and (iii) amortizing intangibles, which consist of patents, trade names and trademarks, licenses, customer relationships and purchased technologies, which are being amortized over their estimated useful lives.

The process of testing goodwill for impairment involves the determination of the fair value of the applicable reporting units. The test consists of the comparison of the fair value to the carrying value of the reporting unit to determine if the carrying value exceeds the fair value. If the carrying value of the reporting unit exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of goodwill. This annual impairment assessment is performed by the Company on the later of January 1 or the first day of each fiscal year. Non-amortizing intangibles are also subject to an annual impairment test. The impairment test consists of a comparison of the fair value of the non-amortizing intangible asset with its carrying amount. If the carrying amount of a non-amortizing intangible asset exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of the amortizing intangible asset. In addition, the Company evaluates the remaining useful life of its non-amortizing intangible asset at least annually to determine whether events or circumstances continue to support an indefinite useful life. If events or circumstances indicate that the useful life of non-amortizing intangible asset is no longer indefinite, the asset will be tested for impairment. The intangible asset will then be amortized prospectively over its estimated remaining useful life and accounted for in the same manner as other intangible assets that are subject to amortization. Amortizing intangible assets are reviewed for impairment when indicators of impairment are present. When a potential impairment has been identified, forecasted undiscounted net cash flows of the operations to which the asset relates are compared to the current carrying value of the long-lived assets present in that operation. If such cash flows are less than such carrying amounts, long-lived assets, including such intangibles, are written down to their respective fair values. See Note 14 below for additional details.

Stock-Based Compensation: The Company accounts for stock-based compensation expense based on estimated grant date fair value, generally using the Black-Scholes option-pricing model. The fair value is recognized as expense in the consolidated financial statements over the requisite service period. The determination of fair value and the timing of expense using option pricing models such as the Black-Scholes model require the input of highly subjective assumptions, including the expected term and the expected price volatility of the underlying stock. The Company estimates the expected term assumption based on historical experience. In determining the Company's expected stock price volatility assumption, the Company reviews both the historical and implied volatility of the Company's common stock, with implied volatility based on the implied volatility of publicly traded options on the Company's common stock. The Company has one stock-based compensation plan from which it makes grants, which is described more fully in Note 20 below.

Marketable Securities and Investments: The cost of securities sold is based on the specific identification method. If securities are classified as available for sale, the Company records these investments at their fair values with unrealized gains and losses included in accumulated other comprehensive (loss) income. Under the cost method of accounting, equity investments in private companies are carried at cost and are adjusted for other-than-temporary declines in fair value, additional investments or distributions.

Cash and Cash Equivalents: The Company considers all highly liquid unrestricted instruments with a purchased maturity of three months or less to be cash equivalents. The carrying amount of cash equivalents approximates fair value due to the short maturities of these instruments.

Environmental Matters: The Company accrues for costs associated with the remediation of environmental pollution when it is probable that a liability has been incurred and the Company's proportionate share of the amount can be reasonably estimated. The recorded liabilities have not been discounted.

Research and Development: Research and development costs are expensed as incurred. The fair value of acquired IPR&D costs are recorded at fair value as an intangible asset at the acquisition date and amortized once the product is ready for sale or expensed if abandoned.

Restructuring Charges: In recent fiscal years, the Company has undertaken a series of restructuring actions related to the impact of acquisitions and divestitures, the alignment of its operations with its growth strategy, the integration of its business units and its productivity initiatives. In connection with these initiatives, the Company has recorded restructuring charges, as more fully described in Note 6 below. Generally, costs associated with an exit or disposal activity are recognized when the liability is incurred. Prior to recording restructuring charges for employee separation agreements, the Company notifies all employees of termination. Costs related to employee separation arrangements requiring future service beyond a specified minimum retention period are recognized over the service period. Costs related to lease terminations are recorded at the fair value of the liability based on the remaining lease rental payments, reduced by estimated sublease rentals that could be reasonably obtained for the property, at the date the Company ceases use.

Comprehensive Income: Comprehensive income is defined as net income or loss and other changes in stockholders' equity from transactions and other events from sources other than stockholders. Comprehensive income is reflected in the consolidated statements of comprehensive income.

Derivative Instruments and Hedging: Derivatives are recorded on the consolidated balance sheets at fair value. Accounting for gains or losses resulting from changes in the values of those derivatives depends on the use of the derivative instrument and whether it qualifies for hedge accounting.

For a cash flow hedge, the effective portion of the derivative's gain or loss is initially reported as a component of other comprehensive income and subsequently amortized into net earnings when the hedged exposure affects net earnings. Cash flow hedges related to anticipated transactions are designated and documented at the inception of each hedge by matching the terms of the contract to the underlying transaction. The Company classifies the cash flows from hedging transactions in the same categories as the cash flows from the respective hedged items. Once established, cash flow hedges are generally recorded in other comprehensive income, unless an anticipated transaction is no longer likely to occur, and subsequently amortized into net earnings when the hedged exposure affects net earnings. Discontinued or dedesignated cash flow hedges are immediately settled with counterparties, and the related accumulated derivative gains or losses are recognized into net earnings on the consolidated financial statements. Settled cash flow hedges related to forecasted transactions that remain probable are recorded as a component of other comprehensive (loss) income and are subsequently amortized into net earnings when the hedged exposure affects net earnings. Forward contract effectiveness for cash flow hedges is calculated by comparing the fair value of the contract to the change in value of the anticipated transaction using forward rates on a monthly basis. The Company also has entered into other foreign currency forward contracts that are not designated as hedging instruments for accounting purposes. These contracts are recorded at fair value, with the changes in fair value recognized into interest and other expense, net on the consolidated financial statements.

The Company also uses foreign currency denominated debt to hedge its investments in certain foreign subsidiaries. Realized and unrealized translation adjustments from these hedges are included in the foreign currency translation component of AOCI, as well as the offset translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold.

Recently Issued Accounting Pronouncements: From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (the "FASB") and are adopted by the Company as of the specified effective dates. Unless otherwise discussed, such pronouncements did not have or will not have a significant impact on the Company's consolidated financial position, results of operations and cash flows or do not apply to the Company's operations.

In August 2018, the FASB issued Accounting Standards Update No. 2018-15, *Intangibles-Goodwill and Other- Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract* ("ASU 2018-15"). ASU 2018-15 aligns the accounting for implementation costs incurred in a hosting arrangement that is a service contract with the guidance on capitalizing costs associated with developing or obtaining internal-use software (and hosting arrangements that include an internal-use software license). Specifically, ASU 2018-15 amends *Intangibles-Goodwill and Other (Topic 350)* to include in its scope implementation costs incurred in a hosting arrangement that is a service contract and clarifies that a customer should apply *Subtopic 350-40* to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. The provisions of this guidance are to be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. ASU 2018-15 is effective for annual reporting periods beginning after December 15, 2019, and interim periods within those years with early adoption permitted. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash flows.

In August 2018, the FASB issued Accounting Standards Update No. 2018-14, *Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans* ("ASU 2018-14"). ASU 2018-14 adds, removes, and clarifies disclosure requirements related to defined benefit pension and other postretirement plans. ASU 2018-14 adds requirements for an entity to disclose the weighted-average interest crediting rates used in the entity's cash balance pension plans and other similar plans; and an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. Further, ASU 2018-14 removes guidance that currently requires the following disclosures: the amounts in accumulated other comprehensive income expected to be recognized as part of net periodic benefit cost over the next year; the amount and timing of plan assets expected to be returned to the employer; information about (1) benefits covered by related-party insurance and annuity contracts and (2) significant transactions between the plan and related parties; and the effects of a one-percentage-point change on the assumed health care costs and the effect of this change in rates on service cost, interest cost, and the benefit obligation for postretirement health care benefits. ASU 2018-14 also clarifies the guidance in *Compensation-Retirement Benefits (Topic 715-20-50-3)* on

defined benefit plans to require disclosure of (1) the projected benefit obligation ("PBO") and fair value of plan assets for pension plans with PBOs in excess of plan assets (the same disclosure with reference to the accumulated postretirement benefit obligation rather than the PBO is required for other postretirement benefit plans) and (2) the accumulated benefit obligation ("ABO") and fair value of plan assets for pension plans with ABOs in excess of plan assets. The provisions of this guidance are to be applied retrospectively to all periods presented upon their effective date. ASU 2018-14 is effective for annual reporting periods beginning after December 15, 2020, and interim periods within those years with early adoption permitted. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash flows.

In August 2018, the FASB issued Accounting Standards Update No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"). ASU 2018-13 adds, removes, and modifies certain disclosures related to fair value measurements. ASU 2018-13 adds requirements for an entity to disclose the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period; and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. Further, ASU 2018-13 removes the requirement to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; the policy for timing of transfers between levels; and the valuation processes for Level 3 fair value measurements. ASU 2018-13 also modifies existing disclosure requirements related to measurement uncertainty. The amendments regarding changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and the narrative description of measurement uncertainty are to be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments are to be applied retrospectively to all periods presented upon their effective date. ASU 2018-13 is effective for annual reporting periods beginning after December 15, 2019, and interim periods within those years. Early adoption is permitted for any removed or modified disclosures. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash flows.

In June 2018, the FASB issued Accounting Standards Update No. 2018-07, *Compensation - Stock Compensation (Topic 718), Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07") which supersedes Subtopic 505-50, *Equity - Equity-Based Payments to Non-employees*, and expands the scope of Topic 718 (which currently only includes share-based payments to employees) to also include share-based payments issued to non-employees for goods and services, except for specific guidance on inputs to an option pricing model and the attribution of cost (that is, the period of time over which share-based payment awards vest and the pattern of cost recognition over that period). ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards, except for financing transactions, or awards issued to customers as part of a contract accounted for under Topic 606, *Revenue from Contracts with Customers* ("Topic 606"). The provisions of this guidance are to be applied using a modified retrospective approach, with a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year, for all (1) liability-classified non-employee awards that have not been settled as of the adoption date and (2) equity-classified non-employee awards for which a measurement date has not been established. ASU 2018-07 is effective for annual reporting periods beginning after December 15, 2018, and interim periods within those years. Early adoption is permitted, but no earlier than a company's adoption date of Topic 606. The Company early adopted the provisions of this guidance effective July 2, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flow.

In March 2018, the FASB Issued Accounting Standards Update No. 2018-05, *Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118* ("ASU 2018-05"). ASU 2018-05 was issued to incorporate into Topic 740 recent SEC guidance related to the income tax accounting implications of the Tax Cut and Jobs Act (the "Tax Act"). The SEC issued Staff Accounting Bulletin No. 118 ("SAB 118") to address concerns about reporting entities' ability to timely comply with the accounting requirements to recognize all of the effects of the Tax Act in the period of enactment. SAB 118 permits companies to disclose that some or all of the income tax effects from the Tax Act are incomplete by the due date of the financial statements, and if possible, disclose a reasonable estimate of such tax effects. ASU 2018-05 is effective immediately. The Company is applying the guidance in ASU 2018-05 when accounting for the enactment date effects of the Tax Act. At December 30, 2018, the Company completed the accounting for all of the tax effects of the Tax Act using reasonable estimates of their effects based on currently available information. These estimates may be affected as additional clarification and implementation guidance becomes available. These changes could be material to the Company's income tax expense. See Note 8 for further disclosures.

In February 2018, the FASB Issued Accounting Standards Update No. 2018-03, *Technical Corrections and Improvements to Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2018-03"). ASU 2018-03 was issued to clarify certain aspects of guidance concerning the recognition of financial assets and liabilities established in Accounting Standards Update No. 2016-01, *Financial Instruments - Overall*

(Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2016-01"). This includes treatment for discontinuations and adjustments for equity securities without a readily determinable market value, forward contracts and purchased options, presentation requirements for certain fair value option liabilities, fair value option liabilities denominated in a foreign currency, and transition guidance for equity securities without a readily determinable fair value. ASU 2018-03 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. Early adoption is permitted for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years, as long as the Company has adopted ASU 2016-01. The Company adopted the provisions of this guidance effective July 2, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In February 2018, the FASB Issued Accounting Standards Update No. 2018-02, *Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"). ASU 2018-02 provides entities with an option to reclassify stranded tax effects within AOCI to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Act (or portion thereof) is recorded. ASU 2018-02 requires entities to disclose a description of the accounting policy for releasing income tax effects from AOCI; whether they elect to reclassify the stranded income tax effects from the Tax Act; and information about the other income tax effects that are reclassified. ASU 2018-02 is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted, and entities should apply the proposed amendments either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Act is recognized. The Company adopted ASU 2018-02 on December 30, 2018. The adoption of the standard resulted in an increase in retained earnings at December 30, 2018 in the amount of $6.5 million, with a corresponding decrease in AOCI. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In August 2017, the FASB issued Accounting Standards Update No. 2017-12, *Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12"), which amends the hedge accounting recognition and presentation requirements in Topic 815. ASU 2017-12 makes targeted changes to the existing hedge accounting model to better align an entity’s financial reporting for hedging relationships with the entity’s risk management activities, and to reduce the complexity of, and simplify the application of, the hedge accounting model. Specifically, ASU 2017-12 expands the types of transactions eligible for hedge accounting, eliminates the requirement to separately measure and present hedge ineffectiveness, simplifies the way assessments of hedge ineffectiveness may be performed, relaxes the documentation requirements for entering into hedging positions, provides targeted improvements to fair value hedges of interest rate risk, and permits an entity to exclude the change in the fair value of cross-currency basis spreads in currency swaps from the assessment of hedge effectiveness. The standard also requires entities to provide new disclosures about the impact fair value and cash flow hedges have on their income statements and about cumulative basis adjustments arising from fair value hedges. The provisions of this guidance are to be applied using a modified retrospective approach to existing hedging relationships as of the adoption date. However, the transition provisions allow for certain elections at the date of adoption and entities may choose to apply any of the provided elections. ASU 2017-12 is effective for annual reporting periods beginning after December 15, 2018, and interim periods within those years. Early adoption is permitted, including adoption in any interim period. The Company early adopted the provisions of this guidance effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In May 2017, the FASB issued Accounting Standards Update No. 2017-09, *Compensation - Stock Compensation (Topic 718), Scope of Modification Accounting* ("ASU 2017-09"), which amends the scope of modification accounting for share-based payment arrangements. ASU 2017-09 provides guidance on the types of changes to the terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting under Topic 718. Specifically, an entity would not apply modification accounting if the fair value, vesting conditions, and classification of the awards are the same immediately before and after the modification. If an entity modifies its awards and concludes that it is not required to apply modification accounting under the standard, it must still consider whether the modification affects its application of other guidance. Additionally, if a significant modification does not result in incremental compensation cost, entities are required to disclose the “lack of” incremental compensation cost resulting from such significant modification. The standard also removes the guidance in Topic 718 stating that modification accounting is not required when an entity adds an antidilution provision as long as that modification is not made in contemplation of an equity restructuring. The provisions of this guidance are to be applied on a prospective basis to awards modified on or after the effective date. ASU 2017-09 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted, including adoption in any interim period. The Company adopted ASU 2017-09 effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In March 2017, the FASB issued Accounting Standards Update No. 2017-07, *Compensation - Retirement Benefits (Topic 715), Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"), which amends the requirements in Topic 715 related to the income statement presentation of the components of net periodic benefit cost for an entity's sponsored defined benefit pension and other postretirement plans. ASU 2017-07 requires entities to (1) disaggregate the current-service-cost component from the other components of net benefit cost (the "other components") and present it with other current employee compensation costs in their income statements and (2) present the other components elsewhere in their income statements and outside of income from operations, and disclose the income statement lines that contain the other components if they are not presented on appropriately described separate lines. Additionally, the standard requires that only the service-cost component of net benefit cost is eligible for capitalization (e.g., as part of inventory or property, plant, and equipment). The change in income statement presentation requires retrospective application, while the change in capitalized benefit cost is to be applied prospectively. ASU 2017-07 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The standard provides a practical expedient that permits entities to use the components of cost disclosed in prior years as a basis for the retrospective application of the new income statement presentation. Entities need to disclose the use of the practical expedient. The Company adopted ASU 2017-07 effective January 1, 2018 using a retrospective approach for each period presented. For the fiscal years 2017 and 2016, $(9.2) million and $11.5 million, respectively, of net periodic pension (credit) cost previously presented within operating income has been presented outside of operating income in the line item "Interest and other expense, net" in the consolidated statements of operations due to the retrospective adoption of ASU 2017-07. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In January 2017, the FASB issued Accounting Standards Update No. 2017-01, *Business Combinations (Topic 805), Clarifying the Definition of a Business* ("ASU 2017-01"), which amends Topic 805 to provide a screen to determine when a set of assets and liabilities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This screen reduces the number of transactions that need to be further evaluated. If the screen is not met, the standard (1) requires that to be considered a business, a set must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output and (2) removes the evaluation of whether a market participant could replace missing elements. The standard provides a framework to assist entities in evaluating whether both an input and a substantive process are present. The standard also provides a framework that includes two sets of criteria to consider that depend on whether a set has outputs and a more stringent criteria for sets without outputs. Lastly, the standard narrows the definition of the term "output" so that the term is consistent with how outputs are described in Topic 606, *Revenue from Contracts with Customers*. The provisions of this guidance are to be applied prospectively. ASU 2017-01 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted in limited circumstances. The Company adopted ASU 2017-01 effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In November 2016, the FASB issued Accounting Standards Update No. 2016-18, *Statement of Cash Flows (Topic 230), Restricted Cash* ("ASU 2016-18"), which amends Topic 230 to add or clarify guidance on the classification and presentation of restricted cash in the statement of cash flows. The standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The provisions of this guidance are to be applied using a retrospective transition method to each period presented. ASU 2016-18 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The Company adopted ASU 2016-18 effective January 1, 2018. For the fiscal years 2017 and 2016, $17.2 million and $(17.0) million, respectively, of changes in restricted cash balances that were previously presented within investing activities in the consolidated statements of cash flows have been excluded from the cash flows used in investing activities and the effect of exchange rate changes increased by $0.2 million in fiscal year 2017, due to the retrospective adoption of ASU 2016-18. Restricted cash amounting to $17.3 million and $0.2 million at January 1, 2017 and December 31, 2017, respectively, have been included with the cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the consolidated statement of cash flows for the fiscal year ended December 31, 2017. Restricted cash amounting to $0.3 million and $17.3 million at January 3, 2016 and January 1, 2017, respectively, have been included with the cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the consolidated statement of cash flows for the fiscal year ended January 1, 2017. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In October 2016, the FASB issued Accounting Standards Update No. 2016-16, *Income Taxes (Topic 740), Intra-entity Transfer of Assets Other than Inventory* ("ASU 2016-16"). ASU 2016-16 removes the prohibition in Topic 740 against the

immediate recognition of the current and deferred income tax effects of intra-entity transfers of assets other than inventory. The standard requires entities to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The provisions of this guidance are to be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. ASU 2016-16 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The Company adopted ASU 2016-16 on January 1, 2018. The adoption of the standard resulted in a decrease in the retained earnings at January 1, 2018 of approximately $2.1 million with corresponding increase in deferred tax assets of $10.7 million and decrease in prepaid taxes of $12.8 million related to prior years' intra-entity transfers of assets other than inventory. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In August 2016, the FASB issued Accounting Standards Update No. 2016-15, *Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"). ASU 2016-15 addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows under Topic 230 and other topics. The provisions of this guidance are to be applied using a retrospective transition method to each period presented, and if it is impracticable to apply the amendments retrospectively for some of the issues, ASU 2016-15 allows the amendments for those issues to be applied prospectively as of the earliest date practicable. ASU 2016-15 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The Company adopted ASU 2016-15 effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, *Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). ASU 2016-13 changes how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The standard requires entities to use the expected loss impairment model and will apply to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance sheet credit exposures. Entities are required to estimate the lifetime "expected credit loss" for each applicable financial asset and record an allowance that, when deducted from the amortized cost basis of the financial asset, presents the net amount expected to be collected on the financial asset. The standard also amends the impairment model for available-for-sale ("AFS") debt securities and requires entities to determine whether all or a portion of the unrealized loss on an AFS debt security is a credit loss. An entity will recognize an allowance for credit losses on an AFS debt security as a contra-account to the amortized cost basis rather than as a direct reduction of the amortized cost basis of the investment. The provisions of this guidance are to be applied using a modified-retrospective approach. A prospective transition approach is required for debt securities for which an other-than-temporary impairment had been recognized before the effective date. ASU 2016-13 is effective for annual reporting periods beginning after December 15, 2019, and interim periods within those years. Early adoption is permitted for annual periods beginning after December 15, 2018, and interim periods therein. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash flows.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases* ("ASU 2016-02"). ASU 2016-02 requires organizations that lease assets to recognize assets and liabilities on the balance sheet related to the rights and obligations created by those leases, regardless of whether they are classified as finance or operating leases. Consistent with current guidance, the recognition, measurement, and presentation of expenses and cash flows arising from a lease of assets will primarily depend on its classification as a finance or operating lease. ASU 2016-02 also requires new disclosures to help financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. The provisions of this guidance are effective for annual periods beginning after December 15, 2018, and interim periods within those years, with early adoption permitted. ASU 2016-02 is to be applied using a modified retrospective approach. Subsequent to the issuance of ASU 2016-02, in July 2018, the FASB issued Accounting Standards Update No. 2018-10, *Codification Improvements to Topic 842, Leases* ("ASU 2018-10") and Accounting Standards Update No. 2018-11, *Leases (Topic 842): Targeted Improvements* ("ASU 2018-11"). The amendments in ASU 2018-10 clarify, correct or remove inconsistencies in the guidance provided under ASU 2016-02 related to sixteen specific issues identified. The amendments in ASU 2018-11 provide entities with an additional (and optional) transition method to adopt the new leases standard. Under the new transition method, an entity initially applies the new leases standard at the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. Consequently, an entity's reporting for the comparative periods presented in the financial statements in the period of adoption will continue to be in accordance with ASC 840, *Leases ("ASC 840")*. An entity that elects this additional (and optional) transition method must provide the required disclosures under ASC 840 for all periods that continue to be in accordance with ASC 840. ASU 2018-11 also provides lessors with a practical expedient, by class of underlying asset, to not separate nonlease components from the associated lease component and, instead,

to account for those components as a single component if certain criteria are met. The effective date and transition requirements for these two standards are the same as the effective date and transition requirements of ASU 2016-02. The standards were effective for the Company beginning on December 31, 2018. The Company did not early adopt these standards and adopted these standards using the optional transition method.

The Company elected to apply the modified retrospective approach, and applied the new leases standard at December 31, 2018, with a cumulative effect adjustment recognized in the opening balance of retained earnings in fiscal year 2019. As a lessee, the most significant impact of the standards relates to the recognition of the right-of-use assets and lease liabilities for the operating leases in the balance sheet. In addition, the Company had deferred gains from a sale-leaseback transaction that are being amortized in operating expenses over the lease term and the lease is accounted for as an operating lease under ASC 840. Under the new standards, the Company will recognize the deferred gains from the sale as a cumulative-effect adjustment in retained earnings at December 31, 2018. The Company will also derecognize the impact of its build-to-suit arrangement in which the Company was the deemed owner during the construction period, for which the construction is complete and the lease commenced before the initial date of adoption. The adoption of the standards will result in an increase in retained earnings at December 31, 2018 of approximately $19.1 million for the cumulative effect of initially applying the standards as of that date. In addition, the adoption of the standards will result in recognition of right-of-use assets of approximately $190.7 million and lease liabilities of approximately $137.7 million, primarily related to the facilities operating leases, a decrease in property and equipment of approximately $31.9 million and an increase in deferred tax liabilities of $2.1 million for the tax impact of the cumulative adjustments. The adoption will have no impact to cash from or used in operating, investing or financing activities in the Company's consolidated statement of cash flows at December 31, 2018.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"). Under this new guidance, an entity should use a five-step process to recognize revenue, depicting the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also requires new disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Subsequent to the issuance of the standard, the FASB decided to defer the effective date for one year to annual reporting periods beginning after December 15, 2017, with early adoption permitted for annual reporting periods beginning after December 15, 2016. In November 2017, the FASB also issued Accounting Standards Update No. 2017-14, *Income Statement-Reporting Comprehensive Income (Topic 220), Revenue Recognition (Topic 605), and Revenue from Contracts with Customers (Topic 606)*. ASU 2017-14 includes amendments to certain SEC paragraphs within the FASB Accounting Standards Codification ("Codification"). ASU 2017-14 amends the Codification to incorporate SEC Staff Accounting Bulletin No. 116 and SEC Interpretive Release on Vaccines for Federal Government Stockpiles (SEC Release No. 33-10403) to align existing SEC staff guidance with Revenue from Contracts with Customers (Topic 606). In May 2016, the FASB also issued Accounting Standards Update No. 2016-12, *Revenue from Contracts with Customers (Topic 606), Narrow-Scope Improvements and Practical Expedients* ("ASU 2016-12"), which amended its revenue recognition guidance in ASU 2014-09 on transition, collectability, non-cash consideration, contract modifications and completed contracts at transition and the presentation of sales and other similar taxes collected from customers. In April 2016, the FASB also issued Accounting Standards Update No. 2016-10, *Revenue from Contracts with Customers (Topic 606), Identifying Performance Obligations and Licensing* ("ASU 2016-10"), which amended its revenue recognition guidance in ASU 2014-09 on identifying performance obligations to allow entities to disregard items that are immaterial in the context of the contract, clarify when a promised good or service is separately identifiable (i.e., distinct within the context of the contract) and allow an entity to elect to account for the cost of shipping and handling performed after control of a good has been transferred to the customer as a fulfillment cost (i.e., an expense). ASU 2016-10 also clarifies how an entity should evaluate the nature of its promise in granting a license of intellectual property ("IP") and requires entities to classify IP in one of two categories: functional IP or symbolic IP, which will determine whether it recognizes revenue over time or at a point in time. ASU 2016-10 also address how entities should consider license renewals and restrictions and apply the exception for sales- and usage-based royalties received in exchange for licenses of IP. In March 2016, the FASB also issued Accounting Standards Update No. 2016-08, *Revenue from Contracts with Customers (Topic 606), Principal versus Agent Considerations (Reporting Revenue Gross versus Net)* ("ASU 2016-08"), which amended the principal-versus-agent implementation guidance and illustrations in ASU 2014-09. ASU 2016-08 clarifies that an entity should evaluate when it is the principal or agent for each specified good or service promised in a contract with a customer. ASU 2017-14, ASU 2016-12, ASU 2016-10, ASU 2016-08 and ASU 2014-09 may be adopted either using a full retrospective approach or a modified retrospective approach. The standards were effective for the Company beginning on January 1, 2018. The Company did not early adopt these standards and adopted these standards using the modified retrospective approach.

The most significant impact of the standards relates to the accounting for certain transactions with multiple elements or “bundled” arrangements. Specifically, for sales of software subscriptions or sales of licenses and maintenance, the Company will recognize the license revenue predominantly at the time of billing and delivery rather than recognizing the entire sales price ratably over the maintenance period, which is the Company's previous practice. In addition, for certain sales of

instruments that include customer-specified acceptance criteria, the Company will recognize revenue when the customer obtains control of the instrument which is typically upon delivery or when title has transferred to the customer, as the Company believes acceptance is perfunctory. The Company will also capitalize incremental commission fees as a result of obtaining contracts when these fees are recoverable and will amortize the assets based on the transfer of goods or services to which the assets relate which typically range from two to six years. The Company elected to apply the modified retrospective approach only to contracts not completed as of January 1, 2018. The adoption of the standards resulted in an increase in the retained earnings at January 1, 2018 of approximately $10.2 million for the cumulative effect of initially applying the standards at January 1, 2018. In addition, the adoption of the standards resulted primarily in a reduction in deferred revenue of approximately $11.5 million, mainly driven by the upfront recognition of license revenue and certain multi-year software subscriptions, and an increase in deferred tax liability of approximately $3.0 million for the tax impact of the cumulative adjustments. The cumulative effect of recognizing instrument sales upon delivery or transfer of title and capitalizing the incremental commission fees were not material at January 1, 2018. The adoption of the standards had no impact to cash from or used in operating, investing, or financing activities in the Company's consolidated statement of cash flows at January 1, 2018. Refer to Note 3, *Changes in Accounting Policies,* for the impact of adoption of the standards on the Company's consolidated financial statements for the fiscal year ended December 30, 2018. Also refer to Note 2, *Revenue,* for the disclosures required by the standards.

Note 2: Revenue

Nature of goods and services

The following is a description of principal activities, by reportable segments, from which the Company generates its revenue. For more detailed information about the reportable segments, see Note 25.

i. Discovery & Analytical Solutions

The Discovery & Analytical Solutions ("DAS") segment of the Company principally generates revenue from sales of (a) instruments, consumables and services in the applied markets and (b) instruments, reagents, informatics, detection and imaging technologies, extended warranties, training and services in the life sciences market. Products and services may be sold separately or in bundled packages. The typical length of a contract for service is 12 to 36 months.

For bundled packages, the Company accounts for individual products and services separately if they are distinct - i.e. if a product or service is separately identifiable from other items in the bundled package and if a customer can benefit from it on its own or with other resources that are readily available to the customer. The consideration (including any discounts) is allocated between separate products and services in a bundle based on their stand-alone selling prices. The stand-alone selling prices are determined based on the prices at which the Company separately sells the products, extended warranties, and services. For items that are not sold separately, the Company estimates stand-alone selling prices by reference to the amount charged for similar items on a stand-alone basis.

The Company sells products and services predominantly through its direct sales force. As a result, the use of distributors is generally limited to geographic regions where the Company has no direct sales force. The Company does not offer product return or exchange rights (other than those relating to defective goods under warranty) or price protection allowances to its customers, including distributors. Payment terms granted to distributors are the same as those granted to end-customers and payments are not dependent upon the distributor's receipt of payment from their end-user customers.

In instances where the timing of revenue recognition differs from the timing of invoicing, the Company determined that the contracts generally do not include a significant financing component. The primary purpose of its invoicing terms is to provide customers with simplified and predictable ways of purchasing products and services, rather than to receive financing from the customers or to provide customers with financing. Examples include invoicing at the beginning of a subscription term with revenue recognized ratably over the contract period, and multi-year software licenses or software subscriptions that are invoiced annually with revenue recognized upfront. In limited circumstances where the Company provides the customer with a significant benefit of financing, the Company uses the practical expedient and only adjusts the transaction price for the effects of the time value of money and only on contracts where the duration of financing is more than one year.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Products and services	Nature, timing of satisfaction of performance obligations, and significant payment terms
Instruments	For instruments that include installation, and if the installation meets the criteria to be considered a separate performance obligation, product revenue is generally recognized upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers, and installation revenue is recognized when the installation is complete. Certain of the Company's products require specialized installation and configuration at the customer's site. Revenue for these products is deferred until installation is complete and customer acceptance has been received. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 to 60 days.
Consumables and reagents	The Company recognizes revenue from the sale of consumables and reagents upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 days.
Software licenses and subscriptions	Customers may purchase perpetual or term licenses, or subscribe to licenses, which provide customers with the same functionality and differ mainly in the duration over which the customer benefits from the software. The Company sells its software subscriptions or software licenses with maintenance services and, in some cases, with consulting services. The Company recognizes revenue for the software upfront at the point in time when the software is made available to the customer. For maintenance and consulting services, revenue is recognized ratably over the period in which the services are provided. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 60 days. Software subscriptions and maintenance service contracts are non-cancelable.
Cloud services	Cloud services, which allow customers to use hosted software over the contract period without taking possession of the software, are provided on either a subscription or consumption basis. Revenue related to cloud services provided on a subscription basis is recognized ratably over the contract period. Revenue related to cloud services provided on a consumption basis, such as the amount of storage used in a period, is recognized based on the customer utilization of such resources. Payment terms are generally net 30 days from signing of contract and contracts are non-cancelable.
Extended warranty	The Company recognizes revenue for extended warranties on a straight-line basis over the extended warranty period in service revenue. In the majority of countries in which the Company operates, the customary warranty period is one year and the extended warranty covers periods beyond year one. Customers typically pay for extended warranties on an annual basis over the term of the warranty. In general, customers can cancel the extended warranty at any time with 30 days notice without significant penalty.
Laboratory services and training	The Company's service offerings include service contracts, field service, including related time and materials, and training. The Company recognizes revenue as the services are performed. Revenue for the service contracts is recognized over the contract period or at a point in time when the service is billable based on time and materials. The Company recognizes revenue as training is provided in service revenue. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 60 days. In general, customers can cancel the service contracts at any time with 30 to 90 days notice without significant penalty.

ii. Diagnostics

The Diagnostics segment of the Company principally generates revenue from sales of instruments, solutions, consumables, reagents, extended warranties and services in the diagnostics market. Products and services may be sold separately or in bundled packages.

For bundled packages, the Company accounts for individual products and services separately if they are distinct - i.e. if a product or service is separately identifiable from other items in the bundled package and if a customer can benefit from it on its own or with other resources that are readily available to the customer. The consideration (including any discounts) is allocated between separate products and services in a bundle based on their stand-alone selling prices. The stand-alone selling prices are determined based on the prices at which the Company separately sells the products, extended warranties, and services. For items that are not sold separately, the Company estimates stand-alone selling prices by reference to the amount charged for similar items on a stand-alone basis.

The Company sells products and services predominantly through its direct sales force. As a result, the use of distributors is generally limited to geographic regions where the Company has no direct sales force. The Company does not offer product return or exchange rights (other than those relating to defective goods under warranty) or price protection allowances to its customers, including distributors. Payment terms granted to distributors are the same as those granted to end-customers and payments are not dependent upon the distributor's receipt of payment from their end-user customers.

In instances where the timing of revenue recognition differs from the timing of invoicing, the Company determined that the contracts generally do not include a significant financing component. The primary purpose of its invoicing terms is to provide customers with simplified and predictable ways of purchasing products and services, rather than to receive financing from the customers or to provide customers with financing. Examples include invoicing at the beginning of a storage period with revenue recognized ratably over the contract period. In limited circumstances where the Company provides the customer with a significant benefit of financing, the Company uses the practical expedient and only adjusts the transaction price for the effects of the time value of money and only on contracts where the duration of financing is more than one year.

Products and services	Nature, timing of satisfaction of performance obligations, and significant payment terms
Instruments	For instruments that include installation, and if the installation meets the criteria to be considered a separate performance obligation, product revenue is generally recognized upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers, and installation revenue is recognized when the installation is complete. Certain of the Company's products require specialized installation and configuration at the customer's site. Revenue for these products is deferred until installation is complete and customer acceptance has been received. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 to 60 days.
Consumables and reagents	The Company recognizes revenue from the sale of consumables and reagents upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 days.
Solutions	When the Company sells the instrument and reagents that work only on those instruments to a customer or distributor, the Company considers the instrument and reagents as separate performance obligations. The Company recognizes revenue when an instrument is sold to the customer upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers. Revenue from the sale of reagents is also recognized at the time of delivery or when title has transferred to the customer. Payment terms for instrument and reagent sales are usually net 30 days from invoice date. When the Company places the instrument at the customer's site and sells the reagents to a customer, the instrument and reagents are accounted for together as one performance obligation. The Company does not charge a fee for the use of the instrument and retains ownership of the placed instrument. The Company has a right to remove the instrument and replace it with another instrument at the customer's site at any time throughout the contract term. The Company recognizes revenue upon delivery of reagents, which is the point in time where the Company has performed its obligation to provide a screening solution to the customer. Payment terms are usually net 30 days from invoice date. Payment terms for certain contracts are based on equal installments over the duration of the contract.
Extended warranty	The Company recognizes revenue for extended warranties on a straight-line basis over the extended warranty period in service revenue. In the majority of countries in which the Company operates, the customary warranty period is one year and the extended warranty covers periods beyond year one. Customers typically pay for extended warranties on an annual basis over the term of the warranty. In general, customers can cancel the extended warranty at any time with 30 days notice without significant penalty.
Services	The Company's service offerings include cord blood processing and storage, and training. The Company recognizes revenue for the cord blood processing and training as the services are performed in service revenue. Revenue for the storage contracts are recognized over the contract period. Storage is typically for a period of 1, 20, or 25 years or lifetime. Lifetime storage is recognized over a certain period that is based on the life expectancy estimate from Social Security data. For cord blood processing, customers pay the processing fee in full at the point of sale. The processing fee is non-refundable unless the cord blood is non-viable for storage. For storage, customers are required to pay the storage fees in full upfront. Storage fees are refundable to the customer on a pro-rated basis if the contract is canceled.

Disaggregation of revenue

In the following tables, revenue is disaggregated by primary geographical market, end-markets and timing of revenue recognition. The tables also include a reconciliation of the disaggregated revenue with the reportable segments revenue.

	Reportable Segments For the fiscal year ended December 30, 2018		
	Discovery & Analytical Solutions	Diagnostics	Total
	(In thousands)		
Primary geographical markets			
Americas	$ 680,117	$ 385,005	$ 1,065,122
Europe	494,707	283,385	778,092
Asia	518,387	416,395	934,782
	$ 1,693,211	$ 1,084,785	$ 2,777,996
Primary end-markets			
Diagnostics	$ —	$ 1,084,785	$ 1,084,785
Life sciences	934,690	—	934,690
Applied markets	758,521	—	758,521
	$ 1,693,211	$ 1,084,785	$ 2,777,996
Timing of revenue recognition			
Products and services transferred at a point in time	$ 1,199,255	$ 1,002,788	$ 2,202,043
Services transferred over time	493,956	81,997	575,953
	$ 1,693,211	$ 1,084,785	$ 2,777,996

Contract Balances

Contract assets: The unbilled receivables (contract assets) primarily relate to the Company's right to consideration for work completed but not billed at the reporting date. The unbilled receivables are transferred to trade receivables when billed to customers. Contract assets are generally classified as current assets and are included in "Accounts receivable, net" in the consolidated balance sheet. The balance of contract assets as of December 30, 2018 and as of the date of adoption of ASC 606 were $31.9 million and $22.7 million, respectively. The amount of unbilled receivables recognized at the beginning of the period that were transferred to trade receivables during the fiscal year ended December 30, 2018 was $21.9 million. The increase in unbilled receivables during the fiscal year ended December 30, 2018 as a result of recognition of revenue before billing to customers, excluding amounts transferred to trade receivables during the period, amounted to $31.1 million.

Contract liabilities: The contract liabilities primarily relate to the advance consideration received from customers for products and related installation for which transfer of control has not occurred at the balance sheet date. Contract liabilities are classified as either current in "Accounts payable" or long-term in "Long-term liabilities" in the consolidated balance sheet based on the timing of when the Company expects to recognize revenue. The balance of contract liabilities as of December 30, 2018 and as of the date of adoption of ASC 606 were $30.8 million and $29.0 million, respectively. The increase in contract liabilities during the fiscal year ended December 30, 2018 due to cash received, excluding amounts recognized as revenue during the period, was $23.6 million. The amount of revenue recognized during the fiscal year ended December 30, 2018 that was included in the contract liability balance at the beginning of the period was $21.8 million.

Contract costs: The Company recognizes the incremental costs of obtaining a contract with a customer as an asset if it expects the benefit of those costs to be longer than one year. The Company determined that certain sales incentive programs meet the requirements to be capitalized. Total capitalized costs to obtain a contract were immaterial during the period and are included in other current and long-term assets on the consolidated balance sheet. The Company applies a practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less. These costs include the Company's internal sales force compensation program, as the Company determined that annual compensation is commensurate with annual sales activities.

Transaction price allocated to the remaining performance obligations

The Company applies the practical expedient in ASC 606-10-50-14 and does not disclose information about remaining performance obligations that have original expected durations of one year or less. The estimated revenue expected to be

recognized beyond one year in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the end of the period are not material to the Company. The remaining performance obligations primarily include noncancelable purchase orders and noncancelable software subscriptions and cloud service contracts.

Note 3: Changes in Accounting Policies

Except for the changes described below, the Company has consistently applied the accounting policies to all periods presented in these consolidated financial statements.

The Company adopted ASC 606 with a date of the initial application of January 1, 2018. As a result, the Company has changed its accounting policy for revenue recognition as detailed below.

The Company applied ASC 606 using the modified retrospective method only to contracts that are not completed contracts as of January 1, 2018, and the cumulative effect of initially applying ASC 606 is recognized as an adjustment to the beginning retained earnings. Therefore, the comparative information has not been adjusted and continues to be reported under ASC 605. The details of the significant changes and quantitative impact of the changes are disclosed below.

A. Sales of software subscriptions or sales of licenses and maintenance in bundled arrangements

The Company previously recognized revenue from software licenses sold together with maintenance and/or consulting services upon shipment using the residual method, provided that the undelivered items in the arrangement have value to the customer on a stand-alone basis and vendor-specific objective evidence ("VSOE") of fair value can be determined. If VSOE of fair value for the undelivered elements cannot be established, the Company deferred all revenue from the arrangement until the earlier of the point at which such sufficient VSOE does exist or all elements of the arrangement have been delivered, or if the undelivered element is maintenance, then the Company recognized the entire fee ratably over the maintenance period. Under ASC 606, the total consideration in the contract is allocated to all products and services based on their stand-alone selling prices. The stand-alone selling prices are determined based on the list prices at which the Company sells the software license, software subscription, maintenance and/or consulting services. Accordingly, the Company now recognizes higher license revenue upfront and less service revenue over time.

B. Sales of instruments

The Company previously recognized revenue from sale of instruments when persuasive evidence of an arrangement existed, delivery had occurred, the price to the buyer was fixed or determinable, and collectability was reasonably assured. For certain sales of instruments that included customer-specified acceptance criteria, the Company previously recognized revenue after the acceptance criteria had been met. Under ASC 606, revenue is recognized when the Company satisfies a performance obligation by transferring control of the product to a customer. Accordingly, the Company now recognizes product revenue upon delivery or when title has transferred to the customer, as the Company believes acceptance is perfunctory.

C. Sales commissions

The Company previously recognized commission fees related to sales of products and services as selling expenses when they were incurred. Under ASC 606, the Company capitalizes those commission fees as costs of obtaining a contract, when they are incremental and, if they are expected to be recovered, the Company amortizes them consistently with the pattern of transfer of the product or service to which the asset relates. If the expected amortization period is one year or less, the commission fee is expensed when incurred.

D. Impacts on financial statements

The following tables summarize the impacts of ASC 606 adoption on the Company's consolidated financial statements for the fiscal year ended December 30, 2018.

Consolidated Balance Sheet

	As reported	Adjustments	Balances without adoption of ASC 606
		(In thousands)	
Cash and cash equivalents	$ 163,111	$ —	$ 163,111
Accounts receivable, net	632,669	(16,264)	616,405
Inventories	338,347	9,773	348,120
Other current assets	100,507	(363)	100,144
Property, plant and equipment, net	318,590	—	318,590
Intangible assets, net	1,199,667	—	1,199,667
Goodwill	2,952,608	—	2,952,608
Other assets, net	270,023	—	270,023
Total assets	$ 5,975,522	$ (6,854)	$ 5,968,668
Current portion of long-term debt	$ 14,856	$ —	$ 14,856
Accounts payable	220,949	—	220,949
Accrued restructuring and contract termination charges	4,834	—	4,834
Accrued expenses and other current liabilities	528,827	19,173	548,000
Current liabilities of discontinued operations	2,165	—	2,165
Long-term debt	1,876,624	—	1,876,624
Long-term liabilities	742,312	—	742,312
Total liabilities	3,390,567	19,173	3,409,740
Commitments and contingencies			
Preferred stock	—	—	—
Common stock	110,597	—	110,597
Capital in excess of par value	48,772	—	48,772
Retained earnings	2,602,067	(26,027)	2,576,040
Accumulated other comprehensive loss	(176,481)	—	(176,481)
Total stockholders' equity	2,584,955	(26,027)	2,558,928
Total liabilities and stockholders' equity	$ 5,975,522	$ (6,854)	$ 5,968,668

Consolidated Statement of Operations

	As reported	Adjustments	Balances without adoption of ASC 606
		(In thousands)	
Product revenue	$ 1,935,493	$ (31,441)	$ 1,904,052
Service revenue	842,503	—	842,503
Total revenue	2,777,996	(31,441)	2,746,555
Cost of product revenue	908,228	(10,290)	897,938
Cost of service revenue	528,829	—	528,829
Total cost of revenue	1,437,057	(10,290)	1,426,767
Selling, general and administrative expenses	811,913	329	812,242
Research and development expenses	193,998	—	193,998
Restructuring and contract termination charges, net	11,144	—	11,144
Operating income from continuing operations	323,884	(21,480)	302,404
Interest and other expense, net	66,201	—	66,201
Income from continuing operations before income taxes	257,683	(21,480)	236,203
Provision for income taxes	20,208	(5,662)	14,546
Income from continuing operations	237,475	(15,818)	221,657
Income from discontinued operations before income taxes	—	—	—
Loss on disposition of discontinued operations before income taxes	(859)	—	(859)
Benefit from income taxes on discontinued operations and dispositions	(1,311)	—	(1,311)
Gain from discontinued operations and dispositions	452	—	452
Net income	$ 237,927	$ (15,818)	$ 222,109

The adoption of ASC 606 increased comprehensive income by $15.8 million in the Company's consolidated statement of comprehensive income for the fiscal year ended December 30, 2018. The adoption of ASC 606 had no impact on cash from or used in operating, investing, or financing activities in the Company's consolidated statement of cash flows as of and for the fiscal year ended December 30, 2018.

Note 4: Business Combinations

Acquisitions in fiscal year 2018

During fiscal year 2018, the Company completed the acquisition of four businesses for aggregate consideration of $106.0 million. The excess of the purchase price over the fair value of the acquired businesses' net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. The Company has reported the operations for these acquisitions within the results of the Company's Diagnostics and Discovery & Analytical Solutions segments from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 11.2 years.

The total purchase price for the acquisitions in fiscal year 2018 has been allocated to the estimated fair values of assets acquired and liabilities assumed as follows:

		2018 Acquisitions
		(In thousands)
Fair value of business combination:		
Cash payments	$	95,950
Other liability		3,354
Contingent consideration		6,200
Working capital and other adjustments		520
Less: cash acquired		(1,132)
Total	$	104,892
Identifiable assets acquired and liabilities assumed:		
Current assets	$	6,522
Property, plant and equipment		1,166
Other assets		891
Identifiable intangible assets:		
Core technology		34,021
Trade names		1,070
Customer relationships		10,200
Goodwill		59,647
Deferred taxes		(3,860)
Debt assumed		(461)
Liabilities assumed		(4,304)
Total	$	104,892

Acquisitions in fiscal year 2017

Acquisition of EUROIMMUN Medizinische Labordiagnostika AG. During fiscal year 2017, the Company completed the acquisition of 99.98% of the outstanding stock of EUROIMMUN Medizinische Labordiagnostika AG ("EUROIMMUN") for aggregate consideration of €1.2 billion (equivalent to $1.4 billion at December 19, 2017, the time of closing). The purchase price was funded by borrowings from the Company's senior unsecured revolving credit facility and senior unsecured term loan credit facility of $710.0 million and $200.0 million, respectively, and available cash on hand of $503.1 million. The excess of the purchase price over the fair value of the acquired net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforce acquired. As a result of the acquisition, the Company recorded goodwill of $591.3 million, which is not tax deductible, and intangible assets of $907.4 million. The Company has reported the operations for this acquisition within the results of the Company's Diagnostics segment from the acquisition date. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of this acquisition had a weighted average amortization period of 16.1 years.

Other acquisitions in 2017. During fiscal year 2017, the Company also completed the acquisition of two other businesses for aggregate consideration of $142.0 million. The acquired businesses were Tulip Diagnostics Private Limited ("Tulip"), which was acquired for total consideration of $127.3 million in cash and one other business acquired for total consideration of $14.7 million in cash. At the acquisition date, the Company had a potential obligation to pay the former shareholders of Tulip up to INR1.6 billion in additional consideration over a two year period, equivalent to $25.2 million, and is accounted for as compensation expense in the Company's financial statements over a two year period and is excluded from the purchase price allocation shown below. The excess of the purchase prices over the fair values of the acquired businesses' net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. The Company has reported the operations of Tulip within the results of the Company's Diagnostics segment and the other acquired business within the results of the Company's Discovery & Analytical Solutions segment from the acquisition date. Identifiable definite-lived intangible assets,

such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 11.8 years.

During fiscal year 2018, the Company paid the former shareholders of Tulip a portion of the additional consideration amounting to INR716.3 million (equivalent to $11.3 million). As of December 30, 2018, the Company may have to pay the former shareholders of Tulip additional consideration of up to INR803.6 million (currently equivalent to $11.4 million) in the first quarter of fiscal year 2019.

The total purchase price for the acquisitions in fiscal year 2017 have been allocated to the estimated fair values of assets acquired and liabilities assumed as follows:

	EUROIMMUN	2017 Other
	(In thousands)	
Fair value of business combination:		
Cash payments	$ 1,413,113	$ 140,861
Other liability	—	1,273
Working capital and other adjustments	—	(93)
Less: cash acquired	(25,018)	(2,439)
Total	$ 1,388,095	$ 139,602
Identifiable assets acquired and liabilities assumed:		
Current assets	$ 121,174	$ 16,268
Property, plant and equipment	109,859	11,356
Other assets	71,621	1,691
Identifiable intangible assets:		
Core technology	160,000	12,400
Trade names	36,000	3,000
Customer relationships	710,000	43,700
In-process research and development ("IPR&D")	1,400	—
Goodwill	591,304	75,250
Deferred taxes	(251,886)	(15,735)
Liabilities assumed	(100,020)	(8,328)
Debt assumed	(61,357)	—
Total	$ 1,388,095	$ 139,602

EUROIMMUN's revenue and net loss for the period from the acquisition date to December 31, 2017 were $13.5 million and $1.0 million, respectively. The following unaudited pro forma information presents the combined financial results for the Company and EUROIMMUN as if the acquisition of EUROIMMUN had been completed at the beginning of fiscal year 2016:

	December 31, 2017	January 1, 2017
	(In thousands, except per share data)	
Pro Forma Statement of Operations Information (Unaudited):		
Revenue	$ 2,562,580	$ 2,379,176
Income from continuing operations	143,459	156,210
Basic earnings per share:		
Income from continuing operations	$ 1.31	$ 1.43
Diluted earnings per share:		
Income from continuing operations	$ 1.29	$ 1.42

The unaudited pro forma information for fiscal years 2017 and 2016 have been calculated after applying the Company's accounting policies and the impact of acquisition date fair value adjustments. The fiscal year 2017 unaudited pro forma income from continuing operations was adjusted to exclude approximately $9.8 million of acquisition-related transaction costs. The fiscal year 2016 pro forma income from continuing operations was adjusted to include these acquisition-related transaction costs and the nonrecurring expenses related to the fair value adjustments. These pro forma condensed consolidated financial results have been prepared for comparative purposes only and include certain adjustments, such as fair value adjustment to inventory, increased interest expense on debt obtained to finance the transaction, and increased amortization for the fair value of acquired intangible assets.

The pro forma information does not reflect the effect of costs or synergies that would have been expected to result from the integration of the acquisition. The pro forma information does not purport to be indicative of the results of operations that actually would have resulted had the combination occurred at the beginning of each period presented, or of future results of the consolidated entities.

Acquisitions in fiscal year 2016

During fiscal year 2016, the Company completed the acquisition of two businesses for total consideration of $72.3 million in cash. The acquired businesses were Bioo Scientific Corporation, which was acquired for total consideration of $63.5 million in cash and one other business acquired for total consideration of $8.8 million in cash. The excess of the purchase prices over the fair values of each of the acquired businesses' net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforces acquired. As a result of the acquisitions, the Company recorded goodwill of $43.1 million, which is not tax deductible, and intangible assets of $22.1 million. The Company has reported the operations for these acquisitions within the results of the Company's Diagnostics and Discovery & Analytical Solutions segments from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 9.4 years.

The total purchase price for the acquisitions in fiscal year 2016 has been allocated to the estimated fair values of assets acquired and liabilities assumed as follows:

	2016 Acquisitions
	(In thousands)
Fair value of business combination:	
Cash payments	$ 72,497
Working capital and other adjustments	(261)
Less: cash acquired	(2,152)
Total	$ 70,084
Identifiable assets acquired and liabilities assumed:	
Current assets	$ 7,153
Property, plant and equipment	7,542
Identifiable intangible assets:	
Core technology	6,600
Trade names	570
Customer relationships	14,900
Goodwill	43,072
Deferred taxes	(7,768)
Liabilities assumed	(1,985)
Total	$ 70,084

The Company does not consider the acquisitions completed during fiscal years 2018, 2017 and 2016, with the exception of the EUROIMMUN acquisition, to be material to its consolidated results of operations; therefore, the Company is only presenting pro forma financial information of operations for the EUROIMMUN acquisition. The aggregate revenue and the results of operations for the acquisitions completed during fiscal year 2018 for the period from their acquisition dates to

December 30, 2018 were not material. The aggregate revenue for the acquisitions, with the exception of EUROIMMUN, completed during fiscal year 2017 for the period from their acquisition dates to December 31, 2017 was $38.5 million and the results of operations were not material. The aggregate revenue and results of operations for the acquisitions completed during fiscal year 2016 for the period from their respective acquisition dates to January 1, 2017 were minimal. The Company has also determined that the presentation of the results of operations for each of those acquisitions, from the date of acquisition, is impracticable due to the integration of the operations upon acquisition.

As of December 30, 2018, the allocations of purchase prices for acquisitions completed in fiscal years 2017 and 2016 were final. The preliminary allocations of the purchase prices for acquisitions completed in fiscal year 2018 were based upon initial valuations. The Company's estimates and assumptions underlying the initial valuations are subject to the collection of information necessary to complete its valuations within the measurement periods, which are up to one year from the respective acquisition dates. The primary areas of the preliminary purchase price allocations that are not yet finalized relate to the fair value of certain tangible and intangible assets acquired and liabilities assumed, assets and liabilities related to income taxes and related valuation allowances, and residual goodwill. The Company expects to continue to obtain information to assist in determining the fair values of the net assets acquired at the acquisition dates during the measurement periods. During the measurement periods, the Company will adjust assets or liabilities if new information is obtained about facts and circumstances that existed as of the acquisition dates that, if known, would have resulted in the recognition of those assets and liabilities as of those dates. These adjustments will be made in the periods in which the amounts are determined and the cumulative effect of such adjustments will be calculated as if the adjustments had been completed as of the acquisition dates. All changes that do not qualify as adjustments made during the measurement periods are also included in current period earnings.

During fiscal year 2018, the Company obtained information relevant to determining the fair values of certain tangible and intangible assets acquired, and liabilities assumed, related to recent acquisitions and adjusted its purchase price allocations. Based on this information, for the EUROIMMUN acquisition, the Company recognized an increase in intangible assets of $10.0 million, an increase in other assets of $21.7 million, an increase in liabilities assumed of $12.3 million, a decrease in property and equipment of $20.1 million, a decrease in deferred tax liabilities of $23.6 million, and a decrease in goodwill of $23.5 million.

Allocations of the purchase price for acquisitions are based on estimates of the fair value of the net assets acquired and are subject to adjustment upon finalization of the purchase price allocations. The accounting for business combinations requires estimates and judgments as to expectations for future cash flows of the acquired business, and the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair values for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management’s estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. Contingent consideration is measured at fair value at the acquisition date, based on the probability that revenue thresholds or product development milestones will be achieved during the earnout period, with changes in the fair value after the acquisition date affecting earnings to the extent it is to be settled in cash. Increases or decreases in the fair value of contingent consideration liabilities primarily result from changes in the estimated probabilities of achieving revenue thresholds or product development milestones during the earnout period.

As of December 30, 2018, the Company may have to pay contingent consideration, related to acquisitions with open contingency periods, of up to $76.5 million. As of December 30, 2018, the Company has recorded contingent consideration obligations of $69.7 million, of which $67.0 million was recorded in accrued expenses and other current liabilities, and $2.7 million was recorded in long-term liabilities. As of December 31, 2017, the Company has recorded contingent consideration obligations of $65.3 million, of which $52.2 million was recorded in accrued expenses and other current liabilities, and $13.1 million was recorded in long-term liabilities. The expected maximum earnout period for acquisitions with open contingency periods does not exceed 1.78 years from December 30, 2018, and the remaining weighted average expected earnout period at December 30, 2018 was 5 months. If the actual results differ from the estimates and judgments used in these fair values, the amounts recorded in the consolidated financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of definite-lived intangible assets or the recognition of additional contingent consideration which would be recognized as a component of operating expenses from continuing operations.

In connection with the purchase price allocations for acquisitions, the Company estimates the fair value of deferred revenue assumed with its acquisitions. The estimated fair value of deferred revenue is determined by the legal performance obligation at the date of acquisition, and is generally based on the nature of the activities to be performed and the related costs to be incurred after the acquisition date. The fair value of an assumed liability related to deferred revenue is estimated based on the current market cost of fulfilling the obligation, plus a normal profit margin thereon. The estimated costs to fulfill the deferred revenue are based on the historical direct costs related to providing the services. The Company does not include any costs associated with selling effort, research and development, or the related margins on these costs. In most acquisitions, profit associated with selling effort is excluded because the acquired businesses would have concluded the selling effort on the

support contracts prior to the acquisition date. The estimated research and development costs are not included in the fair value determination, as these costs are not deemed to represent a legal obligation at the time of acquisition. The sum of the costs and operating income approximates, in theory, the amount that the Company would be required to pay a third-party to assume the obligation.

Total acquisition and divestiture-related costs (income) for fiscal years 2018, 2017 and 2016 were $15.8 million, $(8.5) million and $1.2 million, respectively. These amounts include $6.9 million of compensation expense and $0.7 million of net foreign exchange gain related to the foreign currency denominated stay bonus associated with the Tulip acquisition for fiscal year 2018 and $35.6 million of net foreign exchange gain related to the foreign currency forward contracts associated with the acquisition of EUROIMMUN and $14.9 million of compensation expense associated with the Tulip acquisition for fiscal year 2017. The acquisition-related interest expense amounted to $0.7 million and $0.3 million in fiscal years 2018 and 2017, respectively. These acquisition and divestiture-related costs were expensed as incurred and recorded in selling, general and administrative expenses and interest and other (income) expense, net in the Company's consolidated statements of operations.

Note 5: Disposition of Businesses and Assets

As part of the Company’s continuing efforts to focus on higher growth opportunities, the Company has discontinued certain businesses. When the discontinued operations represented a strategic shift that will have a major effect on the Company's operations and financial statements, the Company has accounted for these businesses as discontinued operations and accordingly, has presented the results of operations and related cash flows as discontinued operations. Any business deemed to be a discontinued operation prior to the adoption of Accounting Standards Update 2014-08, *Reporting Discontinued Operations and Disclosures of Disposals of Components of An Entity,* continues to be reported as a discontinued operation, and the results of operations and related cash flows are presented as discontinued operations for all periods presented. Any remaining assets and liabilities of these businesses have been presented separately, and are reflected within assets and liabilities from discontinued operations in the accompanying consolidated balance sheets as of December 30, 2018 and December 31, 2017.

The Company recorded the following pre-tax gains and losses, which have been reported as a net gain or loss on disposition of discontinued operations during the three fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
(Loss) gain on disposition of the Medical Imaging business	$ (793)	$ 179,615	$ —
Gain on disposition of Technical Services business	—	—	1,753
Loss on disposition of Fluid Sciences Segment	(66)	—	(1,134)
(Loss) gain on disposition of discontinued operations before income taxes	$ (859)	$ 179,615	$ 619

On May 1, 2017 (the "Closing Date"), the Company completed the sale of its Medical Imaging business to Varex Imaging Corporation ("Varex") pursuant to the terms of the Master Purchase and Sale Agreement, dated December 21, 2016 (the “Agreement”), by and between the Company and Varian Medical Systems, Inc. ("Varian") and the subsequent Assignment and Assumption Agreement, dated January 27, 2017, between Varian and Varex, pursuant to which Varian assigned its rights under the Agreement to Varex. On the Closing Date, the Company received consideration of approximately $277.4 million for the sale of the Medical Imaging business. During fiscal year 2017, the Company paid Varex $4.2 million to settle a post-closing working capital adjustment. During fiscal year 2017, the Company recorded a pre-tax gain of $179.6 million and income tax expense of $43.1 million related to the sale of the Medical Imaging business in discontinued operations and dispositions. The corresponding tax liability was recorded within the other tax liabilities in the consolidated balance sheet, and the Company expects to utilize tax attributes to minimize the tax liability. Following the closing, the Company provided certain customary transitional services during a period of up to 12 months. Commercial transactions between the parties following the closing of the transaction were not significant.

During the third quarter of fiscal year 2018, the Company completed the sale of substantially all of the assets and liabilities related to its multispectral imaging business for aggregate consideration of $37.3 million, recognizing a pre-tax gain of $13.0 million. The pre-tax gain is included in interest and other expense, net in the consolidated statement of operations. The multispectral imaging business was a component of the Company's DAS segment. The divestiture of the multispectral imaging business has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on the Company's operations and financial statements.

During fiscal year 2017, the Company sold Suzhou PerkinElmer Medical Laboratory Co., Ltd. for aggregate consideration of $2.3 million, recognizing a pre-tax loss of $1.1 million. The pre-tax loss recognized in fiscal year 2017 is included in interest and other expense, net in the consolidated statement of operations. Suzhou PerkinElmer Medical Laboratory Co., Ltd. was a component of the Company's Diagnostics segment. The divestiture of Suzhou PerkinElmer Medical Laboratory Co., Ltd. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on the Company's operations and financial statements.

During fiscal year 2016, the Company sold PerkinElmer Labs, Inc. for cash consideration of $20.0 million, recognizing a pre-tax gain of $7.1 million. The sale generated a capital loss for tax purposes of $7.3 million, which resulted in an income tax benefit of $2.5 million that was recognized as a discrete benefit during the second quarter of 2016. During fiscal year 2017, the Company recognized an additional pre-tax gain of $1.1 million relating to the earn-out consideration received from the buyer. PerkinElmer Labs, Inc. was a component of the Company's Diagnostics segment. The pre-tax gain recognized in fiscal years 2017 and 2016 is included in interest and other expense, net in the consolidated statement of operations. The divestiture of PerkinElmer Labs, Inc. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on the Company's operations and financial statements.

In August 1999, the Company sold the assets of its Technical Service business. The Company recorded a pre-tax gain of $1.8 million in fiscal year 2016 for a contingency related to this business. This was recognized as a gain on disposition of discontinued operations before income taxes.

The summary pre-tax operating results of the discontinued operations were as follows during the three fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Revenue	$ —	$ 44,343	$ 146,217
Cost of revenue	—	32,933	95,395
Selling, general and administrative expenses	—	5,869	13,657
Research and development expenses	—	4,891	14,368
Restructuring and contract termination charges, net	—	—	568
Income from discontinued operations before income taxes	$ —	$ 650	$ 22,229

The Company recorded a (benefit from) provision for income taxes of $(1.3) million, $44.5 million and $4.3 million on discontinued operations and dispositions in fiscal years 2018, 2017 and 2016, respectively.

Note 6: Restructuring and Contract Termination Charges, Net

The Company has undertaken a series of restructuring actions related to the impact of acquisitions and divestitures, the alignment of the Company's operations with its growth strategy, the integration of its business units and its productivity initiatives. The current portion of restructuring and contract termination charges is recorded in accrued restructuring and contract termination charges and the long-term portion of restructuring and contract termination charges is recorded in long-term liabilities. The activities associated with these plans have been reported as restructuring and contract termination charges, net, as applicable, and are included as a component of income from continuing operations.

The Company implemented a restructuring plan in each of the first, third and fourth quarters of fiscal year 2018 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q1 2018 Plan", "Q3 2018 Plan" and "Q4 2018 Plan", respectively). The Company implemented a restructuring plan in each of the fourth and third quarters of fiscal year 2017 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q4 2017 Plan and "Q3 2017 Plan", respectively). The Company implemented a restructuring plan in the first quarter of fiscal year 2017 consisting of workforce reductions and the closure of excess facility space principally intended to focus resources on higher growth end markets (the "Q1 2017 Plan"). The Company implemented a restructuring plan in the third quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth product lines (the "Q3 2016 Plan"). The Company implemented a restructuring plan in the second quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth end markets (the "Q2 2016 Plan"). All other previous restructuring plans were workforce reductions or the closure of excess facility space principally intended to integrate the Company's businesses in order to realign operations, reduce costs, achieve operational efficiencies and shift

resources into geographic regions and end markets that are more consistent with the Company's growth strategy (the "Previous Plans").

The following table summarizes the number of employees reduced, the initial restructuring or contract termination charges by operating segment, and the dates by which payments were substantially completed, or the expected dates by which payments will be substantially completed, for restructuring actions implemented during fiscal years 2018, 2017 and 2016 in continuing operations:

	Workforce Reductions			Closure of Excess Facility			(Expected) Date Payments Substantially Completed by	
	Headcount Reduction	Diagnostics	Discovery & Analytical Solutions	Diagnostics	Discovery & Analytical Solutions	Total	Severance	Excess Facility
	(In thousands, except headcount data)							
Q4 2018 Plan	1	$ —	$ 348	$ —	$ —	$ 348	Q1 FY2019	—
Q3 2018 Plan	61	618	1,146	—	—	1,764	Q2 FY2019	—
Q1 2018 Plan	47	902	5,096	—	—	5,998	Q2 FY2019	—
Q4 2017 Plan	29	255	1,680	—	—	1,935	Q1 FY2019	—
Q3 2017 Plan	27	1,021	1,321	—	—	2,342	Q4 FY2018	—
Q1 2017 Plan	90	1,631	5,000	33	33	6,697	Q2 FY2018	Q2 FY2018
Q3 2016 Plan	22	41	1,779	—	—	1,820	Q4 FY2017	—
Q2 2016 Plan	72	561	4,106	—	—	4,667	Q3 FY2017	—

The Company expects to make payments under the Previous Plans for remaining residual lease obligations, with terms varying in length, through fiscal year 2022.

The Company also has terminated various contractual commitments in connection with certain disposal activities and has recorded charges, to the extent applicable, for the costs of terminating these contracts before the end of their terms and the costs that will continue to be incurred for the remaining terms without economic benefit to the Company. The Company recorded additional pre-tax charges of $5.0 million, $3.6 million and $0.1 million in the Discovery & Analytical Solutions segment during fiscal years 2018, 2017 and 2016, respectively, and $0.5 million during fiscal year 2017 in the Diagnostics segment as a result of these contract terminations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

At December 30, 2018, the Company had $6.2 million recorded for accrued restructuring and contract termination charges, of which $4.8 million was recorded in short-term accrued restructuring and $1.4 million was recorded in long-term liabilities. At December 31, 2017, the Company had $14.0 million recorded for accrued restructuring and contract termination charges, of which $8.8 million was recorded in short-term accrued restructuring, $2.3 million was recorded in long-term liabilities and $2.9 million was recorded in other reserves. The following table summarizes the Company's restructuring accrual balances and related activity by restructuring plan, as well as contract termination accrual balances and related activity, during fiscal years 2018, 2017 and 2016 in continuing operations:

	Balance at January 3, 2016	2016 Charges and Changes in Estimates, Net	2016 Amounts Paid	Balance at January 1, 2017	2017 Charges and Changes in Estimates, Net	2017 Amounts Paid	Balance at December 31, 2017	2018 Charges and Changes in Estimates, Net	2018 Amounts Paid	Balance at December 30, 2018
		(In thousands)								
Severance:										
Q4 2018 Plan	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ 348	$ —	$ 348
Q3 2018 Plan	—	—	—	—	—	—	—	2,054	(639)	1,415
Q1 2018 Plan	—	—	—	—	—	—	—	5,998	(4,389)	1,609
Q4 2017 Plan(1)	—	—	—	—	1,935	(16)	1,919	(381)	(1,538)	—
Q3 2017 Plan(2)	—	—	—	—	2,342	(270)	2,072	(1,204)	(868)	—
Q1 2017 Plan(3)	—	—	—	—	6,631	(4,133)	2,498	(983)	(1,232)	283
Q3 2016 Plan	—	1,820	(612)	1,208	(202)	(1,006)	—	—	—	—
Q2 2016 Plan	—	4,667	(3,231)	1,436	(829)	(607)	—	232	(156)	76
Facility:										
Q1 2017 Plan	—	—	—	—	66	(33)	33	—	(33)	—
Previous Plans	22,018	(1,451)	(12,787)	7,780	(537)	(2,844)	4,399	338	(2,425)	2,312
Restructuring	22,018	5,036	(16,630)	10,424	9,406	(8,909)	10,921	6,402	(11,280)	6,043
Contract Termination	132	88	(103)	117	3,251	(320)	3,048	4,742	(7,653)	137
Total Restructuring and Contract Termination	$ 22,150	$ 5,124	$ (16,733)	$ 10,541	$ 12,657	$ (9,229)	$ 13,969	$ 11,144	$ (18,933)	$ 6,180

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(1) During fiscal year 2018, the Company recognized pre-tax restructuring reversals of $0.2 million each in the Discovery & Analytical Solutions and Diagnostics segments, related to lower than expected costs associated with workforce reductions for the Q4 2017 Plan.

(2) During fiscal year 2018, the Company recognized pre-tax restructuring reversals of $0.8 million in the Discovery & Analytical Solutions segment and $0.4 million in the Diagnostics segment, related to lower than expected costs associated with workforce reductions for the Q3 2017 Plan.

(3) During fiscal year 2018, the Company recognized pre-tax restructuring reversals of $1.0 million in the Discovery & Analytical Solutions segment, related to lower than expected costs associated with workforce reductions for the Q1 2017 Plan.

Note 7: Interest and Other Expense, Net

Interest and other expense, net, consisted of the following for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
Interest income	$ (1,141)	$ (2,571)	$ (702)
Interest expense	66,976	43,940	41,528
(Gain) loss on disposition of businesses and assets, net (see Note 5)	(12,844)	309	(5,562)
Other expense (income), net	13,210	(42,781)	15,250
Total interest and other expense, net	$ 66,201	$ (1,103)	$ 50,514

Foreign currency transaction gains were $9.4 million, $29.2 million and $1.5 million in fiscal years 2018, 2017 and 2016, respectively. Net losses (gains) from forward currency hedge contracts were $11.7 million, $(4.5) million and $5.4 million in fiscal years 2018, 2017 and 2016, respectively. The other components of net periodic pension cost (credit) were $11.5 million, $(9.2) million and $11.5 million in fiscal years 2018, 2017 and 2016 , respectively. These amounts were included in other expense (income), net.

Note 8: Income Taxes

The Company regularly reviews its tax positions in each significant taxing jurisdiction in the process of evaluating its unrecognized tax benefits. The Company makes adjustments to its unrecognized tax benefits when: (i) facts and circumstances regarding a tax position change, causing a change in management's judgment regarding that tax position; (ii) a tax position is effectively settled with a tax authority at a differing amount; and/or (iii) the statute of limitations expires regarding a tax position.

The tabular reconciliation of the total amounts of unrecognized tax benefits is as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Unrecognized tax benefits, beginning of year	$ 30,308	$ 29,607	$ 28,143
Gross increases—tax positions in prior periods	6,931	749	1,514
Gross decreases—tax positions in prior periods	(1,622)	(828)	(183)
Gross increases—current-period tax positions	—	2,346	3,547
Settlements	(2,253)	(324)	—
Lapse of statute of limitations	(181)	(1,371)	(4,109)
Foreign currency translation adjustments	(174)	129	695
Unrecognized tax benefits, end of year	$ 33,009	$ 30,308	$ 29,607

The Company classifies interest and penalties as a component of income tax expense. At December 30, 2018 and December 31, 2017, the Company had accrued interest and penalties of $2.5 million and $1.9 million, respectively. During fiscal years 2018, 2017 and 2016, the Company recognized a net expense (benefit) of $0.4 million, $(0.3) million and $(0.1) million, respectively, for interest and penalties in its total tax provision primarily due to settlements and statutes of limitations that had lapsed. At December 30, 2018, the Company had gross tax effected unrecognized tax benefits of $33.0 million, of which $31.3 million, if recognized, would affect the continuing operations effective tax rate. The remaining amount, if recognized, would affect discontinued operations.

The Company believes that it is reasonably possible that approximately $2.3 million of its uncertain tax positions at December 30, 2018, including accrued interest and penalties, and net of tax benefits, may be resolved over the next twelve months as a result of lapses in applicable statutes of limitations and potential settlements. Various tax years after 2010 remain open to examination by certain jurisdictions in which the Company has significant business operations, such as Finland, Germany, Italy, Netherlands, Singapore, the United Kingdom and the United States. The tax years under examination vary by jurisdiction.

On December 22, 2017, the President of the United States signed the Tax Act, which makes broad and complex changes to the U.S. Internal Revenue Code. Changes include, but are not limited to: (1) the lowering of the U.S. corporate tax rate from 35% to 21%; (2) the transition of U.S. international taxation from a worldwide tax system to a modified territorial system with a one-time transition tax on the deemed repatriation of cumulative foreign earnings as of December 31, 2017; (3) a new provision designed to tax global intangible low-taxed income (GILTI); (4) the creation of the base erosion anti-abuse tax (BEAT), which is effectively a new minimum tax; (5) the deduction for foreign-derived intangible income (FDII); (6) a new limitation on deductible interest expense; (7) the repeal of the domestic production activity deduction; and (8) limitations on the deductibility of certain executive compensation.

ASU 2018-05 was issued to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Act. The Company is applying the guidance in ASU 2018-05 (see Note 1, *Basis of Presentation*) when accounting for the enactment date effects of the Tax Act. The end of the measurement period for purposes of applying the provisions of ASU 2018-05 was December 22, 2018. As a result, the Company has completed the analysis based on legislative updates relating to the Tax Act currently available and has recorded the impact in tax expense from continuing operations as explained below.

Remeasurement: The Company remeasured its future tax benefits and liabilities at the enacted tax rate of 21% and provided a provisional amount of $21.5 million during fiscal year 2017. During the fiscal year ended December 30, 2018, the Company recognized a tax benefit of $0.3 million for the remeasurement of certain future tax liabilities and included these adjustments as a component of the provision for income tax from continuing operations.

One-Time Transition Tax: The Tax Act requires the Company to pay a one-time transition tax on the unremitted earnings of foreign subsidiaries. Based on available information, the Company estimated the tax on the deemed repatriation of foreign earnings and recorded a tax expense of $85.0 million in continuing operations at December 31, 2017. During the fiscal year ended December 30, 2018, the Company refined its calculations of the one-time transition tax based on newly issued guidance from the Internal Revenue Service and recorded a tax benefit of $4.6 million in continuing operations.

GILTI, FDII, and other provisions: For fiscal year beginning in 2018, the Company is subject to several provisions of the Tax Act including computations under GILTI, FDII, and other provisions. Management has made a reasonable estimate of the impact of each provision of the Tax Act on the Company's effective tax rate for the fiscal year ended December 30, 2018. Management will continue to refine the provisional estimates for the computations of the GILTI, FDII, and other provisions as additional clarification and implementation guidance becomes available. For the fiscal year ended December 30, 2018, the Company has decided to adopt the period cost method and has not recorded any potential deferred tax effects related to GILTI and FDII in the financial statements.

During fiscal year 2018, the Company recorded net discrete income tax benefit of $8.1 million, of which $2.0 million was a result of the enactment of the Tax Act, along with an additional discrete benefit of $7.2 million related to the recognition of excess tax benefits on stock compensation partially offset by $1.1 million expense related to other tax matters. During fiscal years 2017 and 2016, the Company recorded net discrete income tax expense of $98.6 million and income tax benefits of $9.6 million, respectively. The $98.6 million tax expense in fiscal year 2017 was primarily related to $106.5 million as a result of the Tax Act, partially offset by a discrete benefit of $5.1 million related to the recognition of excess tax benefits on stock compensation, while the $9.6 million of tax benefit in fiscal year 2016 was primarily related to the recognition of excess tax benefits on stock compensation, reversals of uncertain tax position reserves, and the resolution of other tax matters.

The components of income from continuing operations before income taxes were as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
U.S.	$ 32,627	$ 3,743	$ 39,689
Non-U.S.	225,056	292,975	204,379
Total	$ 257,683	$ 296,718	$ 244,068

On a U.S. income tax basis, the Company has reported significant taxable income over the three year period ended December 30, 2018. The Company has utilized tax attributes to minimize cash taxes paid on that taxable income.

The components of the provision for income taxes on continuing operations were as follows:

	Current Expense	Deferred Expense (Benefit)	Total
		(In thousands)	
Fiscal year ended December 30, 2018			
Federal	$ 7,938	$ (5,250)	$ 2,688
State	2,345	2,572	4,917
Non-U.S.	61,028	(48,425)	12,603
Total	$ 71,311	$ (51,103)	$ 20,208
Fiscal year ended December 31, 2017			
Federal	$ 62,003	$ 35,435	$ 97,438
State	3,332	(792)	2,540
Non-U.S.	45,639	(5,789)	39,850
Total	$ 110,974	$ 28,854	$ 139,828
Fiscal year ended January 1, 2017			
Federal	$ 14	$ 2,994	$ 3,008
State	2,143	(575)	1,568
Non-U.S.	30,754	(6,968)	23,786
Total	$ 32,911	$ (4,549)	$ 28,362

The total provision for (benefit from) income taxes included in the consolidated financial statements is as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Continuing operations	$ 20,208	$ 139,828	$ 28,362
Discontinued operations	(1,311)	44,522	4,255
Total	$ 18,897	$ 184,350	$ 32,617

A reconciliation of income tax expense at the U.S. federal statutory income tax rate to the recorded tax provision is as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Tax at statutory rate	$ 54,114	$ 103,851	$ 85,424
Non-U.S. rate differential, net	(27,281)	(65,836)	(52,648)
U.S. taxation of multinational operations	7,047	5,408	6,941
State income taxes, net	2,028	1,810	1,509
Prior year tax matters	(6,034)	(7,955)	(9,621)
Federal tax credits	(3,738)	(8,249)	(7,189)
Change in valuation allowance	(759)	1,951	(2,755)
Non-deductible acquisition expense	—	—	5,701
Impact of federal tax reform	(2,025)	106,538	—
Others, net	(3,144)	2,310	1,000
Total	$ 20,208	$ 139,828	$ 28,362

The variation in the Company's effective tax rate for each year is primarily a result of the recognition of earnings in foreign jurisdictions, predominantly Singapore, Finland and the Netherlands, which are taxed at rates lower than the U.S. federal statutory rate, resulting in a benefit from income taxes of $18.7 million in fiscal year 2018, $55.9 million in fiscal year 2017 and $48.2 million in fiscal year 2016. These amounts include $10.3 million in fiscal year 2018, $10.1 million in fiscal

year 2017 and $11.4 million in fiscal year 2016 of benefits derived from tax holidays in China and Singapore. The effect of these benefits derived from tax holidays on basic and diluted earnings per share for fiscal year 2018 was $0.09 and $0.09, respectively, for fiscal year 2017 was $0.09 and $0.09, respectively, and for fiscal year 2016 was $0.10 and $0.10, respectively. The tax holiday in one of the Company's subsidiaries in China expired in 2017 and the tax holiday in one other subsidiary in China is scheduled to expire in fiscal year 2019. The tax holiday in one of the Company's subsidiaries in Singapore is scheduled to expire in fiscal year 2023.

The tax effects of temporary differences and attributes that gave rise to deferred income tax assets and liabilities as of December 30, 2018 and December 31, 2017 were as follows:

	December 30, 2018	December 31, 2017
	(In thousands)	
Deferred tax assets:		
Inventory	$ —	$ 6,376
Reserves and accruals	39,487	26,657
Accrued compensation	21,709	17,333
Net operating loss and credit carryforwards	144,421	88,503
Accrued pension	31,146	34,682
Restructuring reserve	1,780	2,586
Deferred revenue	31,045	28,478
Unrealized foreign exchange loss	—	10,910
Total deferred tax assets	269,588	215,525
Deferred tax liabilities:		
Inventory	(278)	—
Postretirement health benefits	(3,406)	(3,391)
Depreciation and amortization	(309,958)	(392,293)
All other, net	(1,879)	(594)
Total deferred tax liabilities	(315,521)	(396,278)
Valuation allowance	(102,087)	(68,895)
Net deferred tax liabilities	$ (148,020)	$ (249,648)

The components of net deferred tax liabilities as of December 30, 2018 and December 31, 2017 were recognized in the consolidated balance sheets as follows:

	December 30, 2018	December 31, 2017
	(In thousands)	
Other assets, net	$ 79,312	$ 67,280
Long-term liabilities	(227,332)	(316,928)
Total	$ (148,020)	$ (249,648)

At December 30, 2018, for income tax return purposes, the Company had U.S. federal net operating loss carryforwards of $38.3 million, state net operating loss carryforwards of $200.6 million, foreign net operating loss carryforwards of $515.5 million, state tax credit carryforwards of $6.8 million, general business tax credit carryforwards of $10.9 million, and foreign tax credit carryforwards of $0.1 million. These are subject to expiration in years ranging from 2019 to 2038, and without expiration for certain foreign net operating loss carryforwards and certain state credit carryforwards.

Valuation allowances take into consideration limitations imposed upon the use of the tax attributes and reduce the value of such items to the likely net realizable amount. The Company regularly evaluates positive and negative evidence available to determine if valuation allowances are required or if existing valuation allowances are no longer required. Valuation allowances have been provided on state net operating loss and state tax credit carryforwards and on certain foreign tax attributes that the Company has determined are not more likely than not to be realized. The increase in the valuation allowance of $33.2 million in fiscal year 2018 is primarily due to an increase in tax attributes that the Company does not expect to realize for one of its non-U.S. subsidiaries.

The components of net deferred tax (liabilities) assets as of December 30, 2018 and December 31, 2017 were as follows:

	December 30, 2018	December 31, 2017
	(In thousands)	
U.S.	$ 52,469	$ 44,974
Non-U.S.	(200,489)	(294,622)
Total	$ (148,020)	$ (249,648)

Historically, deferred income tax expense has not been provided on the cumulative undistributed earnings of the Company's international subsidiaries. During fiscal year 2018, the Company has determined that previously undistributed earnings of certain international subsidiaries of $1.0 billion no longer met the requirements of indefinite reinvestment and therefore recognized $2.9 million of income tax expense in fiscal year 2018. The Company’s intent is to continue to reinvest the remaining undistributed earnings of its international subsidiaries indefinitely. While federal income tax expense has been recognized as a result of the Tax Act, the Company has not provided any additional deferred taxes with respect to items such as foreign withholding taxes, state income tax or foreign exchange gain or loss. In addition, no additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations. As of December 30, 2018, the amount of foreign earnings that the Company has the intent and ability to keep invested outside the U.S. indefinitely and for which no additional incremental tax cost has been provided, other than the $80.4 million from the one-time transition tax on deemed repatriation, was approximately $652.1 million. It is not practicable for the Company to calculate the unrecognized deferred tax liability related to such incremental tax costs on those earnings.

Note 9: Earnings Per Share

Basic earnings per share was computed by dividing net income by the weighted-average number of common shares outstanding during the period less restricted unvested shares. Diluted earnings per share was computed by dividing net income by the weighted-average number of common shares outstanding plus all potentially dilutive common stock equivalents, primarily shares issuable upon the exercise of stock options using the treasury stock method. The following table reconciles the number of shares utilized in the earnings per share calculations for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Number of common shares—basic	110,561	109,857	109,478
Effect of dilutive securities:			
Stock options	761	708	640
Restricted stock awards	212	294	195
Number of common shares—diluted	111,534	110,859	110,313
Number of potentially dilutive securities excluded from calculation due to antidilutive impact	349	287	458

Antidilutive securities include outstanding stock options with exercise prices and average unrecognized compensation cost in excess of the average fair market value of common stock for the related period. Antidilutive options were excluded from the calculation of diluted net income per share and could become dilutive in the future.

Note 10: Accounts Receivable, Net

Accounts receivable were net of reserves for doubtful accounts of $30.6 million and $31.3 million as of December 30, 2018 and December 31, 2017, respectively.

Note 11: Inventories

Inventories as of December 30, 2018 and December 31, 2017 consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
Raw materials	$ 119,115	$ 122,100
Work in progress	18,110	18,452
Finished goods	201,122	211,123
Total inventories	$ 338,347	$ 351,675

Note 12: Property, Plant and Equipment, Net

Property, plant and equipment as of December 30, 2018 and December 31, 2017, consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
At cost:		
Land	$ 5,482	$ 5,624
Building and leasehold improvements	272,277	262,657
Machinery and equipment	402,424	362,638
Total property, plant and equipment	680,183	630,919
Accumulated depreciation	(361,593)	(332,853)
Total property, plant and equipment, net	$ 318,590	$ 298,066

Depreciation expense on property, plant and equipment for the fiscal years ended December 30, 2018, December 31, 2017 and January 1, 2017 was $44.7 million, $31.3 million and $28.5 million, respectively.

Note 13: Marketable Securities and Investments

Investments as of December 30, 2018 and December 31, 2017 consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
Marketable securities	$ 2,447	$ 2,208
Cost method investments	16,783	10,783
	$ 19,230	$ 12,991

Marketable securities. Marketable securities include equity and fixed-income securities held to meet obligations associated with the Company's supplemental executive retirement plan and other deferred compensation plans. The Company has, accordingly, classified these securities as long-term.

The net unrealized holding gain and loss on marketable securities, net of deferred income taxes, reported as a component of other comprehensive income (loss) in the statements of stockholders' equity, were not material in fiscal years 2018 and 2017. The proceeds from the sales of securities and the related gains and losses are not material for any period presented.

Marketable securities classified as available for sale as of December 30, 2018 and December 31, 2017 consisted of the following:

	Market Value	Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding (Losses)
	(In thousands)			
December 30, 2018				
Equity securities	$ 671	$ 1,037	$ —	$ (366)
Fixed-income securities	22	22	—	—
Other	1,754	1,817	—	(63)
	$ 2,447	$ 2,876	$ —	$ (429)
December 31, 2017				
Equity securities	$ 811	$ 1,161	$ —	$ (350)
Fixed-income securities	22	22	—	—
Other	1,375	1,438	—	(63)
	$ 2,208	$ 2,621	$ —	$ (413)

Cost method investments. The Company has equity interests in privately-held entities over which the Company neither has significant influence nor control and are accounted for using under the cost method. Under the cost method, the Company records the investment at cost and recognizes income for any dividends declared from distribution of investee's earnings.

The Company's investments consist of (i) investments carried at fair value, including available-for-sale securities, and (ii) investments accounted for using the cost method of accounting. The Company regularly reviews its investments for impairment, including when the carrying value of an investment exceeds its market value. If the Company determines that an investment has sustained an other-than-temporary decline in its value, the investment is written down to its fair value by a charge to earnings that is included in Impairment of long-term investments and other assets. Factors that are considered by the Company in determining whether an other-than-temporary decline in value has occurred include (i) the market value of the security in relation to its cost basis, (ii) the financial condition of the investee, and (iii) the Company's intent and ability to retain the investment for a sufficient period of time to allow for recovery in the market value of the investment.

For investments accounted for using the cost method of accounting, the Company evaluates information available (e.g., budgets, business plans, financial statements, etc.) in addition to quoted market prices, if any, in determining whether an other-than-temporary decline in value exists. Factors indicative of an other-than-temporary decline include recurring operating losses, credit defaults and subsequent rounds of financing at an amount below the cost basis of the Company's investment.

Note 14: Goodwill and Intangible Assets, Net

The Company tests goodwill and non-amortizing intangible assets at least annually for possible impairment. Accordingly, the Company completes the annual testing of impairment for goodwill and non-amortizing intangible assets on the later of January 1 or the first day of each fiscal year. In addition to its annual test, the Company regularly evaluates whether events or circumstances have occurred that may indicate a potential impairment of goodwill or non-amortizing intangible assets.

The process of testing goodwill for impairment involves the determination of the fair value of the applicable reporting units. The test consists of the comparison of the fair value to the carrying value of the reporting unit to determine if the carrying value exceeds the fair value. If the carrying value of the reporting unit exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of goodwill. The Company performed its annual impairment testing for its reporting units as of January 1, 2018, its annual impairment date for fiscal year 2018.

Non-amortizing intangibles are also subject to an annual impairment test. The Company consistently employed the relief from royalty model to estimate the current fair value when testing for impairment of non-amortizing intangible asset. The impairment test consists of a comparison of the fair value of the non-amortizing intangible asset with its carrying amount. If the carrying amount of a non-amortizing intangible asset exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of the amortizing intangible asset. In addition, the Company evaluates the remaining useful life of our non-amortizing intangible asset at least annually to determine whether events or circumstances continue to support an indefinite useful life. If events or circumstances indicate that the useful life of our non-amortizing intangible asset is no longer indefinite, the asset will be tested for impairment. This intangible asset will then be amortized prospectively over its estimated remaining useful life and accounted for in the same manner as other intangible assets that are subject to amortization.

The changes in the carrying amount of goodwill for fiscal years 2018 and 2017 are as follows:

	Discovery & Analytical Solutions	Diagnostics	Consolidated
Balance at January 1, 2017	$ 1,303,936	$ 944,030	$ 2,247,966
Foreign currency translation	37,646	29,091	66,737
Acquisitions, earnouts and other	2,653	684,842	687,495
Balance at December 31, 2017	1,344,235	1,657,963	3,002,198
Foreign currency translation	(32,189)	(35,289)	(67,478)
Acquisitions, earnouts and other	22,946	(5,058)	17,888
Balance at December 30, 2018	$ 1,334,992	$ 1,617,616	$ 2,952,608

Identifiable intangible asset balances at December 30, 2018 by category and by business segment were as follows:

	Discovery & Analytical Solutions	Diagnostics	Consolidated
Patents	$ 28,030	$ 14,616	$ 42,646
Less: Accumulated amortization	(25,978)	(11,775)	(37,753)
Net patents	2,052	2,841	4,893
Trade names and trademarks	29,811	48,335	78,146
Less: Accumulated amortization	(21,728)	(12,073)	(33,801)
Net trade names and trademarks	8,083	36,262	44,345
Licenses	50,178	3,127	53,305
Less: Accumulated amortization	(44,376)	(1,174)	(45,550)
Net licenses	5,802	1,953	7,755
Core technology	240,734	300,177	540,911
Less: Accumulated amortization	(189,033)	(76,711)	(265,744)
Net core technology	51,701	223,466	275,167
Customer relationships	222,892	866,635	1,089,527
Less: Accumulated amortization	(128,142)	(165,822)	(293,964)
Net customer relationships	94,750	700,813	795,563
IPR&D	—	1,360	1,360
Net amortizable intangible assets	162,388	966,695	1,129,083
Non-amortizing intangible asset:			
Trade name	70,584	—	70,584
Total	$ 232,972	$ 966,695	$ 1,199,667

Identifiable intangible asset balances at December 31, 2017 by category and business segment were as follows:

	Discovery & Analytical Solutions	Diagnostics	Consolidated
Patents	$ 28,048	$ 11,911	$ 39,959
Less: Accumulated amortization	(24,448)	(10,637)	(35,085)
Net patents	3,600	1,274	4,874
Trade names and trademarks	29,950	51,024	80,974
Less: Accumulated amortization	(20,022)	(8,228)	(28,250)
Net trade names and trademarks	9,928	42,796	52,724
Licenses	43,061	10,239	53,300
Less: Accumulated amortization	(34,620)	(8,015)	(42,635)
Net licenses	8,441	2,224	10,665
Core technology	236,324	243,435	479,759
Less: Accumulated amortization	(190,423)	(59,920)	(250,343)
Net core technology	45,901	183,515	229,416
Customer relationships	233,573	907,938	1,141,511
Less: Accumulated amortization	(116,696)	(126,144)	(242,840)
Net customer relationships	116,877	781,794	898,671
IPR&D	—	80,006	80,006
Net amortizable intangible assets	184,747	1,091,609	1,276,356
Non-amortizing intangible asset:			
Trade name	70,584	—	70,584
Total	$ 255,331	$ 1,091,609	$ 1,346,940

Total amortization expense related to definite-lived intangible assets was $135.9 million in fiscal year 2018, $73.7 million in fiscal year 2017 and $71.5 million in fiscal year 2016. Estimated amortization expense related to definite-lived intangible assets for each of the next five years is $149.7 million in fiscal year 2019, $152.0 million in fiscal year 2020, $136.7 million in fiscal year 2021, $126.6 million in fiscal year 2022, and $109.1 million in fiscal year 2023.

The Company entered into a strategic agreement in fiscal year 2012 under which it acquired certain intangible assets and received a license to certain core technology for an analytics and data discovery platform, as well as the exclusive right to distribute the platform in certain scientific research and development markets. During fiscal year 2012, the Company paid $6.8 million for net intangible assets and $25.0 million for prepaid royalties. During fiscal year 2013, the Company extended the existing agreement for an additional year. In addition, the Company entered into a new agreement to expand the distribution rights to the clinical and other related markets and acquired additional intangible assets. During fiscal year 2013, the Company paid $7.0 million for net intangible assets and $40.3 million for prepaid royalties. During fiscal year 2016, the Company extended the existing agreement for an additional 3 years and expanded the distribution rights to the related markets. During fiscal year 2016, the Company paid $6.0 million for prepaid royalties related to the extension and new agreement. During the fiscal years 2017 and 2016, the Company paid $5.1 million and $9.4 million, respectively, for additional prepaid royalties. As of December 30, 2018, the Company recorded prepaid royalties of $65.0 million, of which $5.6 million was recorded in other current assets, and $59.4 million was recorded in other assets. The Company expenses royalties as revenue is recognized. These intangible assets are being amortized over their estimated useful lives. The Company has reported the amortization of these intangible assets within the results of the Company's Discovery & Analytical Solutions segment from the execution date.

Note 15: Debt

Senior Unsecured Revolving Credit Facility. The Company's senior unsecured revolving credit facility provides for $1.0 billion of revolving loans and has an initial maturity of August 11, 2021. As of December 30, 2018, undrawn letters of credit in the aggregate amount of $11.4 million were treated as issued and outstanding when calculating the borrowing availability under the senior unsecured revolving credit facility. As of December 30, 2018, the Company had $570.6 million available for additional borrowing under the facility. The Company uses the senior unsecured revolving credit facility for general corporate

purposes, which may include working capital, refinancing existing indebtedness, capital expenditures, share repurchases, acquisitions and strategic alliances. The interest rates under the senior unsecured revolving credit facility are based on the Eurocurrency rate or the base rate at the time of borrowing, plus a margin. The base rate is the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. The Eurocurrency margin as of December 30, 2018 was 110 basis points. The weighted average Eurocurrency interest rate as of December 30, 2018 was 2.51%, resulting in a weighted average effective Eurocurrency rate, including the margin, of 3.61%, which was the interest applicable to the borrowings outstanding under the Eurocurrency rate as of December 30, 2018. As of December 30, 2018, the senior unsecured revolving credit facility had outstanding borrowings of $418.0 million, and $2.4 million of unamortized debt issuance costs. As of December 31, 2017, the senior unsecured revolving credit facility had $625.0 million outstanding borrowings, and $3.3 million of unamortized debt issuance costs. The credit agreement for the facility contains affirmative, negative and financial covenants and events of default. The financial covenants include a debt-to-capital ratio that remains applicable for so long as the Company's debt is rated as investment grade. In the event that the Company's debt is not rated as investment grade, the debt-to-capital ratio covenant is replaced with a maximum consolidated leverage ratio covenant and a minimum consolidated interest coverage ratio covenant.

Senior Unsecured Term Loan Credit Facility. The Company entered into a senior unsecured term loan credit facility on August 11, 2017 that provided for $200.0 million of term loans and had an initial maturity of twelve months from December 19, 2017, the date of the initial draw. The Company utilized the senior unsecured term loan facility for the acquisition of EUROIMMUN. The interest rates under the senior unsecured term loan credit facility were based on the Eurocurrency rate or the base rate at the time of the borrowing, plus a margin. The base rate was the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. In April 2018, the Company paid in full the outstanding balance of $200.0 million on the Company’s senior unsecured term loan credit facility, from the proceeds of the 0.6% senior unsecured notes due in 2021 that were issued in April 2018.

5% *Senior Unsecured Notes due in 2021.* On October 25, 2011, the Company issued $500.0 million aggregate principal amount of senior unsecured notes due in 2021 (the “November 2021 Notes”) in a registered public offering and received $493.6 million of net proceeds from the issuance. The November 2021 Notes were issued at 99.4% of the principal amount, which resulted in a discount of $3.1 million. As of December 30, 2018, the November 2021 Notes had an aggregate carrying value of $497.4 million, net of $1.1 million of unamortized original issue discount and $1.6 million of unamortized debt issuance costs. As of December 31, 2017, the November 2021 Notes had an aggregate carrying value of $496.6 million, net of $1.4 million of unamortized original issue discount and $2.0 million of unamortized debt issuance costs. The November 2021 Notes mature in November 2021 and bear interest at an annual rate of 5%. Interest on the November 2021 Notes is payable semi-annually on May 15th and November 15th each year. Prior to August 15, 2021 (three months prior to their maturity date), the Company may redeem the November 2021 Notes in whole or in part, at its option, at a redemption price equal to the greater of (i) 100% of the principal amount of the November 2021 Notes to be redeemed, plus accrued and unpaid interest, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the November 2021 Notes being redeemed, discounted on a semi-annual basis, at the Treasury Rate plus 45 basis points, plus accrued and unpaid interest. At any time on or after August 15, 2021 (three months prior to their maturity date), the Company may redeem the November 2021 Notes, at its option, at a redemption price equal to 100% of the principal amount of the November 2021 Notes to be redeemed plus accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the November 2021 Notes) and a contemporaneous downgrade of the November 2021 Notes below investment grade, each holder of November 2021 Notes will have the right to require the Company to repurchase such holder's November 2021 Notes for 101% of their principal amount, plus accrued and unpaid interest.

1.875% Senior Unsecured Notes due 2026. On July 19, 2016, the Company issued €500.0 million aggregate principal amount of senior unsecured notes due in 2026 (the “2026 Notes”) in a registered public offering and received approximately €492.3 million of net proceeds from the issuance. The 2026 Notes were issued at 99.118% of the principal amount, which resulted in a discount of €4.4 million. The 2026 Notes mature in July 2026 and bear interest at an annual rate of 1.875%. Interest on the 2026 Notes is payable annually on July 19th each year. The proceeds from the 2026 Notes were used to pay in full the outstanding balance of the Company's previous senior unsecured revolving credit facility. As of December 30, 2018, the 2026 Notes had an aggregate carrying value of $564.5 million, net of $4.0 million of unamortized original issue discount and $3.8 million of unamortized debt issuance costs. As of December 31, 2017, the 2026 Notes had an aggregate carrying value of $591.7 million, net of $4.7 million of unamortized original issue discount and $4.3 million of unamortized debt issuance costs.

Prior to April 19, 2026 (three months prior to their maturity date), the Company may redeem the 2026 Notes in whole at any time or in part from time to time, at its option, at a redemption price equal to the greater of (i) 100% of the principal amount of the 2026 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the 2026 Notes being redeemed, discounted on an annual basis, at the applicable Comparable

Government Bond Rate (as defined in the indenture governing the 2026 Notes) plus 35 basis points; plus, in each case, accrued and unpaid interest. In addition, at any time on or after April 19, 2026 (three months prior to their maturity date), the Company may redeem the 2026 Notes, at its option, at a redemption price equal to 100% of the principal amount of the 2026 Notes due to be redeemed plus accrued and unpaid interest.

Upon a change of control (as defined in the indenture governing the 2026 Notes) and a contemporaneous downgrade of the 2026 Notes below investment grade, the Company will, in certain circumstances, make an offer to purchase the 2026 Notes at a price equal to 101% of their principal amount plus any accrued and unpaid interest.

0.6% Senior Unsecured Notes due in 2021. On April 11, 2018, the Company issued €300.0 million aggregate principal amount of senior unsecured notes due in 2021 (the "April 2021 Notes") in a registered public offering and received approximately €298.7 million of net proceeds from the issuance. The April 2021 Notes were issued at 99.95% of the principal amount, which resulted in a discount of €0.2 million. As of December 30, 2018, the April 2021 Notes had an aggregate carrying value of $341.3 million, net of $0.1 million of unamortized original issue discount and $2.0 million of unamortized debt issuance costs. The April 2021 Notes mature in April 2021 and bear interest at an annual rate of 0.6%. Interest on the April 2021 Notes is payable annually on April 9th each year. The proceeds from the April 2021 Notes were used to pay in full the outstanding balance of the Company's senior unsecured term loan credit facility, and a portion of the outstanding senior unsecured revolving credit facility, and in each case the borrowings were incurred to pay a portion of the purchase price for the Company's acquisition of EUROIMMUN, which closed on December 19, 2017. Prior to the maturity date of the April 2021 Notes, the Company may redeem them in whole at any time or in part from time to time, at its option, at a redemption price equal to the greater of (i) 100% of the principal amount of the April 2021 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the April 2021 Notes being redeemed, discounted on an annual basis, at the applicable Comparable Government Bond Rate (as defined in the indenture governing the April 2021 Notes) plus 15 basis points; plus, in each case, accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the April 2021 Notes) and a contemporaneous downgrade of the April 2021 Notes below investment grade, the Company will, in certain circumstances, make an offer to purchase the April 2021 Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest.

Other Debt Facilities. The Company's other debt facilities include Euro-denominated bank loans with an aggregate carrying value of $32.1 million (or €28.0 million) and $57.2 million (or €47.6 million) as of December 30, 2018 and December 31, 2017, respectively. These bank loans are primarily utilized for financing fixed assets and are repaid in monthly or quarterly installments with maturity dates extending to 2028. Of these bank loans, loans in the aggregate amount of $31.9 million bear fixed interest rates between 1.1% and 5.5% and a loan in the amount of $0.2 million bears a variable interest rate based on the Euribor rate plus a margin of 1.5%. An aggregate amount of $4.8 million of the bank loans are secured by mortgages on real property and the remaining $27.3 million are unsecured. Certain credit agreements for the unsecured bank loans include financial covenants which are based on an equity ratio or an equity ratio and minimum interest coverage ratio.

In addition, the Company had other unsecured revolving credit facilities and a secured bank loan in the amount of $5.8 million and $0.3 million, respectively, as of December 30, 2018 and $2.7 million and $0.3 million, respectively, as of December 31, 2017. The unsecured revolving debt facilities bear fixed interest rates between 2.3% and 17.6%. The secured bank loan of $0.3 million bears a fixed annual interest rate of 1.95% and is repaid in monthly installments until 2027.

Financing Lease Obligations. In fiscal year 2012, the Company entered into agreements with the lessors of certain buildings that the Company is currently occupying and leasing to expand those buildings. The Company provided a portion of the funds needed for the construction of the additions to the buildings, and as a result the Company was considered the owner of the buildings during the construction period. At the end of the construction period, the Company was not reimbursed by the lessors for all of the construction costs. The Company is therefore deemed to have continuing involvement and the leases qualify as financing leases under sale-leaseback accounting guidance, representing debt obligations for the Company and non-cash investing and financing activities. As a result, the Company capitalized $29.3 million in property, plant and equipment, net, representing the fair value of the buildings with a corresponding increase to debt. The Company has also capitalized $11.5 million in additional construction costs necessary to complete the renovations to the buildings, which were funded by the lessors, with a corresponding increase to debt. At December 30, 2018, the Company had $34.5 million recorded for these financing lease obligations, of which $1.5 million was recorded as short-term debt and $33.0 million was recorded as long-term debt. At December 31, 2017, the Company had $35.9 million recorded for these financing lease obligations, of which $1.4 million was recorded as short-term debt and $34.5 million was recorded as long-term debt. The buildings are being depreciated on a straight-line basis over the terms of the leases to their estimated residual values, which will equal the remaining financing obligation at the end of the lease term. At the end of the lease term, the remaining balances in property, plant and equipment, net and debt will be reversed against each other. Upon adoption of ASC 842, the Company will derecognize the impact of this build-to-suit arrangement.

The following table summarizes the maturities of the Company's indebtedness as of December 30, 2018:

	Sr. Unsecured Revolving Credit Facility Maturing 2021	November 2021 Notes	April 2021 Notes	2026 Notes	Other Debt Facilities	Financing Lease Obligations	Total
	(In thousands)						
2019	$ —	$ —	$ —	$ —	$ 13,324	$ 1,532	$ 14,856
2020	—	—	—	—	8,527	1,597	10,124
2021	418,000	500,000	343,410	—	8,197	1,665	1,271,272
2022	—	—	—	—	3,907	1,657	5,564
2023	—	—	—	—	2,641	1,681	4,322
2024 and thereafter	—	—	—	572,350	1,574	4,698	578,622
Total before unamortized discount and debt issuance costs and non-cash finance lease liabilities	418,000	500,000	343,410	572,350	38,170	12,830	1,884,760
Unamortized discount and debt issuance costs	(2,401)	(2,628)	(2,133)	(7,806)	—	—	(14,968)
Non-cash finance lease liabilities	—	—	—	—	—	21,688	21,688
Total	$ 415,599	$ 497,372	$ 341,277	$ 564,544	$ 38,170	$ 34,518	$ 1,891,480

Note 16: Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of December 30, 2018 and December 31, 2017 consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
Payroll and incentives	$ 86,549	$ 66,955
Employee benefits	44,060	37,354
Deferred revenue	155,064	159,923
Federal, non-U.S. and state income taxes	30,687	10,800
Other accrued operating expenses	212,467	225,610
Total accrued expenses and other current liabilities	$ 528,827	$ 500,642

Note 17: Employee Benefit Plans

Savings Plan: The Company has a 401(k) Savings Plan for the benefit of all qualified U.S. employees, with such employees receiving matching contributions in the amount equal to 100.0% of the first 5.0% of eligible compensation up to applicable Internal Revenue Service limits. Savings plan expense was $13.2 million in fiscal year 2018, $12.5 million in fiscal year 2017, and $12.8 million in fiscal year 2016.

Pension Plans: The Company has a defined benefit pension plan covering certain U.S. employees and non-U.S. pension plans for certain non-U.S. employees. The principal U.S. defined benefit pension plan was closed to new hires effective January 31, 2001, and benefits for those employed by the Company's former Life Sciences business were frozen as of that date. Plan benefits were frozen as of March 2003 for those employed by the Company's former Analytical Instruments business and corporate employees. Plan benefits were frozen as of January 31, 2011 for all remaining employees that were still actively accruing in the plan. The plans provide benefits that are based on an employee's years of service and compensation near retirement.

Net periodic pension cost (credit) for U.S. and non-U.S. plans included the following components for fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Service and administrative costs	$ 6,853	$ 4,951	$ 4,337
Interest cost	16,146	16,707	18,638
Expected return on plan assets	(28,939)	(26,401)	(24,245)
Actuarial loss (gain)	17,146	(7,085)	15,890
Amortization of prior service cost	375	(195)	(210)
Net periodic pension cost (credit)	$ 11,581	$ (12,023)	$ 14,410

The Company recognizes actuarial gains and losses, unless an interim remeasurement is required, in the fourth quarter of the year in which the gains and losses occur, in accordance with the Company's accounting method for defined benefit pension plans and other postretirement benefits as described in Note 1, *Basis of Presentation*. Such adjustments for gains and losses are primarily driven by events and circumstances beyond the Company's control, including changes in interest rates, the performance of the financial markets and mortality assumptions. As discussed in Note 1, the Company adopted ASU 2017-07 on January 1, 2018. Actuarial gains and losses are now recognized in the line item "Interest and other expense, net" in the consolidated statements of operations. Actuarial gains and losses were presented within operating income prior to the adoption. As such, prior year amounts, including other components of periodic pension cost, have been reclassified to "Interest and other expense, net" in the Company's consolidated statements of operations due to the retrospective adoption of ASU 2017-07.

The following table sets forth the changes in the funded status of the principal U.S. pension plan and the principal non-U.S. pension plans and the amounts recognized in the Company's consolidated balance sheets as of December 30, 2018 and December 31, 2017.

	December 30, 2018		December 31, 2017	
	Non-U.S.	U.S.	Non-U.S.	U.S.
	(In thousands)			
Actuarial present value of benefit obligations:				
Accumulated benefit obligations	$ 304,065	$ 283,310	$ 334,151	$ 308,713
Change in benefit obligations:				
Projected benefit obligations at beginning of year	$ 343,410	$ 308,713	$ 279,522	$ 300,650
Service and administrative costs	4,528	2,325	2,201	2,750
Interest cost	5,484	10,662	4,870	11,836
Benefits paid and plan expenses	(13,081)	(19,709)	(13,238)	(20,032)
Participants' contributions	176	—	189	—
Business acquisition	537	—	39,293	—
Plan amendments	533	—	—	—
Actuarial (gain) loss	(13,141)	(18,681)	(1,486)	13,509
Effect of exchange rate changes	(17,278)	—	32,059	—
Projected benefit obligations at end of year	$ 311,168	$ 283,310	$ 343,410	$ 308,713
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 179,736	$ 253,427	$ 153,281	$ 243,817
Actual return on plan assets	(5,653)	(14,376)	15,866	29,642
Benefits paid and plan expenses	(13,081)	(19,709)	(13,238)	(20,032)
Employer's contributions	8,480	15,000	8,422	—
Participants' contributions	176	—	189	—
Effect of exchange rate changes	(10,495)	—	15,216	—
Fair value of plan assets at end of year	$ 159,163	$ 234,342	$ 179,736	$ 253,427
Net liabilities recognized in the consolidated balance sheets	$ (152,005)	$ (48,968)	$ (163,674)	$ (55,286)
Net amounts recognized in the consolidated balance sheets consist of:				
Other assets	$ 31,419	$ —	$ 26,591	$ —
Current liabilities	(6,752)	—	(7,017)	—
Long-term liabilities	(176,672)	(48,968)	(183,248)	(55,286)
Net liabilities recognized in the consolidated balance sheets	$ (152,005)	$ (48,968)	$ (163,674)	$ (55,286)
Net amounts recognized in accumulated other comprehensive income consist of:				
Prior service cost	$ (278)	$ —	$ (457)	$ —
Actuarial assumptions as of the year-end measurement date:				
Discount rate	2.07%	4.05%	1.99%	3.56%
Rate of compensation increase	3.48%	None	3.50%	None

Actuarial assumptions used to determine net periodic pension cost during the year were as follows:

	December 30, 2018		December 31, 2017		January 1, 2017	
	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.
Discount rate	1.99%	3.56%	2.06%	4.06%	2.88%	4.25%
Rate of compensation increase	3.50%	None	3.64%	None	3.26%	None
Expected rate of return on assets	5.90%	7.25%	6.00%	7.25%	5.30%	7.25%

The following table provides a breakdown of the non-U.S. benefit obligations and fair value of assets for pension plans that have benefit obligations in excess of plan assets:

	December 30, 2018	December 31, 2017
	(In thousands)	
Pension Plans with Projected Benefit Obligations in Excess of Plan Assets		
Projected benefit obligations	$ 183,424	$ 190,265
Fair value of plan assets	—	—
Pension Plans with Accumulated Benefit Obligations in Excess of Plan Assets		
Accumulated benefit obligations	$ 180,560	$ 187,329
Fair value of plan assets	—	—

Assets of the defined benefit pension plans are primarily equity and debt securities. Asset allocations as of December 30, 2018 and December 31, 2017, and target asset allocations for fiscal year 2019 are as follows:

	Target Allocation		Percentage of Plan Assets at			
	December 29, 2019		December 30, 2018		December 31, 2017	
Asset Category	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.
Equity securities	45-55%	35-50%	48%	39%	51%	41%
Debt securities	45-55%	50-65%	51%	61%	49%	59%
Other	0-5%	0-10%	1%	—%	0%	—%
Total	100%	100%	100%	100%	100%	100%

The Company maintains target allocation percentages among various asset classes based on investment policies established for the pension plans which are designed to maximize the total rate of return (income and appreciation) after inflation within the limits of prudent risk taking, while providing for adequate near-term liquidity for benefit payments.

The Company's expected rate of return on assets assumptions are derived from management's estimates, as well as other information compiled by management, including studies that utilize customary procedures and techniques. The studies include a review of anticipated future long-term performance of individual asset classes and consideration of the appropriate asset allocation strategy given the anticipated requirements of the plans to determine the average rate of earnings expected on the funds invested to provide for the pension plans benefits. While the study gives appropriate consideration to recent fund performance and historical returns, the assumption is primarily a long-term, prospective rate.

The Company's discount rate assumptions are derived from a range of factors, including a yield curve for certain plans, composed of the rates of return on high-quality fixed-income corporate bonds available at the measurement date and the related expected duration for the obligations, and a bond matching approach for certain plans.

During fiscal year 2016, for the plans in the United States, the Society of Actuaries issued an updated projection scale, MP-2016, which reduced the life expectancy used to determine the projected benefit obligation. The Company adopted MP-2016 as of January 1, 2017. The adoption of the updated projection scale resulted in a $5.5 million decrease to the projected benefit obligation at January 1, 2017. The Company adopted a further updated projection scale, MP-2017, as of December 31, 2017. The adoption of MP-2017 resulted in a $2.6 million decrease to the projected benefit obligation at December 31, 2017. During fiscal year 2018, the Society of Actuaries issued MP-2018 mortality improvement rates to replace MP-2017 rates for use with the RP-2014 mortality table, which incorporates an additional year (2016) of U.S. population. The Company adopted MP-2018 as of December 30, 2018. The adoption of MP-2018 resulted in a $1.0 million decrease to the projected benefit obligation at December 30, 2018. The changes to the projected benefit obligations due to the adoption of the

mortality base table and projection scale are included within "Actuarial loss (gain)" in the Change in Benefit Obligations for fiscal years 2018 and 2017 above.

The target allocations for plan assets are listed in the above table. Equity securities primarily include investments in large-cap and mid-cap companies located in the United States and abroad, and equity index funds. Debt securities include corporate bonds of companies from diversified industries, high-yield bonds, and U.S. government securities. Other types of investments include investments in non-U.S. government index linked bonds, multi-strategy hedge funds and venture capital funds that follow several different strategies.

The fair values of the Company's pension plan assets as of December 30, 2018 and December 31, 2017 by asset category, classified in the three levels of inputs described in Note 23 to the consolidated financial statements are as follows:

		Fair Value Measurements at December 30, 2018 Using:		
	Total Carrying Value at December 30, 2018	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
		(In thousands)		
Cash	$ 6,326	$ 6,326	$ —	$ —
Equity securities:				
U.S. large-cap	35,072	35,072	—	—
International large-cap value	24,175	24,175	—	—
U.S. small mid-cap	1,928	1,928	—	—
Emerging markets growth	11,993	11,993	—	—
Equity index funds	54,342	—	54,342	—
Domestic real estate funds	1,353	1,353	—	—
Foreign real estate funds	22,196	—	—	22,196
Commodity funds	886	886	—	—
Fixed income securities:				
Non-U.S. treasury securities	23,352	—	23,352	—
Corporate and U.S. debt instruments	131,211	48,133	83,078	—
Corporate bonds	24,848	—	24,848	—
High yield bond funds	5,186	5,186	—	—
Other types of investments:				
Multi-strategy hedge funds	16,934	—	—	16,934
Non-U.S. government index linked bonds	33,703	—	33,703	—
Total assets measured at fair value	$ 393,505	$ 135,052	$ 219,323	$ 39,130

	Total Carrying Value at December 31, 2017	Fair Value Measurements at December 31, 2017 Using: Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Cash	$ 4,307	$ 4,307	$ —	$ —
Equity Securities:				
U.S. large-cap	30,008	30,008	—	—
International large-cap value	32,613	32,613	—	—
U.S. small-cap	2,104	2,104	—	—
Emerging markets growth	14,348	14,348	—	—
Equity index funds	90,838	—	90,838	—
Domestic real estate funds	1,401	1,401	—	—
Commodity funds	7,387	7,387	—	—
Fixed income securities:				
Non-U.S. Treasury Securities	24,946	—	24,946	—
Corporate and U.S. debt instruments	138,948	40,290	98,658	—
Corporate bonds	27,571	—	27,571	—
High yield bond funds	5,912	5,912	—	—
Other types of investments:				
Multi-strategy hedge funds	16,789	—	—	16,789
Non-U.S. government index linked bonds	35,991	—	35,991	—
Total assets measured at fair value	$ 433,163	$ 138,370	$ 278,004	$ 16,789

Valuation Techniques: Valuation techniques utilized need to maximize the use of observable inputs and minimize the use of unobservable inputs. There have been no changes in the methodologies utilized at December 30, 2018 compared to December 31, 2017. The following is a description of the valuation techniques utilized to measure the fair value of the assets shown in the table above.

Equity Securities: Shares of registered investment companies that are publicly traded are categorized as Level 1 assets; they are valued at quoted market prices that represent the net asset value of the fund. These instruments have active markets.

Equity index funds are mutual funds that are not publicly traded and are comprised primarily of underlying equity securities that are publicly traded on exchanges. Price quotes for the assets held by these funds are readily observable and available. Equity index funds are categorized as Level 2 assets.

Fixed Income Securities: Fixed income mutual funds that are publicly traded are valued at quoted market prices that represent the net asset value of securities held by the fund and are categorized as Level 1 assets.

Fixed income index funds that are not publicly traded are stated at net asset value as determined by the issuer of the fund based on the fair value of the underlying investments and are categorized as Level 2 assets.

Individual fixed income bonds are categorized as Level 2 assets except where sufficient quoted prices exist in active markets, in which case such securities are categorized as Level 1 assets. These securities are valued using third-party pricing services. These services may use, for example, model-based pricing methods that utilize observable market data as inputs. Broker dealer bids or quotes of securities with similar characteristics may also be used.

Other Types of Investments: Non-U.S. government index link bond funds are not publicly traded and are stated at net asset value as determined by the issuer of the fund based on the fair value of the underlying investments. Underlying investments consist of bonds in which payment of income on the principal is related to a specific price index and are categorized as Level 2 assets.

Hedge funds, private equity funds, foreign real estate funds and venture capital funds are valued at fair value by using the net asset values provided by the investment managers and are updated, if necessary, using analytical procedures, appraisals, public market data and/or inquiry of the investment managers. The net asset values are determined based upon the fair values of the underlying investments in the funds. These other investments invest primarily in readily available marketable securities and

allocate gains, losses, and expense to the investor based on the ownership percentage as described in the fund agreements. They are categorized as Level 3 assets.

The Company's policy is to recognize significant transfers between levels at the actual date of the event.

A reconciliation of the beginning and ending Level 3 assets for fiscal years 2018, 2017 and 2016 is as follows:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3):			
	Venture Capital Funds	Foreign Real Estate Funds	Multi-strategy Hedge Funds	Total
	(In thousands)			
Balance at January 3, 2016	$ 1	$ —	$ 23,415	$ 23,416
Realized losses	(1)	—	—	(1)
Unrealized gains	—	—	375	375
Balance at January 1, 2017	—	—	23,790	23,790
Sales	—	—	(8,189)	(8,189)
Realized gains	—	—	1,542	1,542
Unrealized losses	—	—	(354)	(354)
Balance at December 31, 2017	—	—	16,789	16,789
Purchases	—	22,196	—	22,196
Unrealized gains	—	—	145	145
Balance at December 30, 2018	$ —	$ 22,196	$ 16,934	$ 39,130

With respect to plans outside of the United States, the Company expects to contribute $8.3 million in the aggregate during fiscal year 2019. During fiscal year 2018, the Company contributed $8.5 million, in the aggregate, to pension plans outside of the United States and $15.0 million to its defined benefit pension plan in the United States for the plan year 2017. During fiscal year 2017, the Company made contributions of $8.4 million, in the aggregate, to plans outside of the United States. During fiscal year 2016, the Company contributed $9.6 million, in the aggregate, to plans outside of the United States.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

	Non-U.S.	U.S.
	(In thousands)	
2019	$ 11,313	$ 18,774
2020	11,654	18,948
2021	12,200	19,176
2022	12,267	19,353
2023	12,551	19,462
2024-2028	67,457	95,403

The Company also sponsors a supplemental executive retirement plan to provide senior management with benefits in excess of normal pension benefits. Effective July 31, 2000, this plan was closed to new entrants. At December 30, 2018 and December 31, 2017, the projected benefit obligations were $22.1 million and $23.7 million, respectively. Assets with a fair value of $1.8 million and $1.4 million, segregated in a trust (which is included in marketable securities and investments on the consolidated balance sheets), were available to meet this obligation as of December 30, 2018 and December 31, 2017, respectively. Pension expenses and income for this plan netted to income of $0.3 million in fiscal year 2018, expense of $3.2 million in fiscal year 2017 and expense of $1.6 million in fiscal year 2016.

Postretirement Medical Plans: The Company provides healthcare benefits for eligible retired U.S. employees under a comprehensive major medical plan or under health maintenance organizations where available. Eligible U.S. employees qualify for retiree health benefits if they retire directly from the Company and have at least ten years of service. Generally, the major medical plan pays stated percentages of covered expenses after a deductible is met and takes into consideration payments by other group coverage and by Medicare. The plan requires retiree contributions under most circumstances and has provisions for

cost-sharing charges. Effective January 1, 2000, this plan was closed to new hires. For employees retiring after 1991, the Company has capped its medical premium contribution based on employees' years of service. The Company funds the amount allowable under a 401(h) provision in the Company's defined benefit pension plan. Assets of the plan are primarily equity and debt securities and are available only to pay retiree health benefits.

Net periodic postretirement medical benefit cost (credit) included the following components for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Service cost	$ 106	$ 92	$ 101
Interest cost	120	125	142
Expected return on plan assets	(1,254)	(1,114)	(1,035)
Actuarial loss (gain)	1,621	(741)	(539)
Net periodic postretirement medical benefit cost (credit)	$ 593	$ (1,638)	$ (1,331)

The following table sets forth the changes in the postretirement medical plan's funded status and the amounts recognized in the Company's consolidated balance sheets as of December 30, 2018 and December 31, 2017.

	December 30, 2018	December 31, 2017
	(In thousands)	
Actuarial present value of benefit obligations:		
Retirees	$ 688	$ 804
Active employees eligible to retire	408	379
Other active employees	2,317	1,948
Accumulated benefit obligations at beginning of year	3,413	3,131
Service cost	106	92
Interest cost	120	125
Benefits paid	(117)	(122)
Actuarial (gain) loss	(611)	187
Change in accumulated benefit obligations during the year	(502)	282
Retirees	583	688
Active employees eligible to retire	362	408
Other active employees	1,966	2,317
Accumulated benefit obligations at end of year	$ 2,911	$ 3,413
Change in plan assets:		
Fair value of plan assets at beginning of year	$ 17,374	$ 15,453
Actual return on plan assets	(993)	1,921
Benefits reimbursements paid	(102)	—
Fair value of plan assets at end of year	$ 16,279	$ 17,374
Net assets recognized in the consolidated balance sheets	$ 13,368	$ 13,961
Net amounts recognized in the consolidated balance sheets consist of:		
Other assets	$ 13,368	$ 13,961
Net amounts recognized in accumulated other comprehensive income consist of:		
Prior service cost	$ —	$ —
Actuarial assumptions as of the year-end measurement date:		
Discount rate	4.09%	3.60%

Actuarial assumptions used to determine net cost during the year are as follows:

	December 30, 2018	December 31, 2017	January 1, 2017
Discount rate	3.60%	4.11%	4.34%
Expected rate of return on assets	7.25%	7.25%	7.25%

The Company maintains a master trust for plan assets related to the U.S. defined benefit plans and the U.S. postretirement medical plan. Accordingly, investment policies, target asset allocations and actual asset allocations are the same as those disclosed for the U.S. defined benefit plans.

The fair values of the Company's plan assets at December 30, 2018 and December 31, 2017 by asset category, classified in the three levels of inputs described in Note 23, are as follows:

		Fair Value Measurements at December 30, 2018 Using:		
	Total Carrying Value at December 30, 2018	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
		(In thousands)		
Cash	$ 390	$ 390	$ —	$ —
Equity securities:				
U.S. large-cap	2,436	2,436	—	—
International large-cap value	1,679	1,679	—	—
U.S. small mid-cap	134	134	—	—
Emerging markets growth	833	833	—	—
Domestic real estate funds	94	94	—	—
Commodity funds	62	62	—	—
Fixed income securities:				
Corporate debt instruments	9,115	3,344	5,771	—
High yield bond funds	360	360	—	—
Other types of investments:				
Multi-strategy hedge funds	1,176	—	—	1,176
Total assets measured at fair value	$ 16,279	$ 9,332	$ 5,771	$ 1,176

	Total Carrying Value at December 31, 2017	Fair Value Measurements at December 31, 2017 Using: Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Cash	$ 268	$ 268	$ —	$ —
Equity securities:				
U.S. large-cap	2,057	2,057	—	—
International large-cap value	2,236	2,236	—	—
U.S. small mid-cap	144	144	—	—
Emerging markets growth	984	984	—	—
Domestic real estate funds	96	96	—	—
Commodity funds	506	506	—	—
Fixed income securities:				
Corporate debt instruments	9,526	2,762	6,764	—
High yield bond funds	406	406	—	—
Other types of investments:				
Multi-strategy hedge funds	1,151	—	—	1,151
Total assets measured at fair value	$ 17,374	$ 9,459	$ 6,764	$ 1,151

Valuation Techniques: Valuation techniques are the same as those disclosed for the U.S. defined benefit plans above.

A reconciliation of the beginning and ending Level 3 assets for fiscal years 2018, 2017 and 2016 is as follows:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3): Multi-strategy Hedge Funds
	(In thousands)
Balance at January 3, 2016	$ 1,374
Unrealized gains	134
Balance at January 1, 2017	1,508
Sales	(562)
Realized gains	229
Unrealized losses	(24)
Balance at December 31, 2017	1,151
Unrealized gains	25
Balance at December 30, 2018	$ 1,176

The Company does not expect to make any contributions to the postretirement medical plan during fiscal year 2019.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

Postretirement Medical Plan

	(In thousands)
2019	$ 136
2020	149
2021	168
2022	184
2023	194
2024-2028	1,050

Deferred Compensation Plans: During fiscal year 1998, the Company implemented a nonqualified deferred compensation plan that provides benefits payable to officers and certain key employees or their designated beneficiaries at specified future dates, or upon retirement or death. The plan was amended to eliminate deferral elections, with the exception of Company 401(k) excess contributions for eligible participants, for plan years beginning January 1, 2011. Benefit payments under the plan are funded by contributions from participants, and for certain participants, contributions by the Company. The obligations related to the deferred compensation plan totaled $1.1 million at December 30, 2018 and $1.0 million at December 31, 2017.

Note 18: Contingencies

The Company is conducting a number of environmental investigations and remedial actions at current and former locations of the Company and, along with other companies, has been named a potentially responsible party (“PRP”) for certain waste disposal sites. The Company accrues for environmental issues in the accounting period that the Company's responsibility is established and when the cost can be reasonably estimated. The Company has accrued $7.9 million and $9.4 million as of December 30, 2018 and December 31, 2017, respectively, in accrued expenses and other current liabilities, which represents its management’s estimate of the cost of the remediation of known environmental matters, and does not include any potential liability for related personal injury or property damage claims. The Company's environmental accrual is not discounted and does not reflect the recovery of any material amounts through insurance or indemnification arrangements. The cost estimates are subject to a number of variables, including the stage of the environmental investigations, the magnitude of the possible contamination, the nature of the potential remedies, possible joint and several liability, the time period over which remediation may occur, and the possible effects of changing laws and regulations. For sites where the Company has been named a PRP, management does not currently anticipate any additional liability to result from the inability of other significant named parties to contribute. The Company expects that the majority of such accrued amounts could be paid out over a period of up to ten years. As assessment and remediation activities progress at each individual site, these liabilities are reviewed and adjusted to reflect additional information as it becomes available. There have been no environmental problems to date that have had, or are expected to have, a material adverse effect on the Company’s consolidated financial statements. While it is possible that a loss exceeding the amounts recorded in the consolidated financial statements may be incurred, the potential exposure is not expected to be materially different from those amounts recorded.

The Company is subject to various claims, legal proceedings and investigations covering a wide range of matters that arise in the ordinary course of its business activities. Although the Company has established accruals for potential losses that it believes are probable and reasonably estimable, in the opinion of the Company’s management, based on its review of the information available at this time, the total cost of resolving these contingencies at December 30, 2018 should not have a material adverse effect on the Company’s consolidated financial statements. However, each of these matters is subject to uncertainties, and it is possible that some of these matters may be resolved unfavorably to the Company.

Note 19: Warranty Reserves

The Company provides warranty protection for certain products usually for a period of one year beyond the date of sale. The majority of costs associated with warranty obligations include the replacement of parts and the time for service personnel to respond to repair and replacement requests. A warranty reserve is recorded based upon historical results, supplemented by management’s expectations of future costs. Warranty reserves are included in “Accrued expenses and other current liabilities” on the consolidated balance sheets.

A summary of warranty reserve activity for the fiscal years ended December 30, 2018, December 31, 2017 and January 1, 2017 is as follows:

	(In thousands)
Balance at January 3, 2016	$ 9,843
Provision charged to income	14,901
Payments	(14,749)
Adjustments to previously provided warranties, net	(850)
Foreign currency translation and acquisitions	(133)
Balance at January 1, 2017	9,012
Provision charged to income	13,700
Payments	(14,245)
Adjustments to previously provided warranties, net	(815)
Foreign currency translation and acquisitions	1,398
Balance at December 31, 2017	9,050
Provision charged to income	13,545
Payments	(13,775)
Adjustments to previously provided warranties, net	(157)
Foreign currency translation and acquisitions	(270)
Balance at December 30, 2018	$ 8,393

Note 20: Stock Plans

Stock-Based Compensation:

In addition to the Company's Employee Stock Purchase Plan, the Company utilizes one stock-based compensation plan, the 2009 Incentive Plan (the "2009 Plan"). Under the 2009 Plan, 10.0 million shares of the Company's common stock are authorized for stock option grants, restricted stock awards, performance restricted stock units, performance units and stock grants as part of the Company's compensation programs. In addition to shares of the Company's common stock originally authorized for issuance under the 2009 Plan, the 2009 Plan includes shares of the Company's common stock previously granted under the Amended and Restated 2001 Incentive Plan and the 2005 Incentive Plan that were canceled or forfeited without the shares being issued.

The following table summarizes total pre-tax compensation expense recognized related to the Company's stock options, restricted stock, restricted stock units, performance restricted stock units, performance units and stock grants, net of estimated forfeitures, included in the Company's consolidated statements of operations for fiscal years 2018, 2017 and 2016:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Cost of product and service revenue	$ 1,466	$ 1,254	$ 1,031
Research and development expenses	1,359	1,389	902
Selling, general and administrative expenses	25,942	22,778	15,225
Total stock-based compensation expense	$ 28,767	$ 25,421	$ 17,158

The total income tax benefit recognized in the consolidated statements of operations for stock-based compensation was $13.6 million in fiscal year 2018, $14.5 million in fiscal year 2017 and $10.5 million in fiscal year 2016. Stock-based compensation costs capitalized as part of inventory were $0.3 million as of each of December 30, 2018 and December 31, 2017.

Stock Options: The Company has granted options to purchase common shares at prices equal to the market price of the common shares on the date the option is granted. Conditions of vesting are determined at the time of grant. Options are generally exercisable in equal annual installments over a period of three years, and will generally expire seven years after the date of grant. Options replaced in association with business combination transactions are generally issued with the same terms of the respective plans under which they were originally issued.

The fair value of each option grant is estimated using the Black-Scholes option pricing model. The fair value is then amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Expected volatility was calculated based on the historical and implied volatility of the Company's stock. The average expected life was based on the contractual term of the option and historic exercise experience. The risk-free interest rate is based on United States Treasury zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant. The Company's weighted-average assumptions used in the Black-Scholes option pricing model were as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
Risk-free interest rate	3.0%	2.0%	1.7%
Expected dividend yield	0.4%	0.4%	0.6%
Expected lives	5 years	5 years	5 years
Expected stock volatility	20.7%	22.4%	25.2%

The following table summarizes stock option activity for the fiscal year ended December 30, 2018:

	December 30, 2018		
	Number of Shares		Weighted-Average Exercise Price
	(Shares in thousands)		
Outstanding at beginning of year	2,154	$	42.77
Granted	364		77.84
Exercised	(709)		35.02
Forfeited	(44)		51.56
Outstanding at end of year	1,765	$	52.91
Exercisable at end of year	965	$	44.60

The aggregate intrinsic value for stock options outstanding at December 30, 2018 was $43.8 million with a weighted-average remaining contractual term of 4.2 years. The aggregate intrinsic value for stock options exercisable at December 30, 2018 was $31.6 million with a weighted-average remaining contractual term of 3.2 years. At December 30, 2018, there were 1.8 million stock options that were vested, and expected to vest in the future, with an aggregate intrinsic value of $43.0 million and a weighted-average remaining contractual term of 4.2 years.

The weighted-average per-share grant-date fair value of options granted during fiscal years 2018, 2017 and 2016 was $17.56, $11.83, and $10.20, respectively. The total intrinsic value of options exercised during fiscal years 2018, 2017 and 2016 was $35.0 million, $17.6 million, and $16.6 million, respectively. Cash received from option exercises for fiscal years 2018, 2017 and 2016 was $24.8 million, $18.0 million, and $14.4 million, respectively. The total compensation expense recognized related to the Company's outstanding options was $5.4 million in fiscal year 2018, $4.7 million in fiscal year 2017 and $4.4 million in fiscal year 2016.

There was $6.7 million of total unrecognized compensation cost related to nonvested stock options granted as of December 30, 2018. This cost is expected to be recognized over a weighted-average period of 1.8 years.

Restricted Stock Awards: The Company has awarded shares of restricted stock and restricted stock units to certain employees and non-employee directors at no cost to them, which cannot be sold, assigned, transferred or pledged during the restriction period. The restricted stock and restricted stock units vest through the passage of time, assuming continued employment. The fair value of the award at the time of the grant is expensed on a straight line basis primarily in selling, general and administrative expenses over the vesting period, which is generally 3 years. These awards were granted under the Company's 2009 Plan. Recipients of the restricted stock have the right to vote such shares and receive dividends.

The following table summarizes restricted stock award activity for the fiscal year ended December 30, 2018:

	December 30, 2018	
	Number of Shares	Weighted-Average Grant-Date Fair Value
	(Shares in thousands)	
Nonvested at beginning of year	496	$ 50.30
Granted	214	76.00
Vested	(206)	50.37
Forfeited	(39)	55.73
Nonvested at end of year	465	$ 61.72

The fair value of restricted stock awards vested during fiscal years 2018, 2017 and 2016 was $10.4 million, $10.6 million, and $8.4 million, respectively. The total compensation expense recognized related to the restricted stock awards was $11.7 million in fiscal year 2018, $10.3 million in fiscal year 2017 and $9.3 million in fiscal year 2016.

As of December 30, 2018, there was $16.0 million of total unrecognized compensation cost, related to nonvested restricted stock awards. That cost is expected to be recognized over a weighted-average period of 1.4 years.

Performance Restricted Stock Units: As part of the Company's executive compensation program, the Company granted 39,133 and 54,337 performance restricted stock units during fiscal years 2018 and 2017, respectively, that will vest based on performance of the Company. The weighted-average per-share grant date fair value of performance restricted stock units granted during fiscal years 2018 and 2017 was $80.31 and $52.78, respectively. During fiscal year 2018, 5,797 performance restricted stock units were forfeited. The total compensation expense recognized related to the performance restricted stock units was $3.2 million in fiscal year 2018 and $0.9 million in fiscal year 2017. As of December 30, 2018, there were 87,673 performance restricted stock units outstanding.

Performance Units: The Company's performance unit program provides a cash award based on the achievement of specific performance criteria. A target number of units are granted at the beginning of a three-year performance period. The number of units earned at the end of the performance period is determined by multiplying the number of units granted by a performance factor ranging from 0% to 200%. Awards are determined by multiplying the number of units earned by the stock price at the end of the performance period, and are paid in cash and accounted for as a liability based award. The compensation expense associated with these units is recognized over the period that the performance targets are expected to be achieved. The Company granted 37,281 performance units, 49,845 performance units, and 72,164 performance units during fiscal years 2018, 2017 and 2016, respectively. The weighted-average per-share grant-date fair value of performance units granted during fiscal years 2018, 2017 and 2016 was $73.23, $52.69, and $42.79, respectively. During fiscal year 2018, no performance units were forfeited. During fiscal years 2017 and 2016, 15,139 and 19,584 performance units were forfeited, respectively. The total compensation expense related to performance units was $7.7 million, $8.7 million, and $2.7 million for fiscal years 2018, 2017 and 2016, respectively. As of December 30, 2018, there were 144,151 performance units outstanding subject to forfeiture, with a corresponding liability of $14.0 million recorded in accrued expenses and long-term liabilities.

Stock Awards: The Company's stock award program provides an annual equity award to non-employee directors. For fiscal years 2018, 2017 and 2016, the award equaled the number of shares of the Company's common stock which has an aggregate fair market value of $100,000 on the date of the award. The stock award is prorated for non-employee directors who serve for only a portion of the year. The compensation expense associated with these stock awards is recognized when the stock award is granted. In fiscal years 2018, 2017 and 2016, the Company awarded 11,088 shares, 12,006 shares, and 15,419 shares, respectively, to non-employee directors. The weighted-average per-share grant-date fair value of stock awards granted during fiscal years 2018, 2017 and 2016 was $72.17, $63.14, and $54.58, respectively. The total compensation expense recognized related to these stock awards was $0.8 million in each of fiscal years 2018, 2017 and 2016.

Employee Stock Purchase Plan:

In April 1999, the Company's shareholders approved the 1998 Employee Stock Purchase Plan. In April 2005, the Compensation and Benefits Committee of the Board voted to amend the Employee Stock Purchase Plan, effective July 1, 2005, whereby participating employees have the right to purchase common stock at a price equal to 95% of the closing price on the last day of each six-month offering period. The number of shares which an employee may purchase, subject to certain aggregate limits, is determined by the employee's voluntary contribution, which may not exceed 10% of the employee's base

compensation. During fiscal year 2018, the Company issued 21,321 shares of common stock under the Company's Employee Stock Purchase Plan at a weighted-average price of $69.57 per share. During fiscal year 2017, the Company issued 36,769 shares under this plan at a weighted-average price of $67.09 per share. During fiscal year 2016, the Company issued 49,578 shares under this plan at a weighted-average price of $49.67 per share. At December 30, 2018 there remains available for sale to employees an aggregate of 0.8 million shares of the Company's common stock out of the 5.0 million shares authorized by shareholders for issuance under this plan.

Note 21: Stockholders' Equity

Comprehensive Income:

The components of accumulated other comprehensive (loss) income consisted of the following:

	Foreign Currency Translation Adjustment, net of tax	Unrecognized Prior Service Costs, net of tax	Unrealized (Losses) Gains on Securities, net of tax	Accumulated Other Comprehensive Income (Loss)
	(In thousands)			
Balance, January 3, 2016	$ (46,846)	$ 1,259	$ (369)	$ (45,956)
Current year change	(54,077)	(860)	32	(54,905)
Balance, January 1, 2017	(100,923)	399	(337)	(100,861)
Current year change	54,341	(77)	79	54,343
Balance, December 31, 2017	(46,582)	322	(258)	(46,518)
Current year change	(123,388)	(77)	(9)	(123,474)
Reclassification to retained earnings upon adoption of ASU 2018-02 (see Note 1)	(6,489)	—	—	(6,489)
Balance, December 30, 2018	$ (176,459)	$ 245	$ (267)	$ (176,481)

During fiscal years 2018, 2017 and 2016, pre-tax expense of $0.1 million, $0.1 million, and $0.9 million, respectively, was reclassified from accumulated other comprehensive income into selling, general and administrative expenses as a component of net periodic pension cost.

Stock Repurchases:

On July 27, 2016, the Board of Directors (the "Board") authorized the Company to repurchase up to 8.0 million shares of common stock under a stock repurchase program (the "Repurchase Program"). On July 23, 2018, the Board authorized the Company to immediately terminate the Repurchase Program and further authorized the Company to repurchase shares of common stock for an aggregate amount up to $250.0 million under a new stock repurchase program (the "New Repurchase Program"). The New Repurchase Program will expire on July 23, 2020 unless terminated earlier by the Board and may be suspended or discontinued at any time. During fiscal year 2018, the Company had no stock repurchases under the Repurchase Program. No shares remain available for repurchase under the Repurchase Program due to its cancellation. During the fourth quarter of fiscal year 2018, the Company repurchased 650,000 shares of common stock under the New Repurchase Program at an aggregate cost of $52.2 million. As of December 30, 2018, $197.8 million remained available for aggregate repurchases of shares under the New Repurchase Program.

In addition, the Board has authorized the Company to repurchase shares of common stock to satisfy minimum statutory tax withholding obligations in connection with the vesting of restricted stock awards and restricted stock unit awards granted pursuant to the Company's equity incentive plans and to satisfy obligations related to the exercise of stock options made pursuant to the Company's equity incentive plans. During the fiscal year 2018, the Company repurchased 66,506 shares of common stock for this purpose at an aggregate cost of $5.2 million. During fiscal year 2017, the Company repurchased 78,644 shares of common stock for this purpose at an aggregate cost of $4.4 million. During fiscal year 2016, the Company repurchased 75,198 shares of common stock for this purpose at an aggregate cost of $3.6 million. The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value.

Dividends:

The Board declared a regular quarterly cash dividend of $0.07 per share in each quarter of fiscal years 2018 and 2017. At December 30, 2018, the Company had accrued $7.7 million for a dividend declared on October 24, 2018 for the fourth quarter

of fiscal year 2018 that was paid in February 2019. On January 24, 2019, the Company announced that the Board had declared a quarterly dividend of $0.07 per share for the first quarter of fiscal year 2019 that will be payable in May 2019. In the future, the Board may determine to reduce or eliminate the Company's common stock dividend in order to fund investments for growth, repurchase shares or conserve capital resources.

Note 22: Derivatives and Hedging Activities

The Company uses derivative instruments as part of its risk management strategy only, and includes derivatives utilized as economic hedges that are not designated as hedging instruments. By nature, all financial instruments involve market and credit risks. The Company enters into derivative instruments with major investment grade financial institutions and has policies to monitor the credit risk of those counterparties. The Company does not enter into derivative contracts for trading or other speculative purposes, nor does the Company use leveraged financial instruments. Approximately 70% of the Company's business is conducted outside of the United States, generally in foreign currencies. As a result, fluctuations in foreign currency exchange rates can increase the costs of financing, investing and operating the business.

In the ordinary course of business, the Company enters into foreign exchange contracts for periods consistent with its committed exposures to mitigate the effect of foreign currency movements on transactions denominated in foreign currencies. The intent of these economic hedges is to offset gains and losses that occur on the underlying exposures from these currencies, with gains and losses resulting from the forward currency contracts that hedge these exposures. Transactions covered by hedge contracts include intercompany and third-party receivables and payables. The contracts are primarily in European and Asian currencies, have maturities that do not exceed 12 months, have no cash requirements until maturity, and are recorded at fair value on the Company's consolidated balance sheets. The unrealized gains and losses on the Company's foreign currency contracts are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from operating activities within the Company's consolidated statements of cash flows.

Principal hedged currencies include the British Pound, Euro, Swedish Krona, Chinese Yuan and Singapore Dollar. The Company held forward foreign exchange contracts, designated as economic hedges, with U.S. dollar equivalent notional amounts totaling $223.3 million at December 30, 2018, $212.1 million at December 31, 2017, and $137.5 million at January 1, 2017, and the fair value of these foreign currency derivative contracts was insignificant. The gains and losses realized on these foreign currency derivative contracts are not material. The duration of these contracts was generally 30 days or less during each of fiscal years 2018, 2017 and 2016.

In addition, in connection with certain intercompany loan agreements utilized to finance its acquisitions and stock repurchase program, the Company enters into forward foreign exchange contracts intended to hedge movements in foreign exchange rates prior to settlement of such intercompany loans denominated in foreign currencies. The Company records these hedges at fair value on the Company's consolidated balance sheets. The unrealized gains and losses on these hedges, as well as the gains and losses associated with the remeasurement of the intercompany loans, are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from financing activities within the Company's consolidated statements of cash flows.

The outstanding forward exchange contracts designated as economic hedges, which were intended to hedge movements in foreign exchange rates prior to the settlement of certain intercompany loan agreements, included combined Euro notional amounts of €37.3 million and combined U.S. Dollar notional amounts of $5.7 million as of December 30, 2018, combined Euro notional amounts of €57.2 million and combined U.S. Dollar notional amounts of $1.3 billion as of December 31, 2017, and combined Euro notional amounts of €58.6 million, combined U.S. Dollar notional amounts of $8.7 million and combined Swedish Krona notional amounts of kr969.5 million as of January 1, 2017. The net gains and losses on these derivatives, combined with the gains and losses on the remeasurement of the hedged intercompany loans were not material for each of the fiscal years 2018 and 2017. The Company paid $34.1 million and $13.8 million during the fiscal years 2018 and 2017, respectively, from the settlement of these hedges.

During fiscal year 2018, the Company entered into a series of foreign currency forward contracts with a notional amount of €298.7 million to hedge its investments in certain foreign subsidiaries. Realized and unrealized translation adjustments from these hedges were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. The foreign currency forward contracts were settled during the second quarter of 2018 and the Company recorded a net realized foreign exchange loss in AOCI of $2.6 million for the fiscal year ended December 30, 2018.

During fiscal year 2016, the Company designated the 2026 Notes to hedge its investments in certain foreign subsidiaries. In January 2018, the Company removed the hedging relationship of its 2026 Notes and investments in certain foreign

subsidiaries and recognized $2.1 million of unrealized foreign exchange gain in AOCI. In April 2018, the Company designated a portion of the 2026 Notes to hedge its investments in certain foreign subsidiaries. Unrealized translation adjustments from a portion of the 2026 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the 2026 Notes that was designated to hedge investments in foreign subsidiaries was €216.0 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was $9.3 million for the fiscal year ended December 30, 2018.

During fiscal year 2018, the Company designated the April 2021 Notes to hedge its investments in certain foreign subsidiaries. Unrealized translation adjustments from the April 2021 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the April 2021 Notes that was designated to hedge investments in foreign subsidiaries was €298.7 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was $27.5 million for the fiscal year ended December 30, 2018.

The Company does not expect any material net pre-tax gains or losses to be reclassified from accumulated other comprehensive (loss) income into interest and other expense, net within the next twelve months.

Note 23: Fair Value Measurements

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash equivalents, derivatives, marketable securities and accounts receivable. The Company believes it had no significant concentrations of credit risk as of December 30, 2018.

The Company uses the market approach technique to value its financial instruments and there were no changes in valuation techniques during fiscal years 2018 and 2017. The Company's financial assets and liabilities carried at fair value are primarily comprised of marketable securities, derivative contracts used to hedge the Company's currency risk, and acquisition related contingent consideration. The Company has not elected to measure any additional financial instruments or other items at fair value.

Valuation Hierarchy: The following summarizes the three levels of inputs required to measure fair value. For Level 1 inputs, the Company utilizes quoted market prices as these instruments have active markets. For Level 2 inputs, the Company utilizes quoted market prices in markets that are not active, broker or dealer quotations, or utilizes alternative pricing sources with reasonable levels of price transparency. For Level 3 inputs, the Company utilizes unobservable inputs based on the best information available, including estimates by management primarily based on information provided by third-party fund managers, independent brokerage firms and insurance companies. A financial asset's or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible.

The following tables show the assets and liabilities carried at fair value measured on a recurring basis as of December 30, 2018 and December 31, 2017 classified in one of the three classifications described above:

		Fair Value Measurements at December 30, 2018 Using:		
	Total Carrying Value at December 30, 2018	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Marketable securities	$ 2,447	$ 2,447	$ —	$ —
Foreign exchange derivative assets	750	—	750	—
Foreign exchange derivative liabilities	(594)	—	(594)	—
Contingent consideration	(69,661)	—	—	(69,661)

	Total Carrying Value at December 31, 2017	Fair Value Measurements at December 31, 2017 Using: Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Marketable securities	$ 2,208	$ 2,208	$ —	$ —
Foreign exchange derivative assets	1,431	—	1,431	—
Foreign exchange derivative liabilities, net	(23,638)	—	(23,638)	—
Contingent consideration	(65,328)	—	—	(65,328)

Level 1 and Level 2 Valuation Techniques: The Company's Level 1 and Level 2 assets and liabilities are comprised of investments in equity and fixed-income securities as well as derivative contracts. For financial assets and liabilities that utilize Level 1 and Level 2 inputs, the Company utilizes both direct and indirect observable price quotes, including common stock price quotes, foreign exchange forward prices and bank price quotes. Below is a summary of valuation techniques for Level 1 and Level 2 financial assets and liabilities.

Marketable securities: Include equity and fixed-income securities measured at fair value using the quoted market prices in active markets at the reporting date.

Foreign exchange derivative assets and liabilities: Include foreign exchange derivative contracts that are valued using quoted forward foreign exchange prices at the reporting date. The Company's foreign exchange derivative contracts are subject to master netting arrangements that allow the Company and its counterparties to net settle amounts owed to each other. Derivative assets and liabilities that can be net settled under these arrangements have been presented in the Company's consolidated balance sheet on a net basis and are recorded in other assets. As of both December 30, 2018 and December 31, 2017, none of the master netting arrangements involved collateral.

Level 3 Valuation Techniques: The Company's Level 3 liabilities are comprised of contingent consideration related to acquisitions. For liabilities that utilize Level 3 inputs, the Company uses significant unobservable inputs. Below is a summary of valuation techniques for Level 3 liabilities.

Contingent consideration: Contingent consideration is measured at fair value at the acquisition date using projected milestone dates, discount rates, probabilities of success and projected revenues (for revenue-based considerations). Projected risk-adjusted contingent payments are discounted back to the current period using a discounted cash flow model.

During fiscal year 2015, the Company acquired all the shares of Vanadis. Under the terms of the acquisition, the initial purchase consideration was $32.0 million, net of cash and the Company will be obligated to make potential future milestone payments, based on completion of a proof of concept, regulatory approvals and product sales, of up to $93.0 million ranging from 2016 to 2019. The key assumptions used to determine the fair value of the contingent consideration included projected milestone dates of 2016 to 2019, discount rates ranging from 3.1% to 11.3%, conditional probabilities of success of each individual milestone ranging from 85% to 95% and cumulative probabilities of success for each individual milestone ranging from 53% to 90%. The fair value of the contingent consideration as of the acquisition date was estimated at $56.9 million. During fiscal year 2018, the Company updated the fair value of the contingent consideration and recorded a liability of $63.2 million as of December 30, 2018. The key assumptions used to determine the fair value of the contingent consideration as of December 30, 2018 included projected milestone dates in 2019, discount rates ranging from 3.7% to 6.8%, conditional probabilities of success of each individual milestone ranging from 95% to 100% and cumulative probabilities of success for each individual milestone ranging from 89.3% to 100%. A significant delay in the product development (including projected regulatory milestone) achievement date in isolation could result in a significantly lower fair value measurement; a significant acceleration in the product development (including projected regulatory milestone) achievement date in isolation would not have a material impact on the fair value measurement; a significant change in the discount rate in isolation would not have a material impact on the fair value measurement; and a significant change in the probabilities of success in isolation could result in a significant change in fair value measurement.

During the fiscal year 2018, the Company recorded a contingent consideration obligation relating to other acquisitions with an estimated fair value of $6.5 million and the Company paid $16.5 million of contingent consideration to the former shareholders of Vanadis, of which $12.8 million was included in financing activities and $3.7 million was included in operating activities in the consolidated statements of cash flows.

The fair values of contingent consideration are calculated on a quarterly basis based on a collaborative effort of the Company's regulatory, research and development, operations, finance and accounting groups, as appropriate. Potential

valuation adjustments are made as additional information becomes available, including the progress towards achieving proof of concept, regulatory approvals and revenue targets as compared to initial projections, the impact of market competition and market landscape shifts from non-invasive prenatal testing products, with the impact of such adjustments being recorded in the consolidated statements of operations.

As of December 30, 2018, the Company may have to pay contingent consideration, related to acquisitions with open contingency periods, of up to $76.5 million. The expected maximum earnout period for acquisitions with open contingency period does not exceed 1.78 years from the December 30, 2018, and the remaining weighted average expected earnout period at December 30, 2018 was 5 months.

A reconciliation of the beginning and ending Level 3 net liabilities for contingent consideration is as follows:

	(In thousands)
Balance at January 3, 2016	$ (57,350)
Additions	—
Amounts paid and foreign currency translation	332
Reclassified to other current liabilities for milestone achieved	10,000
Change in fair value (included within selling, general and administrative expenses)	(16,183)
Balance at January 1, 2017	(63,201)
Additions	—
Amounts paid and foreign currency translation	34
Change in fair value (included within selling, general and administrative expenses)	(2,161)
Balance at December 31, 2017	(65,328)
Additions	(6,200)
Amounts paid and foreign currency translation	16,507
Change in fair value (included within selling, general and administrative expenses)	(14,640)
Balance at December 30, 2018	$ (69,661)

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate fair value due to the short-term maturities of these assets and liabilities. If measured at fair value, cash and cash equivalents would be classified as Level 1.

As of December 30, 2018, the Company’s senior unsecured revolving credit facility, which provides for $1.0 billion of revolving loans, had a carrying value of $415.6 million, net of $2.4 million of unamortized debt issuance costs. As of December 31, 2017, the Company's senior unsecured revolving credit facility had a carrying value of $621.7 million, net of $3.3 million of unamortized debt issuance costs. The interest rate on the Company’s senior unsecured revolving credit facility is reset at least monthly to correspond to variable rates that reflect currently available terms and conditions for similar debt. The Company had no change in credit standing during fiscal year 2018. Consequently, the carrying value approximates fair value and were classified as Level 2.

The Company's November 2021 Notes, with a face value of $500.0 million, had an aggregate carrying value of $497.4 million, net of $1.1 million of unamortized original issue discount and $1.6 million of unamortized debt issuance costs as of December 30, 2018. The November 2021 Notes had an aggregate carrying value of $496.6 million, net of $1.4 million of unamortized original issue discount and $2.0 million of unamortized debt issuance costs as of December 31, 2017. The November 2021 Notes had a fair value of $516.1 million and $536.6 million as of December 30, 2018 and December 31, 2017, respectively. The fair value of the November 2021 Notes is estimated using market quotes from brokers and is based on current rates offered for similar debt.

The Company's 2026 Notes, with a face value of €500.0 million, had an aggregate carrying value of $564.5 million, net of $4.0 million of unamortized original issue discount and $3.8 million of unamortized debt issuance costs as of December 30, 2018. The 2026 Notes had an aggregate carrying value of $591.7 million, net of $4.7 million of unamortized original issue discount and $4.3 million of unamortized debt issuance costs as of December 31, 2017. The 2026 Notes had a fair value of €496.1 million and €508.9 million as of December 30, 2018 and December 31, 2017, respectively. The fair value of the 2026 Notes is estimated using market quotes from brokers and is based on current rates offered for similar debt.

The Company's April 2021 Notes, with a face value of €300.0 million, had an aggregate carrying value of $341.3 million, net of $0.1 million of unamortized original issue discount and $2.0 million of unamortized debt issuance costs as of

December 30, 2018. The April 2021 Notes had a fair value of €300.5 million as of December 30, 2018. The fair value of the April 2021 Notes is estimated using market quotes from brokers and is based on current rates offered for similar debt.

The Company’s other debt facilities that were assumed from the EUROIMMUN acquisition had an aggregate carrying value of $38.2 million and $60.2 million as of December 30, 2018 and December 31, 2017, respectively. As of December 30, 2018, these consisted of bank loans in the aggregate amount of $38.0 million bearing fixed interest rates between 1.1% and 17.6% and a bank loan in the amount of $0.2 million bearing a variable interest rate based on the Euribor rate plus a margin of 1.5%. The Company had no change in credit standing during fiscal year 2018. Consequently, the carrying value approximates fair value.

As of December 30, 2018, the April 2021 Notes, November 2021 Notes, 2026 Notes and other debt facilities were classified as Level 2.

The Company's financing lease obligations had an aggregate carrying value of $34.5 million and $35.9 million as of December 30, 2018 and December 31, 2017, respectively. The non-cash finance lease liabilities due to build-to-suit accounting amounted to $21.7 million as of each of the year ended December 30, 2018 and December 31, 2017. The remaining carrying amounts of the Company's financing lease obligations approximated their fair value as there has been minimal change in the Company's incremental borrowing rate.

As of December 30, 2018, there has not been any significant impact to the fair value of the Company’s derivative liabilities due to credit risk. Similarly, there has not been any significant adverse impact to the Company’s derivative assets based on the evaluation of its counterparties’ credit risks.

Note 24: Leases

The Company leases certain property and equipment under operating leases. Rental expense charged to continuing operations for fiscal years 2018, 2017 and 2016 amounted to $62.3 million, $54.0 million, and $52.0 million, respectively. Minimum rental commitments under noncancelable operating leases are as follows: $56.4 million in fiscal year 2019, $46.6 million in fiscal year 2020, $33.5 million in fiscal year 2021, $22.1 million in fiscal year 2022, $15.6 million in fiscal year 2023 and $67.6 million in fiscal year 2024 and thereafter.

On August 22, 2013, the Company sold one of its facilities located in Boston, Massachusetts for net proceeds of $47.6 million. Simultaneously with the closing of the sale of the property, the Company entered into a lease agreement to lease back the property for its continued use. The lease has an initial term of 15 years and the Company has the right to extend the term of the lease for two additional periods of ten years each. The lease is accounted for as an operating lease and at the transaction date the Company had deferred $26.5 million of gains which are being amortized in operating expenses over the initial lease term of 15 years. The Company amortized $1.8 million of the deferred gains related to the lease during each of the fiscal years 2018, 2017 and 2016. The deferred gains remaining to be amortized were $17.0 million at December 30, 2018, of which $1.8 million was recorded in accrued expenses and other current liabilities, and $15.3 million was recorded in long-term liabilities. The deferred gains remaining to be amortized were $18.8 million at December 31, 2017, of which $1.8 million was recorded in accrued expenses and other current liabilities, and $17.0 million was recorded in long-term liabilities. Upon adoption of ASC 842, the Company will recognize the unamortized deferred gains in retained earnings.

Note 25: Industry Segment and Geographic Area Information

The Company discloses information about its operating segments based on the way that management organizes the segments within the Company for making operating decisions and assessing financial performance. The Company evaluates the performance of its operating segments based on revenue and operating income. Intersegment revenue and transfers are not significant. The accounting policies of the operating segments are the same as those described in Note 1.

The principal products and services of the Company's two operating segments are:

- *Discovery & Analytical Solutions*. Provides products and services targeted towards the life sciences and applied markets.
- *Diagnostics*. Develops diagnostics, tools and applications focused on clinically-oriented customers, especially within the reproductive health, emerging market diagnostics and applied genomics markets. The Diagnostics segment serves the diagnostics market.

The Company has included the expenses for its corporate headquarters, such as legal, tax, audit, human resources, information technology, and other management and compliance costs, as well as the activity related to the mark-to-market adjustment on postretirement benefit plans, as “Corporate” below. The Company has a process to allocate and recharge

expenses to the reportable segments when these costs are administered or paid by the corporate headquarters based on the extent to which the segment benefited from the expenses. These amounts have been calculated in a consistent manner and are included in the Company's calculations of segment results to internally plan and assess the performance of each segment for all purposes, including determining the compensation of the business leaders for each of the Company's operating segments.

Revenue and operating income (loss) from continuing operations by operating segment are shown in the table below for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)	
Discovery & Analytical Solutions			
Product revenue	$ 1,010,899	$ 941,328	$ 934,098
Service revenue	682,312	637,131	578,886
Total revenue	1,693,211	1,578,459	1,512,984
Operating income from continuing operations[1]	230,481	205,259	196,508
Diagnostics			
Product revenue	924,594	536,086	462,798
Service revenue	160,191	142,437	139,735
Total revenue	1,084,785	678,523	602,533
Operating income from continuing operations[2]	153,196	146,862	147,996
Corporate			
Operating loss from continuing operations	(59,793)	(56,506)	(49,922)
Continuing Operations			
Product revenue	1,935,493	1,477,414	1,396,896
Service revenue	842,503	779,568	718,621
Total revenue	2,777,996	2,256,982	2,115,517
Operating income from continuing operations	323,884	295,615	294,582
Interest and other expense, net (see Note 7)	66,201	(1,103)	50,514
Income from continuing operations before income taxes	$ 257,683	$ 296,718	$ 244,068

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(1) Legal costs for significant litigation matters in the Company's Discovery & Analytical Solutions segment were $5.3 million for fiscal year 2018 and $2.7 million for fiscal year 2017.

(2) Legal costs for a significant litigation matter in the Company's Diagnostics segment were $0.2 million for fiscal year 2018.

Additional information relating to the Company's reporting segments is as follows for the three fiscal years ended December 30, 2018:

	Depreciation and Amortization Expense			Capital Expenditures		
	December 30, 2018	December 31, 2017	January 1, 2017	December 30, 2018	December 31, 2017	January 1, 2017
		(In thousands)			(In thousands)	
Discovery & Analytical Solutions	$ 70,362	$ 72,590	$ 72,484	$ 34,852	$ 26,200	$ 21,486
Diagnostics	107,434	31,204	25,339	54,737	11,262	8,556
Corporate	2,792	1,206	2,149	3,664	1,627	1,660
Continuing operations	$ 180,588	$ 105,000	$ 99,972	$ 93,253	$ 39,089	$ 31,702
Discontinued operations	$ —	$ 929	$ 6,266	$ —	$ 182	$ 1,302

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Total Assets		
	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Discovery & Analytical Solutions	$ 2,567,054	$ 2,611,737	$ 2,612,757
Diagnostics	3,358,964	3,447,437	1,505,381
Corporate	49,504	32,289	31,171
Current and long-term assets of discontinued operations	—	—	127,374
Total assets	$ 5,975,522	$ 6,091,463	$ 4,276,683

The following geographic area information for continuing operations includes revenue based on location of external customers for the three fiscal years ended December 30, 2018 and net long-lived assets based on physical location as of December 30, 2018 and December 31, 2017:

	Revenue		
	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
U.S.	$ 906,398	$ 837,018	$ 842,364
International:			
China	559,865	374,931	336,728
United Kingdom	72,124	65,164	65,904
Germany	142,411	91,669	89,839
India	92,327	84,812	43,891
Italy	95,908	77,477	70,948
France	97,990	80,153	71,104
Japan	79,238	76,322	65,980
Other international	731,735	569,436	528,759
Total international	1,871,598	1,419,964	1,273,153
Total sales	$ 2,777,996	$ 2,256,982	$ 2,115,517

	Net Long-Lived Assets		
	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
U.S.	$ 201,649	$ 210,116	$ 182,186
International:			
Germany	99,181	88,249	1,292
China	61,261	64,815	36,458
United Kingdom	33,429	28,028	14,638
India	14,636	14,820	2,020
Finland	16,211	14,764	12,295
Italy	11,324	10,334	3,398
Singapore	14,942	9,240	6,820
Brazil	8,237	7,963	1,452
Netherlands	3,750	4,281	4,162
Sweden	3,038	3,869	2,645
Other international	22,653	19,565	7,684
Total international	288,662	265,928	92,864
Total net long-lived assets	$ 490,311	$ 476,044	$ 275,050

Note 26: Quarterly Financial Information (Unaudited)

Selected quarterly financial information is as follows for the fiscal years ended:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter[1]	Year
	(In thousands, except per share data)				
December 30, 2018					
Revenue	$ 643,972	$ 703,362	$ 674,313	$ 756,349	$ 2,777,996
Gross profit	292,222	340,140	332,327	376,250	1,340,939
Restructuring and contract termination charges, net	6,578	—	6,508	(1,942)	11,144
Operating income from continuing operations	39,935	88,064	80,202	115,683	323,884
Income from continuing operations before income taxes	28,505	71,708	78,041	79,429	257,683
Income from continuing operations	26,035	64,673	75,445	71,322	237,475
Loss (income) from discontinued operations and dispositions	(11)	(610)	1,103	(30)	452
Net income	26,024	64,063	76,548	71,292	237,927
Basic earnings per share:					
Income from continuing operations	$ 0.24	$ 0.59	$ 0.68	$ 0.64	$ 2.15
Income (loss) from discontinued operations and dispositions	—	(0.01)	0.01	—	—
Net income	0.24	0.58	0.69	0.64	2.15
Diluted earnings per share:					
Income from continuing operations	$ 0.23	$ 0.58	$ 0.68	$ 0.64	$ 2.13
Income (loss) from discontinued operations and dispositions	—	(0.01)	0.01	—	—
Net income	0.23	0.57	0.69	0.64	2.13
Cash dividends declared per common share	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.28
December 31, 2017					
Revenue	$ 514,115	$ 546,962	$ 554,275	$ 641,630	$ 2,256,982
Gross profit	239,756	257,602	268,967	307,429	1,073,754
Restructuring and contract termination charges, net	9,651	—	3,269	(263)	12,657
Operating income from continuing operations	49,811	74,183	78,038	93,583	295,615
Income from continuing operations before income taxes	39,983	70,792	105,054	80,889	296,718
Income (loss) from continuing operations	36,062	62,726	96,546	(38,444)	156,890
Income (loss) from discontinued operations and dispositions	2,541	141,343	(5,468)	(2,673)	135,743
Net income (loss)	38,603	204,069	91,078	(41,117)	292,633
Basic earnings per share:					
Income (loss) from continuing operations	$ 0.33	$ 0.57	$ 0.88	$ (0.35)	$ 1.43
Income (loss) from discontinued operations and dispositions	0.02	1.29	(0.05)	(0.02)	1.24
Net income (loss)	0.35	1.86	0.83	(0.37)	2.67
Diluted earnings per share:					
Income (loss) continuing operations	$ 0.33	$ 0.57	$ 0.87	$ (0.35)	$ 1.42
Income (loss) from discontinued operations and dispositions	0.02	1.28	(0.05)	(0.02)	1.22
Net income (loss)	0.35	1.84	0.82	(0.37)	2.64
Cash dividends declared per common share	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.28

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(1) The fourth quarter of fiscal year 2018 includes a pre-tax loss of $21.4 million as a result of the mark-to-market adjustment on postretirement benefit plans. The fourth quarter of fiscal year 2017 includes a pre-tax gain of $2.1 million as a result of the mark-to-market adjustment on postretirement benefit plans. See Note 1 for a discussion of this accounting policy.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

Not applicable.

Item 9A. ***Controls and Procedures***

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 30, 2018. The term “disclosure controls and procedures” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), means controls and other procedures of a company that are designed to provide reasonable assurance that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 30, 2018, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

During the fiscal quarter ended December 30, 2018, we implemented a plan that called for modifications and additions to our internal control over financial reporting related to the accounting for leases as a result of the new lease accounting standard. The modified and new controls have been designed to address risks associated with recognizing leases under the new standard and disclosures required before the standard's effective date. We have therefore augmented our internal control over financial reporting as follows:

- Added new controls related to gathering the information and evaluating the analyses used in the development of disclosures required before the standard's effective date.

- Enhanced the risk assessment process to take into account risks associated with the new lease accounting standard.

There was no other change in our internal control over financial reporting during the fiscal quarter ended December 30, 2018, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the company’s principal executive and principal financial officers and effected by the company’s board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;

- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 30, 2018. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in the 2013 Internal Control-Integrated Framework.

Based on this assessment, our management concluded that, as of December 30, 2018, our internal control over financial reporting was effective based on those criteria.

Our registered public accounting firm has issued an attestation report on our internal control over financial reporting. This report appears below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of PerkinElmer, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of PerkinElmer, Inc. and subsidiaries (the "Company") as of December 30, 2018, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 30, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 30, 2018 of the Company and our report dated February 26, 2019 expressed an unqualified opinion on those financial statements, and included an explanatory paragraph relating to the adoption of Accounting Standards Codification (ASC) Topic 606, "Revenue from Contracts with Customers," on January 1, 2018.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in the conditions, or that the degree of compliance with policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 26, 2019

Changes in Internal Control Over Financial Reporting

During the fiscal quarter ended December 30, 2018, we implemented a plan that called for modifications and additions to our internal control over financial reporting related to the accounting for leases as a result of the new lease accounting standard. The modified and new controls have been designed to address risks associated with recognizing leases under the new standard and disclosures required before the standard's effective date. We have therefore augmented our internal control over financial reporting as follows:

- Added new controls related to gathering the information and evaluating the analyses used in the development of disclosures required before the standard's effective date.

- Enhanced the risk assessment process to take into account risks associated with the new lease accounting standard.

There was no other change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended December 30, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information***

Not applicable.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required to be disclosed by this Item pursuant to Item 401 of Regulation S-K with respect to our executive officers is contained in Part I of this annual report on Form 10-K under the caption, "Executive Officers of the Registrant." The remaining information required to be disclosed by the Item pursuant to Item 401 and Item 407 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the captions "Proposal No. 1 Election of Directors" and "Information Relating to Our Board of Directors and Its Committees" and is incorporated in this annual report on Form 10-K by reference.

The information required to be disclosed by this Item pursuant to Item 405 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption "Section 16(a) Beneficial Ownership Reporting Compliance," and is incorporated in this annual report on Form 10-K by reference.

We have adopted a code of ethics, our Standards of Business Conduct, that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, and persons performing similar functions. Our Standards of Business Conduct, as well as our corporate governance guidelines and the charters for the audit, compensation and benefits, nominating and corporate governance, executive and finance committees of our Board of Directors, are each accessible under the "Corporate Governance" heading of the "Investors" section of our website, http://www.perkinelmer.com. This information is also available in print to any stockholder who requests it, by writing to PerkinElmer, Inc., 940 Winter Street, Waltham, Massachusetts 02451, Attention: Investor Relations. We also intend to disclose in the same location on our website, any amendments to, or waivers from, our Standards of Business Conduct that are required to be disclosed pursuant to the disclosure requirements of Item 5.05 of Form 8-K.

Item 11. ***Executive Compensation***

The information required to be disclosed by this Item pursuant to Item 402 and Item 407(e) of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the captions "Information Relating to Our Board of Directors and Its Committees—Director Compensation," "Information Relating to Our Board of Directors and Its Committees—Compensation Committee Interlocks and Insider Participation," and "Executive Compensation," and is incorporated in this annual report on Form 10-K by reference.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The information required to be disclosed by this Item pursuant to Item 403 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption "Beneficial Ownership of Common Stock," and is incorporated in this annual report on Form 10-K by reference.

The information required to be disclosed by this Item pursuant to Item 201(d) of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption "Executive Compensation—Equity Compensation Plan Information," and is incorporated in this annual report on Form 10-K by reference.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

The information required to be disclosed by this Item pursuant to Item 404 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption "Information Relating to Our Board of Directors and Its Committees—Certain Relationships and Policies on Related Party Transactions," and is incorporated in this annual report on Form 10-K by reference.

The information required to be disclosed by this Item pursuant to Item 407(a) of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption "Information Relating to Our Board of Directors and Its Committees—Determination of Independence," and is incorporated in this annual report on Form 10-K by reference.

Item 14. ***Principal Accountant Fees and Services***

The information required to be disclosed by this Item pursuant to Item 9(e) of Schedule 14A is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption "Information Relating to Our Board of Directors and Its Committees—Independent Registered Public Accounting Firm Fees and Other Matters", and is incorporated in this annual report on Form 10-K by reference.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

(a) DOCUMENTS FILED AS PART OF THIS REPORT:

1. FINANCIAL STATEMENTS

Included in Part II, Item 8:

Report of Independent Registered Public Accounting Firm

Consolidated Statements of Operations for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Consolidated Statements of Comprehensive Income for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Consolidated Balance Sheets as of December 30, 2018 and December 31, 2017

Consolidated Statements of Stockholders' Equity for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Consolidated Statements of Cash Flows for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Notes to Consolidated Financial Statements

2. FINANCIAL STATEMENT SCHEDULE

Schedule II—Valuation and Qualifying Accounts

We have omitted financial statement schedules, other than those we note above, because of the absence of conditions under which they are required, or because the required information is given in the financial statements or notes thereto.

3. EXHIBITS

Exhibit No.	Exhibit Title
2.1[(1)]	Master Purchase and Sale Agreement, dated as of December 21, 2016, by and between PerkinElmer, Inc. and Varian Medical Systems, Inc., filed with the Commission on December 22, 2016 as Exhibit 2.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
2.2	Amendment No. 1, dated January 17, 2017, to the Master Purchase and Sale Agreement, dated as of December 21, 2016, by and between PerkinElmer, Inc. and Varian Medical Systems, Inc., filed with the Commission on May 9, 2017 as Exhibit 2.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
2.3[(1)]	Amendment No. 2, dated April 28, 2017, to the Master Purchase and Sale Agreement, dated as of December 21, 2016, by and between PerkinElmer, Inc. and Varex Imaging Corporation, filed with the Commission on August 8, 2017 as Exhibit 2.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
2.4[(1)]	Share Sale and Transfer Agreement, dated June 16, 2017, by and among PerkinElmer, Inc., Prof. Dr. Winfried Stöcker and Stöcker Vermögensverwaltungsgesellschaft mbH & Co. KG, filed with the Commission on August 8, 2017 as Exhibit 2.2 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
2.5[(1)]	Amendment Agreement, dated December 19, 2017, to the Share Sale and Transfer Agreement, dated as of June 16, 2017, by and among PerkinElmer, Inc., Prof. Dr. Winfried Stöcker, Stöcker Vermögensverwaltungsgesellschaft mbH & Co. KG and PerkinElmer Germany Diagnostics GmbH filed with the Commission on February 27, 2018 as Exhibit 2.5 to our annual report on Form 10-K (file No. 001-05075) and herein incorporated by reference.
3.1	PerkinElmer, Inc.'s Restated Articles of Organization, filed with the Commission on May 11, 2007 as Exhibit 3.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

Exhibit No.	Exhibit Title
3.2	PerkinElmer, Inc.'s Amended and Restated By-laws, filed with the Commission on December 13, 2018 as Exhibit 3.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
4.1	Specimen Certificate of PerkinElmer, Inc.'s Common Stock, $1 par value, filed with the Commission on August 15, 2001 as Exhibit 4.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
4.2	Indenture dated as of October 25, 2011 between PerkinElmer, Inc. and U.S. Bank National Association, filed with the Commission on October 27, 2011 as Exhibit 99.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
4.3	Supplemental Indenture dated as of October 25, 2011 between PerkinElmer, Inc. and U.S. Bank National Association, filed with the Commission on October 27, 2011 as Exhibit 99.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
4.4	Second Supplemental Indenture dated as of December 22, 2011 between PerkinElmer, Inc. and U.S. Bank National Association, filed with the Commission on February 28, 2012 as Exhibit 4.4 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
4.5	Third Supplemental Indenture, dated as of July 19, 2016, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, and Elavon Financial Services DAC, UK Branch, as paying agent, filed with the Commission on July 19, 2016 as Exhibit 4.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
4.6	Paying Agency Agreement, dated July 19, 2016, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, Elavon Financial Services DAC, UK Branch, as paying agent, and Elavon Financial Services DAC, as transfer agent and registrar, filed with the Commission on July 19, 2016 as Exhibit 4.3 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
4.7	Fourth Supplemental Indenture, dated as of April 11, 2018, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, and Elavon Financial Services DAC, UK Branch, as paying agent (including the form of note contained therein) filed with the Commission on April 11, 2018 as Exhibit 4.2 to our current report on Form 8-K (File No. 001-05075)) and herein incorporated by reference
4.8	Paying Agency Agreement, dated as of April 11, 2018, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, transfer agent and registrar, and Elavon Financial Services DAC, UK Branch, as paying agent, filed with the Commission on April 11, 2018 as Exhibit 4.3 to our current report on Form 8-K (File No. 001-05075)) and herein incorporated by reference.
10.1	Credit Agreement, dated as of August 11, 2016, among PerkinElmer, Inc., Wallac Oy, and PerkinElmer Health Sciences, Inc. as Borrowers, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. and Barclays Bank PLC as Co-Syndication Agents, Citibank, N.A., Mizuho Bank, Ltd., TD Bank, N.A., U.S. Bank National Association and Wells Fargo Bank, National Association as Co-Documentation Agents, and J.P. Morgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated and Barclays Bank PLC as Joint Bookrunners and Joint Lead Arrangers, and the other Lenders party thereto, filed with the Commission on August 12, 2016 as Exhibit 10.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.2	Amendment No. 1, dated as of August 11, 2017 to Credit Agreement, dated as of August 11, 2016, by and among PerkinElmer, Inc., Wallac Oy, and PerkinElmer Health Sciences, Inc., as borrowers, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, filed with the Commission on August 15, 2017 as Exhibit 10.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.3	Loan Agreement, dated as of August 11, 2017, among PerkinElmer, Inc., the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A. as Administrative Agent, Sole Bookrunner and Sole Lead Arranger filed with the Commission on August 15, 2017 as Exhibit 10.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.4*	Employment Contracts: (1) Third Amended and Restated Employment Agreement between PerkinElmer, Inc. and Robert F. Friel, dated as of December 16, 2008, filed with the Commission on February 26, 2009 as Exhibit 10.4(2) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference; (2) Employment Agreement by and between Joel S. Goldberg and PerkinElmer, Inc. dated as of July 21, 2008, filed with the Commission on August 8, 2008 as Exhibit 10.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference;

Exhibit No.	Exhibit Title
	(3) Employment Agreement by and between Frank A. Wilson and PerkinElmer, Inc. dated as of April 28, 2009, filed with the Commission on April 30, 2009 as Exhibit 10.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference;
	(4) Form of Amendment, entered into by and between PerkinElmer, Inc. and each of the following executive officers on the dates indicated below, filed with the Commission on March 1, 2011 as Exhibit 10.4(7) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference:

Executive Officer	Date
Joel S. Goldberg	December 3, 2010
Frank A. Wilson	December 21, 2010

Exhibit No.	Exhibit Title
	(5) Employment Agreement between James Corbett and PerkinElmer, Inc. dated as of February 1, 2012, filed with the Commission on May 8, 2012 as Exhibit 10.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
	(6) Amended and Restated Employment Agreement between Andrew Okun and PerkinElmer, Inc. dated as of January 1, 2014, filed with the Commission on February 25, 2014 as Exhibit 10.2(10) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
	(7) Employment Agreement between Daniel R. Tereau and PerkinElmer, Inc. dated as of February 1, 2016, filed with the Commission on March 1, 2016 as Exhibit 10.2(8) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
	(8) Employment Agreement between Deborah A. Butters and PerkinElmer, Inc. dated as of July 11, 2016, filed with the Commission on November 8, 2016 as Exhibit 10.2(9) to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
	(9) Employment Agreement between Prahlad Singh and PerkinElmer, Inc. dated as of October 3, 2016, filed with the Commission on February 28, 2017 as Exhibit 10.2(10) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
	(10) Employment Agreement between Tajinder Vohra and PerkinElmer, Inc. dated January 29, 2018, filed with the Commission on May 8, 2018 as Exhibit 10.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
	(11) Employment Agreement between James Mock and PerkinElmer, Inc., dated as of April 10, 2018, filed with the Commission on April 13, 2018 as Exhibit 99.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.5*	PerkinElmer, Inc.'s 2009 Incentive Plan, filed with the Commission on March 12, 2014 as Appendix A to our definitive proxy statement on Schedule 14A (File No. 001-05075) and herein incorporated by reference.
10.6*	PerkinElmer, Inc.'s 2008 Deferred Compensation Plan, filed with the Commission on December 12, 2008 as Exhibit 10.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.7*	First Amendment to PerkinElmer, Inc.'s 2008 Deferred Compensation Plan, filed with the Commission on March 1, 2011 as Exhibit 10.9 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.8*	PerkinElmer, Inc.'s 2008 Supplemental Executive Retirement Plan, filed with the Commission on December 12, 2008 as Exhibit 10.2 to our current report on Form 8-K and herein incorporated by reference.
10.9*	PerkinElmer, Inc.'s Performance Unit Program Description, filed with the Commission on February 26, 2009 as Exhibit 10.10 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.10*	PerkinElmer, Inc. 1998 Employee Stock Purchase Plan as Amended and Restated on December 10, 2009, filed with the Commission on March 1, 2010 as Exhibit 10.15 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.11*	Form of Stock Option Agreement given by PerkinElmer, Inc. to its chief executive officer for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.12*	Form of Stock Option Agreement given by PerkinElmer, Inc. to its executive officers for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.3 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.

Exhibit No.	Exhibit Title
10.13*	Form of Stock Option Agreement given by PerkinElmer, Inc. to its non-employee directors for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.4 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.14*	Form of Restricted Stock Agreement with time-based vesting for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.5 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.15*	Form of Restricted Stock Agreement with performance-based vesting for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.6 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.16*	Form of Restricted Stock Unit Agreement with time-based vesting for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.7 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.17*	Form of Restricted Stock Unit Agreement with performance-based vesting for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.8 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.
10.18*	Form of Restricted Stock Agreement with time-based vesting for use under the 2009 Incentive Plan, filed with the Commission on May 10, 2011 as Exhibit 10.2 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
10.19*	Form of Stock Option Agreement for use under the 2009 Incentive Plan, filed with the Commission on May 10, 2011 as Exhibit 10.3 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.
10.20*	Form of Restricted Stock Unit Agreement given by PerkinElmer, Inc. to its non-employee directors for use under the 2009 Incentive Plan, filed with the Commission on February 24, 2015 as Exhibit 10.25 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.21*	Form of 162(m)-compliant Restricted Stock Agreement with single-trigger acceleration for use under the 2009 Incentive Plan, filed with the Commission on February 28, 2017 as Exhibit 10.19 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.22*	Form of 162(m)-compliant Restricted Stock Agreement with double-trigger acceleration for use under the 2009 Incentive Plan, filed with the Commission on February 28, 2017 as Exhibit 10.20 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.23*	Form of 162(m)-compliant Restricted Stock Unit Agreement with single-trigger acceleration for use under the 2009 Incentive Plan, filed with the Commission on February 28, 2017 as Exhibit 10.21 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.24*	Form of 162(m)-compliant Restricted Stock Unit Agreement with double-trigger acceleration for use under the 2009 Incentive Plan, filed with the Commission on February 28, 2017 as Exhibit 10.22 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
10.25*	PerkinElmer, Inc. Savings Plan Amended and Restated effective January 1, 2012, as further amended, attached hereto as Exhibit 10.25.
10.26*	PerkinElmer, Inc. Employees Retirement Plan Amended and Restated effective January 1, 2012, as further amended, attached hereto as Exhibit 10.26.
10.27*	PerkinElmer, Inc. Global Incentive Compensation Plan (Executive Officers) effective January 1, 2018, filed with the Commission on February 27, 2018 as Exhibit 10.27 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.
21	Subsidiaries of PerkinElmer, Inc., attached hereto as Exhibit 21.
23	Consent of Independent Registered Public Accounting Firm, attached hereto as Exhibit 23.
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, attached hereto as Exhibit 31.1.
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, attached hereto as Exhibit 31.2.
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, attached hereto as Exhibit 32.1.

Exhibit No.	Exhibit Title
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Calculation Linkbase Document.
101.DEF	XBRL Definition Linkbase Document.
101.LAB	XBRL Labels Linkbase Document.
101.PRE	XBRL Presentation Linkbase Document.

____

(1) The exhibits and schedules to this agreement have been omitted from this filing pursuant to Item 601(b)(2) of Regulation S-K. The registrant agrees to furnish copies of any of such exhibits or schedules to the SEC upon request.

* Management contract or compensation plan or arrangement required to be filed as an exhibit pursuant to Item 15(b) of Form 10-K.

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language):

(i) Consolidated Statements of Operations for each of the three years in the period ended December 30, 2018, (ii) Consolidated Balance Sheets as of December 30, 2018 and December 31, 2017, (iii) Consolidated Statements of Comprehensive Income for each of the three years in the period ended December 30, 2018, (iv) Consolidated Statements of Stockholders' Equity for each of the three years in the period ended December 30, 2018, (v) Consolidated Statements of Cash Flows for each of the three years in the period ended December 30, 2018, (vi) Notes to Consolidated Financial Statements, and (vii) Financial Schedule of Valuation and Qualifying Accounts.

SCHEDULE II

PERKINELMER, INC. AND SUBSIDIARIES

VALUATION AND QUALIFYING ACCOUNTS
For the Three Years Ended December 30, 2018

Description	Balance at Beginning of Year	Provisions	Charges/ Write-offs	Other(1)	Balance at End of Year
			(In thousands)		
Reserve for doubtful accounts:					
Year ended January 1, 2017	$ 29,866	$ 5,346	$ (5,499)	$ (501)	$ 29,212
Year ended December 31, 2017	29,212	2,038	(1,900)	1,931	31,281
Year ended December 30, 2018	31,281	2,503	(2,295)	(899)	30,590

(1) Other amounts primarily relate to the impact of acquisitions, discontinued operations and foreign exchange movements.

Item 16. ***Form 10-K Summary***

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PERKINELMER, INC.

Signature	Title	Date
By: /S/ ROBERT F. FRIEL Robert F. Friel	Chairman and Chief Executive Officer (Principal Executive Officer)	February 26, 2019
By: /S/ JAMES M. MOCK James M. Mock	Sr. Vice President and Chief Financial Officer (Principal Financial Officer)	February 26, 2019
By: /S/ ANDREW OKUN Andrew Okun	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 26, 2019

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of PerkinElmer, Inc., hereby severally constitute Robert F. Friel and James M. Mock, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names, in the capacities indicated below, this Annual Report on Form 10-K and any and all amendments to said Annual Report on Form 10-K, and generally to do all such things in our name and behalf in our capacities as officers and directors to enable PerkinElmer, Inc. to comply with the provisions of the Securities Exchange Act of 1934, and all requirements of the Securities and Exchange Commission, hereby rectifying and confirming signed by our said attorneys, and any and all amendments thereto.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
By: /S/ ROBERT F. FRIEL Robert F. Friel	Chairman and Chief Executive Officer (Principal Executive Officer)	February 26, 2019
By: /S/ JAMES M. MOCK James M. Mock	Sr. Vice President and Chief Financial Officer (Principal Financial Officer)	February 26, 2019
By: /S/ ANDREW OKUN Andrew Okun	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 26, 2019
By: /S/ PETER BARRETT Peter Barrett	Director	February 26, 2019
By: /S/ SAMUEL R. CHAPIN Samuel R. Chapin	Director	February 26, 2019
By: /S/ SYLVIE GRÉGOIRE, PharmD Sylvie Grégoire, PharmD	Director	February 26, 2019
By: /S/ NICHOLAS A. LOPARDO Nicholas A. Lopardo	Director	February 26, 2019
By: /S/ ALEXIS P. MICHAS Alexis P. Michas	Director	February 26, 2019
By: /S/ PATRICK J. SULLIVAN Patrick J. Sullivan	Director	February 26, 2019
By: /S/ FRANK WITNEY, PhD Frank Witney, PhD	Director	February 26, 2019
By: /S/ PASCALE WITZ Pascale Witz	Director	February 26, 2019

EXHIBIT 10.25

PERKINELMER, INC.

SAVINGS PLAN

(Amended and Restated Effective January 1, 2012)

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PERKINELMER, INC.
SAVINGS PLAN

INTRODUCTION

PerkinElmer, Inc. (previously known as EG&G, Inc.) has adopted this amendment and restatement of the PerkinElmer, Inc. Savings Plan (the "Plan") effective as of January 1, 2012. Prior to October 26, 1999, the Plan was known as the EG&G, Inc. Savings Plan. The Plan was last amended and restated effective as of January 1, 2007.

The Plan is intended to provide eligible participants with a convenient way to save on a regular and long-term basis, all as set forth herein and in the trust agreement adopted as a part of the Plan. The benefits provided to any individual under the Plan will depend upon the investment results achieved under such agreement and, accordingly, may vary with respect to each individual. The Plan is a profit-sharing plan which includes a cash or deferred arrangement and provides for employer matching contributions and employee after-tax contributions. It is intended that the Plan and trust shall at all times be qualified and tax-exempt within the meaning of Sections 401(a), 401(k), 401(m) and 501(a) of the Internal Revenue Code of 1986, as now in effect or hereafter amended, and any other applicable provisions of law.

Except as specified herein, the provisions of the Plan as contained herein shall apply only to those persons who are in the service of an Employer (as defined herein) on or after January 1, 2012. The rights and benefits, if any, of an Employee who terminated before January 1, 2012 shall be determined in accordance with the provisions of the Plan as in effect on the date his employment terminated.

ARTICLE I

DEFINITIONS

When used herein the following terms shall have the following meanings:

1.1 "Account" means the account or accounts established and maintained in respect of a Participant pursuant to Section 5.1.

1.2 "Actual Deferral Percentage" means the ratio (expressed as a percentage) of the Before-Tax Contributions made on behalf of the Eligible Employee for the Plan Year to the Eligible Employee's Compensation for the Plan Year.

1.3 "Adjustment Factor" means the cost of living adjustment factor prescribed by the Secretary of the Treasury under Section 415(d) of the Code, as applied to such items and in such manner as the Secretary shall provide.

1.4 "Administrator" means the Committee or its delegate.

1.5 "After-Tax Contribution Account" means the Account to which is credited a Participant's After-Tax Contributions and earnings or losses on those contributions.

1.6 "After-Tax Contributions" means the amounts contributed by a Participant pursuant to Section 3.2.

1.7 "Annual Addition" means, for any Limitation Year, the sum of all contributions and forfeitures allocated to the Participant's Accounts, other than his Rollover Account.

1.8 "Authorized Leave of Absence" means any leave of absence granted by an Employer under the Employer's leave of absence policy, including a leave granted to an Employee who is absent from work due to either (a) the pregnancy of such Employee, (b) the birth of a child of the Employee, (c) the placement of a child in connection with the adoption of the child by the Employee, or (d) for purposes of caring for the child during the period immediately following the birth or placement for adoption.

1.9 "Average Actual Deferral Percentage" means the average (expressed as a percentage) of the Actual Deferral Percentages of the Eligible Employees in a group.

1.10 "Average Contribution Percentage" means the average (expressed as a percentage) of the Contribution Percentages of the Eligible Employees in a group.

1.11 "Before-Tax Contribution Account" means the Account to which is credited Before-Tax Contributions made on behalf of a Participant pursuant to Section 3.1 and earnings or losses on those contributions.

1.12 "Before-Tax Contributions" means the contributions made to the Plan by the Employer on behalf of a Participant who has elected to reduce his Compensation by a like amount pursuant to Section 3.1.

1.13 "Beneficiary" means the beneficiary or beneficiaries designated pursuant to Section 2.2(c) to receive the amount, if any, payable under the Plan upon the death of a Participant.

1.14 "Board of Directors" means the board of directors of the Company.

1.15 "Code" means the Internal Revenue Code of 1986, as now in effect or hereafter amended. Reference to a Code Section shall include reference to any final Treasury regulations issued thereon.

1.16 "Committee" means the Administrative Committee of the Company consisting of the Company's Senior Vice President Human Resources and such other individuals as he shall from time to time appoint.

1.17 "Company" means PerkinElmer, Inc. or any successor thereto.

1.18 "Company Stock" means common stock of the Company.

1.19 "Company Stock Fund" means an investment option that is a unique fund investing primarily in Company Stock.

1.20 "Compensation" means, for each part of a Plan Year that a Participant is eligible to make Before-Tax or After-Tax Contributions, base pay, overtime, shift differentials, commissions, other cash additives to base pay, incentive awards, bonuses and salary deferrals under any salary reduction agreement under Section 125 or 401(k) of the Code but excludes equity-related compensation, reimbursements or other expenses allowances, relocation allowances, per diem allowances, hardship allowances, foreign service premiums, cost-of-living allowances, deferred compensation, severance pay and other welfare benefits. For Plan Years beginning on or after January 1, 2001, Compensation shall include elective amounts that are not includible in the gross income of the Participant under Section 132(f) of the Code.

The annual Compensation of each Participant taken into account for all Plan purposes shall not exceed $200,000 as adjusted by the Secretary of the Treasury for increases in the cost of living in accordance with Section 401(a)(17)(B) of the Code. The cost-of-living adjustment in effect for a calendar year applies to any period, not exceeding twelve (12) months, over which Compensation is determined (the "determination period") beginning in such calendar year. If a determination period consists of fewer than twelve (12) months, the limit referred to above will be multiplied by a fraction, the numerator of which is the number of months in the determination period and the denominator of which is 12.

For other specific purposes described in the Plan, "Compensation" shall have the meanings set forth in the respective provisions.

1.21 “Computation Period” means a 12-month period beginning on an Employee’s Employment Commencement Date or Reemployment Commencement Date, if applicable, and anniversaries thereof.

1.22 “Contribution Percentage” means the ratio (expressed as a percentage) for each Eligible Employee of the sum of the After-Tax Contributions made by such Eligible Employee and Matching Contributions made under the Plan on behalf of the Eligible Employee for the Plan Year to the Eligible Employee’s Compensation for the Plan Year.

1.23 “Disability” means a Participant’s physical or mental condition, as determined by the Social Security Administration, that renders him eligible to receive disability benefits under Title II of the Social Security Act, as amended from time to time. The Administrator will apply the provisions of this Section 1.23 in a nondiscriminatory, consistent and uniform manner.

1.24 “Early Retirement Date” means the first day of any month which is not more than ten (10) years prior to a Participant’s Normal Retirement Date, which a Participant, who will then have completed at least ten (10) Years of Service, elects, on a form and in a manner prescribed by the Administrator, as a date on which he wishes to retire.

1.25 “Effective Date” means January 1, 2012, the date as of which this amendment and restatement of the Plan is effective except as otherwise specifically provided herein. The rights and benefits, if any, of each other Employee shall be determined in accordance with the respective provisions of the Plan in effect on the date such Employee terminated service.

1.26 “Eligible Employee” means any Employee of the Employer, other than: (a) a leased employee within the meaning of Section 414(n)(2) of the Code, (b) any person who is included in a unit of employees covered by an agreement recognized for purposes of collective bargaining with the Employer, provided retirement benefits have been the subject of good faith bargaining and such bargaining does not provide for coverage under the Plan, and (c) an Employee who is a nonresident alien deriving no earned income from the Employer which constitutes income from sources within the United States.

1.27 “Employee” means any person employed by the Employer, other than an independent contractor. Employee shall also include leased employees within the meaning of Section 414(n)(2) of the Code. Notwithstanding any other provision of the Plan, the term “Employee” shall not include any employee, independent contractor, leased employee or other individual unless such individual is contemporaneously treated by the Employer as an employee for purposes of the Plan (without regard to any subsequent recharacterization or inconsistent determination made by any person or entity or by any court, agency or other authority with respect to such individual whenever effective).

1.28 “Employer” means the Company and any subsidiary or affiliated organization of the Company that, with the approval of the Committee and subject to such considerations as the Committee may impose, adopts the Plan.

In determining Compensation for the purposes of determining who is a Highly Compensated Employee under Section 1.37, in determining a Participant's Hours of Service, in determining whether an election to change the Limitation Year has been made in accordance with Section 1.39, in determining a Participant's Severance from Employment under Section 1.54, in determining the limitation on Before-Tax Contributions under Section 3.1(b) in determining the Average Actual Deferral Percentages under Section 3.7 and the Average Contribution Percentages under Section 3.11, in determining the limitations on Annual Additions under Section 3.13 or period of absence for purposes of Section 7.4 and in determining whether the Plan is Top-Heavy under Article X, the term "Employer" shall include any other corporation or other business entity that must be aggregated with the Employer under Section 414(b), (c), (m) or (o) of the Code, but only for such periods of time when the Employer and such other corporation or other business entity must be aggregated as aforesaid. For purposes of Section 3.13, such definition of "Employer" shall be modified by Section 415(h) of the Code.

1.29 "Employment Commencement Date" means the date on which an Employee first performs an Hour of Service.

1.30 "Entry Date" means the first day of any month.

1.31 "ERISA" means the Employee Retirement Income Security Act of 1974, as now in effect or as hereafter amended.

1.32 "Excess Aggregate Contributions" means After-Tax Contributions and Matching Contributions in excess of the Contribution Percentage limit, as described in Section 401 (m)(6)(B) of the Code.

1.33 "Excess Contributions" means Before-Tax Contributions in excess of the Actual Deferral Percentage limit, as described in Section 401(k)(8)(B) of the Code.

1.34 "Excess Deferrals" means Before-Tax Contributions in excess of the limits imposed by Section 402(g) of the Code.

1.35 "Fund" or "Investment Fund" means the investment funds established under Article V, or any of them.

1.36 "Hardship" means an immediate and heavy financial need, as determined by the Administrator on a uniform and nondiscriminatory basis, that arises on account of (a) medical expenses described in Section 213(d) of the Code previously incurred by the Participant, his spouse, any dependents of the Participant (as defined in Section 152 of the Code without regard to Section 152(d)(1)(B) of the Code) or his Beneficiary or amounts necessary for these persons to obtain medical care described in Section 213(d) of the Code, (b) the purchase (excluding mortgage payments) of a principal residence for the Participant, (c) tuition expenses for the next twelve (12) month period of post-secondary education for the Participant, his spouse, any dependents of the Participant (as defined in Section 152 of the Code without regard to Section 152(d)(1)(B) of the Code) or his Beneficiary, (d) the need to prevent the eviction of the Participant from his principal residence or foreclosure on the mortgage of the Participant's principal residence, (e) payments for

burial or funeral expenses for the Participant's deceased parent, spouse, children or dependent (as defined in Section 152 of the Code without regard to Section 152(d)(1)(B) of the Code) or Beneficiary, or (f) expenses for the repair of damage to the Participant's principal residence that would qualify for the casualty deduction under Section 165 of the Code (determined without regard to whether the loss exceeds 10% of adjusted gross income).

1.37 "Highly Compensated Employee" means any Employee who performs services for the Employer during the determination year and who (a), during the look-back year, received Compensation from the Employer in excess of $100,000, multiplied by the Adjustment Factor, or (b) was a five percent (5%) Owner, as defined in Section 10.7, during the determination year or lookback year.

For purposes of this definition, the determination year is the Plan Year; the look-back year is the twelve (12) month period preceding the Plan Year. A highly compensated former Employee shall be treated as a Highly Compensated Employee if he separated from service (or is deemed to have separated) prior to the determination year, performs no service for the Employer during the determination year and was a highly compensated active Employee for either the separation year or any determination year ending on or after the Employee's 55th birthday.

The determination of who is a Highly Compensated Employee, including the determination of the Compensation that is considered, will be made in accordance with Section 414(q) of the Code and the Regulations thereunder. For purposes of this Section 1.37, Compensation means compensation within the meaning of Section 415(c)(3) of the Code.

1.38 "Hour of Service" means, with respect to any applicable Computation Period:

(a) each hour for which an Employee is directly or indirectly paid or entitled to payment for the performance of duties for the Employer;

(b) each hour for which an Employee is directly or indirectly paid or entitled to payment by the Employer on account of a period during which no duties are performed, whether or not the employment relationship has terminated, due to vacation, holiday, illness, incapacity (including disability), layoff, jury duty, military duty or leave of absence, but not more than 501 such hours on account of any single continuous period during which no duties are performed; and

(c) each hour for which back pay, irrespective of mitigation of damages, has been awarded or agreed to by the Employer.

No hours shall be credited on account of any period during which an Employee performs no duties and receives payment solely for the purpose of reimbursement for medical or medically related expenses incurred by the Employee for the purpose of complying with applicable worker's compensation, unemployment compensation or disability insurance laws.

If an Employee's work records are not kept on an hourly basis, he shall be credited with 190 Hours of Service for each month in which he would have been credited with an Hour of Service.

Solely to the extent required by the Family and Medical Leave Act of 1993 (FMLA), an Employee shall be credited with Hours of Service while on a leave of absence protected under FMLA.

The same Hours of Service shall not be credited under more than one of the above clauses (a), (b) or (c); and each hour credited to an Employee under clause (a), (b) or (c) above shall be credited in accordance with Section 2530.200b-2(b) and (c) of the U.S. Department of Labor's Regulations, which hereby are incorporated by reference.

An Employee shall be considered as accruing Hours of Service in accordance with his normal work week for each week: (1) while on an Authorized Leave of Absence, if at or before the end of such leave, the Employee returns to service with the Employer, or (2) the Employee is laid off due to reduction in force if he returns to service with the Employer within one (1) year of the date the layoff began. An Employee who fails to return to service with the Employer at the end of an Authorized Leave of Absence or within one (1) year of a layoff due to reduction in force shall be deemed to have terminated service on the date the absence or layoff began and shall cease accruing Hours of Service as of the date the absence or the layoff began. An Employee who dies, incurs a Disability or retires on an Early Retirement Date or Normal Retirement Date while on an Authorized Leave of Absence shall, despite the foregoing, continue to accrue Hours of Service until his date of death, Disability or retirement, as the case may be.

1.39 "Limitation Year" means the calendar year, unless otherwise selected by the Employer in a manner consistent with that described in the Regulations issued pursuant to Section 415 of the Code.

1.40 "Matched Contributions" means a Before-Tax Contribution that is matched pursuant to Section 3.3(a) or (b) during a Plan Year.

1.41 "Matching Contribution Account" means the Account to which are credited any Matching Contributions made on behalf of the Participant and earnings or losses on those contributions.

1.42 "Matching Contributions" means the amounts contributed on behalf of a Participant pursuant to Section 3.3.

1.43 "Nonhighly Compensated Employee" means an Employee who is not a Highly Compensated Employee.

1.44 "Normal Retirement Age" means the date the Participant attains the age stated below based on his year of birth:

Age	**Year of Birth**
65	1937 and earlier
65 plus 2 months/year	1938 – 1942
66	1943 – 1954
66 plus 2 months/year	1955 – 1959
67	1960 and later

1.45 "Normal Retirement Date" means the first day of the month following the date the Participant reaches Normal Retirement Age.

1.46 "One-Year Break in Service" means a Computation Period in which a Participant completes no more than 500 Hours of Service.

1.47 "Participant" means any Eligible Employee participating in the Plan as provided in Article II or any former Employee whose participation has not ceased pursuant to Section 2.7.

1.48 "Plan" means the PerkinElmer, Inc. Savings Plan, as set forth herein and as amended from time to time.

1.49 "Plan Year" means the twelve (12) month period commencing on each January 1st on or after the Effective Date and ending on the next following December 31st.

1.50 "Reemployment Commencement Date" means the first date following a One Year Break in Service on which the Employee again performs an Hour of Service.

1.51 "Regulations" means the Treasury regulations issued under the Code or any other applicable law by the Internal Revenue Service and any proposed or temporary regulations or rules pending the issuance of such regulations.

1.52 “Rollover Account” means the Participant’s Account to which is credited any Rollover Contribution made by the Participant and earnings or losses on that contribution.

1.53 “Rollover Contribution” means a contribution made by a Participant pursuant to Section 3.4.

1.54 “Severance from Employment” means the termination of the Employee’s employment relationship with the Employer, determined in accordance with Treasury Regulation Section 1.401(k)-1(d)(2).

1.55 “Spouse” means the person to whom a Participant is legally married on the earlier of (a) the date on which the Participant’s Account balances are distributed due to the Participant’s Severance from Employment, or (b) the Participant’s date of death.

1.56 “Trust Agreement” means the agreement entered into between the Company and the Trustee to carry out the purposes of the Plan.

1.57 “Trust Fund” means the assets of the Plan held in trust by the Trustee in accordance with the Trust Agreement.

1.58 “Trustee” means the trustee or trustees by whom the assets of the Plan are held in accordance with the Trust Agreement.

1.59 “Unmatched Contributions” means those Participant contributions which are not Matched Contributions, regardless of whether they are Before-Tax Contributions, After-Tax Contributions, a combination of both or made in a prior Plan Year.

1.60 “Valuation Date” means any business day on which the New York Stock Exchange is open for and conducting business, or any more frequent date designated by the Administrator or the Trustee.

1.61 “Year of Service” means a Computation Period during which an individual completes at least 1,000 Hours of Service.

Wherever used herein, the singular includes the plural and the masculine includes the feminine, unless the context clearly requires otherwise.

ARTICLE II

ELIGIBILITY AND PARTICIPATION

2.1 Eligibility

(a) Each Eligible Employee who was participating in the Plan on December 31, 2011 shall continue as a Participant on the Effective Date.

(b) Effective January 1, 2012, each Eligible Employee not yet a Participant shall be eligible to become a Participant on any Entry Date on or after the date he first completes an Hour of Service for the Employer.

(c) Notwithstanding the foregoing, no Eligible Employee who was an employee of Caliper Life Sciences, Inc. or its affiliates ("Caliper") including prior to the acquisition of Caliper by the Company shall become a Participant prior to January 1, 2012.

2.2 Information

(a) Each Eligible Employee who completes the requirements of Section 2.1 shall become a Participant as of any Entry Date following the date on which he becomes eligible for participation pursuant to Section 2.1 by making an election in accordance with procedures established and uniformly applied by the Administrator that:

(i) indicates whether he is electing under Section 3.1 to have his Compensation reduced and, if appropriate, directs the Employer to contribute an equal amount to the Plan as Before-Tax Contributions and/or elects to make After-Tax Contributions pursuant to Section 3.2;

(ii) authorizes the Employer to make regular payroll deductions;

(iii) makes an investment election; and

(iv) names a Beneficiary.

(b) With respect to Employees hired on or after September 1, 2006, an Eligible Employee who does not, within 30 days after his or her Employment Commencement Date, either authorize his or her Participating Employer to make a Before-Tax Contribution on his or her behalf or notify the Committee that the Employee declines to authorize the making of a Before-Tax Contribution on his or her behalf, shall be deemed to have authorized his or her Employer to make a Before-Tax Contribution on his or behalf of 3% of his or her Compensation, beginning with the first payroll period that begins after the 30th day following the Participant's Employment Commencement Date. Such Contribution shall continue until the Participant terminates employment with the Employer, or suspends or changes the Before-Tax Contribution in accordance with Section 3.5.

(c) Each Participant may file a designation with the Administrator naming as Beneficiary a person, persons or entity to receive benefits payable upon his death. A Participant may at any time revoke or change his Beneficiary designation by filing a new designation with the Administrator. Any Beneficiary designation or revocation or change thereof naming as primary Beneficiary a person, persons or entity other than the Participant's Spouse must be made with the written consent of the Participant's Spouse acknowledging the effect of such designation, revocation

or change and witnessed by a notary public. Written consent of the Participant's Spouse shall not be required if it is established to the satisfaction of the Administrator that there is no Spouse, the Spouse cannot be located or under other circumstances as may be prescribed in Regulations. If the Participant is unmarried and fails to designate a Beneficiary or the Beneficiary does not survive the Participant, the benefits payable upon the death of the Participant will be paid to the Participant's estate.

2.3 Eligibility upon Reemployment

Any person reemployed by an Employer as an Eligible Employee shall again be eligible to become a Participant as of his Reemployment Commencement Date.

2.4 Transferred Employees

(a) A Participant who remains in the employ of the Employer but ceases to be an Eligible Employee shall continue to be a Participant and shall be credited with Hours of Service, but he shall not be eligible (i) to have Before-Tax Contributions made on his behalf, or (ii) to contribute After-Tax Contributions for as long as his employment status is other than that of an Eligible Employee. Any Compensation of such a Participant while he has an employment status other than that of an Eligible Employee shall be disregarded for all Plan purposes.

(b) If an Employee transfers from an employment status with an Employer other than as an Eligible Employee and thereby becomes an Eligible Employee, he shall be eligible to become a Participant, and have Before-Tax Contributions made on his behalf and contribute After-Tax Contributions as of the next following Entry Date.

ARTICLE III

CONTRIBUTIONS AND ALLOCATIONS

3.1 Before-Tax Contributions

(a) An Eligible Employee who meets the requirements of Section 2.1 may, by advance notice in accordance with procedures prescribed by the Administrator, elect to have his subsequent Compensation reduced by means of payroll deduction as of any Entry Date and to have an equal amount contributed to the Plan on his behalf as Before-Tax Contributions of up to 90% of his Compensation (minus any amount necessary to cover contributions for other benefit programs elected by the Employee, pay applicable employment or other payroll taxes or frequently required deductions such as child support). Such reduction amount shall be in one percent (1%) increments and shall be reduced by the amount of any After-Tax Contributions made on his behalf pursuant to Section 3.2. Such reduction shall commence effective with the first payroll period on or next following that Entry Date.

(b) In no event will the Before-Tax Contributions made on behalf of a Participant for any calendar year exceed the dollar limitation contained in Section 402(g) of the Code, reduced

by the amount of the Participant's other before-tax contributions made through the Employer for the calendar year, except to the extent permitted under Section 3.1(e).

(c) Before-Tax Contributions shall be deposited in the Plan by the Employer (whether or not the Employer has current profits or retained earnings) in a manner to be determined by the Administrator, but in any event such Before-Tax Contributions shall be paid to the Trustee on the earliest date on which the Before-Tax Contributions can reasonably be segregated from the Employer's general assets.

(d) If Before-Tax Contributions are returned to the Employer under Section 3.14, the elections to reduce Compensation that were made by Participants on whose behalf those contributions were made shall be void retroactively to the beginning of the period for which returned contributions were made.

(e) All Employees who are eligible to make Before-Tax Contributions under the Plan and who have attained age 50 before the close of the Plan Year shall be eligible to make catch-up contributions in accordance with, and subject to the limitations of, Section 414(v) of the Code. Such catch-up contributions shall not be taken into account for purposes of the provisions of the Plan implementing the required limitations of Sections 401(g) and 415 of the Code. The Plan shall not be treated as failing to satisfy the provisions of the Plan implementing the requirements of Section 401(k)(3), 401(k)(11), 401(k)(12), 410(b), or 416 of the Code, as applicable, by reason of the making of such catch-up contributions. The maximum amount of catch-up contributions that a catch-up eligible Participant may make during a Plan Year shall not exceed the limit described in Treasury Regulation Section 1.414(v)-1(c).

Matching Contributions described in Section 3.3 shall, in no event, be made on account of catch-up contributions.

(f) Except for occasional, bona fide administrative considerations, a Participant's Before-Tax Contributions cannot precede the earlier of (1) the performance of services relating to the Before-Tax Contribution and (2) the date the Compensation subject to the Before-Tax Contribution would be available in the absence of an election to defer.

3.2 After-Tax Contributions

An Eligible Employee who meets the requirements of Section 2.1 may, by advance notice in accordance with procedures prescribed by the Administrator, elect to contribute to the Plan by means of payroll deduction as of any Entry Date After-Tax Contributions of up to sixteen percent (16%) of his Compensation, in one percent (1%) increments, reduced by the amount of any Before-Tax Contributions made on his behalf pursuant to Section 3.1.

3.3 Matching Contributions

(a) Generally.

(i) The Employer shall make a Matching Contribution on behalf of each Participant equal to one hundred percent (100%) of the total Before-Tax and After-Tax contributions made by the Participant during the pay period not exceeding five percent (5%) of the Participant's Compensation for the pay period. Matching Contributions under this paragraph (a) shall be transmitted to the Trustee within a reasonable time following the close of each pay period throughout the Plan Year.

(ii) The Employer shall make an additional Matching Contribution on behalf of each Participant who is employed on December 1 of such Plan Year (or whose employment terminates during the Plan Year because of death, Disability, retirement on or after Normal Retirement Age or Retirement on an Early Retirement Date) so that such Participant receives a total Matching Contribution for the Plan Year equal to 100% of the total Before-Tax and After-Tax Contributions made by the Participant during the Plan Year not exceeding five percent (5%) of the Participant's Compensation for the Plan Year. Matching Contributions under this paragraph (b) shall be transmitted to the Trustee within a reasonable time following the close of the Plan Year.

(iii) In applying the provisions of paragraph (i) or (ii), Participant contributions shall be matched in the following order: (1) Before-Tax Contributions and (2) After-Tax Contributions.

(b) Certain OptoElectronics Employees.

[Intentionally omitted. See prior Plan and Appendix C for provisions governing certain OptoElectronics Employees and other sites or divisions of the Company prior to January 1, 2012.]

(c) Former Caliper Employees.

(i) Notwithstanding any other provision herein, the Matching Contribution on behalf of a Participant who was an employee of Caliper (as defined in Section 2.1(c)) immediately prior to the acquisition of Caliper by the Company (a "Caliper Participant") shall be determined pursuant to this Section 3.3(c). The Employer shall make a Matching Contribution on behalf of each Caliper Participant equal to fifty percent (50%) of the total Before-Tax and After-Tax Contributions made by the Caliper Participant during the pay period not exceeding five percent (5%) of the Participant's Compensation for the pay period. Matching Contributions under this paragraph (i) shall be transmitted to the Trustee within a reasonable time following the close of each pay period throughout the Plan Year.

(ii) The Employer shall make an additional Matching Contribution on behalf of each Participant who is employed on December 1 of such Plan Year (or whose employment terminates during the Plan year because of death, Disability, retirement on or after the Normal Retirement Age or Retirement on an Early Retirement Date) so that such Participant receives a total Matching Contribution for the Plan Year equal to 50% of the total Before-Tax and After-Tax Contributions made by the Participant during the Plan Year not exceeding five percent (5%) of the Participant's Compensation for the Plan Year. Matching Contributions under this paragraph (ii) shall be transmitted to the Trustee within a reasonable time following the close of the Plan Year.

(iii) In applying the provisions of paragraph (i) or (ii), Participant contributions shall be matched in the following order: (1) Before-Tax Contributions and (2) After-Tax Contributions.

(iv) For periods commencing on or after January 1, 2013, this paragraph (c) shall have no effect, and Matching Contributions for all Participants shall be governed by Section 3.3(a).

(d) Notwithstanding any other provisions of the Plan, the Employer may act to suspend, reduce or eliminate Matching Contributions. The Employer shall communicate any such action to all Participants for the applicable Plan Year to which the suspension, reduction or elimination first relates and may rescind such action at any time.

(e) Matching Contributions described in this Section 3.3 shall be paid in cash to the Trustee as soon as administratively convenient following each Plan Year but in any event no later than the date required by applicable law in order to permit the Employer a deduction for such contributions for its taxable year.

(f) For purposes of this Section 3.3, a Participant's Before Tax Contributions do not include Before Tax Contributions that are Excess Deferrals or catch up contributions under Section 414(v) of the Code. For this purpose, Excess Deferrals relate first to Before Tax Contributions for the Plan Year not otherwise eligible for Matching Contributions.

(g) Matching Contributions may not be made prior to (1) the date the Before Tax Contribution election is made; (2) the performance of services relating to the Before Tax Contributions (on which the Matching Contributions are made), or (3) the date the Before Tax Contributions are made.

3.4 Rollover Contributions

(a) An Eligible Employee, whether or not a Participant, may, by notice received by the Administrator and under such terms and conditions as the Administrator shall determine, make a Rollover Contribution to the Plan and Trust Fund. The Administrator may require the Employee to submit such evidence and documentation as the Administrator determines necessary to be assured that the proposed contribution qualifies as a Rollover Contribution.

A Rollover Contribution is (i) a distribution of an "eligible rollover distribution" (as defined in Section 402(c)(4) of the Code) from an employee retirement plan qualified under Section 401(a) or 403(a) of the Code, including after-tax employee contributions, (ii) an annuity contract described in Section 403(b) of the Code excluding after-tax employee contributions, (iii) an eligible plan under Section 457(b) of the Code which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state, (iv) a distribution from an individual retirement account or individual retirement annuity described in Section 408 of the Code comprised solely of amounts attributable to a "rollover contribution" (as defined in Section 408(d)(3) of the Code) from an employee retirement plan qualified under Section 401(a) or 403(a) of the

Code or (v) an amount transferred directly to the Trust Fund in a manner meeting the requirements of a direct transfer of an eligible rollover distribution pursuant to Section 401(a)(31) of the Code.

(b) Unless otherwise determined by the Administrator, the amount to be accepted must be paid in cash or bank check.

(c) The amount received pursuant to this Section 3.4 shall be transferred to the Trust Fund and credited to a separate Rollover Account maintained by the Administrator for the Employee in accordance with Article V herein.

3.5 Changes in Contributions

The percentage of contributions designated by a Participant pursuant to Section 3.1 and/or Section 3.2 automatically shall apply to increases and decreases in his Compensation. A Participant may, in accordance with applicable administrative procedures, change the percentage of his Compensation to be contributed to the Plan as Before-Tax Contributions and/or After-Tax Contributions as of any Entry Date. Any such change shall be subject to the applicable provisions of Sections 3.1 and 3.2. The changed percentage shall remain in effect until subsequently changed.

3.6 Suspension and Resumption of Contributions

(a) A Participant may, by giving advance notice in accordance with applicable administrative procedures, elect to suspend his Before-Tax Contributions and/or After-Tax Contributions as of any Entry Date. Such suspension shall commence effective with the first payroll period on or next following that Entry Date.

(b) Subject to Section 8.5, a Participant who has suspended his Before-Tax Contributions and/or After-Tax Contributions may, by giving advance notice in accordance with applicable administrative procedures, elect to resume contributions as of any Entry Date. Such resumption shall commence effective with the first payroll period on or next following that Entry Date.

3.7 Actual Deferral Percentage Test

(a) For each Plan Year, the Average Actual Deferral Percentage for the group of all Highly Compensated Employees who are eligible to participate in the Plan must bear a relationship to the Average Actual Deferral Percentage for the group of all Nonhighly Compensated Employees who are eligible to participate in the Plan that satisfies at least one of the following tests:

(i) the Average Actual Deferral Percentage for said group of Highly Compensated Employees for that Plan Year shall not be more than the Average Actual Deferral Percentage for said group of Nonhighly Compensated Employees for that Plan Year multiplied by 1.25; or

(ii) the Average Actual Deferral Percentage for said group of Highly Compensated Employees for that Plan Year shall not exceed 2 percentage points more than the Average Actual Deferral Percentage for said group of Nonhighly Compensated Employees for that Plan Year, and the Average Actual Deferral Percentage for said group of Highly Compensated Employees for that Plan Year shall not be more than the Average Actual Deferral Percentage for said group of Nonhighly Compensated Employees for that Plan Year multiplied by 2.

(b) If Before-Tax Contributions are made to the Plan for a Plan Year for a Highly Compensated Employee who also is eligible to have salary reduction contributions allocated to his account under another plan maintained by the Employer that provides a cash or deferred arrangement described in Section 401(k) of the Code, the Actual Deferral Percentage for that Highly Compensated Employee shall be calculated as if all such other plans are part of the Plan. However, if a Highly Compensated Employee participates in two or more cash or deferred arrangements that are parts of plans that have different plan years, the cash or deferred arrangements shall be treated as a single arrangement with respect to the plan years ending with or within the same calendar year.

(c) If the Plan satisfies the requirements of Sections 401(k), 401 (a)(4) or 410(b) of the Code only if aggregated with one or more other plans, or if one or more plans satisfy the requirements of such sections of the Code only if aggregated with the Plan, this Section shall be applied by determining the Actual Deferral Percentages of Employees as if all such plans were a single plan. However, plans may be aggregated in order to satisfy Section 401(k) of the Code only if they have the same plan year.

(d) For the purposes of satisfying the requirements of Sections 401(k), 401 (a)(4) or 410(b) of the Code, the Plan may be disaggregated into two or more plans or the Plan may be aggregated with one or more other plans, to the extent permitted by Sections 401(k), 401 (a)(4) and 410(b) of the Code and the Regulations thereunder.

(e) For purposes of determining the Actual Deferral Percentage, Before-Tax Contributions must be made before the last day of the twelve (12) consecutive month period immediately following the Plan Year to which those contributions relate.

3.8 Reductions during Plan Year

If, during the Plan Year, the Administrator determines that the Actual Deferral Percentage test provided in Section 3.7(a) is not met at the time of its review or would not be met if part or all of Before-Tax Contributions continue to be made on behalf of Participants who are Highly Compensated Employees, the Administrator, in its sole discretion, may reduce the rate (to zero (0) if necessary) of Before-Tax Contributions that would have been made during the remainder of the Plan Year for any Participant. To meet the Average Actual Deferral Percentage requirement of Section 3.7(a), any such decrease shall be applied first to Participants whose Actual Deferral Percentages represent the highest such Percentage, then in descending order to Participants whose

Actual Deferral Percentages represent the next highest such Percentage, until the provisions of Section 3.7(a) are satisfied.

3.9 Return of Excess Contributions after End of Plan Year

(a) If, after the last day of the Plan Year, the Administrator determines that the Average Actual Deferral Percentage requirements of Section 3.7(a) have not been satisfied, the Administrator, within 2½ months after the end of the Plan Year (but not later than the last day of the next Plan Year), shall distribute the Excess Contributions, adjusted for any income or loss, to all affected Participants who are Highly Compensated Employees. The Administrator shall calculate any Excess Contributions after determining the amount of Excess Deferrals pursuant to Section 3.1(b). The amount of Excess Contributions to be distributed shall be reduced by any Excess Deferrals previously distributed to the Participant for the tax year ending with or within the Plan Year. The amount of Excess Deferrals to be distributed for a tax year shall be reduced by any Excess Contributions previously distributed for the Plan Year beginning with or within the Participant's tax year.

(b) The income or loss allocable to Excess Contributions for the Plan Year shall be determined by multiplying the income or loss allocable to the Participant's Before-Tax Contributions for the Plan Year by a fraction, the numerator of which is the Excess Contribution on behalf of the Participant for the Plan Year and the denominator of which is the Participant's Account balance attributable to Before-Tax Contributions on the last day of the Plan Year, without regard to any income or loss during the Plan Year. No income or loss shall be attributable to the period between the end of the Plan Year and the date of the distribution.

(c) The amount of Excess Contributions for Highly Compensated Employees shall be determined as provided in this paragraph. First, the Actual Deferral Percentage of the Highly Compensated Employee with the highest such Percentage will be reduced to the extent necessary to satisfy the Actual Deferral Percentage test or cause the percentage for that Highly Compensated Employee to equal the percentage for the Highly Compensated Employee with the next highest such Percentage. Second, this process will be repeated until the Actual Deferral Percentage test is satisfied. The total of such Excess Contributions shall then be distributed to Highly Compensated Employees in descending order commencing with the Highly Compensated Employee with the highest dollar amount of Before-Tax Contributions and other contributions to be distributed in order to satisfy the Actual Deferral Percentage test, consistent with the final regulations under Section 401(k) of the Code.

(d) Excess Contributions distributed to Participants in accordance with this Section 3.9 shall be distributed in the following order: (i) from the Participant's Before-Tax Contribution Account, to the extent such Contributions are not subject to Matching Contributions, and (ii) from the Participant's Before-Tax Contribution Account, to the extent such Contributions are subject to Matching Contributions. If Excess Contributions are distributed to Participants in accordance with

this Section 3.9, the Participant shall immediately forfeit all Matching Contributions that were made to match such distributed Excess Contributions.

(e) Notwithstanding the foregoing, Excess Contributions will not be adjusted for income or loss from the period between the last day of the Plan Year and the date of distribution.

3.10 Distribution of Excess Deferrals

(a) A Participant may state a claim for the return of Excess Deferrals and such Excess Deferrals, adjusted for any income or loss, shall be distributed if administratively practicable no later than the April 15th following the calendar year for which such allocable Excess Deferrals are made. The Participant's claim shall be made in accordance with procedures established by the Administrator, shall be submitted to the Administrator no later than March 1st, shall specify the Participant's Excess Deferrals for the preceding calendar year, and shall be accompanied by the Participant's statement that such amounts, if not distributed, will constitute Excess Deferrals.

(b) The income or loss allocable to Excess Deferrals for the Plan Year shall be determined by multiplying the income or loss allocable to the Participant's Before-Tax Contributions for the Plan Year by a fraction, the numerator of which is the Excess Deferrals on behalf of the Participant for the Plan Year and the denominator of which is the Participant's Account balance attributable to Before-Tax Contributions on the last day of the Plan Year, without regard to any income or loss during the Plan Year.

(c) If Excess Deferrals have previously been distributed within the Plan Year, the Plan shall offset such distribution from the amount of the Participant's Excess Contributions to be distributed for such Plan Year. In addition, the amount of Excess Deferrals that may be distributed for a Participant by the Plan for a Plan Year shall be reduced by the amount of Excess Contributions previously distributed.

3.11 Contribution Percentage Test

(a) For each Plan Year, the Average Contribution Percentage for the group of all Highly Compensated Employees who are eligible to participate in the Plan must bear a relationship to the Average Contribution Percentage for the group of all Nonhighly Compensated Employees who are eligible to participate in the Plan that satisfies at least one of the following tests:

(i) The Average Contribution Percentage for said group of Highly Compensated Employees for that Plan Year shall not be more than the Average Contribution Percentage for said group of Nonhighly Compensated Employees for that Plan Year multiplied by 1.25; or

(ii) The Average Contribution Percentage for said group of Highly Compensated Employees for that Plan Year shall not exceed 2 percentage points more than the Average Contribution Percentage for said group of Nonhighly Compensated Employees for that Plan Year, and the Average Contribution Percentage for said group of Highly Compensated Employees for that Plan Year shall not be more than the Average Contribution Percentage for said group of Nonhighly Compensated Employees for that Plan Year multiplied by 2.

(b) If After-Tax Contributions and/or Matching Contributions are made to the Plan for a Plan Year for a Highly Compensated Employee who also is eligible to have after-tax contributions and/or matching contributions allocated to his account under another plan maintained by the Employer that is qualified under Section 401(a) of the Code, the Contribution Percentage for that Highly Compensated Employee shall be calculated as if all such other plans are part of the Plan. If a Highly Compensated Employee participates in two (2) or more plans that have different plan years, this Section 3.11(b) shall be applied by treating all plans that have plan years ending with or within the same calendar year as a single plan.

(c) If the Plan satisfies the requirements of Sections 401(m), 401 (a)(4) and 410(b) of the Code only if aggregated with one or more other plans, or if one or more other plans satisfy the requirements of such sections of the Code only if aggregated with the Plan, this Section shall be applied by determining the Contribution Percentages of Employees as if all such plans were a single plan. However, plans may be aggregated in order to satisfy Section 401(m) of the Code only if they have the same plan years.

(d) For the purposes of satisfying the requirements of Sections 401(m), 401 (a)(4) or 410(b) of the Code, the Plan may be disaggregated into two or more plans or the Plan may be aggregated with one or more other plans, to the extent permitted by Sections 401(m), 401(a)(4) and 410(b) of the Code and the Regulations thereunder.

(e) For purposes of determining the Contribution Percentage, (i) After-Tax Contributions are considered to have been made in the Plan Year as of which they are contributed to the Trust Fund and (ii) Matching Contributions will be considered made for a Plan Year if made before the last day of the twelve (12) consecutive month period immediately following the Plan Year to which those contributions relate.

3.12 Return of Excess Aggregate Contributions

(a) If, after the last day of the Plan Year, the Administrator determines that the Average Contribution Percentage requirements of Section 3.11 (a) have not been satisfied, the Administrator, within 2½ months after the end of the Plan Year (but not later than the last day of the next Plan Year), shall first cause to be forfeited, if forfeitable, or if not forfeitable, distribute the

Excess Aggregate Contributions, adjusted for any income or loss, to all affected Participants who are Highly Compensated Employees. The Administrator shall calculate any Excess Aggregate Contributions after determining the amount of Excess Deferrals pursuant to Section 3.1(b) and the amount of Excess Contributions pursuant to Section 3.9(a).

(b) The income or loss allocable to Excess Aggregate Contributions for the Plan Year shall be determined by multiplying the income or loss allocable to Matching Contributions and After-Tax Contributions made on behalf of the Participant for the Plan Year by a fraction, the numerator of which is the Excess Aggregate Contribution on behalf of the Participant for the Plan Year and the denominator of which is the sum of the Participant's Matching Contribution Account and After-Tax Contribution Account balances on the last day of the Plan Year, without regard to any income or loss during the Plan Year.

(c) The amount of Excess Aggregate Contributions for Highly Compensated Employees shall be determined as provided in this Section 3.12(c). First, the Contribution Percentage of the Highly Compensated Employee with the highest such Percentage will be reduced to the extent necessary to satisfy the Contribution Percentage test or cause the percentage for that Highly Compensated Employee to equal the percentage for the Highly Compensated Employee with the next highest such Percentage. Second, this process will be repeated until the Contribution Percentage test is satisfied. The total of such Excess Aggregate Contributions to be distributed shall then be distributed to Highly Compensated Employees in descending order commencing with the Highly Compensated Employee with the highest dollar amount of Excess Aggregate Contributions and other contributions to be distributed in order to satisfy the Contribution Percentage test, consistent with the provisions of final regulations under Section 401(k) of the Code.

(d) Excess Aggregate Contributions forfeited in accordance with this Section 3.12 shall be treated as Annual Additions under Section 3.13 and shall be applied to reduce subsequent Matching Contributions, as provided in Section 7.3.

(e) Excess Aggregate Contributions distributed to Participants in accordance with this Section 3.12 shall be distributed in the following order: (i) from the Participant's After-Tax Contribution Account and (ii) from the Participant's Matching Contribution Account.

(f) Notwithstanding the foregoing, Excess Aggregate Contributions will not be adjusted for income or loss from the period between the last day of the Plan Year and the date of distribution.

3.13 Maximum Annual Additions

(a) Except to the extent permitted under Section 3.1(e) of the Plan and Section 414(v) of the Code, the Annual Addition to a Participant's Accounts for any Limitation Year, when added to the annual additions for such year under any other defined contribution plans maintained by the Employer, shall not exceed the lesser of:

(i) $40,000 as adjusted for increases in the cost of living under Section 415(d) of the Code, or

(ii) 100 percent of the Participant's 415 Compensation (as defined below) for the Limitation Year.

For purposes of this Section, the default rules of Section 415 of the Code and the Treasury Regulations thereunder are incorporated herein by this reference unless an optional rule is set forth in this Section or elsewhere in the Plan.

(b) For purposes of this Section, "415 Compensation" means a Participant's wages that are required to be reported as wages within the meaning of Section 3401(a) of the Code and all other payments of compensation to a Participant by the Employer (in the course of the Employer's trade or business) for which the Employer is required to furnish the Participant a written statement under Sections 6041(d), 6051(a)(3), and 6052 of the Code (wages, tips and other compensation as reported on Form W-2) but determined without regard to any rules under Section 3401(a) of the Code that limit the remuneration included in wages based on the nature or location of the employment or the services performed (such as the exception for agricultural labor in Section 3401(a)(2) of the Code) and amounts paid or reimbursed by the Employer for moving expenses incurred by a Participant but only to the extent that at the time of payment it is reasonable to believe that such amounts are deductible by the Participant under Section 217 of the Code. For purposes of this Section:

(i) 415 Compensation shall include (1) amounts contributed by the Employer pursuant to a salary reduction agreement which are excludable from a Participant's gross income under Sections 125, 402(e)(3), 402(h)(1)(B) and 403(b) of the Code and elective amounts that are not includible in the gross income of the Participant by reason of Section 132(f)(4) and (2) of the Code differential wage payments as defined in Section 414(u)(12) of the Code paid by the Employer to the extent such payments do not exceed the amounts the Participant would have received if he or she had continued to perform services for the Employer rather than entering qualified military service as defined in Section 414(u)(5) of the Code.

(ii) 415 Compensation shall exclude amounts paid by the Employer after Severance from Employment except for amounts that (1) represent payment for regular compensation for services during the Participant's regular working hours, or compensation for services outside the Participant's regular working hours (such as overtime or shift differential), commissions, bonuses, or other similar payments that would have been paid to the Participant prior to his or her Severance from Employment, if the Participant had continued in employment with the Employer and (2) are paid by the end of the 2 1/2 month period following the Participant's Severance from Employment or by the end of the Plan Year that includes the Participant's Severance from Employment whichever is the latest to occur.

3.14 Return of Contributions to Employer

(a) If all or part of the Employer's contributions hereunder are conditioned upon their deductibility under Section 404 of the Code and the deduction for all or any part of such contributions to the Plan is disallowed by the Internal Revenue Service, the portion of the

contributions to which such disallowance applies shall be returned to the Employer without interest, but reduced by any investment loss attributable to those contributions. The return shall be made as soon as practicable within one (1) year after the disallowance. All contributions to the Plan are conditioned on their deductibility.

(b) If a contribution is made due to a mistake of fact, the Employer may require the Trustee to return the contribution, without interest but reduced by any investment loss allocable to the contribution. The return shall be made as soon as practicable within one (1) year after the date the contribution was made.

ARTICLE IV

ROTH ELECTIVE DEFERRALS

4.1 General Application

(a) This article will apply to contributions beginning March 1, 2006.

(b) As of March 1, 2006, the Plan will accept Roth elective deferrals made on behalf of Participants. A Participant's Roth elective deferrals will be allocated to a separate account maintained for such deferrals as described in Section 4.2.

(c) Unless specifically stated otherwise, Roth elective deferrals will be treated as Before-Tax Contributions for all purposes under the Plan.

4.2 Separate Accounting

(a) Contributions and withdrawals of Roth elective deferrals will be credited and debited to the Roth elective deferral account maintained for each Participant.

(b) The Plan will maintain a record of the amount of Roth elective deferrals in each Participant's account.

(c) Gains, losses, and other credits or charges must be separately allocated on a reasonable and consistent basis to each Participant's Roth elective deferral account and the Participant's other accounts under the Plan.

(d) No contributions other than Roth elective deferrals and properly attributable earnings will be credited to each Participant's Roth elective deferral account.

4.3 Direct Rollovers

(a) Notwithstanding Section 9.6, a direct rollover of a distribution from a Roth elective deferral account under the Plan will only be made to another Roth elective deferral account under an applicable retirement plan described in Section 402A(e)(1) of the Code or to a Roth IRA described in Section 408A of the Code, and only to the extent the rollover is permitted under the rules of Section 402(c) of the Code.

(b) Notwithstanding Section 3.4, unless specifically stated otherwise, the Plan will accept a rollover contribution to a Roth elective deferral account only if it is a direct rollover from another Roth elective deferral account under an applicable retirement plan described in Section 402A(e)(1) of the Code and only to the extent the rollover is permitted under the rules of Section 402(c) of the Code.

(c) The Plan will not provide for a direct rollover (including an automatic rollover) for distributions from a Participant's Roth elective deferral account if the amount of the distributions that are eligible rollover distributions are reasonably expected to total less than $200 during a year. In addition, any distribution from a Participant's Roth elective deferral account is not taken into account in determining whether distributions from a Participant's other accounts are reasonably expected to total less than $200 during a year. However, eligible rollover distributions from a Participant's Roth elective deferral account are taken into account in determining whether the total amount of the Participant's account balances under the Plan exceeds $1,000 for purposes of mandatory distributions from the Plan.

(d) The provisions of the Plan that allow a Participant to elect a direct rollover of only a portion of an eligible rollover distribution but only if the amount rolled over is at least $500 is applied by treating any amount distributed from the Participant's Roth elective deferral account as a separate distribution from an amount distributed from the Participant's other accounts in the Plan, even if the amounts are distributed at the same time.

4.4 Correction of Excess Contributions

(a) In the case of a distribution of excess contributions as determined under the final regulations issued pursuant to Section 401(k) and Section 402A of the Code, a Highly Compensated Employee may designate the extent to which the excess amount is comprised of Before-Tax Contributions and Roth elective deferrals but only to the extent such types of deferrals were made for the year.

(b) If the Highly Compensated Employee does not designate which type of elective deferrals are to be distributed, the Plan will distribute Before-Tax Contributions first.

(c) Any excess contribution shall be treated as an Excess Contribution as described in Section 3.9 and distributed within 2 ½ months after the end of the Plan Year.

4.5 Definition of Roth Elective Deferrals

A Roth elective deferral is an elective deferral that is:

(a) Designated irrevocably by the Participant at the time of the cash or deferred election as a Roth elective deferral that is being made in lieu of all or a portion of the Before-Tax Contributions the Participant is otherwise eligible to make under the Plan; and

(b) Treated by the employer as includible in the Participant's income at the time the Participant would have received that amount in cash if the Participant had not made a cash or deferred election.

ARTICLE V

MAINTENANCE AND VALUATION OF ACCOUNTS

5.1 Maintenance of Accounts

The Administrator shall maintain for each Participant a separate Before-Tax Contribution Account, After-Tax Contribution Account, Matching Contribution Account, Rollover Account and any other accounts or subaccounts as the Administrator deems necessary or desirable.

5.2 Valuation of Accounts

As of each Valuation Date, the Administrator shall adjust the Accounts of each Participant to reflect contributions, withdrawals, distributions, income earned or accrued, expenses paid from the assets of the Plan and any increase or decrease in the fair market value of the assets of the Plan since the preceding Valuation Date; provided, however, that all such items shall be proportionally credited or debited, as applicable, based on the balances of each Participant's Account as of the preceding Valuation Date, as adjusted to reflect the impact of any transactions during the period.

5.3 Account Statements

At least once a year, each Participant shall be furnished with a statement stating the dollar value of his Accounts and the vested portion of his Accounts.

ARTICLE VI

INVESTMENT OF CONTRIBUTIONS

6.1 Investment Funds

(a) The Administrator from time to time shall direct the Trustee to establish and maintain one or more investment funds, hereinafter referred to as Funds, for the investment of assets of the Trust Fund. The number and type of Funds shall be determined by the Administrator, which may, in its discretion, direct the Trustee to establish and maintain one or more additional Funds or to delete one or more existing Funds. Such funds shall include a Company Stock Fund.

(b) Pending the investment of any amounts in a Fund, the Trustee may invest assets of the Trust Fund temporarily in a qualified default investment alternative as defined in regulations issued by the Department of Labor. The Trustee may keep such amounts of cash as it, in its sole

discretion, shall deem necessary or advisable as part of such Funds, all within the limitations specified in the Trust Agreement.

(c) All interest, dividends and proceeds from the disposition of and other income received with respect to assets held with respect to each of the Funds shall be reinvested in the respective Fund and all expenses of the Trust that are properly allocable to a particular Fund shall be so allocated and charged.

6.2 Investment of Participant's Accounts

(a) A Participant may, in accordance with applicable administrative procedures, specify the percentages of the Before-Tax Contributions, After-Tax Contributions, Matching Contributions, and Rollover Contributions made by or on behalf of the Participant that shall be invested in each Fund maintained under the Plan.

(b) If an investment fund is closed, the Participant shall redirect the investment of amounts held in a closing investment fund to a new or remaining investment fund. If a Participant does not provide timely affirmative investment instructions, the Administrator may establish procedures in accordance with section 404(c)(4) of ERISA under which amounts invested in a closing investment fund shall be transferred to a new or remaining investment fund. Such procedures shall be subject to the following:

(i) Amounts invested in a closing investment fund shall be transferred to a new or remaining investment fund with the characteristics, including characteristics relating to risk and rate of return, that are reasonably similar to the characteristics of the closing investment fund; and

(ii) At least 30 days and no more than 60 days prior to the effective date of the change, Participants shall be provided with written notice of the change and information comparing the existing funds and the new or remaining investment fund to which amounts invested in the closing investment fund will be transferred (in the absence of affirmative investment instructions from the Participant to the contrary).

(c) If a Participant fails to direct the investment of his Account, it shall be invested in an investment fund selected by the Administrator until superseded by a subsequent election by the Participant. It is intended that the investment fund selected by the Administrator shall be a "qualified default investment alternative" as described in Section 404(c)(5) of ERISA and Department of Labor Regulations issued thereunder. Participants on whose behalf an investment in the default investment fund may be made shall be notified at least 30 days in advance of the first such investment and shall be notified at least 30 days in advance of each subsequent Plan Year. Any material relating to the Participant's investment in the default investment fund (e.g., account statements, prospectuses) shall be provided to such Participants.

6.3 Responsibility for Investments

Each Participant is solely responsible for the selection of his investment options. Participants shall exercise such responsibility in a manner intended to relieve Plan fiduciaries from liability for investments in accordance with Section 404(c) of ERISA. The Trustee, the Administrator, the Employer and the officers, supervisors and other employees of the Employer are not empowered to advise a Participant as to the manner in which his Accounts shall be invested. The fact that a particular Fund is available to Participants for investment under the Plan shall not be construed as a recommendation for investment in that Fund. The Employer shall be the named fiduciary for the purposes of carrying out the Participant's investment instructions.

6.4 Changing Investment Elections - Future Contributions

A Participant may, in accordance with applicable administrative procedures, change his investment election as to subsequent contributions, subject to the limitations of Section 6.2, as of any Valuation Date.

6.5 Transfer among Funds

A Participant may, in accordance with applicable administrative procedures, elect to transfer all or a portion of the balance in all of his Accounts between and among Funds as of any Valuation Date.

6.6 Special Rules Concerning the Company Stock Fund

Consistent with the terms of the Trust Agreement, the following rules shall apply to the Company Stock Fund:

(a) Voting. Voting, tender and similar rights with respect to Company Stock shall be passed through by the Trustee to Participants and Beneficiaries with accounts holding such securities. If the Trustee does not receive instructions with respect to shares, or if the Plan holds unallocated shares, the Trustee shall act with respect to those shares in the same proportion as the shares for which the Trustee has received instruction.

(b) Confidentiality. The Trustee shall employ procedures to ensure that information relating to the purchase, holding, and sale of Company Stock and the exercise of voting, tender and similar rights with respect to Company Stock by Participants and Beneficiaries is maintained in accordance with procedures which are designed to safeguard the confidentiality of such information, except to the extent necessary to comply with applicable law. The Administrator shall be responsible for ensuring that such procedures are sufficient to safeguard Participant confidentiality, such procedures are being followed, and that an independent fiduciary, such as the Trustee, is appointed under the circumstances described in Department of Labor Regulation section 2550.404c-1(d)(2)(ii)(E)(4)(ix).

(c) Transfers/Restrictions. Transactions in Company Stock may be subject to such procedures or restrictions as the Company or the Administrator deem appropriate to comply with federal or state securities law consistent with Section 401(a)(35)(D)(ii)(II) of the Code. Otherwise, a Participant may direct the Administrator to transfer all or a portion of the Participant's Account balance invested in Company Stock into other Funds in accordance with Section 6.5.

(d) Construction. It is intended that transactions in the Company Stock Fund will be described in ERISA Section 404(c).

(e) Compliance with Section 401(a)(35) of the Code. The Company Stock Fund shall comply with the requirements of Section 401(a)(35) of the Code. The diversification requirements shall apply as follows:

(i) With respect to a Participant (including for this section an alternate payee who has an account under the Plan or a deceased Participant's beneficiary), if any portion of the Participant's account attributable to elective deferrals (as described in Section 402(g)(3)(A) of the Code), employee contributions or rollover contributions is invested in publicly traded employer securities, then the Participant must be offered the opportunity to elect to divest those employer securities and reinvest an equivalent amount in other investment options available under the Plan.

(ii) With respect to a Participant who has completed at least three Years of Service (including for purposes of this section an alternate payee who has an account under the Plan with respect to such Participant or a deceased Participant's beneficiary), if a portion of the Participant's account attributable to employer nonelective contributions is invested in publicly traded employer securities, the Participant must be offered the opportunity to elect to divest those employer securities and reinvest an equivalent amount in other investment options available under the Plan.

(iii) At least three investment options (other than employer securities) must be offered to Participants described in (i) and (ii) above. Each investment option must be diversified and have materially different risk and return characteristics. Periodic reasonable divestment and reinvestment opportunities must be provided at least quarterly. Except as provided in Sections 1.401(a)(35-1(e)(2) and (3) of the Treasury Regulations, restrictions (either direct or indirect) or conditions will not be imposed on the investment of publicly traded employer securities if such restrictions or conditions are not imposed on the investment of other plan assets.

ARTICLE VII

VESTING

7.1 Vesting in Before-Tax Contribution, After-Tax Contribution and Rollover Accounts

A Participant shall at all times have a one hundred percent (100%) nonforfeitable vested right to the value of his Before-Tax Contribution Account, After-Tax Contribution Account and Rollover Account.

7.2 Vesting in Matching Contribution Account

(a) A Participant receiving Matching Contributions described in Section 3.3(a) or (c) shall have a one hundred percent (100%) nonforfeitable right to that portion of his Matching Contribution Account attributable to such contributions.

(b) A Participant who prior to January 1, 2012 received Matching Contributions described in Section 3.3(b) of the prior Plan shall have a nonforfeitable right to that portion of his Matching Contribution Account attributable to such contributions in accordance with the following schedule:

Years of Service	**Vested Percentage**
Less than 3	0
3 or more	100

(c) Notwithstanding the provisions of (b) above, a Participant shall have a one hundred percent (100%) nonforfeitable vested right to the value of his Matching Contribution Account upon the occurrence of any of the following events prior to his Severance from Employment: (i) Normal Retirement Age, (ii) Disability, (iii) death, or (iv) in accordance with Section 13.4.

7.3 Forfeiture of Nonvested Interest

Upon a Participant's Severance from Employment, the nonvested portion of a Participant's Matching Contribution Account shall be forfeited at the earlier of the date he receives a distribution of the vested portion of his Account balance or the date he incurs five consecutive One-Year Breaks in Service or a one-year period of absence described in Section 7.4(a), whichever is applicable. The Administrator shall apply all forfeitures (i) by restoring the amount of previous forfeitures, in accordance with Section 7.4(b) or (c), (ii) by reducing the amount of Matching Contributions required under the Plan for the then current Plan Year and allocating such forfeitures in a manner consistent with Section 3.3(a), or using them to pay reasonable administrative expenses of the Plan.

7.4 Restoration of Forfeitures and Service

(a) If a former Participant whose Severance from Employment resulted in a forfeiture of the entire portion of his Account balance pursuant to Section 7.3 resumes participation in the Plan after at least five (5) consecutive One-Year Breaks in Service (with respect to Matching Contributions), he shall have no right to restoration of any previously forfeited portion of his Account. Such Participant's Years of Service or period of employment after the Break in Service or period of absence shall not be taken into account in determining the Participant's vested nonforfeitable right to the value of his Matching Contribution Account attributable to Matching Contributions made by the Employer before he resumed participation in the Plan.

(b) If a former Participant (i) whose Severance from Employment resulted in a forfeiture of less than the entire portion of his Account balance pursuant to Section 7.3 did not receive a distribution pursuant to Section 9.3 and resumes employment as an Eligible Employee or (ii) whose Severance from Employment resulted in a forfeiture of the entire portion of his Account balance pursuant to Section 7.3 resumes employment as an Eligible Employee, in either case prior to incurring five (5) consecutive One-Year Breaks in Service or a one-year period of absence, whichever is applicable, the previously forfeited portion of his Account shall be restored upon his Reemployment Commencement Date. Such Participant's Years of Service or period of employment before and after the Break in Service shall be taken into account in determining the Participant's vested nonforfeitable right to the value of his Matching Contribution Account.

(c) If a former Participant whose Severance from Employment resulted in a forfeiture of less than the entire portion of his Account balance pursuant to Section 7.3 received a distribution pursuant to Section 9.3 and resumes employment as an Eligible Employee prior to incurring five (5) consecutive One-Year Breaks in Service, the previously forfeited portion of his Account shall be restored upon the date on which the Participant repays in cash to the Plan the full amount of the distribution, in accordance with applicable administrative procedures. Such repayment must be made prior to the end of the five-year period commencing on the Participant's Reemployment Commencement Date. Such Participant's Years of Service before and after the Break in Service shall be taken into account in determining the Participant's vested nonforfeitable right to the value of his Matching Contribution Account.

(d) Notwithstanding any provision herein to the contrary, if a distribution is made at a time when a Participant has less than a one hundred percent (100%) nonforfeitable vested right to the value of his Matching Contribution Account and may increase his vested percentage in such Account after the distribution,

(i) a separate account will be established for the Participant's interest in the Plan as of the time of the distribution, and

(ii) at any relevant time, the Participant's nonforfeitable portion of the separate account will be equal to an amount ("X") determined by the formula:

$$X = P(AB + (R \times D)) - (R \times D)$$

For purposes of applying the formula: P is the nonforfeitable percentage at the relevant time, AB is the account balance at the relevant time, D is the amount of the distribution and R is the ratio of the account balance at the relevant time to the account balance after distribution.

ARTICLE VIII

WITHDRAWALS AND LOANS DURING EMPLOYMENT

8.1 After-Tax Contribution Account Withdrawals

A Participant may, in accordance with applicable administrative procedures, elect to withdraw all or a portion of his After-Tax Contribution Account from the Plan at any time. Any withdrawal made pursuant to this Section 8.1 shall be taken, to the extent available, prorata from the Investment Funds in the order established by the Administrator.

8.2 Rollover Contribution Account Withdrawal

A Participant may, in accordance with applicable administrative procedures, request a withdrawal of all or a portion of his Rollover Account, determined as of the Valuation Date coinciding with or immediately following receipt of such request. Any withdrawal made pursuant to this Section 8.2 shall be taken, to the extent available, pro rata from the Investment Funds.

8.3 Age 59½ Withdrawals

(a) A Participant who has attained age 59½ and withdrawn all of his After-Tax Contribution Account pursuant to Section 8.1 above may, in accordance with applicable administrative procedures, request a withdrawal of all or a portion of his Before-Tax Contribution Account, determined as of the Valuation Date coinciding with or immediately following receipt of such request. Any withdrawal made pursuant to this Section 8.3(a) shall be taken, to the extent available, prorata from the Investment Funds in the order established by the Administrator.

(b) A Participant who has attained age 59½ and has a one hundred percent (100%) nonforfeitable vested right to the value of his Matching Contribution Account may request a withdrawal of the entire portion of his individual Account, determined as of the Valuation Date coinciding with or immediately following receipt of such request. Any withdrawal made pursuant to this Section 8.3(b) shall be taken, to the extent available, prorata from the Funds and shall be subject to the provisions of Sections 8.1 and 8.3(a) above.

8.4 Age 70½ Withdrawals

A Participant who has attained age 70½ and withdrawn all of his After-Tax Contribution Account pursuant to Section 8.1 may, in accordance with applicable administrative procedures, withdraw all or any portion of the balance of his Account determined as of the Valuation Date

coinciding with or immediately following receipt of such request. Such a withdrawal shall be subject to the foregoing provisions of this Article VIII but shall not be subject to the withdrawal penalty provisions of Section 8.3. Partial withdrawals are permitted under this Section 8.4. Any withdrawal made pursuant to this Section 8.4 shall be taken, to the extent available, prorata from the Funds.

8.5 Hardship Withdrawals

(a) A Participant who has suffered a Hardship may request a withdrawal of all or any portion of the value of his Before-Tax Contribution Account (excluding all earnings comprising part of such Account that were credited after 1988) determined as of the Valuation Date coinciding with or immediately following receipt of such request. The request must be made in accordance with procedures prescribed by the Administrator.

(b) Before requesting a withdrawal pursuant to this Section 8.5, a Participant must first obtain all distributions, other than hardship distributions, and all nontaxable loans currently available to him under all qualified plans maintained by the Employer.

(c) The amount of any Hardship withdrawal shall not exceed the amount required to meet the immediate and heavy financial need created by the hardship, including the amount necessary to pay any income taxes and related penalties resulting from the distribution. The determination of the existence of the financial need and the amount necessary to meet that need shall be made by the Administrator in accordance with objective standards on a uniform and nondiscriminatory basis.

(d) A Participant who obtains a Hardship withdrawal pursuant to this Section 8.5 shall be prohibited from making Before-Tax Contributions and After-Tax Contributions to the Plan and to all other plans maintained by the Employer for six (6) months from the date of the withdrawal

(e) Any Hardship withdrawal made pursuant to this Section 8.5 shall be taken, to the extent available, prorata from the Funds in the order described in Section 8.3(a). All withdrawal payments shall be made in a lump sum in cash as soon as practicable after the Administrator makes its determination.

8.6 Loans to Participants

(a) <u>Loans</u>. The Administrator or its delegate may, in accordance with a uniform and nondiscriminatory policy, direct the Trustee to loan a Participant amounts from the vested portion of his Accounts. All loans shall be in accordance with the terms, conditions, requirements and limitations specified in this Section 8.6 and any separate written document adopted by the Administrator and forming part of the Plan. It is intended that all loans made to Participants under this Section 8.6 shall meet the requirements of Section 72(p) of the Code.

(b) Loan Administration. The loan provision of the Plan shall be administered by the Administrator, which shall establish the terms and conditions generally applicable to loans made under the Plan. The Administrator is authorized to delegate to the Trustee the authority to review loan requests, execute loan agreements and collect loan payments.

In administering the loan provisions of this Section 8.6, the Administrator shall:

(i) adopt such rules and regulations as it deems necessary for the proper and efficient administration of loans, including, but not limited to, appropriate adjustments in the accounting provisions of the Plan as it deems necessary and advisable to facilitate and account for loans;

(ii) establish standards that shall be used to determine if a loan request should be approved;

(iii) determine how the interest rate to be charged on outstanding loans is to be calculated and when the rate to be charged for new loans is to be changed;

(iv) determine, from time to time, the minimum loan amount;

(v) employ agents, attorneys, accountants, and other persons to administer the loan provision and to collect outstanding loans; and

(vi) take all other actions necessary or advisable to carry out the provisions of this Section 8.6.

(c) Loan Eligibility. Any Participant who is either (i) an Employee paid on the payroll system of the Employer or (ii) a former employee who is a party in interest as defined in Section 3(14) of ERISA with respect to the Plan may request a loan subject to the terms, conditions and limitations prescribed in this Section 8.6.

(d) Loan Request. Each loan request must be made in accordance with procedures prescribed by the Administrator. Two loans may be granted concurrently and/or may be outstanding at any one time if one loan is a principal residence loan, which is a loan used to acquire a dwelling that within a reasonable period of time is to be used (determined at the time the loan is to be made) as the principal residence of the Participant.

(e) Term of Loan and Payment. The Administrator or its delegate shall review each loan request and decide whether or not it shall be approved. The decision of the Administrator or its delegate regarding the approval of the loan request shall be final and binding on all parties. Each loan shall be evidenced by a promissory note executed by the borrowing Participant in a form approved by the Administrator and shall provide for payment of principal and interest based on substantially level amortization payments. All loans shall be subject to a specific repayment schedule with payments to be made not less frequently than quarterly over the term of the loan. The period of repayment for any loan shall in no event exceed sixty (60) months; provided, however, that the

60-month repayment period restriction shall not apply to any principal residence loan as defined in Section 8.6(d). The Administrator or its delegate shall have discretion to determine when and under what circumstances a principal residence loan shall be made and the loan repayment period for such loans.

A loan to a Participant shall be secured by the Participant's Account. Loan payments shall be required to be made through payroll deductions, and all Participants shall be required to execute an irrevocable authorization directing the Employer to deduct the loan payments from the Participant's wages or salary, which amounts shall be transmitted to the Trustee and applied against the outstanding loan balance. Effective as of April 1, 2000, a Participant who terminated with an outstanding loan balance shall be permitted to continue to make loan repayments other than through payroll deduction by personal check or cash in accordance with the repayment schedule set forth in the promissory note. Participants may prepay the entire amount of the remaining unpaid principal balance (and all remaining interest due thereon) at any time without penalty.

(f) Maximum Loan. Loans to a Participant (when added to the outstanding balance of all other loans from the Plan and any other qualified plan maintained by the Employer) shall not be in an amount that exceeds the lesser of:

(i) $50,000, reduced by the excess (if any) of the highest outstanding balance of loans from the Plan during the one-year period ending on the day before the date on which such loan is made, over the outstanding balance of other loans from the Plan on the date the new loan is made, or

(ii) fifty percent (50%) of the vested portion of the Participant's Account reduced by the then outstanding balance of any other loans that the Participant received from the Plan.

The Administrator shall also establish guidelines relating to the ability of the Participant to repay the loan, which shall determine the maximum amount of any loan which can be made to any Participant.

(g) Interest. Each loan shall bear interest at a rate to be fixed by the Administrator and, in determining the interest rate, the Administrator shall take into consideration interest rates currently being charged by commercial lending institutions. Interest rates shall be fixed for the terms of the loan at the time the loan is made, and the Administrator shall determine periodically the interest rate to be charged on new loans.

(h) Failure to Repay Loans. The Administrator shall establish uniform rules to apply where a Participant fails to repay any portion of a loan made to him and accrued interest thereon in accordance with the terms of the loan, or where any portion of a loan and accrued interest thereon remains unpaid on a Participant's Severance from Employment, if the Participant elects not to continue repayments on a non-payroll deduction basis as permitted by Section 8.6(e). Such rules shall not be inconsistent with Section 72(p) of the Code and Regulations thereunder. Loan repayments with respect to qualified military service will be suspended as permitted under Sections 414(u)(4) and 72(p) of the Code.

Notwithstanding the foregoing provisions of this Section 8.6(h), if a Participant loan remains unpaid at the time that a distribution is due the Participant (or his Beneficiary) under the Plan, the Administrator shall reduce the amount otherwise distributable to the Participant or Beneficiary by the unpaid balance of principal and accrued interest on the Participant's loan and distribute (in kind) the promissory note or other agreement evidencing such loan in full or partial satisfaction of the obligation to distribute the Participant's vested Account.

(i) Directed Investment. Any loan to a Participant under this Section 8.6 shall be made prorata from the Investment Funds in which the Participant's individual Account is invested, shall be charged against said Account and shall be treated as a segregated investment of the Participant's Account. Any principal and interest paid on the loan shall be paid prorata to the Investment Funds in which are invested the Participant's Accounts from which the loan was taken, in the same proportions as the amounts taken from those Accounts. Loan repayments shall be applied first to satisfy accrued loan interest and the remainder shall be applied to principal.

ARTICLE IX

DISTRIBUTIONS UPON SEVERANCE FROM EMPLOYMENT

9.1 Eligibility for Distribution

A Participant's vested Account shall become payable upon Severance from Employment due to death, Disability, attainment of Normal Retirement Age or other termination of employment.

A Participant's Before-Tax Contributions, qualified nonelective contributions, qualified matching contributions and earnings attributable to these contributions shall be distributed on account of the Participant's Severance from Employment.

9.2 Form of Payment

Benefits shall be paid in a single lump sum payment.

9.3 Timing of Payment

Benefits that become payable in accordance with Section 9.1 shall be distributed as soon as administratively feasible after the Participant or the Beneficiary, as the case may be, elects, in accordance with procedures established by the Administrator, to receive a distribution.

If the vested value of a Participant's Account is $1,000 or less at the time benefits become distributable in accordance with Section 9.1, the Participant or Beneficiary, as the case may be, shall be required to receive a distribution of the balance in a single lump sum as soon as administratively practicable.

9.4 Special Timing Rules

Unless a Participant elects otherwise, his vested Account shall be distributed to him no later than sixty (60) days after the close of the Plan Year in which occurs the latest of his Normal Retirement

Age, the tenth (10th) anniversary of the year in which he commenced participation in the Plan or the date of his Severance from Employment. The failure of a Participant to consent to a distribution while his benefit is immediately distributable within the meaning of Section 411(a)(11) of the Code shall be deemed to be an election to defer commencement of payment of any benefit sufficient to satisfy this Section 9.4.

9.5 Proof of Death

The Administrator may require and rely upon such proof of death and such evidence of the right of any Beneficiary or other person to receive the value of the Accounts of a deceased Participant as the Administrator may deem proper, and its determination of death and of the right of that Beneficiary or other person to receive payment shall be conclusive.

9.6 Direct Rollovers

(a) In General. Notwithstanding any provision of the Plan to the contrary that would otherwise limit a Distributee's election under this Section 9.6, a Distributee may elect, at the time and in the manner prescribed by the Administrator, to have any portion of an Eligible Rollover Distribution paid directly to an Eligible Retirement Plan specified by the Distributee in a Direct Rollover. Notwithstanding the foregoing, the amount to be distributed in a direct rollover to a Distributee who is not the must be paid in a direct trustee-to-trustee transfer to an individual retirement plan described in Section 402(c)(8)(B)(i) or (ii) of the Code that is established for the purposes of receiving the distribution on behalf of the nonspousal beneficiary.

(b) Eligible Rollover Distribution. An Eligible Rollover Distribution is any distribution of all or any portion of the balance to the credit of the Distributee, except that an Eligible Rollover Distribution does not include: any distribution that is one of a series of substantially equal periodic payments (no less frequently than annually) made for the life (or life expectancy) of the Distributee or the joint lives (or joint life expectancies) of the Distributee and the Distributee's designated beneficiary, or for a specified period of ten years of more; any distribution to the extent such distribution is required under Section 401(a)(9) of the Code; the portion of any distribution that is not includible in gross income; any hardship distribution. A portion of a distribution shall not fail to be an eligible rollover distribution merely because the portion consists of After Tax employee contributions or Roth contributions which are not includible in gross income. However, such portion may be transferred only to an individual retirement account or annuity described in Section 408(a) or (b) of the Code, a qualified defined benefit or defined contribution plan described in Section 401(a) or 403(a) of the Code, or an annuity contract described in Section 403(b) of the Code that agrees to separately account for amounts so transferred, including separately accounting for the portion of such distribution which is includible in gross income and the portion of such distribution which is not so includible.

(c) Eligible Retirement Plan. An Eligible Retirement Plan is an individual retirement account described in Section 408(a) of the Code, an individual retirement annuity described in Section 408(b) of the Code, an annuity plan described in Section 403(a) of the Code, a qualified trust described in Section 401 (a) of the Code, that accepts the Distributee's Eligible Rollover Distribution, an annuity contract described in Section 403(b) of the Code and an eligible

Plan under Section 457(b) of the Code which is maintained by a state, political subdivision of a state or any agency or instrumentality of a state or political subdivision of a state which agrees to separately account for such amounts transferred into the plan from the Plan, or to a Roth IRA described in Section 408A(b) of the Code. The definition of eligible retirement plan shall also apply in the case of a distribution to a surviving spouse or to a spouse or former spouse who is the alternate payee under a qualified domestic relations order as defined in Section 414(p) of the Code.

(d) Distributee. A Distributee includes an Employee or former Employee. In addition, the Employee's or former Employee's surviving Spouse and the Employee's or former Employee's Spouse or former Spouse who is the alternate payee under a qualified domestic relations order, as defined in Section 414(p) of the Code, are Distributees with regard to the interest of the Spouse or former Spouse.

(e) Direct Rollover. A Direct Rollover is a payment by the Plan to the Eligible Retirement Plan specified by the Distributee.

(f) Nonspousal Rollovers. Effective for distributions on and after January 1, 2008, a distribute who is a designated beneficiary (as defined in Section 401(a)(9)(E) of the Code) of a deceased Participant and who is not the deceased Participant's surviving Spouse (a "nonspousal beneficiary") may elect, at the time and in the manner prescribed by the Administrator, to have any amount payable to him or her paid directly in a direct rollover. The amount to be distributed in the direct rollover must satisfy all of the requirement to be an eligible rollover distribution other than the requirement that the distribution be made to the Participant or the Participant's Spouse and must be paid in a direct trustee-to-trustee transfer to an individual retirement plan described in Section 402(c)(8)(B)(i) or (ii) of the Code that is established for the purposes of receiving the distribution on behalf of the nonspousal beneficiary.

9.7 Minimum Required Distributions

The requirements of this Section shall take precedence over any inconsistent provisions of this Plan. Distributions in all cases will be made in accordance with Section 401(a)(9) of the Code and the regulations promulgated thereunder.

(a) Time and Manner of Distribution.

(i) Required Beginning Date. The participant's entire interest shall be distributed, or begin to be distributed, to the Participant no later than the Participant's Required Beginning Date.

(ii) Death of Participant before Distributions Begin. If the Participant dies before distributions begin, the Participant's entire interest shall be distributed, or begin to be distributed, no later than as follows:

(A) If the participant's surviving Spouse is the Participant's sole designated beneficiary, then distributions to the surviving Spouse shall begin by December 31 of

the calendar year immediately following the calendar year in which the Participant died, or by December 31 of the calendar year in which the Participant would have attained age 70½, if later.

(B) If the participant's surviving Spouse is not the Participant's sole designated beneficiary, then distributions to the designated beneficiary shall begin by December 31 of the calendar year immediately following the calendar year in which the Participant died.

(C) If there is no designated beneficiary as of September 30 of the year following the year of the Participant's death, the Participant's entire interest shall be distributed by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(D) If the Participant's surviving Spouse is the Participant's sole designated beneficiary and the surviving Spouse dies after the Participant but before distributions to the surviving Spouse begin, this subsection (a)(ii), other than subsection (a)(ii)(A), will apply as if the surviving Spouse were the Participant.

For purposes of subsections (a)(ii) and (c), unless subsection (a)(ii)(D) applies, distributions are considered to begin on the Participant's Required Beginning Date. If subsection (a)(ii)(D) applies, distributions are considered to begin on the date distributions are required to begin to the surviving Spouse under subsection (a)(ii)(A). If distributions under an annuity purchased from an insurance company irrevocably commence to the Participant before the Participant's Required Beginning Date (or to the Participant's surviving Spouse before the date distributions are required to begin to the surviving Spouse under subsection (a)(ii)(A), the date distributions are considered to begin is the date distributions actually commence.

(iii) Forms of Distribution. Unless the Participant's interest is distributed in the form of an annuity purchased from an insurance company or in a single sum on or before the Required Beginning Date, as of the first distribution calendar year distributions shall be made in accordance with subsections (b) and (c) of this Section. If the Participant's interest is distributed in the form of an annuity purchased from an insurance company, distributions thereunder will be made in accordance with the requirements of Section 401(a)(9) of the Code and the Treasury Regulations.

(b) Required Minimum Distributions during Participant's Lifetime.

(i) Amount of Required Minimum Distribution for Each Distribution Calendar Year. During the Participant's lifetime, the minimum amount that will be distributed for each distribution calendar year is the lesser of:

(A) the quotient obtained by dividing the Participant's account balance by the distribution period in the Uniform Lifetime Table set forth in Treasury Regulation Section 1.401(a)(9)-9, using the Participant's age as of the Participant's birthday in the distribution calendar year; or

(B) if the Participant's sole designated beneficiary for the distribution calendar year is the Participant's Spouse, the quotient obtained by dividing the Participant's account

balance by the number in the Joint and Last Survivor Table set forth in Treasury Regulation Section 1.401(a)(9)-9, using the Participant's and Spouse's attained ages as of the Participant's and Spouse's birthdays in the distribution calendar year.

(ii) Lifetime Required Minimum Distribution through Year of Participant's Death. Required minimum distributions will be determined under this subsection (b) beginning with the first distribution calendar year and up to and including the distribution calendar year that includes the Participant's date of death.

(c) Required Minimum Distributions after Participant's Death.

(i) Death on or after Date Distributions Begin

(A) Participant Survived by Designated Beneficiary. If the Participant dies on or after the date distributions begin and there is a designated Beneficiary, the minimum amount that will be distributed for each distribution calendar year after year of the Participant's death is the quotient obtained by dividing the Participant's account balance by the longer of the remaining life expectancy of the Participant or the remaining life expectancy of the Participant's designated beneficiary, determined as follows:

(1) The Participant's remaining life expectancy is calculated using the age of the Participant in the year of death, reduced by one for each subsequent year.

(2) If the Participant's surviving Spouse is the Participant's sole designated beneficiary, the remaining life expectancy of the surviving Spouse is calculated for each distribution calendar year after the year of the Participant's death using the surviving Spouse's age as of the Spouse's birthday in that year. For distribution calendar years after the year of the surviving Spouse's death, the remaining life expectancy of the surviving Spouse is calculated using the age of the surviving Spouse as of the Spouse's birthday in the calendar year of the Spouse's death, reduced by one for each subsequent calendar year.

(3) If the Participant's surviving Spouse is not the Participant's sole designated beneficiary, the designated beneficiary's remaining life expectancy is calculated using the age of the Beneficiary in the year following the year of the Participant's death, reduced by one for each subsequent year.

(B) No Designated Beneficiary. If the Participant dies on or after the date distributions begin and there is no designated beneficiary as of September 30 of the year after the year of the Participant's death, the minimum amount that shall be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant's account balance by the Participant's remaining life expectancy calculated using the age of the Participant in the year of death, reduced by one for each subsequent year.

(ii) Death before Date Distributions Begin

(A) Participant Survived by Designated Beneficiary. If the Participant dies before the date distributions begin and there is a designated beneficiary, the minimum amount that shall be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant's account balance by the remaining life expectancy of the Participant's designated beneficiary, determined as provided in subsection (c)(i).

(B) No Designated Beneficiary. If the Participant dies before the date distributions begin and there is no designated beneficiary as of September 30 of the year following the year of the Participant's death, distribution of the Participant's entire interest shall be completed by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(C) Death of Surviving Spouse before Distributions to Surviving Spouse are Required to Begin. If the Participant dies before the date distributions begin, the Participant's surviving Spouse is the Participant's sole designated beneficiary, and the surviving Spouse dies before distributions are required to begin to the surviving Spouse under subsection (a)(ii)(A), this subsection (c)(ii) shall apply as if the surviving Spouse were the Participant.

(d) Definitions.

(i) Designated Beneficiary. The individual who is designated as the Beneficiary under the Plan and is the designated Beneficiary under Section 401(a)(9) of the Code and Treasury Regulation Section 1.401(a)(9)-1, Q&A-4.

(ii) Distribution Calendar Year. A calendar year for which a minimum distribution is required. For distributions beginning before the Participant's death, the first distribution calendar year is the calendar year immediately preceding the calendar year which contains the Participant's Required Beginning Date. For distributions beginning after the Participant's death, the first distribution calendar year is the calendar year in which distributions are required to begin under subsection (a)(ii). The required minimum distribution for the Participant's first distribution calendar year shall be made on or before the Participant's Required Beginning Date. The required minimum distribution for other distribution calendar years, including the required minimum distribution for the distribution calendar year in which the Participant's Required Beginning Date occurs, will be made on or before December 31 of that distribution calendar year.

(iii) Life Expectancy. Life expectancy as computed by use of the Single Life Table in Treasury Regulation Section 1.401(a)(9)-9.

(iv) Participant's Account Balance. The Participant's account balance as of the last valuation date in the calendar year immediately preceding the distribution calendar year (valuation calendar year) increased by the amount of any contributions made and allocated or forfeitures allocated to the Participant's account balance as of dates in the valuation calendar year after the valuation date and decreased by distributions made in the valuation calendar year after the

valuation date. The Participant's account balance for the valuation calendar year includes any amounts rolled over or transferred to the Plan either in the valuation calendar year or in the distribution calendar year if distributed or transferred in the valuation calendar year.

(v) Required Beginning Date. The required beginning date of a Participant is April 1 following the calendar year in which the Participant attains age 70½ or if later, April 1 following the calendar year in which the Participant retires (except that benefit distributions to a 5 percent owner must commence by the April 1 of the calendar year following the calendar year in which the Participant attains age 70½).

(e) Election to Apply 5-Year Rule to Distributions to Designated Beneficiaries. If the Participant dies before distributions begin and there is a designated beneficiary, distribution to the designated beneficiary is not required to begin by the date specified in (a)(ii), but the Participant's entire interest will be distributed to the designated beneficiary by December 31 of the calendar year containing the fifth anniversary of the Participant's death. If the Participant's surviving Spouse is the Participant's sole designated beneficiary and the surviving Spouse dies after the Participant but before distributions to either the Participant or the surviving Spouse begin, this election will apply as if the surviving Spouse were the Participant. The election will apply to all distributions.

(f) Notwithstanding the foregoing, a Participant or Beneficiary who would have been required to receive required minimum distributions for 2009 but for the enactment of Section 401(a)(9)(H) of the Code ("2009 RMDs"), and who would have satisfied that requirement by receiving distributions that are equal to the 2009 RMDs will not receive those distributions for 2009 unless the Participant or Beneficiary chooses to receive such distributions. Participants and Beneficiaries described in the preceding sentence will be given the opportunity to elect to receive the distributions described in the preceding sentence. In addition, notwithstanding Section 9.6 of the Plan, and solely for purposes of applying the direct rollover provisions of the Plan 2009 RMDs will be treated as eligible rollover distributions.

ARTICLE X

TOP HEAVY PROVISIONS

10.1 When Applicable

If the Plan is determined to be "Top Heavy" for any Plan Year, the provisions of this Article shall supersede any conflicting provisions of the Plan.

10.2 Top Heavy Determination

(a) The Plan shall be Top Heavy with respect to any Plan Year in which, as of the "Determination Date", the ratio of the present value of accrued benefits under all defined benefit plans in the "Aggregation Group" for "Key Employees" plus all account balances attributable to

Employer and Employee contributions (except as otherwise noted below) under the Plan and all other defined contribution plans in the Aggregation Group, exceeds 60 percent of such present value of accrued benefits and such account balances for all Key Employees and Non-Key Employees under all plans in the Aggregation Group. If any individual has not performed services for any Employer maintaining the Plan at any time during the five (5) year period ending on the Determination Date, his accrued benefits and account balances shall not be taken into account to determine whether the Plan is Top Heavy. The accrued benefits and account balances of any individual who is not a Key Employee but who was a Key Employee in a prior year will be disregarded. In any event, the calculation of the Top Heavy ratio and the extent to which distributions, tax deductible qualified employee contributions, rollovers and transfers are taken into account shall be in accordance with Section 416 of the Code and Regulations thereunder. When aggregating plans, accrued benefits and account balances under other plans will be calculated as of determination dates that are within the same calendar year.

(b) Distributions during year ending on the Determination Date. The present values of accrued benefits and the amounts of account balances of an Employee as of the Determination Date shall be increased by the distributions made with respect to the Employee under the Plan and any plan aggregated with the Plan under Section 416(g)(2) of the Code during the 1-year period ending on the determination date. The preceding sentence shall also apply to distributions under a terminated plan which, had it not been terminated, would have been aggregated with the Plan under Section 416(g)(2)(A)(i) of the Code. In the case of a distribution made for a reason other than Severance from Employment, death, or disability, this provision shall be applied by substituting 5-year period for 1-year period.

(c) Employees not performing services during year ending on the determination date. The accrued benefits and accounts for any individual who has not performed services for the Employer during the 1-year period ending on the determination date shall not be taken into account.

10.3 Minimum Contribution

For each year that the Plan is Top Heavy the Employer shall contribute to the Plan and allocate to the Matching Contribution Account of each Non-Key Employee (including such an individual who is eligible to participate but has not elected to do so in accordance with Article II) an amount that is not less in total than the lesser of three percent (3%) of the Non-Key Employee's Compensation for the Plan Year or the greatest amount (expressed as a percentage of the Compensation) allocated to the Account of any Key Employee for that year. This minimum allocation shall be made even though, under other Plan provisions, the Eligible Employee would not otherwise be entitled to receive an allocation or would have received a lesser allocation for the year because of (i) his failure to be employed on a specified date such as the last day of the Plan Year, (ii) his failure to make mandatory contributions, if any, to the Plan, or (iii) his Compensation being less than a stated amount. This requirement shall not apply to the extent the Participant is covered under any plan or plans of the Employer and such Employer has provided that the minimum benefit or minimum allocation requirements applicable to Top Heavy Plans will be satisfied in the other plan or plans.

10.4 Vesting Rules

For any Plan Year in which the Plan is Top Heavy, the minimum vesting schedule described in Section 10.5 will apply to the Plan in lieu of the schedule provided in Section 7.2. The minimum vesting schedule applies to all accrued benefits within the meaning of Section 411(a)(7) of the Code, including benefits accrued before the Plan became Top Heavy. Further, no reduction in vested benefits may occur in the event the Plan's status as Top Heavy changes for any Plan Year. However, this Section does not apply to the Account balance of any Employee who does not complete any Years of Service after the Plan has initially become Top Heavy and such Employee's Account balance will be determined without regard to this Section.

If the minimum vesting schedule shall apply, the nonforfeitable interest of such Participant in his Account balance attributable to Matching Contributions shall be determined on the basis of the following if such nonforfeitable interest is greater than that determined under Section 7.2:

Years of Service	Vested Percentage
Less than 2	0
2 but less than 3	20
3 but less than 4	40
4 but less than 5	60
5 but less than 6	80
6 or more	100

10.5 Dual Plan Special Limitations

If a Key Employee participates in both the Plan and a defined benefit plan maintained by the Employer, then for all years that the Plan and the defined benefit plan are Top Heavy and the Top Heavy ratio referred to in Section 10.7(b) does not exceed 90 percent, the minimum benefit described in Section 416(h)(2)(A) of the Code shall be provided under the defined benefit plan for each Non-Key Employee.

10.6 Aggregation Groups

(a) Aggregation Group means a required or permissive aggregation group. The required aggregation group consists of each plan of the Employer in which a Key Employee is a

participant and each other plan of the Employer which enables any plan of such Employer to meet the nondiscrimination requirements of Section 401(a)(4) of the Code. The Employer may permit any plan not required to be included in an Aggregation Group as being part of such group if such group would continue to meet the Section of the Code requirements previously set forth.

(b) Each plan of the Employer required to be included in an Aggregation Group shall be treated as a Top Heavy Plan if such group is a Top Heavy group. A required aggregation will be considered a Top Heavy group if the present value of the cumulative accrued benefits for Key Employees under all defined benefit plans included in such group and the aggregate of the accounts of Key Employees under all defined contribution plans included in such group exceed sixty percent (60%) of a similar sum determined for all Employees.

10.7 Key Employee Defined

Key Employee means any Employee or former Employee (including any deceased Employee) who at any time during the Plan Year that includes the determination date was an officer of the Employer having annual compensation greater than $145,000 (as adjusted under Section 416(i)(1) of the Code for Plan Years beginning after December 31, 2002), a 5-percent owner of the Employer, or a 1-percent owner of the Employer having annual compensation of more than $150,000. For this purpose, annual compensation means compensation within the meaning of Section 415(c)(3) of the Code. The determination of who is a Key Employee will be made in accordance with Section 416(i)(1) of the Code and the applicable regulations and other guidance of general applicability.

10.8 Determination Date Defined

Determination Date means with respect to the initial Plan Year, the last day of the first Plan Year and, for each other Plan Year, the last day of the preceding Plan Year.

10.9 Matching Contributions

Matching Contributions described in Section 3.3 of the Plan shall be taken into account for purposes of satisfying the minimum contribution requirements of Section 416(c)(2) of the Code and the Plan. The preceding sentence shall apply with respect to Matching Contributions under the Plan or, if the Plan provides that the minimum contribution requirement shall be met in another plan, such other plan. Matching Contributions that are used to satisfy the minimum contribution requirements shall be treated as Matching Contributions for purposes of the actual contribution percentage test and other requirements of Section 401(m) of the Code.

10.10 Contributions under Other Plans

The minimum benefit requirement shall be met as to non-Key Employees who participate in the Plan and in the PerkinElmer, Inc. Employees Retirement Plan by providing the minimum benefit required by Section 416 of the Code to such non-Key Employees under the PerkinElmer, Inc. Employees Retirement Plan.

ARTICLE XI

ADMINISTRATION OF PLAN

11.1 Records and Notices

The Administrator shall keep a record of all its proceedings and acts with respect to its administration of the Plan and shall maintain all such books of accounts, records and other data as may be necessary for the proper administration of the Plan. The Administrator shall have the discretionary authority to interpret the provisions of the Plan and Trust Agreement. The Administrator shall notify the Trustees of any action taken by the Administrator affecting the Trustees and its obligations or rights regarding the Plan and, when required, shall notify any other interested person or persons.

11.2 Powers and Duties

The Administrator has the following powers and duties:

(a) To determine the rights of eligibility of an Employee to participate in the Plan, the value of a Participant's Account and the nonforfeitable percentage of each Participant's Account;

(b) To adopt rules of procedure and regulations necessary for the proper and efficient administration of the Plan provided the rules are not inconsistent with the terms of the Plan;

(c) To construe and enforce the terms of the Plan and the rules and regulations it adopts, including interpretation of the Plan documents and documents related to the Plan's operation;

(d) To direct the Trustee as respects the crediting and distribution of the Trust Fund;

(e) To review and render decisions respecting a claim for (or denial of a claim for) a benefit under the Plan;

(f) To furnish the Employer with information which the Employer may require for tax or other purposes;

(g) To engage the service of agents whom it may deem advisable to assist it with the performance of its duties;

(h) To engage the services of an Investment Manager or Managers, as defined in Section 12.3, each of whom will have power and authority to manage, acquire or dispose (or direct the Trustee with respect to acquisition or disposition) of any Plan asset under its control; and

(i) To establish, in its sole discretion, a nondiscriminatory policy which the Trustee must observe in making loans, if any, to Participants and Beneficiaries.

All rules, procedures and decisions of the Administrator shall be uniformly and consistently applied to all Participants in similar circumstances. Such rules, procedures and decisions so made shall be conclusive and binding on all persons having an interest in the Plan.

11.3 Claims Procedure

The Office of the Senior Vice President Human Resources (the "Claims Administrator") shall make all initial determinations as to the right of any person to a benefit. If any application for payment of a benefit under the Plan shall be denied, the Claims Administrator shall notify the claimant within ninety (90) days of such application setting forth the specific reasons therefore and shall afford such claimant a reasonable opportunity for a full and fair review of the decision denying his or her claim. If special circumstances require an extension of time for processing the claim, the claimant will be furnished with a written notice of the extension prior to the termination of the initial ninety (90) day period. In no event shall such extension exceed a period of ninety (90) days from the end of such initial period. The extension notice shall indicate the special circumstances requiring an extension of time and the date by which the Claims Administrator expects to render its decision. The Claims Administrator may delegate initial determinations as to the right of any person to a benefit to a member of his or her staff.

The notice of the initial denial shall set forth, in addition to the specific reasons for the denial, the following:

(a) reference to pertinent provisions of the Plan;

(b) such additional information as may be relevant to the denial of the claim;

(c) an explanation of the claims review procedure; and

(d) notice that such claimant may request the opportunity to review pertinent Plan documents and submit a statement of issues and comments.

Within sixty (60) days following notice of denial of his or her claim, upon written request made by any claimant for a review of such denial to the Senior Vice President Human Resources (or such other member of the Administrative Committee designated by him or her to hear the appeal), the Senior Vice President Human Resources shall take appropriate steps to review the denial in light of any further information or comments submitted by such claimant.

The Senior Vice President Human Resources shall render a decision within sixty (60) days after the claimant's request for review and shall advise said claimant in writing of the decision on such review, specifying reasons and identifying appropriate provisions of the Plan. If special circumstances require an extension of time for processing, a decision will be rendered as soon as possible, but not later than one hundred twenty (120) days after receipt of a request for the review.

If the extension of time for review is required because of special circumstances, written notice of the extension shall be furnished to the claimant prior to the commencement of the extension. If the decision is not furnished within such time, the claim shall be deemed denied on review. The decision on review shall be in writing and shall include specific reasons for the decision, written in a manner calculated to be understood by the claimant without legal counsel, as well as specific references to the pertinent Plan provisions on which the decision is based.

ARTICLE XII

MANAGEMENT OF FUNDS

12.1 Appointment of Trustee

The Company shall appoint one or more Trustees to receive and hold in trust all contributions paid into the Trust Fund. Such Trustee or Trustees shall serve at the pleasure of the Company and shall have such rights, powers and duties as the Company shall from time to time determine including but not limited to those stated below.

12.2 Investment of Trust Fund by Trustees

All contributions made to the Trust Fund pursuant to the Plan shall be paid to the Trustees and, except as herein otherwise provided, shall be held, invested and reinvested by the Trustees without distinction between principal and income in such securities or such other property, real or personal, wherever situated, as the Trustees shall deem advisable, including, but not limited to, shares of stock, common or preferred, whether or not listed on any exchange, participations in mutual investment funds, bonds and mortgages, and other evidences of indebtedness or ownership, or in loans to Participants (consistent with other provisions hereof), and participations in any common trust fund established or maintained by the Trustees for the collective investment of fiduciary funds and shall not be limited by any state statute or judicial decision prescribing or limiting investments appropriate for trustees. The Trustees shall hold and retain all the property and assets of the Trust Fund including income from investments and from all other sources, for the exclusive benefit of the Participants and their Beneficiaries, as provided herein, and for paying the costs and expenses of administering the Plan or Trust Fund, to the extent that the same are not paid by any Employer.

12.3 Investment of Trust Fund by Investment Manager

The Company may enter into one or more agreements for the appointment of one or more Investment Managers to supervise and direct all the investment and reinvestment of a portion or all

of the Trust Fund in accordance with the provisions of the Plan in the same manner and with the same powers, duties, obligations, responsibilities and limitations as apply to the Trustees. As a condition to its appointment, an Investment Manager shall acknowledge in writing that it is a fiduciary with respect to the Trust Fund. An Investment Manager so appointed shall be an investment advisor registered under the Investment Advisors Act of 1940, a bank as defined in such Act or an insurance company that is qualified to manage the assets of employee benefit plans pursuant to the laws of more than one state. The Trustees shall be bound by the supervision and direction of the Investment Manager, unless and until the Company amends or revokes the appointment or authority of the Investment Manager.

The Company may furnish an Investment Manager with written investment guidelines for investment of the Trust Fund assets, which guidelines may include directions with respect to diversification of the investments. Any Investment Manager shall receive such reasonable compensation chargeable against the Trust Fund or payable by each Employer as shall be agreed upon by the Company. The Company may revoke any agreement with the Investment Manager at any time by thirty (30) days' written notice to the Investment Manager. Any Investment Manager may resign by thirty (30) days' written notice to the Committee.

12.4 Exclusive Benefit Rule

Except as otherwise provided in the Plan, no part of the corpus or income of the assets of the Plan shall be used for, or diverted to, purposes other than for the exclusive benefit of Participants and other persons entitled to benefits under the Plan. No person shall have any interest in or right to any part of the earnings of the assets of the Plan, or any right in, or to, any part of the assets held under the Plan, except as and to the extent expressly provided in the Plan.

12.5 Medium of Distribution

The Trustee shall cause all distributions to be made in cash. Notwithstanding the foregoing, if a Participant or Beneficiary whose Account is invested in Company Stock so elects in the manner prescribed by the Administrator, distribution of all or part of such interest shall be made in shares of Company Stock (with fractional shares paid in cash). The preceding sentence shall not apply in the case of hardship withdrawals pursuant to Section 8.5.

ARTICLE XIII

AMENDMENT, MERGER, TERMINATION OF PLAN

13.1 Amendment of Plan

The Company (for itself and other Employers) shall have the right at any time to amend the Plan, and retroactively if deemed necessary or appropriate, by written instrument approved by the Committee, except that no such amendment shall make it possible for any part of the assets of the Plan to be used for, or diverted to, purposes other than for the exclusive benefit of persons entitled to benefits under the Plan; provided, however, that an amendment that is expected to have a significant cost impact (including, without limitation, an amendment to merge or terminate the Plan) as determined by the Committee whose determination will be final and binding, must be approved by the Board of the Company; and provided further that the Senior Vice President Human Resources may approve any amendment necessary to comply with the Code, ERISA or other applicable laws and regulations. No amendment shall be made which has the effect of decreasing the balance of the Accounts of any Participant or of reducing the nonforfeitable percentage computed under the Plan as in effect on the date on which the amendment is adopted or, if later, the date on which the amendment becomes effective.

13.2 Merger or Consolidation

The Plan may not be merged or consolidated with, and its assets or liabilities may not be transferred to, any other plan unless each person entitled to benefits under the Plan would, if the resulting plan were then terminated, receive a benefit immediately after the merger, consolidation, or transfer which is equal to or greater than the benefit he would have been entitled to receive immediately before the merger, consolidation, or transfer if the Plan had then terminated.

13.3 Additional Participating Employers

(a) If any company is or becomes a subsidiary of or associated with the Company, the Committee may include any employees of that subsidiary or associated company in the participation of the Plan upon appropriate action by that company necessary to adopt the Plan. In that event, or if any persons become Employees of an Employer as the result of merger or consolidation or acquisition of all or part of the assets or business of another company or for purposes of a specific assignment at a specific location, the Committee shall determine to what extent, if any, previous service with the subsidiary, associated or other company or at the specific location shall be recognized under the Plan, but subject to the continued qualification and tax-exempt status of the Plan and trust, respectively, under the Code.

(b) Any Employer may terminate its participation in and withdraw from the Plan upon appropriate action by its board of directors. In that event, the assets of the Plan held on account of Participants in the employ of that Employer, and any unpaid balances of the Accounts of all Participants who have separated from the employ of that Employer, shall be determined by the Administrator. Those funds shall be distributed as provided in Section 13.4 if the Plan should be terminated with respect to the Employer, or shall be segregated by the Trustee as a separate trust, pursuant to certification to the Trustee by the Administrator, continuing the Plan as a separate plan for the Employees of that Employer under which the board of directors of that Employer shall succeed to all the powers and duties of the Board of Directors, including the appointment of an administrator for such separate plan. Except as required by applicable law, the withdrawal of an Employer from the Plan shall not constitute a partial or complete termination of the Plan as thereafter in effect with respect to any other Employer.

13.4 Termination of Plan

(a) The Board of Directors may terminate the Plan or completely discontinue contributions under the Plan for any reason at any time. In the case of the termination or partial termination of the Plan, or of the complete discontinuance of Employer contributions to the Plan, affected Participants shall be one hundred percent (100%) vested in and have a nonforfeitable right to the total amount in all of their Accounts under the Plan as of the date of the termination or discontinuance. The total amount in each Participant's Accounts shall be distributed, as the Administrator shall direct, to him or for his benefit or continued in trust for his benefit.

(b) The Plan will be deemed terminated (i) if and when the Company is judicially declared bankrupt or executes a general assignment to or for the benefit of its creditors, (ii) if and when the Company is a party to a merger in which it is not the surviving organization unless the surviving organization adopts the Plan within sixty (60) days after the merger, or (iii) upon dissolution of the Company.

ARTICLE XIV

MISCELLANEOUS PROVISIONS

14.1 Limitation of Liability

Neither the Company, any Employer, the Board of Directors, the Committee, the Administrator, nor any of their respective directors, officers and employees, shall incur any liability for any act or failure to act unless such act or failure to act constitutes a lack of good faith, willful misconduct or gross negligence in relation to the Plan or the Trust Fund.

14.2 Indemnification

To the extent that the Administrator, or directors, officers and employees of the Company or of a participating Employer who act as or on behalf of the Administrator or otherwise as plan fiduciaries, are not protected and held harmless by or through insurance, the Company indemnifies and saves harmless the Administrator and any director, officer or employee of the Company or of a participating Employer who acts on behalf of the Administrator or otherwise as a plan fiduciary, from and against any and all loss resulting from liability to which the Administrator, director, officer or employee, may be subjected by reason of any act or conduct (except willful misconduct or gross negligence) in connection with the Plan or Trust Fund or both, including reasonable attorneys' fees and amounts paid in settlement of any claims approved by the Company.

14.3 Compliance with ERISA

Anything herein to the contrary notwithstanding, nothing above or any other provision contained elsewhere in the Plan shall relieve a fiduciary or other person of any responsibility or

liability for any responsibility, obligation or duty imposed upon him pursuant to Title I, Part 4 of ERISA. Furthermore, anything in the Plan to the contrary notwithstanding, if any provision of the Plan is voided by ERISA Sections 410 and 411, such provision shall be of no force and effect only to the extent that it is voided by such Section.

14.4 Nonalienation of Benefits

(a) None of the payments, benefits or rights of any Participant shall be subject to any claim of any creditor of such Participant and, in particular, shall be free from attachment, garnishment, trustee's process, or any other legal or equitable process available to any creditor of such Participant. No Participant shall have the right to alienate, commute, pledge, encumber or assign any of the benefits or payments which he or she may expect to receive, contingently or otherwise, under the Plan, except the right to designate a Beneficiary or Beneficiaries as hereinbefore provided.

(b) Section 14.4(a) also shall apply to the creation, assignment or recognition of a right to any benefit payable with respect to a Participant pursuant to a domestic relations order, unless such order is a qualified domestic relations order as defined in Section 414(p) of the Code.

(c) The Plan may offset against the Account of any Participant, any amount that the Participant is ordered or required to pay under a judgment, order, decree or settlement described in ERISA Section 206(d)(4) and Section 401(a)(13)(C) of the Code.

14.5 Employment not Guaranteed by Plan

Neither the establishment of the Plan nor its amendment nor the granting of a benefit pursuant to the Plan shall be construed as giving any Participant the right to continue as an employee of an Employer, as limiting the rights of such Employer to dismiss or impose penalties upon the Participant or as modifying in any other way the terms of employment of any Participant.

14.6 Form of Communication

Any election, application, claim, notice or other communication required or permitted to be made by or to a Participant, the Administrator, the Company, or an Employer in writing shall be made in such form as the Administrator, the Company or the Employer, as the case may be, shall prescribe. Such communication shall be effective upon mailing if sent first class, postage prepaid and addressed to the addressee at its principal office, or to the Participant at his last known address, or upon personal delivery, if delivered to an officer of the addressee or to the Participant, as the case may be.

14.7 Facility of Payment

If the Participant entitled to receive payments hereunder is unable to care for his affairs because of illness, accident or disability, and a duly qualified guardian or legal representative is appointed for such Participant, the Administrator shall direct the Trustees to pay any amount to which the Participant is entitled to such duly qualified guardian or legal representative upon claim of such guardian or legal representative. If a duly qualified guardian or legal representative is not appointed for such Participant, the Administrator shall direct the Trustees to pay any amount to which the Participant is entitled to such person's Spouse, child, grandchild, parent, brother or sister or to a person deemed by the Administrator to have incurred expense for such person entitled to payment. Any payment made pursuant to this Section 14.7 in good faith shall be a payment for the account of the Participant and shall be a complete discharge from any liability of the Trust Fund or the Trustees therefor.

14.8 Service in More Than One Fiduciary Capacity

Any individual, entity or group of persons may serve in more than one fiduciary capacity with respect to the Plan, the Trust Fund or both.

14.9 Binding Effect of Company's Actions

Each Employer shall be bound by any and all decisions and actions taken by the Company hereunder.

14.10 Governing Law

Except to the extent inconsistent with and preempted by ERISA or other applicable Federal law, the Plan and all matters arising thereunder shall be governed by the laws of the Commonwealth of Massachusetts.

14.11 Military Service

Notwithstanding any other provision of the Plan to the contrary, service credit and contributions with respect to qualified Military Service will be provided in accordance with Section 414(u) of the Code. In addition, in accordance with Section 401(a)(37) of the Code, the survivors of a Participant who dies while performing qualified military service shall be entitled to additional benefits (other than benefit accruals relating to the period of qualified military service) that would be provided under the Plan if the Participant had resumed employment and then terminated employment on account of death. Thus, to the extent required by Section 401(a)(37) and Section 414(u)(8)(B), such a Participant shall be credited with vesting service for the period of the Participant's qualified military service.

IN WITNESS WHEREOF, and as evidence of the adoption of the Plan, the undersigned officer duly authorized has appended his signature this 20th day of December 2012.

PerkinElmer, Inc.

By:/s/ John R. Letcher
John R. Letcher
Its Senior Vice President, Human Resources

APPENDIX A
ADDITIONAL RULES FOR PUERTO RICAN PARTICIPANTS

(as amended and restated effective January 1, 2002)

1. **Purpose and Effect** – The purpose of this Appendix A is to modify the Plan to comply with the requirements of Sections 1165(a) and 1165(3) of the Puerto Rico Internal Revenue Code of 1994 (the "PR-Code"). The provisions of this Appendix A were originally effective on May 28, 1999, and the provisions of this Amended and Restated Appendix A are effective for Plan Years beginning on and after January 1, 2002. Appendix A shall only apply to those employees of the Employer whose compensation is subject to Puerto Rico Income Tax ("Appendix A Participants").

2 . **Type of Plan** – It is the intent of the Employer that the Plan be a profit-sharing plan as defined in Article 1165-1 of the PR-Code Regulations and that it include a cash or deferred arrangement qualified pursuant to PR-Code Section 1165(e). Contributions to the Plan by the Employer shall be made out of the Employer's current or accumulated earnings and profits.

Appendix A Participants Before-Tax Contributions – Appendix A Participants may direct the Employer to make Before-Tax Contributions out of current or accumulated earnings and profits of the Company up to an amount equal to the lesser of ten percent (10%) of the Appendix A Participant's compensation or $7,500 or such other limit provided under the PR-Code. Such amount will not be adjusted to reflect cost of living increases. This limit shall be applied by aggregating all plans maintained by the Employer and all affiliates that provide for elective deferrals.

3 . **Highly Compensated Appendix A Participant** – Any Appendix A Participant who, determined on the basis of compensation for each Plan Year, has greater compensation than two-thirds of all other Appendix A Participants will be considered a Highly Compensated Appendix A Participant.

4 . **Limitation on Appendix A Participants Before-Tax Contributions** – For each Plan Year, in addition to satisfying the actual deferral percentage test of Section 401(k) of the United States Internal Revenue Code of 1986, the Plan shall satisfy the average deferral percentage test pursuant to PR-Code Section 1165(e)(3) and the regulations promulgated thereunder. This test must be complied with only taking into consideration Appendix A Participants.

In no event shall the actual deferral percentage of the Highly Compensated Appendix A participants for any Plan Year exceed the greater of:

(a) the actual deferral percentage of all other Appendix A Participants for such Plan Year multiplied by 1.25; or

(b) the actual deferral percentage of all other Appendix A Participants for such Plan Year multiplied by 2.0; provided that the actual deferral percentage of Highly Compensated Appendix A Participants does not exceed that of all other Appendix A Participants by more than two (2) percentage points.

The “actual deferral percentage” of a group of Appendix A Participants means the ratio (expressed as a percentage) of employer contributions made on behalf of the Appendix A Participant for the Plan Year to the Appendix A Participant’s Compensation for the Plan Year. For purposes of calculating the actual deferral percentage, Employer contributions made on behalf of the Appendix A Participants shall include (1) Before-Tax Contributions and (2) at the election of the Company, Qualified Nonelective Contributions and Qualified Matching Contributions.

5. **Modification of Plan**. – Solely for purposes of applying the provisions of the Plan to Appendix A Participants, the Plan shall be modified as follows:

(a) A new Section 1.59 shall be added to read as follows:

> “1.59 “Qualified Matching Contributions” means Matching Contributions that are nonforfeitable when made, and that are distributable only in accordance with the distribution provisions that are applicable to Before-Tax Contributions.”

(b) A new Section 1.60 shall be added to read as follows:

> “1.60 “Qualified Nonelective Contributions” means contributions made by the Employer and allocated to Participant’s Account that the Participant may not elect to receive in cash until distributed from the Plan, that are nonforfeitable when made, and that are distributable only in accordance with the distribution provisions that are applicable to Before-Tax Contributions.”

(c) Article III shall be amended to add a new subparagraph (f) to Section 3.7 to read as follows:

> “(f) In lieu of distributing Excess Contributions as provided in Section 3.9 of the Plan, the Employer may use Qualified Matching Contributions to satisfy the actual deferral percentage test. Qualified Matching Contributions shall be applied in an amount sufficient to cause the Plan to satisfy the actual deferral percentage test. Qualified Matching Contributions taken into account under the actual deferral percentage test are not considered in the Average Contribution Percentage test.”

(d) Article III shall be further amended to add a new Section 3.15 titled "Qualified Nonelective Contributions" to read as follows:

> "3.15 Qualified Nonelective Contributions
>
> The Employer may elect to make Qualified Nonelective Contributions under the Plan. The amount of such contribution to the Plan for each Plan Year, if any, shall be in an amount determined by the Employer. Qualified Nonelective Contributions shall be allocated to the Account of Appendix A Participants who are not Highly Compensated Appendix A Participants and who are designated by the Employer.
>
> If the current year testing rules apply to the Plan, in lieu of distributing Excess Contributions or Excess Aggregate Contributions, the Employer may use all or any portion of the Qualified Nonelective Contributions to satisfy either the actual deferral percentage test or the Average Contribution Percentage test, or both, pursuant to regulations under the Code."

6 . **Use of Terms** – All terms and provisions of the Plan shall apply to this Appendix A, except that where the terms and provisions of the Plan and this Appendix A conflict, the terms and provisions of this Appendix A govern.

APPENDIX B
PREPARTICIPATION SERVICE

Employees of the following entities shall receive credit under the Plan for preparticipation service within the meaning of Treasury Regulation Section 1.401(a)(4)-11(d)(3)(ii)(A) for the following entities as of the dates indicated:

ENTITY	**DATE**
Packard Bioscience Company	November 13, 2001
Analytical Automation Specialists, Inc.	April 2, 2001
Lumen Technologies, Inc.	January 31, 2000
Wolfram, Inc.	January 31, 2000
Voltarc Technologies, Inc.	January 31, 2000
ILC Technology, Inc.	January 31, 2000
ORC Technologies	January 31, 2000

APPENDIX C
EFFECTIVE DATE OF ADOPTION OF 5% MATCHING CONTRIBUTION

Life Sciences Divisions 154 and 179	February 1, 2001
All Other Life Sciences SBU	January 1, 2003
Corporate (SBU 011)	January 1, 2003
Analytical Instruments (SBU 193 and 229)	January 1, 2003
OptoElectronics (generally)	January 1, 2009
OptoElectronics (grandfathered ERP participants)	January 31, 2011 (pro rated)

APPENDIX D
FLUID SCIENCES PARTICIPANTS

Active Participants employed by the Fluid Sciences Strategic Business Unit at the sites identified below ceased to be employed by the Company as of the transaction dates identified below (each, a "Transaction Date"). Any such Fluid Sciences Participant who remained employed by the Company through his applicable Transaction Date shall have a fully vested and nonforfeitable right to his Account.

Division	Location Number(s)	Transaction Date
Industrial Technologies	San Antonio – 043	November 9, 2005
Aerospace	Beltsville – 075 Phelps – 025	December 6, 2005 December 6, 2005
	Warwick – 031,040	December 6, 2005
Semiconductor	Daytona	February 28, 2006

With respect to such Fluid Sciences Participants for the Plan Year ending December 31, 2005 (December 31, 2006 with respect to Semiconductor employees), the Employer shall make Matching Contributions, as of the Transaction Date, on behalf of each such Participant who is employed on the Transaction Date. The amount of Matching Contributions allocable to the Matching Contribution Account of each such eligible Fluid Sciences Participant shall be 55% of the Participant's Matched Contributions for the part of the Plan Year in which he is a Participant.

APPENDIX E
IDS PARTICIPANTS

IDS Participants. Active Participants employed by the Company's Illumination and Detection Solutions ("IDS") business ceased to be employed by the Company and its affiliates as of November 28, 2010 (the "Final Employment Date"). Any such IDS Participant who remained employed by the Company through the Final Employment Date shall have a fully vested and nonforfeitable right to his Account.

With respect to such IDS Participants who are "Grandfathered Participants" described in Section 3.3(b)(ii) of the prior Plan, for the Plan Year ending December 31, 2010, the Employer shall make Matching Contributions, as of the Final Employment Date, on behalf of each such Participant who is employed on the Final Employment Date. The amount of Matching Contributions allocable to the Matching Contribution Account of each such eligible Grandfathered Participant shall be 55% of the Participant's Matched Contributions (not exceeding 6% of Compensation) for the part of the Plan Year ending December 31, 2010 in which he is a Participant.

With respect to IDS Participants who are eligible to receive a Matching Contribution described in Section 3.3(a) of the Plan, the provisions of Section 3.3(a)(ii) shall be applied for the Plan Year ending December 31, 2010 by substituting the words "the Final Employment Date" for the words "December 1 of such Plan Year."

For the avoidance of doubt, compensation attributable to periods on and after the Final Employment Date shall be disregarded for all purposes under the Plan and, on and after the Final Employment Date, PerkinElmer Illumination, Inc., PerkinElmer LED Solutions, Inc., and PerkinElmer Sensors, Inc. shall no longer be treated as Employers under the terms of the Plan because such entities have, following the Final Employment Date, ceased to be a subsidiaries or affiliates of the Company.

PERKINELMER, INC. SAVINGS PLAN

(Amended and Restated Effective as of January 1, 2012)

First Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Savings Plan (the "Plan"), which Plan was last amended and restated effective as of January 1, 2012;

WHEREAS, the Company wishes to amend the Plan in connection with obtaining a favorable determination letter from the Internal Revenue Service as to the Plan's continued qualified status; and

WHEREAS, the Company reserves the right pursuant to Section 13.1 to amend the Plan.

NOW, THEREFORE, the Company hereby amends the Plan, as follows, effective as set forth herein:

1. Section 1.44 is amended effective on the date hereof in its entirety to read as follows:

"Normal Retirement Age" means social security retirement age as defined in Code Section 415(b)(8), based on the year of a Participant's birth (age 65 in the case of a Participant born in 1942 and earlier; age 66 in the case of a Participant born in 1943 through 1959; age 67 in the case of a Participant born in or after 1960).

2. Section 3.7(a) is amended effective as of the Effective Date (as defined in the Plan) by adding to the end thereof the following text: "The Plan utilizes the current year testing method described in Treas. Reg. section 1.40l(k)-2(a)(2)."

3. Section 3.11(a) is amended effective as of the Effective Date (as defined in the Plan) by adding to the end thereof the following text: "The Plan utilizes the current year testing method described in Treas. Reg. section 1.401(m)-2(a)(2)."

IN WITNESS WHEREOF the Company has caused this First Amendment to be executed this 8th day of July 2014.

(CORPORATE SEAL)

PerkinElmer, Inc.
By: /s/ John R. Letcher
Its: SVP HR

PERKINELMER, INC. SAVINGS PLAN

(Amended and Restated Effective as of January 1, 2012)

Second Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Savings Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First Amendment thereto;

WHEREAS, the Company wishes to amend the Plan to reflect certain changes in the law and make certain other changes; and

WHEREAS, the Company reserves the right pursuant to Section 13.1 to amend the Plan. NOW, THEREFORE, the Company hereby amends the Plan as follows, effective as set forth herein:

1. Section 1.55 is amended, effective June 26, 2013, to read in its entirety as follows: "1.55 **"Spouse"** means the person to whom a Participant is legally married on the earlier

of (a) the date on which the Participant's Account balances are distributed due to the Participant's Severance from Employment, or (b) the Participant's date of death. For all purposes under the Plan prior to June 26,2013, the Plan's determination of "spouse" and "marriage" was made in accordance with Federal law as in effect prior to the decision in United States v. Windsor. On and after June 26, 2013, "spouse" and "marriage" shall be interpreted consistent with United States v. Windsor and IRS guidance, including Rev. Rul. 2013-17 and IRS Notice 2014-19."

2. Section 3.2 is amended, effective January 1, 2014, to read in its entirety as follows:

"3.2 After-Tax Contributions

An Eligible Employee who meets the requirements of Section 2.1 may, by advance notice in accordance with procedures prescribed by the Administrator, elect to contribute to the Plan by means of payroll deduction as of any Entry Date After-Tax Contributions of a percentage of his Compensation, in one percent (1%) increments."

4. Section 3.8 is amended, effective January 1, 2014, to read in its entirety as follows:

"3.8 Reductions during Plan Year

If, during the Plan Year, the Administrator determines that the Actual Deferral Percentage test provided in Section 3.7(a), the Average Contribution Percentage Test provided in Section 3.11 or the Maximum Annual Addition limit provided in Section 3.13 is not met at the time of its review or is not likely to be met if a Participant's rate of Before-Tax Contributions or After-Tax Contributions continue to be made on behalf of a Highly Compensated Employee Participant (or any Participant, in the case of a potential excess of the Maximum Annual Addition for such Participant), the Administrator, in its sole discretion, may reduce the rate (to zero (0) if necessary) of Before-Tax Contributions or After-Tax Contributions, as applicable, that would have been made during the remainder of the Plan Year for any Participant. To meet the Average Actual Deferral Percentage requirements of Section 3.7(a), any such decrease shall be applied first to Participants who are Highly Compensated Employees whose Actual Deferral Percentages represent the highest such Percentage, then in decreasing order to Participants whose Actual Deferral Percentages represent the next highest such Percentage, until the provisions of Section 3.7(a) are satisfied. A similar methodology shall be used in the case of reductions with respect to the Average Contribution Percentage Test."

4. Section 11.3 is amended, effective for claims made on or after the date hereof, to add the following paragraph to the end thereof:

"A Participant must exhaust the Plan's claims review procedures before filing an action in court making claim for benefits. Any such action in court must be filed within three years from the date of the initial failure regarding the benefit claimed."

IN WITNESS WHEREOF, the Company has caused this Second Amendment to be executed this 16th day of December 2014.

(CORPORATE SEAL)

PerkinElmer, Inc.

By: /s/ John R. Letcher

Its: SVP HR

PERKINELMER, INC. SAVINGS PLAN

(Amended and Restated Effective as of January l, 2012)

Third Amendment

WHEREAS. PerkinElmer, Inc. (the "Company"') maintains the PerkinElmer, Inc. Savings Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First Amendment and Second Amendments thereto;

WHEREAS, the Company wishes to amend the Plan to reflect the imposition of a limit on the investments in Company Stock; and

WHEREAS, the Company reserves the right pursuant to Section 13.1 to amend the Plan.

NOW, THEREFORE, the Company hereby amends the Plan as follows, effective as of the date hereof:

A new Paragraph (f) is added to Section 6.6 to read in its entirety as follows:

"(f) Limitation on New Acquisitions of Company Stock. Effective September 28, 2015 or such later date as is determined by the Administrator (the "Limitation Date"), the following limits shall apply to new acquisitions of Company Stock. notwithstanding any other provision of the Plan to the contrary:

(i) With respect to a Participant's election as to the investment of new contributions or loan repayments made to the Plan on and after the Limitation Date. allocations to the Company Stock Fund shall be limited to 25% of such contributions or repayments.

(ii) In the event that, as of the Limitation Date and after the notice described below, a Participant's investment election allocation to the Company Stock Fund exceeds 25%, the allocation

shall be reduced to 25%, and the difference between (x) the Participant's previously elected allocation to the Company Stock Fund and (y) the 25% limit described in (a) above shall be allocated to the Plan 's "qualified default investment alternative" described in Section 6.2(c) applicable to the Participant. The Administrator shall provide advance notice to the Participant of the change in Plan terms with respect to future investment elections as to contributions to the Company Stock Fund and opportunity for the Participant to effect a new election as to the investment of future contributions in accordance with the principles applicable under section 404(c)(4) and (c)(5) of ERISA.

(iii) If, at any time, a transfer of balances pursuant to Section 6.5 is initiated, the value of the Participant's Account allocated to the Company Stock Fund exceeds 25% of the total value of the Participant's Account, the transfer shall not be permitted, and the Participant will be required to designate an alternative Fund to receive such transferred amounts. Similarly, to the extent a requested transfer pursuant to Section 6.5 would at the time of the transfer cause the value of the Participant's Account allocated to the Company Stock Fund to exceed 25% of the total value of the Participant 's Account, the transfer shall be limited so as not to cause the allocation to the Company Stock Fund to exceed the 25% limit, and the Participant will be required to designate an alternative Fund to receive such excess amounts.

(iv) The Administrator may adopt rules and administrative procedures to effect appropriate changes to Plan procedures and operations, including allocations in connection with periodic rebalancing, that are consistent with the intent to limit new contributions and transfers to the Company Stock Fund as provided above."

IN WITNESS WHEREOF, the Company has caused this Third Amendment to be executed this 22nd day of June 2015.

(CORPORATE SEAL)

PerkinElmer, Inc.

By: /s/ Joel S. Goldberg

Name: Joel S. Goldberg

Its: Chair, Administrative Committee

PERKINELMER, INC. SAVINGS PLAN

(Amended and Restated Effective as of January 1, 2012)

Fourth Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Savings Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First Amendment, Second Amendment and Third Amendment thereto;

WHEREAS, the Company wishes to amend the Plan to reflect the clarification of the treatment of certain bonuses under the definition of Compensation; and

WHEREAS, the Company reserves the right pursuant to Section 13.1 to amend the Plan.

NOW, THEREFORE, the Company hereby amends the Plan as follows, effective as of January 1, 2016:

Section 1.20 is amended in its entirety to read as follows:

1.20 "Compensation" means, for each part of a Plan Year that a Participant is eligible to make Before-Tax or After-Tax Contributions, base pay, overtime, shift differentials, commissions, other cash additives to base pay, incentive awards, bonuses and salary deferrals under any salary reduction agreement under Section 125 or 401(k) of the Code. Compensation shall also include elective amounts that are not includible in the gross income of the Participant under Section 132(f) of the Code.

Compensation excludes equity-related compensation, reimbursements or other expenses allowances, relocation allowances, per diem allowances, hardship allowances, foreign service premiums, cost-of-living allowances, deferred compensation, severance pay and other welfare benefits. The following bonus payments are not included as Compensation for Plan purposes: patent awards; reward and recognition bonuses; sign-on bonuses; referral bonuses; retention bonuses; and any other irregular bonuses.

The annual Compensation of each Participant taken into account for all Plan purposes shall not exceed $200,000 as adjusted by the Secretary of the Treasury for increases in the cost of living in accordance with Section 401(a)(17)(B) of the Code. The cost-of-living adjustment in effect for a calendar year applies to any period, not exceeding twelve (12) months, over which Compensation is determined (the "determination period") beginning in such calendar year. If a determination period consists of fewer than twelve (12) months, the limit referred to above will be multiplied by a fraction, the numerator of which is the number of months in the determination period and the denominator of which is 12.

For other specific purposes described in the Plan, "Compensation" shall have the meanings set forth in the respective provisions.

IN WITNESS WHEREOF, the Company has caused this Fourth Amendment to be executed this 10th day of November 2016.

(CORPORATE SEAL) PerkinElmer, Inc.

By:

/s/ Christine Hargrave

Its:

VP Compensation & Benefits

PERKINELMER, INC. SAVINGS PLAN

(Amended and Restated Effective as of January 1, 2012)

Fifth Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Savings Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First, Second, Third and Fourth Amendments thereto;

WHEREAS, the Company wishes to amend the Plan, effective as of the date hereof, in connection with the divestiture of the Medical Imaging business unit; and

WHEREAS, the Company reserves the right pursuant to Section 13.1 to amend the Plan.

NOW, THEREFORE, the Company hereby amends the Plan as follows, effective as of May 1, 2017:

Section 1.20, as previously amended by the Fourth Amendment, is amended to include the following at the end thereof:

For purposes of Before-Tax Contributions, Roth Contributions, or After-Tax Contributions on behalf of any Participant employed in the Company's Medical Imaging business unit who experiences a termination of employment in connection with the divestiture of such business unit on or about May 1, 2017, (the "Medical Imaging Closing Date"), "Compensation" shall exclude any compensation paid after the Medical Imaging Closing Date. Accordingly, such a Participant’s contribution elections shall not apply to compensation paid after the Medical Imaging Closing Date.

IN WITNESS WHEREOF, the Company has caused this Fifth Amendment to be executed this 28th day of April 2017.

(CORPORATE SEAL)

PerkinElmer, Inc.
By: /s/ Christine Hargrave
Its: VP Compensation & Benefits

PERKINELMER, INC. SAVINGS PLAN (Amended and Restated Effective as of January 1, 2012)

Sixth Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Savings Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First, Second, Third, Fourth and Fifth Amendments thereto;

WHEREAS, the Company wishes to amend the Plan, effective as of the date hereof, in connection with the acquisition of Control Development, Inc.; and

WHEREAS, the Company reserves the right pursuant to Section 13.1 to amend the Plan; NOW, THEREFORE, the Company hereby amends the Plan to provide for the adoption of the Plan by Control Development, Inc. and to provide for the participation by the employees of Control Development, Inc. as follows:

A new Appendix F as attached hereto is incorporated into the Plan effective as of March 15, 2018.

IN WITNESS WHEREOF, the Company has caused this Sixth Amendment to be executed this 23rd day of March 2018.

(CORPORATE SEAL)

PerkinElmer, Inc.
By: /s/ Christine Hargrave
Its: VP Compensation & Benefits

APPENDIX F

ADOPTING EMPLOYERS

PerkinElmer, Inc.	04-2052042
PerkinElmer Holdings, Inc.	04-2436772
PerkinElmer Informatics, Inc.	04-2897700
PerkinElmer Health Sciences, Inc.	04-3361624
Geospiza, Inc.	91-1894564
Novascreen Biosciences Corp.3e	86-0593048
Caliper Life Sciences, Inc.	33-0675808
PerkinElmer Genetics, Inc.	25-1645804
ViaCord, LLC	04-3201419
Bioo Scientific Corp.	87-0781699
Control Development, Inc.	[35-1826939] [Effective March 15, 2018]

PERKINELMER, INC. SAVINGS PLAN

(Amended and Restated Effective as of January 1, 2012)

Seventh Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Savings Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First, Second, Third, Fourth, Fifth and Sixth Amendments thereto;

WHEREAS, the Company wishes to amend the Plan, effective as of the date hereof, to make certain changes, including to reflect recent statutory provisions; and

WHEREAS, the Company reserves the right pursuant to Section 13.1 to amend the Plan;

NOW, THEREFORE, the Company hereby amends the Plan as follows:

1. Section 1.26 is amended effective January 1, 2018 by deleting the word "and" immediately preceding subsection (c) and adding the following text to the end thereof:

"and (d) an Employee who is on temporary assignment in the United States or who is on indefinite assignment in the United States and remains an active participant in his or her home country pension or retirement program."

2. Section 1.30 is deleted in its entirety and replaced with the text "[Reserved]".

3. Section 2.l(b) is amended in its entirety to read as follows:

"(b) Each other Eligible Employee not yet a Participant shall be eligible to become a Participant on or after the date he first completes an Hour of Service for the Employer as an Eligible Employee."

4. So much of Section 2.2(a) as precedes clause (i) is amended in its entirety to read as follows:

"(a) Each Eligible Employee who completes the requirements of Section 2.1 shall become a Participant as soon as administratively practicable following the date on which he becomes eligible for participation pursuant to Section 2.1 by making an election in accordance with procedures established and uniformly applied by the Administrator that:"

5. A new sentence is added to the end of Section 2.2(b) to read in its entirety as follows:

"In the case of an Eligible Employee employed by EUROIMMUN US, Incorporated on December 1, 2018 (or such earlier date in November 2018 as determined by the Administrator), the automatic enrollment provisions of Section 2.2 shall be applied by treating December 1, 2018 as the Eligible Employee's Employment Commencement Date and January 1, 2019 as the effective date of commencement of autoenrollment contributions (absent an Eligible Employee's affirmative decline within such 30-day period)."

6. In Section 2.4(b) the words "as of the next following Entry Date" are deleted and replaced with the words "as soon as administratively practicable following the date on which he becomes an Eligible Employee"

7. In Section 3.1(a), the words "as of any Entry Date" in the first sentence thereof are deleted, and the words "on or next following that Entry Date" in the third sentence thereof are deleted and replaced with the words "thereafter".

8. In Section 3.2 and in Section 3.5, the words "as of any Entry Date" are deleted.

9. In Section 3.6(a), the words "as of any Entry Date" in the first sentence thereof are deleted, and the words "on or next following that Entry Date" in the second sentence thereof are deleted and replaced with the words "thereafter".

10. In Section 3.6(b), the words "as of any Entry Date" in the first sentence thereof are deleted, and the words "on or next following that Entry Date" in the second sentence thereof are deleted and replaced with the words "thereafter".

11. In Section 7.3, regarding the application of forfeitures in the second sentence thereof, the words "by reducing the amount of Matching Contributions required under the Plan" are deleted

and replaced with the words "by reducing the amount of Matching Contributions or other employer contributions (including Qualified Matching Contributions or Qualified Nonelective Contributions) required or made under the Plan".

12. Effective with respect to hardship withdrawals made on or after January 1, 2019, Section 8.5(a) is amended by deleting the words "(excluding all earnings comprising part of such Account that were credited after 1988)", and Sections 8.5(b) and (d) are deleted in their entirety and replaced with the text "[Reserved]".

13. Appendix F is replaced by the attached Appendix F which is effective January 1, 2019.

IN WITNESS WHEREOF, the Company has caused this Seventh Amendment to be executed this 19th day of December 2018.

(CORPORATE SEAL)

PerkinElmer, Inc.
By: /s/ Christine Hargrave
Its: Vice President, Compensation, Benefits & HRIM

APPENDIX F

ADOPTING EMPLOYERS

January 1, 2019

PerkinElmer, Inc.	04-2052042
PerkinElmer Holdings, Inc.	04-2436772
PerkinElmer Informatics, Inc.	04-2897700
PerkinElmer Health Sciences, Inc.	04-3361624
Novascreen Biosciences Corp.	86-0593048
Caliper Life Sciences, Inc.	33-0675808
PerkinElmer Genetics, Inc.	25-1645804
ViaCord, LLC	04-3201419
Bioo Scientific Corp.	87-0781699
Control Development, Inc.	35-1826939
EUROIMMUN US Incorporated	20-1507364

EXHIBIT 10.26

PERKINELMER, INC.

EMPLOYEES RETIREMENT PLAN

(Amended and Restated Effective January 1, 2012)

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ARTICLE I

GENERAL

1.1 **Plan Name**. The Plan shall be known as the PerkinElmer, Inc. Employees Retirement Plan. Prior to October 26, 1999, the Plan was known as the EG&G, Inc. Employees Retirement Plan.

1.2 **Qualification of Plan**. The Plan and any trust created hereunder are intended to meet the requirements of Sections 401(a) and 501(a) of the Internal Revenue Code of 1986, as amended from time to time, and the Employee Retirement Income Security Act of 1974, as amended from time to time.

1.3 **Purpose of Restatement**. The last amendment and restatement of the Plan, effective January 1, 2007, obtained a favorable ruling from the Internal Revenue Service regarding its qualified status. The current amendment and restatement of the Plan is effective January 1, 2012, except as otherwise specifically provided herein.

1.4 **Application**. The terms and conditions of the Plan shall, in all respects, apply to all Employees of all participating Employers, except as otherwise specifically provided in an Appendix.

1.5 **Plan Frozen**. Notwithstanding any provision of the Plan to the contrary, all accruals under the Plan shall cease effective as of the Freeze Date. The Accrued Benefit of all Participants shall be determined as of the Freeze Date, and shall not thereafter be increased by any service or compensation changes. All Participants actively accruing benefits in the Plan immediately prior to the Freeze Date shall be fully vested in their Accrued Benefit as of the Freeze Date. For the avoidance of doubt, a Participant who completed at least ten (10) Years of Service prior to the Freeze Date and who became a Disabled Participant prior to the Freeze Date, by reason of a determination by the Federal Social Security Administration made prior to the Freeze Date, shall be treated as having accrued his or her Disability Retirement Income benefit payable under Section 4.6 prior

to the Freeze Date, and the provisions of this Section 1.5 shall not reduce the benefit otherwise payable pursuant to Section 4.6 for such a Disabled Participant. Benefits for Disabled Participants who had last actively performed services at sites previously affected by benefit freezes pursuant to Section 4.2 shall be determined in a similar manner. Accordingly, a Participant who last actively performed services at a site identified in Section 4.2(d) or (e), and who had completed at least ten (10) Years of Service prior to the date identified in Section 4.2(d) or (e), as applicable, (the "Applicable Freeze Date") and who became a Disabled Participant prior the Applicable Freeze Date by reason of a determination by the Federal Social Security Administration made prior to the Applicable Freeze Date shall be treated as having accrued his or her Disability Retirement Income benefit payable under Section 4.6 prior to the Applicable Freeze Date, and the provisions of this Section 1.5 or Section 4.2 (d) or (e) shall not reduce the benefit otherwise payable pursuant to Section 4.6 for such a Disabled Participant.

ARTICLE II

DEFINITIONS

The following terms shall have the meanings defined herein unless a different meaning is clearly indicated by the context.

2.1 "**Accrued Benefit**" means the amount of retirement income as of the calculation date determined in accordance with Section 4.2, and subject to the provisions of Section 4.7.

The Accrued Benefit of any Participant shall not be less than his Accrued Benefit determined as of December 31, 2011 in accordance with the applicable provisions of the Plan as in effect on such date.

2.2 "**Active Service**" means actual performance of duties as an Employee and shall not include time spent on an Authorized Leave of Absence.

2.3 "**Actuarial Equivalent**" means, for non-lump sum forms of payment, a benefit of equivalent value to the benefit which otherwise would have been provided determined on the basis of the 1971 Group Annuity Mortality Table with no loading, and projected by Scale E, with a one (1) year age setback for the Participant and a five (5) year age setback for any Beneficiary, and on the basis of an interest rate of seven percent (7%).

In the case of a lump sum form of payment, Actuarial Equivalent shall, instead, be based on the Applicable Mortality Table and the Applicable Interest Rate.

For purposes of this Section 2.3, the following definitions shall apply:

(a) Applicable Mortality Table means the mortality table based on the prevailing commissioners' standard table (described in Section 807(d)(5)(A) of the Code) used to determine reserves for group annuity contracts issued on the date as of which present value is being determined (without regard to any other subparagraph of Section 807(d)(5) of the Code) that is prescribed by the

Commissioner of the Internal Revenue Service in revenue rulings, notices or other guidance published in the Internal Revenue Bulletin. Effective for distributions with annuity starting dates (as defined in Section 417(f)(2) of the Code) on or after December 31, 2002, the Applicable Mortality Table means the mortality table set forth in Rev. Rul. 2001-62. For Plan Years beginning after December 31, 2007, the "Applicable Mortality Table" means the mortality table prescribed under Section 417(e)(3)(B) of the Code.

(b) Applicable Interest Rate means the annual interest rate on 30-year Treasury securities as specified by the Commissioner of the Internal Revenue Service for the Lookback Month, as published in revenue rulings, notices or other guidance published in the Internal Revenue Bulletin. For Plan Years beginning after December 31, 2007, the "Applicable Interest Rate" means the segment rates of interest for the Lookback Month, as defined in Section 417(e)(3)(C) of the Code.

(c) Lookback Month means the second full calendar month preceding the first day of the Stability Period.

(d) Stability Period means the Plan Year that contains the annuity starting date.

2.4 "**Actuary**" means a Fellow or Associate of the Society of Actuaries or a Member of the American Academy of Actuaries, who is Enrolled by the Joint Board for the Enrollment of Actuaries and who has been retained by the Administrative Committee as Actuary for the Plan.

2.5 "**Administrative Committee**" means the Plan's Administrative Committee consisting of the Company's Senior Vice President Human Resources, and such other individuals as he shall from time to time appoint.

2.6 "**Affiliate**" shall mean a corporation (i) in which the Company and/or a Subsidiary has an equity interest of less than fifty percent (50%) or a note or debenture convertible into an equity interest and (ii) which is determined by the Administrative Committee to be an affiliated corporation. For purposes of Article V, Affiliate means the Company and any

corporation which is a member of a controlled group of corporations (as defined in Section 414(b) of the Code) which includes the Company; any trade or business (whether or not incorporated) which is under common control (as defined in Section 414(c) of the Code) with the Company; any organization (whether or not incorporated) which is a member of an affiliated service group (as defined in Section 414(m) of the Code) which includes the Company; and any other entity required to be aggregated with the Company in accordance with regulations issued under Section 414(o) of the Code.

2.7 "**Alternate Payee**" means a Spouse, former Spouse, child, or other dependent of a Participant who is recognized by a Qualified Domestic Relations Order as having a right to receive all or a portion of the benefits of a Participant.

2.8 "**Applicable Freeze Date**" has the meaning ascribed to it in Section 1.5.

2.9 "**Authorized Leave of Absence**" means any leave of absence granted by an Employer under the Employer's leave of absence policy, including a leave granted to an Employee who is absent from work due to either (a) the pregnancy of such Employee, (b) the birth of a child of the Employee, (c) the placement of a child in connection with the adoption of the child by the Employee, or (d) for purposes of caring for the child during the period immediately following the birth or placement for adoption.

2.10 "**Average Earnings**" means the average annual Earnings of a Participant for the highest sixty (60) successive months of Credited Service for which the Employee is compensated by an Employer out of the last one hundred and twenty (120) months of such Credited Service prior to his date of termination of Employment. A Participant who does not have sixty (60) successive months of Credited Service shall have his average Earnings calculated over a period of months of Credited Service evenly divisible by twelve. If such a Participant's successive months of Credited Service are not evenly divisible by twelve, Earnings attributable to a period of Credited Service of less than twelve months shall be annualized.

Except as provided herein with respect to certain Transferred Participants or Rehired Participants, Earnings received during a month in which the Participant is not accruing Credited Service shall not be used in the determination of Average Earnings. Notwithstanding the foregoing, in the case of a Transferred Participant or a Rehired Participant whose date of transfer or rehire by an Employer, Affiliate or Subsidiary is prior to March 15, 2003, Average Earnings shall mean the average annual Earnings of the Participant for the highest five (5) successive Years of Service out of the last ten (10) Years of Service with an Employer, Affiliate or Subsidiary prior to his date of termination from such Employer, Affiliate or Subsidiary. In the event that such a Transferred Participant or Rehired Participant is not employed by an Employer, Affiliate or Subsidiary for a full five (5) successive year period, Average Earnings will be based on the five (5) highest compensated years in the last ten (10) years with the Employer, Affiliate or Subsidiary.

2.11 "**Beneficiary**" means a person(s), trust, or other entity designated by the Participant, on the form and in a manner prescribed by the Administrative Committee, to receive any benefits which shall be payable under the Plan in the event of the Participant's death, or in the absence of such designation, the Participant's estate. Pre-retirement death benefits which become payable under Article VIII may only be paid to a Participant's Eligible Spouse (or former spouse to the extent provided under a Qualified Domestic Relations Order).

2.12 "**Board**" means the Board of Directors of the Company.

2.13 "**Break-in-Service**" means a calendar year after the Effective Date during which a Participant completes less than five hundred (500) Hours of Service.

2.14 "**Code**" means the Internal Revenue Code of 1986, as amended from time to time, and any regulations issued thereunder.

2.15 "**Company**" means PerkinElmer, Inc. Prior to October 26, 1999, Company means EG&G, Inc.

2.16 "**Credited Service**" means that portion of a Participant's Employment, as determined in accordance with Article VII, which will be used in determining the amount of a Participant's retirement benefit under the Plan.

2.17 "**Defined Benefit Dollar Limitation**" is $160,000, as adjusted, ($200,000 in 2012) effective January 1 of each year, under Section 415(d) of the Code in such manner as the Secretary shall prescribe, and payable in the form of a straight life annuity. A limitation as adjusted under Section 415(d) of the Code will apply to limitation years ending with or within the calendar year for which the adjustment applies.

2.18 "**Disabled Participant**" means a Participant who incurs a physical or mental condition which, as determined by the Federal Social Security Administration, renders the Participant eligible to receive disability benefits under Title II of the Federal Social Security Act, as amended from time to time.

2.19 "**Early Retirement Date**" means the first day of any month which is not more than ten (10) years prior to an Employee's Normal Retirement Date, which that Employee, who will then have completed at least ten (10) Years of Service, elects, on a written form acceptable to the Administrative Committee, as a date on which he wishes to retire. For an Employee who was a Participant on December 31, 1988, "Early Retirement Date" means the first day of any month after an Employee's fifty-fifth (55th) birthday, which that Employee, who will then have completed at least ten (10) Years of Service, elects, on a written form acceptable to the Administrative Committee, as a date on which he wishes to retire.

2.20 "**Earnings**" means the regular base wage or salary received by the Employee from an Employer, Affiliate, or Subsidiary, inclusive of commissions and severance, but exclusive of any bonus, overtime payments, or any other additives to the base wage or salary.

Earnings shall not include any amount in excess of the limit prescribed under Section 401(a)(17) of the Code, as adjusted for cost-of-living in accordance with Section 401(a)(17)(B) of the Code.

The annual Earnings of each Participant taken into account in determining benefit accruals in any Plan Year beginning after December 31, 2002, shall not exceed $200,000, as adjusted ($250,000 in 2012). Annual Earnings means compensation during the Plan Year or such other consecutive 12-month period over which earnings are otherwise determined under the Plan (the determination period). For purposes of determining benefit accruals in a Plan Year beginning after December 31, 2002, Earnings for any prior determination period shall be $200,000.

The $250,000 limit on annual Earnings in paragraph 1 shall be adjusted for cost-of-living increase in accordance with Section 401(a)(17)(B) of the Code. The cost-of-living adjustment in effect for a calendar year applies to annual Earnings for the determination period that begins with or within such calendar year.

If a determination period consists of fewer than twelve (12) months, the annual Earnings limit is an amount equal to the otherwise applicable annual Earnings limit multiplied by a fraction, the numerator of which is the number of months in the short determination period and the denominator of which is twelve (12).

Except as may be provided in Section 4.7, if Earnings for any prior determination period are taken into account in determining a Participant's benefits for the current Plan Year, the Earnings for such prior determination period are subject to the applicable annual Earnings limit in effect for that prior period.

2.21 "**Effective Date**" shall mean January 1, 2012, the date as of which this amendment and restatement of the Plan is effective except as otherwise specifically provided herein. As so amended and restated, the respective provisions of the Plan shall apply only to Employees who terminate on or after the Effective Date. The rights and benefits, if any, of each other Employee shall be determined in accordance with the respective provisions of the Plan in effect on the date such Employee terminated service.

2.22 "**Eligible Spouse**" means a person who was legally married to the Participant on the date of retirement or death of the Participant.

2.23 “**Employee**” means any person employed by an Employer. A “Full-Time Employee” is an Employee who works the regular full-time workweek for his Employer, whether or not that Employee is considered regular or temporary by the Employer. A “Part-Time Employee” is an Employee who does not normally work the regular full-time workweek for his Employer, whether or not that Employee is considered regular or temporary by the Employer.

Leased employees (as defined in Section 414(n)(2) of the Code) shall be considered Employees only to the extent required under Section 414 of the Code.

Notwithstanding any other provision of the Plan, the term “Employee” shall not include any employee, independent contractor, leased employee or other individual unless such individual is contemporaneously treated by the Employer as an Employee for purposes of the Plan (without regard to any subsequent recharacterization or inconsistent determination made by any person or entity or by any court, agency or other authority with respect to such individual).

2.24 “**Employer**” means the Company and/or a Subsidiary which is authorized by the Board to participate in the Plan and, in fact, does adopt the Plan.

2.25 “**Employment**” means service in the employ of an Employer, provided, however, that transfer from one Employer to another does not constitute a termination of Employment hereunder whatever its common law effects.

2.26 “**ERISA**” means Public Law 93-406, Employee Retirement Income Security Act of 1974, as amended from time to time.

2.27 “**Freeze Date**” means January 31, 2011.

2.28 “**Hour of Service**” shall be determined from the Employer’s records and shall include:

(a) hours for which an Employee is directly or indirectly paid, or is entitled to payment, for the performance of duties for an Employer;

(b) hours for which back pay, irrespective of mitigation of damages, is either awarded to or agreed by the Employer; and

(c) hours for which an Employee is paid, or entitled to payment, by an Employer on account of a period of time during which no duties are performed (irrespective of whether or not the Employee is still in the Employment of an Employer) due to vacation, holiday, illness, incapacity (including disability), layoff, jury duty, military duty or leave of absence.

(d) Notwithstanding anything to the contrary contained in the foregoing, an Employee may receive credit for the same Hour of Service only under one of the preceding subsections;

(i) no more than five hundred one (501) Hours of Service are required to be credited under Paragraph (c) above to an Employee on account of any single continuous period during which the Employee performs no duties (whether or not such period occurs in a single Year); and

(ii) an hour for which an Employee is paid or entitled to payment on account of a period during which no duties are performed is not required to be credited to the Employee if such payment:

(A) is made or due under a plan maintained solely for the purpose of complying with applicable workers' compensation or unemployment compensation or disability insurance laws, or

(B) solely reimburses the Employee for medical or medically-related expenses incurred by the Employee.

(e) Each hour not counted under Paragraphs (a), (b), (c) or (d) above during a period of military service, in the case of an Employee who was employed by the Employer prior to such military service and who returns to employment with the Employer while protected by reemployment rights under federal law.

(f) Hours of Service, except as provided below, will be credited to the Year to which they are attributable. In the case of Hours of Service attributable to a period of no more than thirty-one (31) days which overlaps two (2) Years, all such Hours of Service shall be credited to either Year, as determined by the Administrative Committee.

Hours of Service shall be computed and credited in accordance with paragraphs (b) and (c) of Section 2530.200b 2 of the U.S. Department of Labor Regulations; provided, however, that in the case of an Employee for whom record of actual hours worked is not maintained, Hours of Service shall be credited in accordance with Section 2530.200b 3(e)(1)(iv) of the U.S. Department of Labor Regulations on the basis of 190 Hours of Service per month for each month in which the Employee would be required to be credited with at least one Hour of Service under Section 2530.200b 2 of the U.S. Department of Labor Regulations.

2.29 "**IDS**" and "**IDS Final Employment Date**" have the meaning ascribed to them in Section 3.9.

2.30 "**Investment Manager**" means the individuals and/or other entities appointed in accordance with Section 9.10 who have acknowledged in writing that they are a Named Fiduciary with respect to the Plan and who is:

(a) registered as an investment advisor under the Investment Advisors Act of 1940; or

(b) a bank, as defined in such Act; or

(c) an insurance company qualified to manage, acquire or dispose of assets of pension plans.

2.31 "**Joint Annuitant**" means a person designated by a Participant, in accordance with Section 8.2.

2.32 "**Maximum Permissible Benefit**" means the lesser of the Defined Benefit Dollar Limitation or the Defined Benefit Compensation Limitation (both adjusted where required, as provided in (a) and, if applicable, in (b) or (c) below).

(a) If the Participant has fewer than 10 Years of Participation in the Plan, the Defined Benefit Dollar Limitation shall be multiplied by a fraction, (i) the numerator of which is the number of years (or part thereof) of participation in the Plan and (ii) the denominator of which is 10. In the case of a Participant who has fewer than 10 Years of Service with the Employer, the Defined Benefit Compensation Limitation shall be multiplied by a fraction, (i) the numerator of which is the number of Years (or part thereof) of Service with the Employer and (ii) the denominator of which is 10.

(b) If the benefit of a Participant begins prior to age 62, the Defined Benefit Dollar Limitation applicable to the Participant at such earlier age is an annual benefit payable in the form of a straight life annuity beginning at the earlier age that is the Actuarial Equivalent of the Defined Benefit Dollar Limitation applicable to the Participant at age 62 (adjusted under (a) above, if required). The Defined Benefit Dollar Limitation applicable at an age prior to age 62 is determined as the lesser of (i) the Actuarial Equivalent (at such age) of the Defined Benefit Dollar Limitation computed using the interest rate and mortality table specified in Section 2.3 of the Plan and (ii) the Actuarial Equivalent (at such age) of the Defined Benefit Dollar Limitation computed using a 5 percent (5%) interest rate and the applicable Mortality Table as defined in Section 2.3(a) of the Plan. Any decrease in the Defined Benefit Dollar Limitation determined in accordance with this paragraph (b) shall not reflect a mortality decrement if benefits are not forfeited upon the death of the Participant. If any benefits are forfeited upon death, the full mortality decrement is taken into account.

(c) If the benefit of a Participant begins after the Participant attains age 65, the Defined Benefit Dollar Limitation applicable to the Participant at the later age is

the annual benefit payable in the form of a straight life annuity beginning at the later age that is actuarially equivalent to the Defined Benefit Dollar Limitation applicable to the Participant at age 65 (adjusted under (a) above, if required). The Actuarial Equivalent of the Defined Benefit Dollar Limitation applicable at an age after age 65 is determined as (i) the lesser of the Actuarial Equivalent (at such age) of the Defined Benefit Dollar Limitation computed using the interest rate and mortality table specified in Section 2.3 of the Plan and (ii) the Actuarial Equivalent (at such age) of the Defined Benefit Dollar Limitation computed using a 5 percent (5%) interest rate assumption and the Applicable Mortality Table as defined in Section 2.3(a) of the Plan. For these purposes, mortality between age 65 and the age at which benefits commence shall be ignored

2.33 "**Named Fiduciary**" means the Administrative Committee, the Trustees and the Investment Manager(s), but only with respect to the specific responsibilities of each for the administration of the Plan.

2.34 "**Normal Retirement Age**" means the age determined in accordance with the following table:

Age	Year of Birth
65	1937 and Earlier
65 plus 2 months/year	1938 – 1942
66	1943 – 1954
66 plus 2 months/year	1955 – 1959
67	1960 and later

Prior to January 1, 1989, the Normal Retirement Age was 65, provided however, that the Employee is 100% vested on the day the Employee attained 65.

2.35 "**Normal Retirement Date**" means the first day of the month following the month in which the Participant attains his Normal Retirement Age.

2.36 "**Participant**" means an Employee who meets the requirements for participation as provided in Article III, or a former Employee who is receiving benefits under the Plan or who has vested rights under the Plan.

2.37 "**Plan**" means the PerkinElmer, Inc. Employees Retirement Plan as set forth herein and as it may from time to time be duly amended. Prior to October 26, 1999, Plan means the EG&G, Inc. Employees Retirement Plan.

2.38 "**Plan Year**" means the twelve (12) month period commencing on January 1st and ending on December 31st.

2.39 "**Predecessor Corporation**" means a corporation that has merged into or consolidated with, or whose voting stock or assets have all or substantially all been acquired by the Company or a Subsidiary.

2.40 "**Qualified Domestic Relations Order**" means an order as defined in Section 414(p) of the Code.

2.41 "**Rehired Participant**" means an individual who terminates Employment with an Employer and begins employment with an Employer, Affiliate or Subsidiary on a date later than the next regularly scheduled work day and would have his prior service reinstated under the reinstatement rules set forth in Section 5.3(b) had he been rehired by an Employer.

2.42 "**Social Security Tax Base**" means the thirty-five (35) year average of maximum wages upon which Social Security taxes were based during each of the calendar years ending with the calendar year in which the Employee reaches his Normal Retirement Age, assuming no change in the Social Security maximum taxable wage after the Employee's termination of Employment. In order to determine the Social Security Tax Base for an Employee who works beyond his Normal Retirement Age, it will be assumed that the Employee's Normal Retirement Age occurs in his year of termination.

2.43 “**Subsidiary**” means a corporation fifty percent (50%) or more of the voting stock of which is owned legally or beneficially by the Company and/or by a Subsidiary or Subsidiaries of the Company.

2.44 “**Surviving Spouse Option**” means that the Participant’s retirement income will be paid in the form of a fifty percent (50%) Joint and Survivor option determined in accordance with Section 8.1(b)(i).

2.45 “**Transaction Date**” has the meaning ascribed to it in Section 3.5.

2.46 “**Transferred Participant**” means an individual who terminates Employment with an Employer and begins employment with an Affiliate or Subsidiary on the next following regularly scheduled workday.

2.47 “**Trust Fund**” means any fund established by a trust agreement and held by a Trustee or Trustees in order to provide for benefits under the Plan.

2.48 “**Trustees**” means the persons or corporations named by the Company, and who have agreed to serve in such capacity.

2.49 “**Year**” means the twelve (12) month period ending on the day prior to the anniversary of the Employee’s date of hire by an Employer, or where the Employee has incurred a Break-in-Service, the twelve (12) month period ending on the day prior to the anniversary of the Employee’s reemployment commencement date.

2.50 “**Year of Eligibility Service**” means a Year in which a Participant is credited with one thousand (1,000) or more Hours of Service.

2.51 “**Year of Service**” means a Year of Service as defined in Article V.

ARTICLE III

PARTICIPATION

3.1 **Eligibility to Participate**. Each Employee who was a Participant in the Plan as of December 31, 2011 shall continue to participate in the Plan, subject to the provisions of Section 1.5.

3.2 **Former Participant**. A former Participant receiving or entitled to receive a retirement benefit under the Plan shall continue as a Participant until the date of his death. The rights and benefits of a former Participant will be determined in accordance with the provisions of the Plan in effect on the Participant's retirement date or date of termination of Employment, if earlier.

3.3 **Plan Closed**. In no event shall an individual become a Participant after March 15, 2003.

3.4 **Belfab**. Former hourly employees of Belfab who were acquired by the Employer shall participate in the Plan but shall not be subject to the basic terms and conditions of the Plan. Instead, such former hourly employees of Belfab shall be subject to the terms and conditions of the John Crane, Inc. Employees' Pension Plan - Belfab Hourly Employees as in effect on March 31, 1998, the terms and conditions of which are explicitly herein incorporated by reference.

3.5 **Fluid Sciences Participants**. Active Participants employed by the Fluid Sciences Strategic Business Unit at the sites identified below ceased to be employed by the Company as of the transaction dates identified below (each, a "Transaction Date"). Any such Fluid Sciences Participant who remained employed by the Company through his applicable Transaction Date shall have a fully vested and nonforfeitable right to his Accrued Benefits as determined as of the Transaction Date. No further benefits shall accrue under the Plan for such a Fluid Sciences Participant for any period occurring after his applicable Transaction Date.

Division	Location Number(s)	Transaction Date
Industrial Technologies	San Antonio – 043	November 9, 2005
Aerospace	Beltsville – 075	December 6, 2005
	Phelps – 025	December 6, 2005
	Warwick – 031, 040	December 6, 2005
Semiconductor	Daytona	February 28, 2006

3.6 **Participation by Former Missouri Metals Employees**. Notwithstanding anything herein to the contrary, effective on September 30, 2004 (the date of the merger of the Missouri Metals Shaping Company Employees Pension Plan with and into the Plan), former hourly employees of the Company who participated in the Missouri Metals Shaping Company Employees Pension Plan will become Participants in the Plan. Such Participants shall not be subject to the benefit provisions of Articles III, IV, V, VII, and VIII hereunder, but shall instead be subject to the benefit accrual and time and form of payment provisions of the Missouri Metals Shaping Company Pension Plan as of September 30, 2004 (as set forth in Appendix G) , and the terms of such provisions are explicitly herein incorporated by reference. In no event shall the Accrued Benefit of a Participant described in this Section 3.6 be less than his accrued benefit under the Missouri Metals Shaping Company Pension Plan.

3.7 **Participation by Former Shop Union Employees**. Notwithstanding anything herein to the contrary, effective on March 31, 2007 (the date of the merger of the PerkinElmer Shop Union Pension Plan with and into the Plan), former hourly employees of the Company who participated in the PerkinElmer Shop Union Pension Plan will become Participants in the Plan. Such Participants shall not be subject to the benefit provisions of Articles III, IV, V, VII, and VIII hereunder, but shall instead be subject to the benefit accrual and time and form of payment provisions of the PerkinElmer Shop Union Pension Plan as of March 31, 2007 (as set forth in Appendix H) , and the terms of such provisions are explicitly herein incorporated by reference. In no event shall the Accrued Benefit of a Participant described in this Section 3.7 be less than his accrued benefit under the PerkinElmer Shop Union Pension Plan.

3.8 **Exclusions**. No individual whose work site location is identified on Schedule 3.8 to the Plan, as from time to time in effect, shall become a Participant in the Plan.

3.9 **IDS Participants**. Active Participants employed in the Company's Illumination and Detection Solutions ("IDS") business ceased to be employed by the Company and its Subsidiaries as of November 28, 2010 (the "IDS Final Employment Date"). Any such IDS Participant who remained employed by the Company through the IDS Final Employment Date shall have a fully vested and nonforfeitable right to his Accrued Benefit as determined as of the IDS Final Employment Date. For the avoidance of doubt, no further benefits shall accrue under the Plan for such IDS Participant for any period occurring after the applicable IDS Final Employment Date.

ARTICLE IV

AMOUNT OF RETIREMENT INCOME

4.1 **General**. To establish eligibility for a retirement benefit, a Participant shall file an application for such benefit on a form and in a manner prescribed by the Administrative Committee.

4.2 **Normal Retirement Income**. A Participant who retires upon attaining his Normal Retirement Age shall have a nonforfeitable right to his retirement income and shall be entitled to receive a monthly retirement income for life, payable as of his Normal Retirement Date, which shall be the greatest of (a), (b) and (c) below:

(a) Seventy dollars and eighty-three cents ($70.83)

(b) One-twelfth (1/12) of the sum of (i), (ii) and (iii) below:

(i) eighty-five one hundredth's percent (0.85%) of his Average Earnings, multiplied by his years of Credited Service, plus

(ii) seventy-five one hundredth's percent (0.75%) of that part, if any, of his Average Earnings in excess of the Social Security Tax Base, multiplied by the lesser of:

(A) his years of Credited Service, and

(B) thirty-five (35)

(iii) solely for Participants listed in Appendix B, the product of (A) multiplied by (B) below where:

(A) one and six-tenth's percent (1.6%) of his Average Earnings multiplied by his years of Credited Service, times the ratio determined by dividing his service credit as set forth in Appendix B (if any) by twenty-five (25), and

(B) equals, for a Participant who retires or terminates employment prior to attaining his Normal Retirement Age, a fraction, the numerator of which is the Participant's actual years of Credited Service, and the denominator of which is the Participant's Years of Credited Service that he would have had at Normal Retirement Age (in both cases disregarding Credited Service before January 1, 1994).

(c) For an Employee who was a Participant as of December 31, 2000, the monthly retirement benefit income accrued as determined under the provisions of the Plan determined as of that date.

(d) No further benefits shall accrue under the Plan for any period occurring after January 31, 2001 for any Participant who is an Employee of Life Science Divisions 154 and 179 (formerly EG&G Wallac) other than as may be required in accordance with Section 416 of the Code or other than in connection with a transfer of the Participant's employment to a site whose employees are active Participants accruing benefits under Section 4.2 (subject to Section 3.3).

(e) No further benefits shall accrue under the Plan for any period occurring after March 15, 2003 for any Participant who is employed by Corporate (Strategic Business Unit 011) or by Analytical Instruments (Strategic Business Unit 193 or 229) other than as may be required in accordance with Section 416 of the Code or other than in connection with a transfer of the Participant's employment to a site whose employees are active Participants accruing benefits under Section 4.2 (subject to Section 3.3). This Section 4.2(e) shall not apply to any Participant employed at either of the foregoing designated locations who, as of March 15, 2003, had both attained age 50 and accrued 10 years of Credited Service (the "Grandfathered Participants"). The provisions of the Plan as in effect prior to the effective date of this Section 4.2(e) shall continue to apply to the Grandfathered

Participants until March 15, 2008, after which date no further benefits shall accrue other than as may be required in accordance with Section 416 of the Code.

(f) Effective January 1, 2009, the Company discontinued the use of "Strategic Business Unit" as a basis for classifying its workforce and instead uses site codes. Each Participant actively accruing benefits as of December 31, 2008 shall remain eligible for the accrual of benefits under the provisions of the Plan for so long as he continues employment with the Employer at the site code he was employed at on December 31, 2008 (or at another site whose employees are active Participants accruing benefits under Section 4.2 (subject to Section 3.3 and Section 4.2(g)).

(g) Notwithstanding any provisions of the Plan to the contrary, no further benefits shall accrue under the Plan for any period occurring after January 31, 2011.

4.3 **Early Retirement Income**. A Participant retiring on an Early Retirement Date shall be entitled to receive a retirement income which shall be determined in accordance with either (a) or (b) below, as elected by the Participant:

(a) The Participant may elect to defer commencement of his retirement income until his Normal Retirement Date. The amount of his retirement income will be determined in accordance with Section 4.2 based on his Credited Service as of his Early Retirement Date.

(b) The Participant may elect at his Early Retirement Date or at any time prior to his Normal Retirement Date to have his retirement income commence on the first day of any month after the date of his retirement, but no later than his Normal Retirement Date. The amount of his retirement income payable at his Early Retirement Date shall be a percentage of his retirement income payable at his Normal Retirement Date as follows:

Years Prior to Normal Retirement Age	Percent of Retirement Benefit Payable at Early Retirement Date For an Employee Retiring With Less than Thirty (30) Years of Service	Percent of Retirement Benefit at Early Retirement Date For an Employee Retiring With At Least Thirty (30) Years of Service	
	Sections 4.2(b)(i), 4.2(b)(ii) and 4.2(b)(iii) Benefit	**Sections 4.2(a), 4.2(b)(i) and 4.2(b)(iii) Benefit**	**Section 4.2(b)(ii) Benefit**
0	100.0%	100.0%	100.0%
1	93.3	100.0	93.3
2	86.7	100.0	86.7
3	80.0	100.0	80.0
4	73.3	91.6	73.3
5	66.7	83.2	66.7
6	63.3	79.0	63.3
7	60.0	74.8	60.0
8	56.7	70.6	56.7
9	53.3	66.4	53.3
10	50.0	62.2	50.0
11	45.0	58.0	45.0
12	40.0	53.8	40.0

4.4 **Postponed Retirement Income**. A Participant may remain employed after his Normal Retirement Age. His retirement benefits will not begin until he actually retires. His additional Years of Service after his Normal Retirement Date will be counted as Credited Service and any salary increases after his Normal Retirement Age will be taken into consideration in the determination of Average Earnings.

4.5 **Termination Prior to Retirement**. A Participant whose Employment terminates prior to his Normal Retirement Age but after the completion of at least five (5) Years of Service shall be entitled to receive a monthly retirement income for life payable as of his Normal Retirement Date, which monthly retirement income shall be determined in accordance with Section 4.2. A Participant whose Employment terminates after the completion of at least ten (10) Years of Service shall also be eligible to elect an Early Retirement Date, in which case the amount of his retirement income shall be determined in accordance with Section 4.3(b). Notwithstanding the foregoing, each Participant who (i) was employed in the operation of the business of PKL LLC on October 2, 2000 and who became a "Transferred Employee" pursuant to the stock purchase agreement dated September 15, 2000 by and between the Employer and Kenlee Precision Corporation and (ii) had three (3) or more Years of Service on September, 2000, shall have a nonforfeitable right to receive a monthly retirement income for life payable as of his Normal Retirement Date and determined in accordance with Section 4.2

4.6 **Disability Retirement Income**. A Participant, who has completed at least ten (10) Years of Service and becomes a Disabled Participant while an Employee, will be eligible to receive a retirement benefit determined in accordance with Section 4.2 commencing at his Normal Retirement Date. Provided, however, that if such Participant is receiving Long-Term Disability (LTD) benefit payments under an Employer-sponsored LTD plan, his LTD benefit payments will be reduced by the amount of his benefit payable under the Plan. For purposes of the Plan, the Participant's Average Earnings shall be computed by assuming that his Earnings during his status as a Disabled Participant were at the same rate as in effect on the last day of Active Service as an Employee and the Participant shall be considered as accruing Hours of Service in accordance with the normal work week for each week that he remains a Disabled Participant up to his Normal Retirement Date or his annuity starting date with the Company, if earlier. A Disabled Participant who elects an Early Retirement Date shall have his benefit determined by applying the provisions of Section 4.3 to his retirement income payable at his Normal Retirement Date, computing such retirement income by taking into account the provisions of this Section 4.6.

4.7 **Determination of Accrued Benefit for Certain Participants**. Notwithstanding any other provision in the Plan, each Section 401(a)(17) Participant's Accrued Benefit under the Plan will be the greater of:

(a) the Participant's Accrued Benefit as of December 31, 1993, frozen in accordance with Treasury Regulation 1.401(a)(4)-13, or

(b) the Participant's Accrued Benefit determined with respect to the benefit formula applicable for the Plan Year beginning on January 1, 1994, as applied to the Participant's total years of Credited Service taken into account under the Plan for purposes of benefit accruals and based on the two hundred thousand dollar Earnings limit, as adjusted, ($250,000 for 2012) as described in Section 2.20.

(i) A Section 401(a)(17) Participant means a Participant whose current Accrued Benefit as of a date on or after the first day of the first Plan Year beginning on or after January 1, 1994, is based on Earnings for a year beginning prior to the first day of the first Plan Year beginning on or after January 1, 1994, that exceeded the current Section 401(a)(17) of the Code limitation on Earnings considered for this purpose.

ARTICLE V

VESTED SERVICE

5.1 **General**. A Participant's eligibility for retirement income benefits under the Plan shall be based on his Years of Service. Years of Service shall be determined in accordance with Section 5.2 below.

5.2 **Determination of Years of Service**. A Participant's Years of Service shall be determined in accordance with the following:

(a) For a Participant as of the Effective Date, who had been covered under the prior provisions of the Plan, the Participant's continuous service with the Employer prior to the Effective Date, determined in accordance with the provisions of the Plan in effect prior to the Effective Date, shall be counted as Years of Service.

(b) Subject to Section 5.2(a), a Participant shall accrue a Year of Service for each Year ending after the Effective Date in which he has one thousand (1,000) or more Hours of Service. Any Year in which the Participant has less than one thousand (1,000) but more than five hundred one (501) Hours of Service shall not constitute a Break-in-Service but will not be considered as a Year of Service. If in any Year, the Participant has less than five hundred one (501) Hours of Service, he shall incur a Break-in-Service.

(c) For purposes of Section 5.2(b), a Participant shall be considered as accruing Hours of Service in accordance with his normal work week for each week:

(i) while on an Authorized Leave of Absence, if at or before the end of such Authorized Leave of Absence, the Participant returns to Active Service, provided however, that a Participant on an Authorized Leave of Absence who fails to return to Active Service at or before the end of such Authorized Leave of Absence, will be considered to have terminated his Employment as of the last day of Active Service with an Employer or with

a Subsidiary or Affiliate. If, however, such failure to return was due to death, disability, or retirement on his Early or Normal Retirement Date, the Participant's date of termination will be the date on which one of the above occurs.

(ii) during the one (1) year period following the date on which a Participant is laid off due to a reduction in work force provided the Participant returns to Active Service within the one (1) year period following his date of termination. If the Participant does not return to Active Service within said one (1) year period, whether because he was not recalled or was recalled but did not return to Active Service, the Participant shall be considered to have terminated his service as of the last day of Active Service.

(iii) during any period for which Hours of Service shall be credited pursuant to applicable law.

(d) Except as provided in (e) below, all or part of the service with an Affiliate, Subsidiary, or Predecessor Corporation, while such entities were members of the same controlled group (as such term is defined in Section 1563 of the Code) immediately preceding Employment with the Employer, shall be counted as Years of Service. Such Years of Service shall be determined in accordance with the provisions of this Section 5.2.

(e) Unless otherwise required by ERISA, the Administrative Committee may, but shall not be required to, give credit for service with an Affiliate, Subsidiary, or Predecessor Corporation immediately preceding Employment with an Employer under any of the following conditions:

(i) The Affiliate, Subsidiary, or Predecessor Corporation was not a part of the same controlled group at the time the service was rendered, or

(ii) The Affiliate, Subsidiary, or Predecessor Corporation maintained a Qualified Plan which required voluntary contributions from an Employee as a prerequisite for participation and the Employee elected not to participate, or

(iii) The Affiliate, Subsidiary, or Predecessor Corporation maintained a Qualified Plan which provided in the terms of such Plan that certain service was not to be counted in determining Years of Service.

(f) If a Participant was an Employee of the Company, terminated his Employment and is rehired, the following rules shall apply in determining his Years of Service:

(i) In the case of a Participant who had five (5) or more Years of Service, including the period of a Participant's service determined in accordance with Section 5.2(a), his Years of Service accrued during his prior period of Employment shall be reinstated as of the date of his re-employment.

(ii) In the case of a Participant whose Employment terminated before completing five (5) Years of Service, including the period of a Participant's service determined in accordance with Section 5.2(a), his Years of Service accrued during his prior period of Employment shall be reinstated unless the "Break-in-Service" exceeds the greater of: (i) five (5) years, or (ii) the number of prior Years of Service.

(g) In no event shall a Participant be deemed to have more than one (1) Year of Service with respect to any Year.

5.3 **Rehired Participant**.

(a) In the event a former Employee is hired by an Affiliate or Subsidiary, such former Employee's years of service with the Affiliate or Subsidiary, while such Affiliate or Subsidiary is a member of the same control group (as such term is defined in

Section 1563 of the Code), will be counted in the Plan provided he meets the rule set forth in Section 5.2 above.

(b) The prior period of service with an Affiliate or Subsidiary accrued by a Rehired Participant will be reinstated in the Plan as of his date of hire by an Employer provided he meets the rule set forth in Section 5.2 above.

ARTICLE VI

LIMITATIONS ON BENEFITS

6.1 **Defined Benefit Limitations**. The limitations of this Article VI shall apply in Limitation Years beginning on or after July 1, 2007, except as otherwise provided herein:

(a) The Annual Benefit otherwise payable to a Participant at any time will not exceed the Maximum Permissible Benefit. If the benefit the Participant would otherwise accrue in a Limitation Year would produce an Annual Benefit in excess of the Maximum Permissible Benefit, the benefit must be limited (or the rate of accrual reduced) to a benefit that does not exceed the Maximum Permissible Benefit as defined in Section 6.2(i).

(b) If a Participant is, or has ever been, a participant in more than one defined benefit plan maintained by the Employer, the sum of the Participant's Annual Benefits from all such plans may not exceed the Maximum Permissible Benefit. Where the Participant's employer-provided benefits under all defined benefit plans ever maintained by the Employer (determined as of the same age) would exceed the Maximum Permissible Benefit applicable at that age, the Annual Benefit provided under the Plan shall be limited to the extent necessary to prevent the Maximum Permissible Benefit from being exceeded.

(c) The application of the provisions of this Article VI will not cause the Maximum Permissible Benefit for any Participant to be less than the Participant's accrued benefit under all the defined benefit plans of the Employer or a Predecessor Employer as of the end of the last Limitation Year beginning before July 1, 2007 under provisions of the plans that were both adopted and in effect before April 5, 2007. The preceding sentence applies only if the provisions of such defined benefit plans that were both adopted and in effect before April 5, 2007 satisfied the applicable requirement of statutory provisions, regulations, and other published guidance relating to Section 415 of the Code in effect as of the end of

the last Limitation Year beginning before July 1, 2007, as described in Treasury Regulations Section 1.415(a)-1(g)(4).

(d) If as a result of actuarial increases to the benefit of a Participant who delays commencement of benefits beyond Normal Retirement Age the accrued benefit of such Participant would exceed the limitation under Section 6.1 of the Plan for the Limitation Year, immediately before the actuarial increase to the Participant's benefit that would cause such Participant's benefit to exceed the limitations of Section 6.1 of the Plan, payment of benefits to such Participant will be suspended in accordance with Section 8.5 of the Plan, if applicable; otherwise, distribution of the Participant's benefit will commence.

6.2 **Definitions**.

(a) *Annual Benefit*: A benefit that is payable annually in the form of a straight life annuity. Except as provided below, where a benefit is payable in a form other than a straight life annuity, the benefit must be adjusted to an actuarially equivalent straight life annuity that begins at the same time as such other form of benefit and is payable on the first day of each month, before applying the limitations of this Article VI. For a Participant who has or will have distributions commencing at more than one annuity starting date, the Annual Benefit will be determined as of each such annuity starting date (and will satisfy the limitations of this Article VI as of each such date), actuarially adjusting for past and future distributions of benefits commencing at the other annuity starting dates. For this purpose, the determination of whether a new starting date has occurred shall be made without regarding to Treasury Regulation Section 1.401(a)-20, Q&A 10(d), and with regard to Treasury Regulation Sections 1.415(b)-1(b)(1)(iii)(B) and (C).

No actuarial adjustment to the benefit is required for (a) survivor benefits payable to a surviving spouse under a qualified joint and survivor annuity to the extent such benefits would not be payable if the Participant's benefit were paid in another form, (b) benefits that are not directly related to retirement benefits (such

as a qualified disability benefit, pre-retirement incidental death benefits, and post-retirement medical benefits), and (c) the inclusion in the form of benefit of an automatic benefit increase feature, provided the form of benefit is not subject to Section 417(e)(3) of the Code and would otherwise satisfy the limitations of this Article 6, and the Plan provides that the amount payable under the form of benefit in any Limitation Year shall not exceed the limits of this Article VI applicable at the annuity starting date, as increased in subsequent years pursuant to Section 415(d) of the Code. For this purpose, an automatic benefit increase feature is included in a form of benefit if the form of benefit provides for automatic, periodic increases to the benefits paid in that form.

The determination of the Annual Benefit shall take into account Social Security supplements described in Section 411(a)(9) of the Code and benefits transferred from another defined benefit plan, other than transfers of distributable benefits pursuant to Treasury Regulation Section 1.411(d)-4, Q&A-3(c), but shall disregard benefits attributable to Employee contributions or rollover contributions.

Effective for Plan Years beginning after December 31, 2003, the determination of actuarial equivalence of forms of benefit other than a straight life annuity shall be made in accordance with Section 6.2(a)(i) or Section 6.2(a)(ii).

(i) Benefit forms not subject to Section 417(e)(3): The straight life annuity that is actuarially equivalent to the Participant's form of benefit shall be determined under this Section 6.2(a)(i) if the form of the Participant's benefit is either (1) a nondecreasing annuity (other than a straight life annuity) payable for a period of not less than the life of the Participant (or, in the case of a qualified pre-retirement survivor annuity, the life of the surviving spouse), or (2) an annuity that decreases during the life of the Participant merely because of (a) the death of the survivor annuitant (but only if the reduction is not below fifty percent (50%) of the benefit

payable before the death of the survivor annuitant), or (b) the cessation or reduction of Social Security supplements or qualified disability payments (as defined in Section 401(a)(11) of the Code).

(A) Limitation Years beginning before July 1, 2007: For Limitation Years beginning before July 1, 2007, the Actuarially Equivalent straight life annuity is equal to the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit computed using whichever of the following produces the greater annual amounts: (1) the interest rate specified in Section 2.3 of the Plan and the mortality table (or other tabular factor) specified in Section 2.3 of the Plan for adjusting benefits in the same form; and (2) a five percent (5%) interest rate assumption and the applicable mortality table defined in Section 2.3(a) of the Plan for that annuity starting date.

(B) Limitation Years beginning on or after July 1, 2007. For Limitation Years beginning on or after July 1, 2007, the Actuarially Equivalent straight life annuity is equal to the greater of (1) the annual amount of the straight life annuity (if any) payable to the Participant under the Plan commencing at the same annuity starting date as the Participant's form of benefit; and (2) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit computed using a five percent (5%) interest rate assumption and the applicable mortality table defined in Section 2.3(a) of the Plan for that annuity starting date.

(ii) Benefit Forms Subject to Section 417(e)(3): The straight life annuity that is actuarially equivalent to the Participant's form of benefit shall be

determined under this paragraph if the form of the Participant's benefit is other than a benefit form described in Section 6.2(a)(i). In this case, the actuarially equivalent straight life annuity shall be determined as follows:

(A) Annuity Starting Date in Plan Years Beginning After 2005. If the annuity starting date of the Participant's form of benefit is in a Plan Year beginning after 2005, the actuarially equivalent straight life annuity is equal to the greatest of (1) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using the interest rate specified in Section 2.3 of the Plan and the mortality table (or other tabular factor) specified in Section 2.3 of the Plan for adjusting benefits in the same form; (2) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using a 5.5 percent (5.5%) interest rate assumption and the applicable mortality table defined in Section 2.3(a) of the Plan; and (3) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using the applicable interest rate defined in Section 2.3(b) of the Plan and the applicable mortality table defined in Section 2.3(a) of the Plan, divided by 1.05.

(B) Annuity Starting Date in Plan Years Beginning in 2004 or 2005. If the annuity starting date of the Participant's form of benefit is in a Plan Year beginning in 2004 or 2005, the actuarially equivalent straight life annuity is equal to the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of

benefit, computed using whichever of the following produces the greater annual amount: (1) the interest rate specified in Section 2.3 of the Plan and the mortality table (or other tabular factor) specified in Section 2.3 of the Plan for adjusting benefits in the same form; and (2) a 5.5 percent (5.5%) interest rate assumption and the applicable mortality table defined in Section 2.3(a) of the Plan.

If the annuity starting date of the Participant's benefit is on or after the first day of the first Plan Year beginning in 2004 and before December 31, 2004, the application of this Section 6.2(a)(ii)(B) shall not cause the amount payable under the Participant's form of benefit to be less than the benefit calculated under the Plan, taking into account the limitations of this Article, except that the actuarially equivalent straight life annuity is equal to the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using whichever of the following produces the greatest annual amount:

(1) the interest rate specified in Section 2.3 of the Plan and the mortality table (or other tabular factor) specified in Section 2.3 of the Plan for adjusting benefits in the same form;

(2) the applicable interest rate defined in Section 2.3(b) of the Plan and the applicable mortality table defined in Section 2.3(a) of the Plan; and

(3) the applicable interest rate defined in Section 2.3(b) of the Plan (as in effect on the last day of the last Plan Year beginning before January 1, 2004, under provisions of the

Plan then adopted and in effect) and the applicable mortality table defined in Section 2.3(a) of the Plan.

(b) *Compensation*: Compensation is defined as wages, salaries, and fees for professional services and other amounts received (without regard to whether or not an amount is paid in cash) for personal services actually rendered in the course of employment with the Employer maintaining the Plan to the extent that the amounts are includible in gross income (including, but not limited to, commissions paid salespeople, compensation for services on the basis of a percentage of profits, commissions on insurance premiums, tips, bonuses, fringe benefits, and reimbursements, or other expense allowances under a nonaccountable plan (as described in Section 1.62-2(c) of the Treasury Regulations), and excluding the following:

(i) Employer contributions (other than elective contributions described in Sections 402(e)(3), 408(k)(6), 408(p)(2)(A)(i), or 457(b) of the Code) to a plan of deferred compensation (including a simplified employee pension described in Section 408(k) or a simple retirement account described in Section 408(p) and whether or not qualified) to the extent such contributions are not includible in the Employee's gross income for the taxable year in which contributed, and any distributions (whether or not includible in gross income when distributed) from a plan of deferred compensation (whether or not qualified);

(ii) Amounts realized from the exercise of a non-qualified stock option, or when restricted stock (or property) held by the Employee either becomes freely transferable or is no longer subject to a substantial risk of forfeiture;

(iii) Amounts realized from the sale, exchange or other disposition of stock acquired under a qualified stock option;

(iv) Other amounts that receive special tax benefits, such as premiums for group-term life insurance (but only to the extent that the premiums are not includible in the gross income of the Employee and are not salary reduction amounts that are described in Section 125 of the Code); and

(v) Other items of remuneration that are similar to any of the items listed in (i) through (iv).

For any self-employed individual, Compensation will mean earned income.

Except as provided herein, for Limitation Years beginning after December 31, 1991, Compensation for a Limitation Year is the Compensation actually paid or made available during such Limitation Year.

For Limitation Years beginning after December 31, 1997, Compensation paid or made available during such Limitation Year shall include any elective deferral (as defined in Section 402(g)(3) of the Code), and any amount which is contributed or deferred by the Employer at the election of the Employee and which is not includible in the gross income of the Employee by reason of Section 125 or 457 of the Code. For Limitation Years beginning after December 31, 2000, Compensation shall also include any elective amounts that are not includible in the gross income of the Employee by reason of Section 132(f)(4) of the Code. For Limitation Years beginning on or after December 31, 2008, differential wage payments by the Employers to Participants who are called to active duty, to the extent such payments do not exceed the amounts the Participant would have received if he or she had continued to perform services for the Employer rather than entering qualified military service, are included as Compensation.

For Limitation Years beginning on or after July 1, 2007, Compensation for a Limitation Year shall also include compensation paid by the later of 2½ months after an Employee's Severance from Employment with the Employer maintaining

the Plan or the end of the Limitation Year that includes the date of the Employee's Severance from Employment with the Employer maintaining the Plan, if:

(i) the payment is regular compensation for services during the Employee's regular working hours, or compensation for services outside the Employee's regular working hours (such as overtime or shift differential), commissions, bonuses, or other similar payments, and, absent a Severance from Employment, the payments would have been paid to the Employee while the Employee continued in Employment with the Employer.

(ii) the payment is for unused accrued bona fide sick, vacation or other leave that the Employee would have been able to use if Employment had continued; or

(iii) the payment is received by the Employee pursuant to a nonqualified unfunded deferred compensation plan and would have been paid at the same time if Employment had continued, but only to the extent includible in gross income.

Any payments not described above shall not be considered Compensation if paid after Severance from Employment, even if they are paid by the later of 2 ½ months after the date of Severance from Employment or the end of the Limitation Year that includes the date of Severance from Employment, except, payments to an individual who does not currently perform services for the Employer by reason of qualified military service (within the meaning of Section 414(u)(1) of the Code) to the extent these payments do not exceed the amounts the individual would have received if the individual had continued to perform services for the Employer rather than entering qualified military service; or (b) compensation paid to a Participant who is permanently and totally disabled, as defined in Section 22(e)(3) of the Code, provided salary continuation applies to all Participants who are permanently and totally disabled for a fixed or determinable period, or the

Participant was not a highly compensated employee, as defined in Section 414(q) of the Code, immediately before becoming disabled.

Back pay, within the meaning of Treasury Regulations Section 1.415(c)-2(g)(8), shall be treated as compensation for the Limitation Year to which the back pay relates to the extent the back pay represents wages and compensation that would otherwise be included under this definition.

(c) *Defined Benefit Compensation Limitation*: One hundred percent (100%) of a Participant's High Three-Year Average Compensation, payable in the form of a straight life annuity. In the case of a Participant who has had a Severance from Employment with the Employer, the Defined Benefit Compensation Limitation applicable to the Participant in any Limitation Year beginning after the date of severance shall be automatically adjusted by multiplying the limitation applicable to the Participant in the prior Limitation Year by the annual adjustment factor under Section 415(d) of the Code that is published in the Internal Revenue Bulletin. The adjusted compensation limit shall apply to Limitation Years ending with or within the calendar year of the date of the adjustment, but a Participant's benefits shall not reflect the adjusted limit prior to January 1 of that calendar year.

In the case of a Participant who is rehired after a Severance from Employment, the Defined Benefit Compensation Limitation is the greater of one hundred percent (100%) of the Participant's High Three-Year Average Compensation, as determined prior to the Severance from Employment, as adjusted pursuant to the preceding paragraph, if applicable; or one hundred percent (100%) of the Participant's High Three-Year Average Compensation, as determined after the Severance from Employment under Section 6.2(g).

(d) *Defined Benefit Dollar Limitation*: $160,000, as automatically adjusted, effective January 1st of each year, under Section 415(d) of the Code in such manner as the Secretary shall prescribe, and payable in the form of a straight life annuity ($200,000 for 2012). The new limitation will apply to Limitation Years ending

with or within the calendar year of the date of the adjustment. The automatic annual adjustment shall apply to Participants who have had a separation from Employment.

(e) *Employer*: For purposes of this article, Employer shall mean the Employer that adopts the Plan, and all members of a controlled group of corporations (as defined in Section 414(b) of the Code, as modified by Section 415(h) of the Code), all commonly controlled trades or businesses (as defined in Section 414(c) of the Code, as modified by Section 415(h) of the Code), or affiliated service groups (as defined in Section 414(m) of the Code) of which the adopting Employer is a part, and any other entity required to be aggregated with the Employer pursuant to Section 414(o) of the Code.

(f) *Formerly Affiliated Plan of the Employer*: A plan that, immediately prior to the cessation of affiliation, was actually maintained by the Employer and, immediately after the cessation of the affiliation, is not actually maintained by the Employer. For this purpose, cessation of affiliation means the event that causes an entity to no longer be considered the Employer, such as the sale of a member controlled group of corporations, as defined in Section 414(b) of the Code, as modified by Section 415(h) of the Code, to an unrelated corporation, or that causes a plan to not actually be maintained by the Employer, such as transfer of plan sponsorship outside a controlled group.

(g) *High Three-Year Average Compensation*: The average Compensation for the three (3) consecutive years of service (or, if the Participant has less than three (3) consecutive years of service, the Participant's longest consecutive period of service, including fractions of years, but not less than one year) with the Employer that produces the highest average. A Year of Service is defined in Section 2.51. In the case of a Participant who is rehired by the Employer after a Severance from Employment, the Participant's High Three-Year Average Compensation shall be calculated by excluding all Years of Service for which the

Participant performs no services for and receives no Compensation from the Employer (the break period) and by treating the years immediately preceding and following the break period as consecutive. A Participant's Compensation for a Year of Service shall not include Compensation in excess of the limitation under Section 401(a)(17) of the Code that is in effect for the calendar year in which such Year of Service begins.

(h) *Limitation Year*: The Plan Year as defined in Section 2.38.

(i) *Maximum Permissible Benefit*: The lesser of the Defined Benefit Dollar Limitation or the Defined Benefit Compensation Limitation (both adjusted where required, as provided below).

(i) If the Participant has less than 10 Years of Participation in the Plan, the Defined Benefit Dollar Limitation shall be multiplied by a fraction -- (i) the numerator of which is the number of years (or part thereof, but less than one year) of participation in the Plan, and (ii) the denominator of which is 10. In the case of a Participant who has less than 10 Years of Service with the Employer, the Defined Benefit Compensation Limitation shall be multiplied by a fraction -- (i) the numerator of which is the number of Years (or part thereof, but not less than one year) of Service with the Employer, and (ii) the denominator of which is 10.

(ii) Effective for benefits commencing in Limitation Years ending after December 31, 2001, the Defined Benefit Dollar Limitation shall be adjusted if the annuity starting date of the Participant's benefit is before age 62 or after age 65. If the annuity starting date is before age 62, the Defined Benefit Dollar Limitation shall be adjusted under Section 6.2(i)(ii)(A), as modified by Section 6.2(i)(ii)(C)). If the annuity starting date is after age 65, the Defined Benefit Dollar Limitation shall be adjusted under Section 6.2(i)(ii)(B), as modified by Section 6.2(i)(ii)(C).

(A) Adjustment of Defined Benefit Dollar Limitation for Benefit Commencement Before Age 62:

(1) Limitation Years Beginning Before July 1, 2007. If the annuity starting date for the Participant's benefit is prior to age 62 and occurs in a Limitation Year beginning before July 1, 2007, the Defined Benefit Dollar Limitation for the Participant's annuity staring date is the annual amount of a benefit payable in the form of a straight life annuity commencing at the Participant's annuity starting date that is the actuarial equivalent of the Defined Benefit Dollar Limitation (adjusted under Section 6.2(i)(i) for Years of Participation less than 10, if required) with actuarial equivalence computed using whichever of the following produces the smaller annual amount: (i) the interest rate specified in Section 2.3 of the Plan and the mortality table (or other tabular factor) specified in Section 2.3 of the Plan; or (2) a five percent (5%) interest rate assumption and the applicable mortality table as defined in Section 2.3(a) of the Plan.

(2) Limitation Years Beginning on or After July 1, 2007. If the annuity starting date for the Participant's benefit is prior to age 62 and occurs in a Limitation Year beginning on or after July 1, 2007, and the Plan does not have an immediately commencing straight life annuity payable at both age 62 and the age of benefit commencement, the Defined Benefit Dollar Limitation for the Participant's annuity starting date is the annual amount of a benefit payable in the form of a straight life annuity commencing at the Participant's annuity starting date that this the

actuarial equivalent of the Defined Benefit Dollar Limitation (adjusted under Section 6.2(i)(i) for Years of Participation less than 10, if required) with actuarial equivalence computed using a five percent (5%) interest rate assumption and the applicable mortality table for the annuity starting date as defined in Section 2.3(a) of the Plan (and expressing the Participation's age based on completed calendar months as of the annuity starting date).

(B) Adjustment of Defined Benefit Dollar Limitation for Benefit Commencement After Age 65:

(1) Limitation Years Beginning Before July 1, 2007. If the annuity starting date for the Participant's benefit is after age 65 and occurs in a Limitation Year beginning before July 1, 2007, the Defined Benefit Dollar Limitation for the Participant's annuity staring date is the annual amount of a benefit payable in the form of a straight life annuity commencing at the Participant's annuity starting date that is the actuarial equivalent of the Defined Benefit Dollar Limitation (adjusted under Section 6.2(i)(i) for Years of Participation less than 10, if required) with actuarial equivalence computed using whichever of the following produces the smaller annual amount: (i) the interest rate specified in Section 2.3 of the Plan and the mortality table (or other tabular factor) specified in Section 2.3 of the Plan; or (2) a five percent (5%) interest rate assumption and the applicable mortality table as defined in Section 2.3(a) of the Plan.

(2) Limitation Years Beginning on or After July 1, 2007. If the annuity starting date for the Participant's benefit is after age 65 and occurs in a Limitation Year beginning on or after July 1, 2007, and the Plan does not have an immediately commencing straight life annuity payable at both age 65 and the age of benefit commencement, the Defined Benefit Dollar Limitation for the Participant's annuity starting date is the annual amount of a benefit payable in the form of a straight life annuity commencing at the Participant's annuity starting date that this the actuarial equivalent of the Defined Benefit Dollar Limitation (adjusted under Section 6.2(i)(i) for Years of Participation less than 10, if required) with actuarial equivalence computed using a five percent (5%) interest rate assumption and the applicable mortality table for the annuity starting date as defined in Section 2.3(a) of the Plan (and expressing the Participation's age based on completed calendar months as of the annuity starting date).

(C) Notwithstanding the other requirements of this Section 6.2(i)(ii), no adjustment shall be made to the Defined Benefit Dollar Limitation to reflect the probability of a Participant's death between the annuity starting date and age 62, or between age 65 and the annuity starting date, as applicable, if benefits are not forfeited upon the death of the Participant prior to the annuity starting date. To the extent benefits are forfeited upon death before the annuity starting date, such an adjustment shall be made. For this purpose, no forfeiture shall be treated as occurring upon the Participant's death if the Plan does not charge Participants for

providing a qualified pre-retirement survivor annuity, as defined in Section 417(c) of the Code, upon the Participant's death.

(iii) Minimum benefit permitted: Notwithstanding anything else in this Article VI to the contrary, the benefit otherwise accrued or payable to a Participant under the Plan shall be deemed not to exceed the Maximum Permissible Benefit if:

(A) the retirement benefits payable for a Limitation Year under any form of benefit with respect to such Participant under the Plan and under all other defined benefit plans (regardless of whether terminated) ever maintained by the Employer do not exceed $10,000 multiplied by a fraction—(i) the numerator of which is the Participant's number of Years of Service or parts thereof but not less than one year (not to exceed 10) with the Employer, and (ii) the denominator of which is 10; and

(B) the Employer (or a Predecessor Employer) has not at any time maintained a defined contribution plan in which the Participant participated (for this purpose, mandatory employee contributions under a defined benefit plan, individual medical accounts under Section 401(h), and accounts for postretirement medical benefits established under Section 419A(d)(1) of the Code are not considered a separate defined contribution plan).

(j) *Predecessor Employer*: If the Employer maintains a plan that provides a benefit which the Participant accrued while performing services for a former employer, the former employer is a predecessor employer with respect to participation in the Plan. A former entity that antedates the Employer is also a Predecessor Employer with respect to a Participant if, under the facts and circumstances, the Employer constitutes a continuation of all or a portion of the trade or business of the former entity.

(k) *Severance from Employment*: An Employee has a severance from employment when the Employee ceases to be an Employee of the Employer maintaining the Plan. An Employee does not have a Severance from Employment if, in connection with a change of Employment, the Employee's new employer maintains the Plan with respect to the Employee.

(l) *Year of Participation*: The Participant shall be credited with a Year of Participation (computed to fractional parts of a year) for each accrual computation period for which the following conditions are met: (1) the Participant is credited with at least the number of Hours of Service for benefit accrual purposes, required under the terms of the Plan in order to accrue a benefit for the accrual computation period, and (2) the Participant is included as a Participant under the eligibility provisions of the Plan for at least one day of the accrual computation period. If these two conditions are met, the portion of a Year of Participation credited to the Participant shall equal the amount of benefit accrual service credited to the Participant for such accrual computation period. A Participant who is permanently and totally disabled within the meaning of Section 415(c)(3)(c)(i) of the Code for an accrual computation period shall receive a Year of Participation with respect to that period. In addition, for a Participant to receive a Year of Participation (or part thereof) for an accrual computation period, the Plan must be established no later than the last day of such accrual computation period. In no event will more than one Year of Participation be credited for any twelve (12) month period.

(m) *Year of Service*: For purposes of Article VI, the Participant shall be credited with a Year of Service (computed to fractional parts of a year) for each accrual computation period for which the Participant is credited with at least the number of Hours of Service for benefit accrual purposes, required under the terms of the Plan in order to accrue a benefit for the accrual computation period, taking into account only service with the Employer or Predecessor Employer.

6.3 Funding-Based Limits.

Notwithstanding any other provision of the Plan to the contrary, no benefit shall accrue under or be paid from the Plan, and no amendment increasing liability for benefits shall take effect, to the extent that such accrual, payment or amendment is prohibited by Section 206(g) of ERISA or Section 436 of the Code (or any successor provisions thereto) as interpreted by applicable regulatory guidance. No Employer or Affiliate shall be required to (i) make additional contributions, (ii) provide security to the Plan, or (iii) alter the method or timing of any actuarial valuation in order to avoid or reduce the application of such prohibition. Except to the extent required by law, the Plan shall not restore any benefits that did not accrue and shall not make any payment in lieu of any benefits that are not paid by reason of this Section 6.3, and any amendment that does not take effect by reason of this Section 6.3 shall be null and void, and shall not become effective unless readopted by the Employer.

ARTICLE VII

CREDITED SERVICE

7.1 **Determination of Credited Service**. A Participant's Credited Service shall be determined in accordance with the following:

(a) For a Participant as of the Effective Date, who had been covered under the prior provisions of the Plan, the Participant's Credited Service shall be determined in accordance with the provisions of the Plan in effect prior to the Effective Date.

(b) Subject to Section 7.1(a), a Full-Time Employee shall accrue a full Year of Credited Service for each calendar year in which he is an Employee eligible to participate in the Plan under Section 3.1. In the year in which a Full-Time Employee is hired or terminated, the Participant shall be deemed to complete one/twelfth (1/12) of a year of Credited Service for each month employed, rounded to the nearest month. A Part-Time Employee shall be deemed to complete one/twelfth (1/12) of a year of Credited Service for each one hundred seventy-three and one/third (1731/3) Hours of Service completed while employed as a Part-Time Employee. For the year in which, with respect to a Participant, benefit accruals cease pursuant to the provisions of Section 4.2(d) or (e) or (g), a Participant who is a Full-Time Employee shall be deemed to complete one-twelfth (1/12) of a year of Credited Service for each month employed through the effective date of the cessation of benefit accruals, and no Participant described in Section 4.2(d) or (e) or (g) shall accrue additional Credited Service for periods thereafter.

(c) Credited Service will not include a period of time a Participant is on an Authorized Leave of Absence for other than medical or military reasons, is on layoff status or while employed with an Affiliate or Subsidiary which is not an Employer.

(d) Prior Service with a Predecessor Corporation may, at the discretion of the Administrative Committee, be deemed to be Credited Service.

(e) In the event a Participant who has completed ten (10) or more Years of Service becomes a Disabled Participant, the period of disability up to the Participant's Normal Retirement Date shall be counted as Credited Service regardless of whether the Participant remains in the employ of an Employer.

(f) A Participant shall in no event be deemed to accrue more than one (1) full Year of Credited Service with respect to any Year.

(g) If the Participant was an Employee of the Employer, terminated his Employment and is rehired, the following rules shall apply in determining his Credited Service:

(i) In the case of a Participant who had five (5) or more Years of Service or who terminated Employment after his Normal Retirement Date, his Credited Service accrued during his prior period of Employment shall be reinstated as of the date of his re-employment.

(ii) In the case of a Participant whose Employment terminated before completing five (5) Years of Service and before his Normal Retirement Date, his Years of Credited Service accrued during his prior period of Employment shall be reinstated unless the "Break-in-Service" exceeds the greater of: (i) five (5) years, or (ii) the number of prior Years of Service.

(h) Years of Service with an Affiliate or Subsidiary which does not participate in the Plan will not be included as Credited Service.

(i) Notwithstanding any other provision of this Section 7.1, Years of Service or other periods of employment with a Strategic Business Unit whose employees are not active Participants accruing benefits under Section 4.2 will not be included as Credited Service.

ARTICLE VIII

PAYMENT OF RETIREMENT BENEFITS

8.1 **Normal Form of Payment**. The retirement income to which a Participant may be entitled at his Normal Retirement Date shall be payable in the following method unless the Participant elects one of the optional forms of payment provided for in Section 8.2.

(a) The retirement income payable to a Participant who does not have an Eligible Spouse on the date payments commence shall be in the form of a lifetime income amount calculated in accordance with Section 4.2.

(b) The retirement income payable to a Participant who has an Eligible Spouse on the date payments commence shall be in the form of a Surviving Spouse Option with his Eligible Spouse as the survivor, subject to the following:

(i) Under a Surviving Spouse Option, a reduced amount shall be paid to the Participant for his lifetime, and his Eligible Spouse, if surviving at the Participant's death, shall be entitled to receive thereafter a lifetime benefit equal to fifty percent (50%) of the reduced benefit which had been payable to the Participant. The amount of the reduced benefit payable to the Participant and Survivor shall be the Actuarial Equivalent of the lifetime benefit as determined in Section 4.2.

(ii) Within the twelve (12) month period prior to his Normal Retirement Date, or at the time he applies for retirement income payments to commence, if earlier, or if requested by the Participant eligible for Early Retirement, each Participant must certify to the Administrative Committee, on a form and in a manner prescribed by the Administrative Committee whether or not he is married, and if so, the name and date of birth of the person to whom he is married and the date of the marriage. The Participant will notify the Administrative Committee of any changes in his status prior to retirement.

(iii) Within a reasonable period (but in no event more than 180 days prior to the annuity starting date) following receipt of the certification specified in (ii) above, from a Participant who certifies that he will be married at the time his retirement income payments are to commence, the Administrative Committee shall furnish him a written explanation of the Surviving Spouse Option and an estimate of the amounts of retirement income payable both under that option and all other options. Such explanation shall include a description of how much larger benefits will be if the commencement of distributions is deferred.

(iv) At the time such explanation is furnished to the Participant, an election form will also be furnished to him. The Participant must complete such form and return it to the Administrative Committee within the 180-day period ending on the date as of which his retirement income payments are to commence. The Participant may elect to waive the otherwise applicable election period described above and commence distribution of his benefit on a date that is more than seven (7) days after the election form is furnished to him. The election form shall allow the Participant to elect (a) to revoke the Surviving Spouse Option or (b) to elect to be covered under the option, in which case he must submit satisfactory proof of the date of his spouse's birth and of their marriage if such has not previously been submitted to the Administrative Committee. A Participant who fails to so complete and return the election form in a timely manner shall be deemed to have elected to be covered under the Surviving Spouse Option.

(v) If a Participant revokes the Surviving Spouse Option, he may nevertheless cancel such revocation at any time prior to the first (1st) day of the month for which his retirement income payments are to commence by completing the appropriate form and submitting it to the Administrative Committee; otherwise retirement income shall be paid in the form of a lifetime income unless an optional form is elected in accordance with Section 8.3. If a

married Participant revokes the Surviving Spouse Option, he must provide spousal consent for such revocation. The spouse's consent to revoke the Surviving Spouse Option must be either witnessed by a Plan representative or notarized by a Notary of the Public.

(vi) If a vested Participant who has not revoked the Surviving Spouse Option dies on or after his Early Retirement Date, he will be deemed to have retired on the first (1st) day of the month coincident with or following the date of his death or retirement, whichever occurs first, and retirement income shall be paid to his Eligible Spouse in the form of a Surviving Spouse Option.

(vii) If a vested Participant who has not revoked the Surviving Spouse Option dies before his Early Retirement Date, he will be deemed to have:

(A) terminated Employment on the date of death (unless he had terminated Employment prior to his death),

(B) survived to this Early Retirement Date, and

(C) retired with an immediate Surviving Spouse Option.

The amount of the retirement income payable to the Eligible Spouse for life shall be equal to fifty percent (50%) of the amount the Participant would have received had he survived to elect an Early Retirement Date in accordance with (i) and (ii) above. Payment to the Eligible Spouse of a deceased Participant is to commence with the month in which the Participant would have reached his Early Retirement Date.

(viii) Subject to retroactive payment thereof, any retirement income payments otherwise due under the Plan may be delayed until thirty (30) days after the latest of whichever of the following are applicable:

(A) The receipt by the Administrative Committee of the certification specified in (ii) above;

(B) The receipt by the Administrative Committee of the completed election form furnished in accordance with (iv) above; or

(C) The receipt by the Administrative Committee of satisfactory proof of the marriage and date of birth of the Eligible Spouse of a Participant who elects or is deemed to have elected the Surviving Spouse Option.

(ix) The election of the Surviving Spouse Option shall be null and void if the Participant's spouse should die within thirty (30) days after the latest date on which the Participant may make a timely return of the election form pursuant to (iv) above.

8.2 **Optional Forms of Payment**. A Participant may elect, at any time prior to 180 days preceding the commencement of his retirement income, by giving written notice on a form and in a manner prescribed by the Administrative Committee, to convert the amount of retirement income payable to him under the normal form of payment into the Actuarial Equivalent under one of the following options:

(a) ***Lifetime Income Option***. Under this option retirement income will cease at the death of the Participant.

(b) ***Joint and Survivor Option***. Under this option, a Participant can elect to receive a reduced income, but after the Participant's death, fifty percent (50%), seventy-five percent (75%) or one hundred percent (100%) (depending upon the election made) of such reduced income shall be paid for life to his Eligible Spouse or his designated Joint Annuitant.

(c) ***Ten (10) Year Certain Option***. Under this option, the Participant can elect to receive a reduced income, but in the event of his death prior to one hundred

twenty (120) months after retirement income payments commence, the same reduced income shall be paid for the remainder of the one hundred twenty (120) months to his designated Beneficiary.

(d) ***Level Income Option***. A Participant electing an Early Retirement Date which is prior to the date when he is eligible to receive Social Security benefits may elect to receive an increased monthly payment from the Plan continuing until he is eligible to receive Social Security Benefits, whereupon his monthly payment from the Plan will be decreased. The amount of increase and decrease will be determined in accordance with appropriate Actuarial Equivalent factors based on the Participant's expected Social Security Benefits as of his Early Retirement Date so that his total monthly retirement income from this retirement date shall be approximately level.

In the event of the election of this Level Income Option, the monthly payment of the retirement income shall commence at the date of retirement and shall cease with the last payment prior to the death of the Participant.

8.3 **Election Procedure**.

(a) An election may not be made nor will it be accepted by the Administrative Committee, or if accepted it shall become null and void, if the Participant's Employment terminates prior to his Early Retirement Date.

(b) If a Participant shall validly elect a Surviving Spouse Option or a Joint and Survivor Option and shall retire on an Early or Normal Retirement Date, his election shall be effective on such retirement date, provided both the Participant and Joint Annuitant are then alive. If the Joint Annuitant shall die before such retirement date, the election shall be of no effect.

(c) If a Participant shall elect a Surviving Spouse Option or a Joint and Survivor Option and shall remain in the service of the Company after his Normal

Retirement Date, his election shall nevertheless become effective on his Normal Retirement Date provided, however,

(i) if his Joint Annuitant dies before such Participant retires, such Participant shall be entitled after retiring to receive only the reduced retirement income payable to him in accordance with such option; and

(ii) if such Participant dies before retiring, his Joint Annuitant shall receive the reduced income which would be payable to such Joint Annuitant in accordance with such option, as if such Participant had retired on the first day of the month coinciding with or next preceding his date of death.

(d) If a Participant shall elect a Surviving Spouse Option or a Joint and Survivor Option and his Joint Annuitant shall die before the death of, but after the retirement of, the Participant, such Participant shall continue to receive the reduced retirement income payable to him in accordance with such option.

(e) If a Participant shall validly elect a ten (10) year certain option and shall remain in the service of the Company after his Normal Retirement Date, and if such Participant shall die before retiring, his Beneficiary shall receive the reduced retirement income for the guaranteed period elected in accordance with this option as if the Participant had retired on the first day of the month coinciding with or next preceding his date of death.

(f) Notwithstanding anything to the contrary contained herein, if the Joint Annuitant is other than the Participant's Eligible Spouse, the present value of the payments made and to be made to a Participant under any of the optional forms of income cannot be less than fifty percent (50%) of the present value of the total payments to be made to the Participant and his Joint Annuitant. In such event, the optional form elected shall be adjusted to satisfy the fifty percent (50%) requirement referred to above.

8.4 **Minimum Required Distributions**.

(a) The distribution of benefits shall be made in accordance with Section 401(a)(9) of the Code and Treasury Regulations issued thereunder on June 15, 2004.

(i) Determination of Amount to be Distributed Each Year.

(A) General Annuity Requirements. If a Participant's benefit is paid in the form of an annuity, payments under the annuity shall satisfy the following requirements:

(1) The annuity distributions shall be paid in periodic payments made at intervals not longer than one year;

(2) The distribution period shall be over a life (or lives) or over a period certain not longer than the period described in subsection (b) or (c); and

(3) Payments shall either be nonincreasing or increase only as permitted under Q&A-14 of Regulation section 1.401(a)(9)-6.

(B) Amount Required to be Distributed by Required Beginning Date. The amount that must be distributed on or before the Participant's Required Beginning Date (or, if the Participant dies before distributions begin, the date distributions are required to begin under subsection (c)(v) is the payment that is required for one payment interval. The second payment need not be made until the end of the next payment interval even if that payment interval ends in the next calendar year. Payment intervals are the periods for which payments are received, e.g., bi-monthly, monthly, semi-annually, or annually. All of the Participant's benefit accruals as of the last day of the first Distribution Calendar Year shall be included in the calculation of the amount of the annuity payments for

payment intervals ending on or after the Participant's Required Beginning Date.

(C) Additional Accruals after First Distribution Calendar Year. Any additional benefits accruing to the Participant in a calendar year after the first Distribution Calendar Year shall be distributed beginning with the first payment interval ending in the calendar year immediately following the calendar year in which such amount accrues.

(ii) Requirement for Joint Life Annuities that Commence During Participant's Lifetime Where the Co-Annuitant is not the Participant's Spouse. If the Participant's benefit is being distributed in the form of a survivor annuity for the joint lives of the Participant and a non-spouse co-annuitant, annuity payments to be made on or after the Participant's Required Beginning Date to such co-annuitant after the Participant's death must not at any time exceed the applicable percentage of the annuity payment for such period that would have been payable to the Participant using the table set forth in Q&A-2 of Regulation section 1.401(a)(9)-6. The applicable percentage is based on the adjusted Participant/co-annuitant age difference. The adjusted Participant/co annuitant age difference is determined by first calculating the excess of the age of the Participant over the age of the co-annuitant based on their ages on their birthdays in a calendar year. If the Participant is younger than age 70, the age difference determined in the previous sentence is reduced by the number of years that the Participant is younger than age 70 on the Participant's birthday in the calendar year that contains the Benefit Commencement Date. In the case of an annuity that provides for increasing payments, the requirement of this subsection (ii) will not be violated merely because benefit payments to the co-annuitant increase, provided the increase is determined in the same manner for the Participant and the co-annuitant.

(iii) Requirements for Minimum Distributions Where Participant Dies Before Date Distributions Begin.

(A) Participant Survived by Designated Beneficiary. Except as provided in subsection (b), if the Participant dies before the date distribution of his or her benefit begins and there is a Designated Beneficiary, the Participant's benefit shall be distributed, beginning no later than the time described in subsection (c)(v), over the life of the Designated Beneficiary or over a period certain not exceeding:

(1) Unless the Benefit Commencement Date is before the first Distribution Calendar Year, the Life Expectancy of the Designated Beneficiary determined using the Designated Beneficiary's age as of the Designated Beneficiary's birthday in the calendar year immediately following the calendar year of the Participant's death; or

(2) If the Benefit Commencement Date is before the first Distribution Calendar Year, the Life Expectancy of the Designated Beneficiary determined using the Designated Beneficiary's age as of the Designated Beneficiary's birthday in the calendar year that contains the Benefit Commencement Date.

(B) No Designated Beneficiary. If the Participant dies before the date distributions begin and there is no Designated Beneficiary as of September 30 of the year following the year of the Participant's death, distribution of the Participant's entire vested benefit shall be completed by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(C) Death of Surviving Spouse Before Distributions to Surviving Spouse Begin. If the Participant dies before the date distribution of his or her vested benefit begins, the Participant's surviving spouse is the Participant's sole Designated Beneficiary, and the surviving spouse dies before distributions to the surviving spouse begin, this subsection shall apply as if the surviving spouse were the Participant, except that the time by which distributions must begin will be determined without regard to subsection (c)(v)(A).

(iv) Minimum Required Distributions Made or Commencing Prior to January 1, 2003. Notwithstanding anything in the Plan to the contrary, the distribution of benefits under the Plan shall be made in accordance with Section 401(a)(9) of the Code and the Regulations, including the minimum distribution incidental benefit requirement of Regulation section 1.401(a)(9)-2. Distributions made or commencing under this subsection to a Participant who has not yet terminated employment with the Employer shall be limited to the minimum required distributions pursuant to Section 401(a)(9) of the Code as in effect on December 31, 1995. The Plan Administrator shall adopt appropriate rules to reduce the benefits paid under the Plan after the Participant terminates employment in order to reflect the distributions made while the Participant was still employed.

(b) Elections.

(i) Election to Apply 5-Year Rule to Distributions to Designated Beneficiaries. If the Participant dies before distributions begin and there is a Designated Beneficiary, distribution to the Designated Beneficiary is not required to begin by the date specified in subsection (c)(v), but the Participant's entire vested interest in the Plan shall be distributed to the Designated Beneficiary by December 31 of the calendar year containing the fifth anniversary of the Participant's death. Participants or Designated

Beneficiaries may elect on an individual basis whether the 5-year rule or the life expectancy rule in subsection (a)(iii) applies to distributions after the death of a Participant who has a Designated Beneficiary. The election must be made no later than the earlier of September 30 of the calendar year in which distribution would be required to begin under subsection (c)(iv), or by September 30 of the calendar year which contains the fifth anniversary of the Participant's (or, if applicable, surviving spouse's) death. If neither the Participant nor Designated Beneficiary makes an election under this subsection, distributions shall be made in accordance with subsection (a)(iii). If the Participant's surviving spouse is the Participant's sole Designated Beneficiary and the surviving spouse dies after the Participant but before distributions to either the Participant or the surviving spouse begin, this election shall apply as if the surviving spouse were the Participant.

(ii) Election to Allow Designated Beneficiary Receiving Distributions Under 5-Year Rule to Elect Life Expectancy Distributions. A Designated Beneficiary who is receiving payments under the 5 year rule described in subsection (a) above may make a new election to receive payments under the life expectancy rule until December 31, 2003, provided that all amounts that would have been required to be distributed under the life expectancy rule for all Distribution Calendar Years before 2004 are distributed by the earlier of December 31, 2003 or the end of the 5-year period.

(iii) Election under TEFRA Section 242(b)(2). Notwithstanding any provision in this Article VIII to the contrary, distributions under the Plan may be made under a designation made before January 1, 1984, in accordance with Section 242(b)(2) of the Tax Equity and Fiscal Responsibility Act (TEFRA).

(c) Definitions. For purposes of this Article, the following rules and definitions shall apply:

(i) "Designated Beneficiary" means the individual who is designated as the Beneficiary under the Plan and is the Designated Beneficiary under Section 401(a)(9) of the Code and Section 1.401(a)(9)-1, Q&A-4 of the Treasury Regulations.

(ii) "Distribution Calendar Year" means a calendar year for which a minimum distribution is required. For distributions beginning before the Participant's death, the first Distribution Calendar Year is the calendar year immediately preceding the calendar year that contains the Participant's Required Beginning Date. For distributions beginning after the Participant's death, the first Distribution Calendar Year is the calendar year in which distributions are required to begin under subsection (v) below.

(iii) "Life Expectancy" means life expectancy as computed by use of the Single Life Table in Regulation section 1.401(a)(9)-9.

(iv) "Required Beginning Date" means:

(A) April 1 of the calendar year following the calendar year in which the Participant attains age 70½ or, if later, April 1 of the calendar year following the calendar year in which the Participant terminates employment with the Employer; and

(B) April 1 of the calendar year following the calendar year in which the Participant attained age 70½ in the case of a Participant who attained age 70½ prior to 1999.

(i) Commencement Date in the Event of Death of Participant Before Distributions Begin. If a Participant dies before distributions begin, the

Participant's death benefit shall be distributed, or begin to be distributed, no later than as follows:

(A) If in the form of a Qualified Pre-retirement Survivor Annuity, Distributions to a surviving spouse shall begin by December 31 of the calendar year immediately following the calendar year in which the Participant died, or by December 31 of the calendar year in which the Participant would have attained age 70-1/2, if later.

(B) Distributions to a beneficiary other than a surviving spouse or to the surviving spouse in a form other than the Qualified Pre-retirement Survivor Annuity shall begin by December 31 of the calendar year immediately following the calendar year in which the Participant died.

8.5 **Suspension of Benefits**.

(a) ***Reemployment Prior to Normal Retirement Age***. If a retired Participant is again employed by the Employer prior to his Normal Retirement Age, his retirement income hereunder shall be suspended during the period of such reemployment and the retirement income to which he is entitled when he again retires hereunder shall be actuarially adjusted to take account of any benefit payments previously received by the Participant. To determine the adjustment, the present value of the benefits already paid will be converted to an annuity payable in the automatic form of payment for an unmarried Participant at Normal Retirement Date and subtracted from the Accrued Benefit so determined under Section 4.2 without regard to the prior benefit payments. In no event, however, may the benefit be less than his original retirement benefit. If such benefits have been paid in a lump sum in accordance with the terms of the Plan and if the Participant is subsequently reemployed by the Employer, he shall not accrue any benefits for service prior to his reemployment date unless such lump sum is repaid to the Trust Fund, with interest at five percent (5%) per annum.

(b) ***Continued Employment after Normal Retirement Date***. Subject to the mandatory commencement provisions, if a Participant postpones his or her retirement beyond his or her Normal Retirement Age, the payment of such Participant's retirement benefit shall be suspended during each calendar month in which the Participant completes forty (40) or more Hours of Service (except for Hours of Service credited as a result of back pay) for the Employer or Affiliate.

(c) ***Notice of Suspension of Benefits***. During the first calendar month in which a Participant's benefits are suspended under the above paragraph (b) of this Section 8.5, the Administrative Committee shall deliver to the Participant, by personal delivery or first class mail, a notice setting forth the following:

(i) a description of the specific reasons why benefit payments are being suspended;

(ii) a general description of the Plan provisions relating to the suspension of benefits;

(iii) a copy of the Plan provisions relating to the suspension of benefits;

(iv) the statement that "Applicable Department of Labor Regulations may be found in Section 2530.203-3 of the Code of Federal Regulations";

(v) a description of the procedures set forth in the Plan for obtaining a review of the suspension of benefits; and

(vi) a description of any notice procedure (including any forms which must be filed by the Participant) as a prerequisite for the Participant's obtaining the resumption of benefit payments.

If the Administrative Committee intends to offset any amounts previously received by a Participant during periods when such benefits should have been suspended against any future benefits to be received by the Participant, the notice shall also set forth the periods of employment which gave rise to the offset, the

suspendible amounts which are subject to offset, and the manner in which the Administrative Committee intends to offset the suspendible amounts.

In no event shall the amount of benefits offset by the Administrative Committee in any month exceed twenty-five percent (25%) of the benefits to which a Participant would have been entitled but for the offset.

(d) ***Resumption of Benefits***. If, during a calendar month, a Participant's benefit payments are no longer suspendible pursuant to Section 8.5(b), the benefit payments to the Participant shall resume no later than the first (1st) day of the third (3rd) calendar month after such calendar month. The initial payment upon resumption shall include the payment scheduled to occur in the calendar month when payments resume and any amounts withheld during the period between the cessation of employment and the resumption of payments, less any offset for payment when benefits should have been suspended.

(e) ***Procedure for Review of Suspension of Benefits***. If a Participant submits a written request to the Administrative Committee for a review of the suspension of his or her benefits, such request shall be deemed to be a request for a review of the denial of a claim for benefits for purposes of the benefit claims procedure set forth in Section 9.4.

(f) ***Procedure for Status Determination***. If a Participant submits a written request to the Administrative Committee for a determination whether specific contemplated employment will result in the suspension of benefits, the Administrative Committee shall, within thirty (30) days of the receipt of such request, notify the Participant in writing whether said employment will result in suspension of benefits.

8.6 **Direct Rollovers**.

(a) Notwithstanding any provisions of the Plan to the contrary that would otherwise limit a distributee's election under this Section, a distributee may elect, at the time

and in the manner prescribed by the Administrative Committee, to have any portion of an "eligible rollover distribution" paid directly to an eligible retirement plan specified by the distributee in a direct rollover.

(b) ***Definitions***.

(i) "Eligible rollover distribution": An eligible rollover distribution is any distribution of all or any portion of the balance to the credit of the distributee, except that an eligible rollover distribution does not include: any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or life expectancy) of the distributee or the joint lives (or joint life expectancies) of the distributee and the distributee's designated beneficiary, or for a specified period of ten (10) years or more; any distribution to the extent such distribution is required under Section 401(a)(9) of the Code; a hardship distribution; or the portion of any distribution that is not includible in gross income (determined without regard to the exclusion for net unrealized appreciation with respect to employer securities), except that an eligible rollover distribution shall include the portion that is not includable in gross income if the distribution is transferred in a direct trustee-to-trustee transfer to an individual retirement account or annuity described in Section 408(a) of (b) of the Code, a qualified defined benefit or defined contribution plan described in Section 401(a) or 403(a) of the Code, or an annuity contract described in Section 403(b) of the Code, which agrees to separately account for amounts so transferred, including separately accounting for the portion of such distribution which is includable in gross income and the portion of such distribution which is not includable.

(ii) "Eligible retirement plan": An eligible retirement plan is an individual retirement account described in Section 408(a) of the Code, and individual

retirement annuity described in Section 408(b) of the Code, an annuity plan described in Section 403(a) of the Code, an annuity contract described in Section 403(b) of the Code, a qualified trust described in Section 401(a) of the Code, or an eligible plan under Section 457(b) of the Code which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state that accepts the distributee's eligible rollover distribution and agrees to separately account for amounts transferred into such plan from the Plan., or to a Roth IRA described in Section 408A(b) of the Code. The definition of an eligible retirement plan shall also apply in the case of a distribution to a surviving spouse or former spouse who is the alternate payee under a qualified domestic relations order as defined in Section 414(p) of the Code.

(iii) "Distributee": A distributee includes an Employee or former Employee. In addition, the Employee's or former Employee's surviving spouse and the Employee's or former Employee's spouse or former spouse who is the alternate payee under a qualified domestic relations order (qdro), as defined in Section 414(p) of the Code, are distributees without regard to the interest of the spouse or former spouse. A distribute also includes the Participant's nonspouse designated Beneficiary. In the case of a nonspouse beneficiary, the direct rollover may be made only to an individual retirement account or annuity described in Section 408(a) or Section 408(b) ("IRA") that is established on behalf of the designated beneficiary and that will be treated as an inherited IRA pursuant to the provisions of Section 402(c)(11). Also, in this case, the determination of any required minimum distribution under Section 401(a)(9) of the Code that is ineligible for rollover shall be made in accordance with Notice 2007-7, Q&A 17 and 18.

(iv) "Direct rollover": A direct rollover is a payment by the Plan to the eligible retirement plan specified by the distributee.

(v) "Non-Spousal Rollovers": A distributee who is a designed beneficiary (as defined in Section 401(a)(9)(E) of the Code) of a deceased Participant and who is not the deceased Participant's surviving Spouse (a "nonspousal beneficiary") may elect, at the time and in the manner prescribed by the Administrator, to have any amount payable to him or her paid directly in a direct rollover. The amount to be distributed in the direct rollover must satisfy all of the requirements to be an eligible rollover distribution other than the requirement that the distribution be made to the Participant or the Participant's Eligible Spouse and must be paid in a direct trustee-to-trustee transfer to an individual retirement plan described in Section 402(c)(8)(B)(i) or (ii) of the Code that is established for the purposes of receiving the distribution on behalf of the nonspousal beneficiary.

ARTICLE IX

ADMINISTRATION

9.1 **Administrative Committee**. All usual and reasonable expenses of the Administrative Committee will be paid by the Employer. No member of the Administrative Committee shall receive any compensation for his service on the Administrative Committee.

9.2 **Agents of the Administrative Committee**. The Administrative Committee may: elect a secretary who may, but need not, be one of the members of the Administrative Committee; appoint from their number such committees with such powers as they shall determine; authorize one or more of the members, or any agent, to execute or deliver any instrument or to make any payment on their behalf; and employ counsel, agents, and such clerical, accounting and actuarial services as they might require in carrying out the provisions of the Plan.

9.3 **Procedures**. The Administrative Committee may from time to time establish rules and procedures for the administration of the Plan. All rules, procedures and decisions of the Administrative Committee shall be uniformly and consistently applied to all Participants in similar circumstances. Such rules, procedures and decisions so made shall be conclusive and binding on all persons having an interest in the Plan.

9.4 **Claims Procedures**. The Office of the Senior Vice President Human Resources (the "Claims Administrator") shall make all initial determinations as to the right of any person to a benefit. If any application for payment of a benefit under the Plan shall be denied, the Claims Administrator shall notify the claimant within ninety (90) days of such application setting forth the specific reasons therefor and shall afford such claimant a reasonable opportunity for a full and fair review of the decision denying his or her claim. If special circumstances require an extension of time for processing the claim, the claimant will be furnished with a written notice of the extension prior to the termination of the initial ninety (90) day period. In no event shall such extension exceed a period of ninety (90) days from the end of such initial period. The extension notice shall indicate the special circumstances requiring an extension of time and the date by which the

Claims Administrator expects to render its decision. The Claims Administrator may delegate initial determinations as to the right of any person to a benefit to a member of his or her staff.

The notice of the initial denial shall set forth, in addition to the specific reasons for the denial, the following:

(a) reference to pertinent provisions of the Plan;

(b) such additional information as may be relevant to the denial of the claim;

(c) an explanation of the claims review procedure; and

(d) notice that such claimant may request the opportunity to review pertinent Plan documents and submit a statement of issues and comments.

Within sixty (60) days following notice of denial of his or her claim, upon written request made by any claimant for a review of such denial to the Senior Vice President Human Resources (or such other member of the Administrative Committee designated by it to hear the appeal), the Senior Vice President Human Resources shall take appropriate steps to review the denial in light of any further information or comments submitted by such claimant.

The Senior Vice President Human Resources shall render a decision within sixty (60) days after the claimant's request for review and shall advise said claimant in writing of the decision on such review, specifying reasons and identifying appropriate provisions of the Plan. If special circumstances require an extension of time for processing, a decision will be rendered as soon as possible, but not later than one hundred twenty (120) days after receipt of a request for the review. If the extension of time for review is required because of special circumstances, written notice of the extension shall be furnished to the claimant prior to the commencement of the extension. If the decision is not furnished within such time, the claim shall be deemed denied on review. The decision on review shall be in writing and shall include specific reasons for the decision, written in a manner

calculated to be understood by the claimant without legal counsel, as well as specific references to the pertinent Plan provisions on which the decision is based.

9.5 **Benefit Payments from Trust**. The Administrative Committee shall cause benefits to be paid from the Trust Fund pursuant to the provisions of the Plan.

9.6 **Payment to Incompetents**. Whenever, in the Administrative Committee's opinion, a person entitled to receive benefits under the Plan is under legal disability or is incapacitated in any way so as to be unable to manage his financial affairs, the Administrative Committee may direct the payments becoming due to such person to be made to another for his benefit without responsibility of the Administrative Committee or the Trustee to see to the application of such payment. Payments made pursuant to such power shall be a complete discharge of any liability for making such payment under the provisions of the Plan.

9.7 **Powers of Administrative Committee**. The Administrative Committee shall have the full power and discretionary authority to administer the Plan in all of its details, subject to the requirements of ERISA. The Administrative Committee shall have the authority to construe the terms of the Plan, including the authority to remedy any omissions, ambiguities, or inconsistencies in the provisions of the Plan, and to resolve all questions arising under the Plan or in the administration of the Plan. Whenever, in the administration of the Plan, any discretionary action by the Administrative Committee is required, the Administrative Committee shall exercise its authority in a nondiscriminatory manner so that all persons similarly situated will receive substantially the same treatment. The Administrative Committee's decision or actions shall be conclusive and binding upon all Participant's and their beneficiaries, heirs, assigns, administrators, executors, and any other person claiming through them, in absence of clear and convincing evidence that the Administrative Committee acted arbitrarily and capriciously.

9.8 **Special Powers**. Without limiting the general discretionary authority of the Administrative Committee, the Administrative Committee's powers include the power:

(a) To construe and interpret the Plan, decide all questions of eligibility and determine the amount, manner, and time of payment of any benefit hereunder.

(b) To prescribed rules, procedures and forms to be followed regarding the administration of the Plan.

(c) To receive, review and keep on file (as it deems convenient or proper) reports of the financial condition, and of the receipts and disbursements, of the Trust, and a copy of the Plan including any amendments thereto.

(d) To comply with requirements of ERISA and all other government requirements.

(e) To appoint and remove (1) a person or persons with responsibility for reporting and disclosure under the Code or any other applicable law; (2) attorneys and others to represent them before any court or governmental agency; (3) an investment manager or managers with exclusive authority and discretion to manage, acquire and dispose of part or all of the assets of the Plan; (4) an insurer or insurers; and (5) such other agents as may be required to assist in administering the Plan;

(f) To authorize one of its member to execute written instruments setting forth the Plan or any amendments to the Plan duly adopted by the Board or the Committee in accordance with Section 12.1;

(g) To establish a funding policy and method for the Plan, in each case consistent with the objectives of the Plan and consistent with ERISA, and to provide procedures for carrying them out;

(h) To approve administrative expenses of the Plan and Trust to be paid from the Trust under Section 10.1;

(i) To allocate responsibilities among themselves; and

(j) To delegate its fiduciary responsibilities under the Plan, such delegation to be by written instrument in accordance with Section 405 of ERISA.

9.9 **Use of Outside Specialists**. The Administrative Committee shall be entitled to rely conclusively upon all tables, valuations, certificates, opinions and reports which shall be furnished by an Actuary, accountant, controller, counsel or other person who shall be employed or engaged for such purposes.

9.10 **Power of Named Fiduciaries**. The Named Fiduciaries shall have only those specific powers, duties, responsibilities and obligations as they are specifically given under the Plan. In general, the Employers shall have the sole responsibility for making contributions provided under Section 10.3. The Administrative Committee shall have the sole responsibility for the administration of the Plan in accordance with the procedures set forth in the Plan and shall have the power to amend the Plan (except as otherwise provided in Section 12.1). The Trustee shall have the responsibility for the administration of the Trust and the management of the Trust Assets held under the Trust as specifically provided for in the Trust. The Administrative Committee may appoint and remove Investment Managers as provided in the Trust Agreement. The Investment Manager(s) shall have the exclusive authority to manage (including the power to acquire and dispose of) all assets of the Trust placed under its management by the Administrative Committee in accordance with the terms of the agreement with the applicable Investment Manager. Each Named Fiduciary shall warrant that any directions given, information furnished, or action taken by it shall be in accordance with the provisions of the Plan or the Trust, as the case may be, authorizing or providing for such direction, information or action. Furthermore, each Named Fiduciary may rely upon such direction, information, or action of another Named Fiduciary as being proper under the Plan or the Trust, and is not required under the Plan or the Trust to inquire into the propriety of any such direction, information or action. It is intended under the Plan and the Trust that each Named Fiduciary shall be responsible for the proper exercise of its own powers, duties, responsibilities and obligations under the Plan and the Trust and shall not be responsible for any act or failure to act of the Company or another Named Fiduciary. No Named

Fiduciary guarantees the Trust Assets in any manner against investment loss or depreciation in asset value.

9.11 **Indemnification**. To the extent that the Administrative Committee, or directors, officers and employees of the Company or of a participating Employer who serve on or on behalf of the Administrative Committee or otherwise as plan fiduciaries are not protected and held harmless by or through insurance, the Company indemnifies and saves harmless the Administrative Committee, and any director, officer or employee of the Company or of a participating Employer who serves on or on behalf of the Administrative Committee or otherwise as a plan fiduciary, from and against any and all loss resulting from liability to which the Administrative Committee, director, officer or employee, may be subjected by reason of any act or conduct (except willful misconduct or gross negligence) in connection with the Plan or Trust Fund or both, including reasonable attorneys' fees and amounts paid in settlement of any claims approved by the Company.

ARTICLE X

TRUST FUND

10.1 **Trust**. The Company (for itself and other Employers), shall enter into one or more agreements for the administration of the Trust Fund, in such form and containing such provisions as are appropriate. All assets of the Trust Fund shall be retained for the exclusive benefit of Participants, Joint Annuitants and Beneficiaries and shall be used to pay benefits to such persons or to pay administrative expenses of the Plan and Trust Fund (to the extent not paid by the Employer) and shall not revert to or inure to the benefit of the Employer, except to the extent provided in Sections 10.2 and 12.3.

10.2 **Return of Contributions**. Upon an Employer's request, a contribution which was made by a mistake of fact, or conditioned upon the deductibility of the contribution under Section 404 of the Code, shall be returned to the Employer within one (1) year after the payment of the contributions or the disallowance of the deduction (to the extent disallowed), whichever is applicable. All contributions made to the Trust Fund shall be conditioned upon their deductibility under the Code.

10.3 **Contributions**. No contributions shall be required under the Plan from any Participant. The Employer(s) shall contribute over a period of time such amounts as may be determined by actuarial calculations to provide retirement income pursuant to the terms of the Plan. Such calculations shall be made by the Actuary appointed by the Administrative Committee.

ARTICLE XI

RETIREE HEALTH PLAN ACCOUNT

11.1 **Establishment of Retiree Health Plan**.

(a) There is created, established and maintained under the Plan a separate account known as the Retiree Health Plan Account. The Trustee and Administrative Committee agree to hold and administer the Retiree Health Plan Account, and to receive contributions hereto, for the purpose of providing for the payment of certain medical expenses pursuant to Section 401(h) of the Code, for Covered Retirees and their Covered Dependents (as such terms are defined below). The separate account shall be for recordkeeping purposes only. Funds contributed to the Retiree Health Plan Account may be invested without identification of which investments are allocable to the Retiree Health Plan Account.

(b) (i) No part of the income or corpus of the Retiree Health Plan Account shall be (either within the taxable year of contribution or thereafter) used for, or diverted to, any purpose (including the provision of any retirement benefits provided under the Plan) other than the provision of Medical Benefits, at any time prior to the satisfaction of all liabilities under the Plan with regard to the payment of Medical Benefits in accordance with this Section. Notwithstanding the above, the payment of any necessary or appropriate expenses attributable to the administration of the Retiree Health Plan Account may be made from the income or corpus of such account.

(ii) Notwithstanding any other termination provisions herein, any amounts in the Retiree Health Plan Account which remain in such account following satisfaction of all liabilities for the payment of Medical Benefits arising under this Section shall be returned to the Employer.

(c) Notwithstanding the foregoing, no Medical Benefits shall be payable to any person, who is, or ever has been, a Key Employee as defined in Section 14, or his Covered Dependents.

11.2 **Definitions**. Whenever used in the Plan, the following terms shall have the meaning set forth below unless otherwise clearly required by the context:

(a) "Covered Dependent" shall mean a Covered Retiree's dependent who meets the conditions for coverage under the PerkinElmer, Inc. Retiree Health Plan. In no event will the term Covered Dependent include any person who is an eligible Covered Retiree himself or any person who is employed full-time with the Employer. If both parents of any Covered Dependent child are eligible Covered Retirees, the Covered Dependent child shall be considered as a Covered Dependent of only one of the Covered Retirees.

(b) "Covered Retiree" shall mean a Retired Participant who has completed at least ten (10) Years of Service on his Normal or Early Retirement Date. In no event shall a Covered Retiree include a person not covered under the PerkinElmer, Inc. Retiree Health Plan, nor a person who is or ever was a Key Employee.

(c) "Medical Benefits" shall mean, with respect to a Covered Retiree, a percentage of the Per Capita Retiree Health Cost, such percentage being equal to three thousand, four hundred dollars ($3,400) as indexed from time to time) divided by the Per Capita Retiree Health Cost, but in no event in excess of one hundred percent (100%) of such cost.

(d) "Per Capita Retiree Health Cost" for any year shall mean the total annual Employer cost of claims under the PerkinElmer, Inc. Retiree Health Plan, divided by the number of retired employees covered under that plan at any time during that year.

(e) "PerkinElmer, Inc. Retiree Health Plan" shall mean the PerkinElmer, Inc. health plan, as it relates to retired persons, as it shall be amended from time to time, and the provisions of such Plan shall be incorporated by reference herein.

(f) "Retired Participant" shall mean an individual who was an active Participant under the Plan until his Early, Normal or Postponed Retirement Date and who retires from Employment with the Employer and is thereupon immediately eligible to receive retirement benefits hereunder.

11.3 **Election to Continue Coverage**. If a Covered Dependent loses coverage as a result of the death or divorce of a Covered Retiree, such Covered Dependent shall have coverage continuation rights as shall be provided under the Retiree Health Plan, and the provisions of such continuation coverage shall be incorporated by reference with respect to benefits under the Retiree Health Plan Account created hereunder. Because such continuation coverage shall be provided under the Retiree Health Plan at the Covered Dependent's expense, no further benefits will be paid from the Retiree Health Plan Account with respect to such Covered Dependents.

11.4 **Funding Method and Policy**. All contributions to fund benefits provided under this Section shall be made by the Employer, except those relating to Continuation Coverage. Subject to the restrictions of this Section, the Employer shall contribute to the Retiree Health Plan Account annually an amount which is reasonably estimated to cover the total cost of the benefits to be provided hereunder and which satisfies the general requirements applicable to deductions allowable under Section 404 of the Code (as set forth in Treasury Regulations 1.404(a)-3(f)). The total cost of providing Medical Benefits shall be determined in accordance with any generally accepted actuarial method which is reasonable in view of the provisions and coverage of the Plan, the funding medium, and other applicable considerations.

11.5 **Subordination to Retirement Benefits**. It is intended that the Medical Benefits provided under this Section be subordinate at all times to the retirement benefits provided under the Plan. Therefore, the aggregate of contributions (made after the effective date of

this Section) to the Retiree Health Plan Account, shall at no time exceed twenty-five percent (25%) of the aggregate of contributions (made after such effective date) for all purposes of the Plan, other than contributions to fund past service credits. For this purpose, contributions to the Plan for benefits other than Medical Benefits shall not be deemed to be less than the cost of such benefits determined under the projected unit credit method (other than the cost of past service credits).

11.6 **Benefits Provision**. The benefits payable pursuant to this Section shall be limited to the payment of Medical Benefits for Covered Retirees and their Covered Dependents. The Medical Benefits provided under this Section and the Employer contributions to fund said Benefits shall not discriminate in favor of the highly compensated employees of the Employer within the meaning of Section 414(q) of the Code.

11.7 **Coordination with Retiree Health Plan**. Benefits under the Plan shall be provided by reimbursing annually the Employer or other paying agent under the PerkinElmer, Inc. Retiree Health Plan for the percentage of the Per Capita Retiree Health Cost, as defined under Section 11.2(d) for each Covered Retiree.

11.8 **Reservation of the Right to Terminate Benefits**. The Employer reserves the right to amend or terminate the Medical Benefits provided hereunder or the Retiree Health Plan at any time. In such event, assets in the Medical Benefit Account shall be used to provide the Medical Benefits provided hereunder, both to Covered Retirees and those Participants who at the date of termination subsequently become Covered Retirees, but only to the extent assets remain in such account. After the satisfaction of all such liabilities, any assets remaining shall revert to the Employer.

11.9 **Disallowance of Deduction**. All contributions made to the Retiree Health Plan Account shall be conditioned upon their deductibility under the Code. The disallowance of the deduction by the Internal Revenue Service shall be cause for reversion of the contribution to the Employer.

ARTICLE XII

AMENDMENT AND DURATION OF PLAN

12.1 **Right to Amend**. The Company (for itself and other Employers), shall have the right at any time to amend the Plan by written instrument approved by the Administrative Committee, except that no such amendment shall have the effect of reducing any benefits accrued to a Participant, Joint Annuitant or Beneficiary prior thereto, or cause any part of the assets of the Trust Fund to be diverted to any purpose other than for the exclusive benefit of Participants, Joint Annuitants, or Beneficiaries; provided, however, that an amendment that is expected to have a significant cost impact (including, without limitation, an amendment to merge or terminate the Plan) as determined by the Committee whose determination will be final and binding, must be approved by the Board of the Company; and provided further that the Senior Vice President Human Resources may approve any amendment necessary to comply with the Code, ERISA or other applicable laws and regulations.

12.2 **Right to Suspend**. The Plan is adopted in the expectation that it will be continued indefinitely, but the continuance of the Plan and the payment of any contribution hereunder is not assumed as a contractual obligation. Each Employer reserves the right to discontinue its contributions under the Plan and any Employer may discontinue further contributions under the Plan without discontinuing the Plan with respect to any other Employer. The Company (for itself and the other Employers), as authorized by the Board, reserves the right to discontinue the Plan at any time. The suspension of contributions shall not itself constitute a discontinuance of the Plan as long as the minimum funding requirements of Section 412 of the Code are met.

12.3 **Distribution of Funds upon Termination**. The Plan may be terminated by the Board as to all or any particular group or groups of Participants and such other persons, if any, who have or may become entitled to benefits under the Plan on account of such Participant's participation subject to the conditions that, at any time prior to the satisfaction of all liabilities with respect to Participants, Beneficiaries, Joint Annuitants and Eligible

Spouses, no part of the funds of the Plan shall, by reason of such termination, be at any time used for or diverted to purposes other than for the exclusive benefit of such persons. Upon such termination of the Plan, or upon complete discontinuance of Company contributions, the funds of the Plan shall be allocated for the benefit of each Participant, Beneficiary, Joint Annuitant and Eligible Spouse in a manner approved by the Internal Revenue Service in accordance with the provisions of, and regulations issued pursuant to, Section 4044 of ERISA.

Upon termination or partial termination of the Plan, the right of each Participant to benefits accrued to the date of such termination or partial termination to the extent funded shall be nonforfeitable.

Upon termination of the Plan with respect to a group of Participants which constitutes a partial termination of the Plan, the proportionate interest of each Participant, Beneficiary, Joint Annuitant and Eligible Spouse affected by such partial termination shall be determined in a manner approved by the Internal Revenue Service in accordance with the provisions of, and regulations issued pursuant to, Section 4044 of ERISA.

The amount allocated for the benefit of each Participant, Beneficiary, Joint Annuitant or in accordance with the above shall be applied for the benefit of each Participant, Beneficiary, Joint Annuitant or Eligible Spouse either by a cash payment, or by insurance company contract or by the continuance of the fund and the payment of retirement incomes therefrom in such amounts as may be provided by the funds so allocated, all as the Administrative Committee shall determine. However, in the event that the assets available for allocation are less than the value of insured vested benefits, the Pension Benefit Guaranty Corporation may direct how the allocated amounts are to be applied.

In the event of any such termination, the Pension Benefit Guaranty Corporation (PBGC) will be notified in accordance with the notice requirements established by the PBGC.

If any of the funds of the Plan remain after the satisfaction of all liabilities of the Plan, the said remaining funds shall be paid by the Trustee to the Company.

12.4 **Termination Events**. The Plan will terminate with respect to any Employer upon the happening of any of the following events:

(a) Delivery to the Trustee of a notice of termination by the Employer specifying the date as of which the Plan shall terminate for such Employer.

(b) Adjudication of an Employer as a bankrupt or a general assignment by the Employer to or for the benefit of creditors or a dissolution of any Employer.

12.5 **Merger or Consolidation**. In the event of any merger or consolidation of the Plan with (or transfer in whole or in part of the assets and liabilities of a trust not another Trust) any other plan of deferred compensation maintained or to be established for the benefit of all or some of the Participants of the Plan, the assets of a trust applicable to such Participants shall be transferred to another trust fund only if:

(a) Each Participant would (if either the Plan or the other plan then terminated) receive a benefit immediately after the merger, consolidation or transfer which is equal to or greater than the benefit he would have been entitled to receive immediately before this merger, consolidation or transfer (if the Plan then terminated);

(b) Such other plan and trust are qualified under Sections 401(a) and 501(a) of the Code.

ARTICLE XIII

MISCELLANEOUS

13.1 **Plan Voluntary**. The adoption and maintenance of the Plan shall not be deemed to be a contract between the Employer and any Employee. Nothing herein contained shall be deemed to give to any Employee the right to be retained in the employ of an Employer or to interfere with the right of the Employer to discharge any Employee at any time, nor shall it be deemed to give the Employer the right to require any Employee to remain in its employ, nor shall it interfere with the Employee's right to terminate his Employment at any time.

13.2 **Benefits Payable from Trust**. All benefits payable under the Plan shall be paid or provided for solely from the Trust Fund and Employers assume no liability or responsibility therefor.

13.3 **Non-alienation of Benefits**. Except in the case of a Qualified Domestic Relations Order, the interest hereunder of any Participant, Joint Annuitant, or Beneficiary shall not be alienable by the Participant, Joint Annuitant, or Beneficiary either by assignment or by any other method and shall not be subject to be taken by his creditors by any process whatever. The Administrative Committee shall establish a written procedure to determine the qualified status of domestic relations orders and to administer distributions under such qualified orders.

The Plan may offset against the benefit of any Participant, any amount that the Participant is ordered or required to pay under a judgment, order, decree or settlement agreement described in ERISA Section 206(d)(4) and Section 401(a)(13)(C) of the Code.

13.4 **Rights of Participants**. All rights of every Participant under the Plan with relation to the Trust Fund or which may arise against or affect the Trustee shall be enforced exclusively by the Administrative Committee, which is hereby given the express power and authority to enforce all such rights as the representatives of every Participant under the Plan, and in

any action or proceeding with relation to the Trust Fund or brought by or against the Trustee, the Administrative Committee shall be deemed to represent every Participant.

13.5 **Enforcement.** The Plan and any subsequent amendments thereto, shall be construed and enforced under the Code, ERISA, and the laws of the Commonwealth of Massachusetts.

13.6 **Payment of Plan Expenses**. Investment brokerage fees, transfer taxes, cost of necessary actuarial studies, and similar cost arising as a direct result of the making of investments, actuarial studies, sales of assets or realization of investment yield shall be paid from the Trust Fund.

13.7 **Restriction on Benefits**. In the event of Plan termination, the benefit of any highly compensated active or form Employee is limited to a benefit that is nondiscriminatory under Section 401(a)(4) of the Code.

Benefits distributed to any of the 25 most highly compensated active and highly compensated former Employees with the greatest Compensation in the current or any prior year are restricted such that the annual payments are no greater than an amount equal to the payment that would be made on behalf of the Employee under a straight life annuity that is the Actuarial Equivalent of the sum of the Employee's Accrued Benefit, the Employee's other benefits under the Plan (other than a Social Security supplement, within the meaning of Section 1.411(a)-7(c)(4)(ii) of the Treasury Regulations, and the amount the employee is entitled to receive under a Social Security supplement.

The preceding paragraph shall not apply if: (1) after payment of the benefit to an Employee described in the preceding paragraph, the value of Plan assets equals or exceeds one hundred percent (100%) of the value of current liabilities, as defined in Section 412(l)(7) of the Code, (2) the value of the benefits for an Employee described above is less than one percent (1%) of the value of current liabilities before distribution, or (3) the value of the benefits payable under the Plan to an Employee described above does not exceed $5,000.

For purposes of this Section 13.7, benefit includes loans in excess of the amount set forth in Section 72(p)(2)(A) of the Code, any periodic income, any withdrawal values payable to a living employee, and any death benefits not provided for by insurance on the Employee's life.

13.8 **Illegal Provisions**. If any provisions of the Plan shall be held illegal or invalid for any reason, said illegality or invalidity shall not affect the remaining provisions of the Plan, but shall be fully severable, and the Plan shall be construed and enforced as if said illegal or invalid provisions had never been inserted herein.

13.9 **Forfeitures.** Forfeitures arising from termination of Employment, death, or for any other reason must not be applied to increase the benefits any Employee would otherwise receive under the Plan at any time prior to the termination of the Plan or the complete discontinuance of Employer's contribution thereunder; the amount forfeited must be used as soon as possible to reduce the Employer's contributions.

13.10 **Lump Sum Payments**. Notwithstanding any provision in the Plan to the contrary, including the requirement to obtain spousal consent to a distribution, if the Actuarial Equivalent present value of the benefit from the Trust Fund payable to any person shall not exceed $1,000 and the benefit has not yet commenced, a lump sum payment of such Actuarial Equivalent present value shall automatically be made to the appropriate recipient as soon as practicable following the date the Actuarial Equivalent present value was determined in lieu of all other benefits under the Plan. Such determination shall be made on or after the date the Participant terminates Employment or dies, as applicable. Such determination shall also be made as of the first day of each Plan Year (provided no benefit has yet commenced) based on the Actuarial Equivalent assumptions then in effect.

If the Actuarial Equivalent present value of the benefit from the Trust Fund payable to a Participant is $0, the Participant shall be deemed to have received a distribution of his vested Accrued Benefit. If a Participant who is deemed to have received a distribution in accordance with this Section 13.10 resumes Employment with the Employer before incurring five (5) consecutive One year Breaks in Service, the participant will be deemed

to have made repayment in accordance with Section 13.11 of the amount of the deemed distribution upon his resumption of Employment.

13.11 **Repayment of Lump Sums**. In the event that an individual's Accrued Benefit has been distributed in the form of a lump sum in accordance with Section 13.10, and that individual later returns to Employment with an Employer, the following rules shall apply in determining the individual's Years of Service under Articles V and VII of the Plan:

(a) If the individual returns to Employment and repays within five (5) years of the date of reemployment the amount he received from the Trust plus interest compounded annually at the Actuarial Equivalent interest rate in effect on the January 1st of the Year of reemployment, his prior Years of Service will be reinstated under both Articles V and VII of the Plan.

(b) If the individual returns to Employment and does not repay the amount received from the Trust, his prior Years of Service will be reinstated under Article V of the Plan.

13.12 **Headings**. The headings of articles and sections hereof are included solely for convenience and for reference, and if there be any conflict between such headings and the text of the Plan, the text shall control.

13.13 **Action by Employer**. Any action by the Employer under the Plan may be by resolution of its Board, or by an person or persons duly authorized by resolution of said Board to take such action.

13.14 **Gender and Number**. The masculine gender words include both sexes, the single includes the plural, and the plural includes the single, unless the context clearly otherwise requires.

13.15 **Qualified Military Service**. Notwithstanding any provisions of the Plan to the contrary, contributions, benefits and service credit with respect to qualified military service will be provided in accordance with Section 414(u) of the Code. In addition, in accordance with

Section 401(a)(37) of the Code, the survivors of a Participant who dies while performing qualified military service shall be entitled to additional benefits (other than benefit accruals relating to the period of qualified military service) that would be provided under the Plan if the Participant had resumed employment and then terminated employment on account of death. Thus, to the extend required by Section 401(a)(37) and Section 414(u)(8)(B), such a Participant shall be credited with vesting service for the period of the Participant's qualified military service.

ARTICLE XIV

TOP-HEAVY PLAN RESTRICTIONS

The following restrictions shall apply if the Plan becomes a Top-Heavy Plan.

14.1 **Definitions.** For purposes of this Article XIV, the following definitions shall apply:

(a) Key Employee – means any Employee or former Employee (including any deceased Employee) who at any time during the Plan Year that includes the Determination Date was an officer of the Employer having annual compensation greater than $130,000 (as adjusted under Section 416(i)(1) of the Code for Plan Years beginning after December 31, 2002 ($165,000 for 2012), a 5 percent (5%) owner of the Employer, or a 1-percent (1%) owner of the Employer having annual compensation of more than $150,000. For this purpose, annual compensation means compensation within the meaning of Section 415(c)(3) of the Code. The determination of who is a Key Employee will be made in accordance with Section 416(i)(1) of the Code and applicable regulations and other guidance of general applicability issued thereunder.

(b) Non-Key Employee – any Employee who is not a Key Employee.

(c) Determination Date – the last day of the preceding Plan Year, or of the current Plan Year, if the Plan was not in existence during the preceding year.

(d) Valuation Date – the annual date on which the Plan's assets and liabilities are valued. This is the same valuation date used for computing Plan costs for minimum funding.

(e) Annual Compensation – an Employee's Compensation (as defined in Section 6.2(b)) received from the Employer during the Plan Year.

14.2 **Top-Heavy Plan**. The Plan is a Top-Heavy Plan with respect to any Plan Year if, as of the most recent Valuation Date occurring within a twelve (12) month period ending on

the Determination Date applicable to such Plan Year, the total value of Accrued Benefits of Key Employees exceeds sixty percent (60%) of the Total Value of Accrued Benefits for all Participants.

The present value of Accrued Benefits and the amounts of account balances of a Participant as of the Determination Date shall be increased by the distributions made with respect to the Participant under the Plan and any plan aggregated with the Plan under Section 416(g)(2) of the Code during the one (1) year period ending on the Determination Date. The preceding sentence shall also apply to distributions under a terminated plan which, had it not been terminated, would have been aggregated with the Plan under Section 416(g)(2)(A)(i) of the Code. In the case of a distribution made for a reason other than severance from employment, death, or disability, this provision shall be applied by substituting "five (5) year period" for "one (1) year period."

If any Employee has not performed services for the Employer at any time during the one (1) year period ending on the Determination Date, his Accrued Benefit shall be disregarded for purposes of determining whether the Plan is Top-Heavy as set forth in Section 416(g)(4)(E) of the Code.

A Key Employee in a prior Plan Year who is not a Key Employee with respect to a current Plan Year shall be excluded entirely in computing the percentage in the first paragraph above.

14.3 **Restrictions**. The following restrictions shall apply if the Plan becomes a Top-Heavy Plan.

(a) Vesting. A Participant of a Top-Heavy Plan shall have a nonforfeitable interest in his Accrued Benefit derived from Employer contributions as provided under the following schedule:

YEARS OF SERVICE	VESTED PERCENTAGE OF ACCRUED BENEFIT
Less than 2	0%
2	20%
3	40%
4	60%
5 or more	100%

Accrued Benefit, for purposes of this subsection (a), shall include that portion of Accrued Benefits which the Participant earned during all prior Plan Years, whether or not the Plan was a Top-Heavy Plan during such prior Plan Years.

If the Plan ceases to be Top-Heavy, the vesting schedule shall revert to the schedule set forth in Section 4.5. However, any portion of a Participant's Accrued Benefit that was vested before the Plan ceased to be Top-Heavy shall remain non-forfeitable, and any Employee who has three or more Years of Service for Vesting may elect to have the Top-Heavy vesting schedule apply to his benefits.

(b) Minimum Benefits. During any Plan Year in which the Plan is a Top-Heavy Plan, the Accrued Benefit, derived from Employer's contributions and expressed as a life annuity commencing at Normal Retirement Date, of a Non-Key Employee, shall be the greater of the benefit accrued for that year under Section 2.2 of the Plan or (1) times (2) where:

(i) is the Employee's Average Compensation; and

(ii) is two percent (2%) per Year of Service, not to exceed twenty percent (20%).

Each Non-Key Employee who is a Participant and has completed at least 1,000 Hours of Service during an accrual computation period must accrue a minimum benefit in accordance with the provisions of this Section 4.3(b) regardless of

whether such Non-Key Employee's level of Compensation and regardless of whether such Non-Key Employee is employed on a specified date.

Any accrual of Company-derived benefits, whether or not attributable to years of which the Plan is Top-Heavy, may be used to satisfy such minimum benefits.

For purposes of this subsection (b), the following definitions are applicable:

(i) Years of Service shall be the Participant's Years of Service except any service with the Employer shall be disregarded to the extent that such service occurs during a Plan Year when the Plan benefits (within the meaning of Section 410(b) of the Code) no Key Employee or former Key Employee any year which includes the last day of a Plan Year which the Plan was not a Top-Heavy Plan.

(ii) Average Compensation shall be the Participant's average Compensation from the Employer during that period of five (5) consecutive years (or actual years, if less than five) which produce the highest average.

14.4 **Plan Aggregations**. For purposes of determining top-heaviness, the aggregation group shall include:

(a) each plan of the Employer in which a Key Employee is a participant; and

(b) each other plan of the Employer that allows a covering a Key Employee to meet qualification requirements under the coverage and anti-discrimination rules of Sections 401(a)(4) and 410 of the Code; and

(c) each terminated plan described in subsection (a) or (b) above maintained by the Employer during the Plan Year containing the Determination Date or any of the four preceding Plan Years (regardless of whether the plan has terminated); and

(d) at the option of the Employer, any other plan maintained by the Employer as long as the expanded aggregation group including such plan or plans continues to

satisfy coverage and anti-discrimination rules of Sections 401(a)(4) and 410 of the Code.

The Plan shall be a Top-Heavy Plan only if the sum of (a) the percent value of Accrued Benefits for Key Employees, as determined under the provisions of this Article applicable to defined benefit plans, under all such plans included within the aggregation group, and (b) the aggregate of the account balances of Key Employees, as determined under the provisions of this article applicable to defined contribution plans, exceeds sixty percent (60%) of a similar sum determined for all participants in such plans.

If the Plan becomes a Top-Heavy Plan, for Participants who are covered by both the Plan and a defined contribution plan of the Employer, the minimum benefit required shall be provided under the Plan. The Plan Administrator shall act pursuant to Treasury Regulations in carrying out these options.

Solely for the purpose of determining if the Plan, or any other Plan included in a required aggregation group of which the Plan is a part, is Top-Heavy (within the meaning of Section 416(g) of the Code) the Accrued Benefit each Non-Key Employee shall be determined under (1) the method, if any, that uniformly applies for accrual purposes under all plans maintained by the Employer and all entities related to the Employer under Section 414 of the Code or (b) if there is no such method, as if such benefit accrued not more rapidly than the slowest accrual rate permitted under the fractional accrual rate of Section 411(b)(1)(C) of the Code.

The minimum benefit requirements of Section 416(c)(1) of the Code and the Plan shall be met as to non-Key Employees who participate in the Plan and in the PerkinElmer, Inc. Savings Plan providing the minimum benefit to such Non-Key Employees under the Plan.

IN WITNESS WHEREOF, and as evidence of the adoption of the Plan, the undersigned officer duly authorized has appended his signature this 20th day of December, 2012.

PerkinElmer, Inc.

By: /s/ John R. Letcher
John R. Letcher
Its Senior Vice President
Human Resources

APPENDICES

APPENDIX A

PARTICIPATION OF EG&G ASTROPHYSICS RESEARCH CORPORATION

Effective as of December 1, 1989 and except as otherwise specifically provided below, EG&G Astrophysics Research Corporation (now known as PerkinElmer, Inc. Detection Systems) adopts the Plan as amended on January 1, 1985, and including all subsequent amendments thereto, in substitution for and in continuation of the Astrophysics Research Corporation Defined Pension Plan (the "Astrophysics Plan"). The Plan shall be and become the Astrophysics Plan in all respects, except for Section 4.2 and 8.2, as to which Sections the following provisions shall be the respective provisions of the Plan as it applies to Astrophysics Participants:

Article . Section 4.2 as amended on January 1, 1989, reads as follows:

"4.2 "Normal Retirement Income." A Participant retiring on his Normal Retirement Date shall be entitled to receive a monthly income for life, payable from his Normal Retirement Date, which shall be equal to one-twelfth (1/12) of the sum of (a) and (b) and (c) below:

(a) the sum of (i) and (ii) below:

(i) For a Participant who was a Participant in the Astrophysics Plan on November 30, 1989, the annual accrued benefit under the Astrophysics Plan as of November 30, 1989, as set forth on the attached schedule.

(ii) For each Year of Credited Service (with appropriate adjustment for completed months) after November 30, 1989, eighty-five one hundredths percent (.85%) of his Average Earnings, plus

For each Year of Credited Service not in excess of thirty-five (35) (with appropriate adjustment for completed months) after November 30, 1989, seventy-five one hundredths percent (.75%) of that part, if any, of his Average Earnings in excess of the Social Security Tax Base.

OR

(b) For every Participant, for each Year of Service (with appropriate adjustment for completed months) before or after December 1, 1989, eighty-five one hundredths percent (.85%) of his Average Earnings, plus

For each Year of Service not in excess of thirty-five (35) (with appropriate adjustment for completed months) before or after December 1, 1989, seventy-five one hundredths percent (.75%) of that part, if any, of his Average Earnings in excess of the Social Security Tax Base.

(c) For an Employee who was a Participant as of December 31, 1988, the monthly retirement income accrued as of December 31, 1988, as determined under the provisions of Appendix I of the Plan in effect on that date."

SCHEDULE OF ACCRUED BENEFITS

FROM THE ASTROPHYSICS PLAN

AS OF NOVEMBER 30, 1989

EMPLOYEE BENEFIT	PERCENT VESTED	ANNUAL BENEFIT	MONTHLY
Aiman, Kenneth M.	100	$ 5,242.92	$ 436.91
Bailey, Frederick A.	100	31,216.80	2,601.40
Bamett, Todd	40	1,146.24	95.52
Brannon, Sharon R.	100	1,213.20	101.10
Briones, Jose Daniel	100	1,755.12	146.26
Bryce, James W.	60	1,198.08	99.84
Castro, Abel R.	60	658.32	54.86
Castro, Florentino	100	1,858.20	154.85
Castro, Miguel	100	1,139.52	94.96
Chatman, Donald L.	100	5,113.68	426.14
Cooley, Janet	60	1,157.76	96.48
Delsignore, Patsy F.	80	2,002.44	166.87
Dermott, Brian P.	100	7,294.80	607.90
Dodson, Roy	20	359.28	29.94
Ericksen, Richard A.	40	876.96	73.08
Espinoza, Arturo	20	310.80	25.90
Espiritu, Vicky E.	60	1,021.20	85.10
Esquivel, Alicia O.	100	1,962.72	163.56
Fleming, James P.	40	1,864.80	155.40
Garcia, Galileo	40	1,020.48	85.04
German, Meroe P.	60	1,374.48	114.54
Giesseman, Helen M.	100	4,012.20	334.35
Harma, Delia M.	100	1,493.28	124.44
Hua, Huy	100	3,341.76	278.48
Huey, John	40	1,533.60	127.80
Huggins, William D.	60	5,783.04	481.92
Ignacio, Antonio A.	100	1,219.92	101.66
Jacquez, Benjamin	60	1,287.36	107.28
Jaime, Maria	100	1,223.28	101.94
Konreddy, Naveen	60	2,109.60	175.80
Lloyd, Donald	40	1,299.84	108.32
Lovisa, Roland	100	7,266.72	605.56

EMPLOYEE BENEFIT	PERCENT VESTED	ANNUAL BENEFIT	MONTHLY
Marshall, Patricia A.	80	882.72	73.56
Miranda Jr., Bemardo B.	100	1,645.92	137.16
Mueller, Leopoldine A.	100	1,578.72	131.56
Mutter, Louis	60	1,021.68	85.14
Naval, Jr., Anselmo P.	100	7,982.28	665.19
O'Brien, Gregory G.	100	1,532.16	127.68
Oca, Feliza	100	2,034.72	169.56
Ochoa, Delfino	100	1,731.84	144.32
Ochoa, Ezequiel	100	1,360.08	113.34
Olsen, Kenneth R.	80	2,073.60	172.80
Orlando, Carlo L.	80	1,323.36	110.28
Orozco, Armando	100	1,399.68	116.64
Ortega Jr., Rudy V.	100	2,784.24	232.02
Paine, Diane J.	80	1,391.76	115.98
Parmer, George A.	80	1,539.36	128.28
Patel, Mehendra H.	80	2,193.12	182.76
Phan, Xuyen D.	100	1,979.28	164.94
Raines, Jerry C.	40	969.60	80.80
Randall, Annette	60	937.44	78.12
Reed, Stephen	60	1,404.00	117.00
Reyes, Celso L.	60	982.44	81.87
Riedel, Sharon	40	746.40	62.20
Rivello, Paul J.	60	1,119.60	93.30
Roldan Jr., Natalio	100	1,692.72	141.06
Rothrock, Robert D.	100	1,747.32	145.61
Sanchez, Angel	100	1,058.64	88.22
Sanchez, Jose	100	1,581.84	131.82
Sary, Pharath	40	632.16	52.68
Sary, Pharith	60	1,354.32	112.86
Shirley, John B.	100	1,853.28	154.44
Sturgeon, Copper M.	80	1,350.00	112.50
Trapani, Linda A.	100	2,244.60	187.05
Turcios, Guillermo S.	100	1,940.04	161.67
Ulanday, Absalon D.	100	1,359.00	113.25
Vaysburd, Eduard	60	1,628.64	135.72
Vo, Julie J.	20	265.44	22.12
Wascher, Philllip M.	60	3,754.08	312.84
Welch, Wayne L.	100	5,012.28	417.69
Wiersma, Lars S.	100	7,621.08	635.09
Yates, Raymond G.	100	37,840.44	3,153.37

APPENDIX B

DEFINITION OF CREDITED SERVICE FOR SECTION 4.2(b)(iii)

Social Security Number	Name	Service Credit
174-48-0328	Alexander, John	12
447-54-0957	Arnold, Steven	6
015-34-5337	Ayers, Phillip	6
219-40-3401	Barrett, Robert	4
024-66-4354	Beech, Paul	5
266-96-9604	Buser, Andres	1
023-32-9254	Castellana, Angelo	11
497-44-8105	Fleming, Donald	5
530-18-0816	Fraser, Dale	8
031-34-0349	Galluccio, Michael	7
109-24-7323	Gross, Murray	16
011-40-7484	King, Ronald	5
076-48-6364	Klemmer, Anthony	13
463-76-8617	Kott, L. Kevin	9
388-32-8927	Kucharski, John	17
100-28-1377	Lewis, Elsie L.	3
065-38-5029	Lorenz, Deborah	11
005-32-5412	Parker, William	4
489-48-6521	Parks, Fred	16
093-32-9132	Peters, Donald	12
014-52-4751	Ribaudo, William	9
038-54-1093	Rossi, Luciano	17
517-76-8123	Schorling, Thomas	10
390-36-8544	Shaver, Paul	1
564-62-3475	Shetterly, John	3
176-26-8375	Slawek, Joseph	3
027-32-8644	Sullivan, William	5
005-32-5054	Theodores, Theodore	6
144-28-3156	Touhill, C. Joseph	3
577-44-1358	Williams, Charles	16

APPENDIX C

EG&G MOUND APPLIED TECHNOLOGIES, INC.

Effective September 30, 1997, the contract between EG&G Mound Applied Technologies, Inc. and the Department of Energy expired. The purpose of this Appendix C is to describe the benefits with respect to certain participants under the EG&G Mound Applied Technologies, Inc. Salaried Employees' Pension Plan (the "Mound Plans") who transferred to the Company prior to September 30, 1997 ("Transferred Participants").

1. The Accrued Benefits under the Mound Plans (and the corresponding assets and liabilities) of the Transferred Participants listed below will be transferred to the Plan as soon as practicable after September 30, 1997. The Accrued Benefits so transferred, and the applicable rights and features related to such Accrued Benefits, shall be determined in accordance with the Mound Plans as in effect on September 30, 1997.

2. Years of Vested Service counted under the Mound Plans shall be counted as Years of Service under the Plan with respect to Transferred Participants.

3. Years of Credited Service under the Mound Plans shall be counted as Credited Service under the Plan with respect to Transferred Participants.

4. Section 4.2 is amended by adding the following paragraph to the end thereof:

> "Transferred Participants from Mound Plans
>
> The normal retirement income determined above for a Transferred Participant from the Mound Plans shall be offset by his monthly Accrued Benefit under the Mound Plans determined as of September 30, 1997 and shall be increased by the "Extra Benefit" specified for said transferred Participants in Section 5 in Appendix C. The Transferred Participants described in this Appendix C.

5. Section 4.3 is amended by adding the following paragraph to the end thereof:

"Transferred Participants from Mound Plans

The retirement income determined above for a Transferred Participant from the Mound Plans shall be offset by his monthly Accrued Benefit under the Mound Plans determined as of September 30, 1997, reduced for commencement prior to his Normal Retirement Date in accordance with the provisions of the Mound Plans as in effect on September 30, 1997."

Article . The Transferred Participants described in this Appendix C are listed below:

SSN	NAME	9/30/97 ACCRUED BENEFIT	9/30/97 PRESENT VALUE	EXTRA BENEFIT
270-52-5779	Adams, John T.	706.16	36,618	302.40
015-34-5337	Ayers, Philip	875.88	83,050	122.20
290-56-4813	Benner, Douglas E.	830.27	39,347	362.00
271-66-6894	Caldwell, Roger W.	873.20	45,280	0.00
268-70-8271	Demana, Andrew T.	838.31	39,728	387.30
290-64-2481	Edwards, James T.	155.37	8,057	52.41
291-74-2721	Haas, David J.	448.00	16,969	0.00
286-52-2327	Kelley, Charles P.	951.50	67,895	0.00
272-48-6822	Knick, Daniel R.	1,936.25	158,999	800.19
286-42-5514	Lee, Cynthia L.	1,458.57	90,364	0.00
290-42-4195	Neyer, Barry T.	911.18	54,122	294.38
268-46-7957	Schaefer, Connie S.	846.40	87,616	352.67
280-54-0535	Stoltz, Mark D.	598.36	42,697	257.33
357-48-6364	Tomasoski, Robert J.	1,065.90	57,825	498.63
275-66-7285	Hudson, Kathy J.	508.44	32,084	206.88

APPENDIX D

CREDITED SERVICE DETERMINATIONS

LOCATION NAME	LOCATION NUMBER	EARLIEST DATE CREDITED SERVICE BEGINS
Wright Components	25	01/01/1988
Opto Electronics Components - St. Louis	30	01/01/1977
Opto Electronics Components – St. Louis (Union)	030U	01/01/1978
Pressure Science	75	10/01/1986
Reticon	80	06/01/1988
Power Systems	93	04/01/1984
Life Sciences – Wallac (Gaithersburg)	154	06/14/1993
Life Sciences – Wallac (Akron)	179	03/01/1998
Belfab	181	04/01/1998
Belfab (Union)	182	04/01/1998
Analytical Instruments	193	05/29/1999

In accordance with Section 5.2(e), Participants employed at the listed locations shall receive credit for vesting purposes for employment at the respective location from initial date of hire at the location.

APPENDIX E

AMETEK, INC.

A Participant who was an 'Affected Employee' within the meaning of Section 10.2 of the Employer's December 6, 2001 Master Purchase Agreement (the "Agreement") with AMETEK, INC. shall have the following rules apply in determining his Accrued Benefit. An Affected Employee other than a Foreign Affiliate Employee within the meaning of Section 10.2 of the Agreement shall be treated as having received Earnings from the Employer equal to the amount of Earnings credited under the Plan as of the closing date of the Agreement increased by 3.5% for each calendar year after December 28, 2001 during which the Affected Employee remains employed by AMETEK, INC.

The provisions of this Appendix E shall cease to apply after March 15, 2003. For the period commencing on January 1, 2003 and ending on March 15, 2003 an Affected Employee who remains employed by Ametek, Inc. on March 15, 2003 shall receive credit for one quarter of Earnings, as previously adjusted pursuant to this Appendix E through December 31, 2002, increased by .875% (.25 x 3.5%), with no additional Earnings credited under the Plan for periods after March 15, 2003.

APPENDIX F

SEMICONDUCTOR PARTICIPANTS

Notwithstanding anything in the Plan to the contrary, a Participant employed in the Semiconductor division who remained employed by the Company through February 28, 2006 shall have their Credited Service determined as if they remained employed by the Company through December 31, 2006.

APPENDIX G

PROVISIONS APPLICABLE TO MISSOURI METALS EMPLOYEES

Notwithstanding any other provisions of the Plan, the following provisions shall apply in determining the amount of benefit for a Missouri Metals Employee:

ARTICLE ONE
DEFINITIONS

1.01 "Accrued Benefit" shall mean the benefit calculated under section 5.01 of this Appendix G using Credited Service under section 3.02 of this Appendix G as of the date of calculation.

1.02 "Actuarial Equivalent" shall mean a benefit of equivalent value to the benefit which would otherwise have been provided, determined on the basis of the 1971 Group Annuity Mortality Table with no loading, and projected by Scale E, with a one-year age setback for the Missouri Metals Participant and a five-year age setback for any Beneficiary and on the basis of an interest rate of seven percent (7%). In the case of a lump sum form of payment with an annuity starting date before October 1, 2000, the interest rate used shall be the rate used by the Pension Benefit Guaranty Corporation for purposes of determining the present value of a benefit on Plan termination and which is in effect on the first day of the Plan Year. In the case of a lump sum form of payment with an annuity starting date on or after October 1, 2000, Actuarial Equivalent shall, instead, be based on the Applicable Mortality Table and the Applicable Interest Rate.

For purposes of this section 1.02 of this Appendix G, the following definitions shall apply:

(a) Applicable Mortality Table means the mortality table based on the prevailing commissioners' standard table (described in Section 807(d)(5) of the Code) that is prescribed by the Commissioner of the Internal Revenue Service in revenue rulings, notices or other guidance published in the Internal Revenue Bulletin.

(b) Applicable Interest Rate means the annual interest rate on 30-year Treasury securities as specified by the Commissioner of the Internal Revenue Service for the Lookback Month, as published in revenue rulings, notices or other guidance published in the Internal Revenue Bulletin.

(c) Lookback Month means the second full calendar month preceding the first day of the Stability Period.

(d) Stability Period means the Plan Year that contains the annuity starting date.

1.03 "Actuary" shall mean the actuarial firm or individual selected by the Administrative Committee from time to time, which firm or individual meets all applicable government requirements for enrollment then in effect.

1.04 "Affiliated Entity" shall mean

(a) any corporation which is a member of a controlled group of corporations (as defined in Section 414(b) of the Code) which includes the Employer;

(b) any trade or business (whether or not incorporated) which is under common control (as defined in Section 414(c) of the Code) with the Employer;

(c) any organization (whether or not incorporated) which is a member of an affiliated service group (as defined in Section 414(m) of the Code) which includes the Employer; and

(d) any other entity required to be aggregated with the Employer pursuant to regulations under Section 414(o) of the Code.

(e) "50% Affiliated Entity" shall mean an Affiliated Entity but with "more than fifty percent (50%)" substituted for the "at least eighty percent (80%)" test in Section 1563(a) of the Code.

1.05 "Break in Service" shall mean, with respect to any calendar year, a separation from employment as described in section 3.05 of this Appendix G.

1.06 "Missouri Metals Employee" shall mean an hourly-rated employee of the Company who is (a) included in the basic collective bargaining agreement between the Company and District No. 9 of the International Association of Machinists and Aerospace Workers, as amended from time to time and (b) not covered by another defined benefit pension plan to which the Company makes contributions.

1.07 "Missouri Metals Participant" shall mean a Missouri Metals Employee who has a present or future right to receive benefits under this Appendix G of the Plan.

1.08 "Qualified Reemployment" shall mean the reemployment of a Missouri Metals Participant by the Company, the Employer or an Affiliated Entity or the continued employment of a Missouri Metals Participant after his Normal Retirement Date in such a capacity that the Missouri Metals Participant receives or is entitled to receive compensation for at least 40 Hours of Service (not including Hours of Service under Section 2.26(b) during a calendar month.

1.09 "Total Disability" shall mean a Missouri Metals Participant's inability, due to accident, injury, or disease, to engage in any work for remuneration or profit for the balance of his life. Disability resulting from the following causes shall not constitute Total Disability under the Plan:

(a) service in the Armed Forces or Merchant Marine of the United States or any other country;

(b) warfare or acts of a public enemy;

(c) willful participation in any criminal act;

(d) intentionally self-inflicted or self-incurred injury; or

(e) use of drugs or narcotics contrary to law.

1.10 "Years of Credited Service" shall mean the number of full and partial calendar years counted with respect to determining a Missouri Metals Employee's Accrued Benefit under the Plan, as determined under Article Three.

1.11 "Years of Service" shall mean the number of calendar years counted with respect to determining a Missouri Metals Employee's eligibility for benefits and vested status under the Plan, as determined under Article Three.

ARTICLE TWO
ELIGIBILITY TO PARTICIPATE

2.01 Eligibility to Participate. Each Missouri Metals Employee who was a Missouri Metals Participant as of September 30, 2001 shall continue to participate in the Plan for as long as he remains a Missouri Metals Employee or is entitled to a benefit under the Plan.

2.02 Plan Closed. No Missouri Metals Employee shall first become a Missouri Metals Participant after December 31, 2000.

ARTICLE THREE
SERVICE AND CREDITED SERVICE

3.01 Service for Eligibility for Benefits and Vesting. A Missouri Metals Employee shall accrue a Year of Service for each calendar year during which he is credited with 1,000 Hours of Service.

3.02 Credited Service for Benefit Accrual. Except as provided in section 3.03 of this Appendix G, a Missouri Metals Participant shall accrue a Year of Credited Service for each calendar year in which he completes at least the number of his regularly scheduled, annual Hours of Service. A Missouri Metals Participant's number of regularly scheduled, annual Hours of Service shall be determined by the Administrative Committee, which shall apply uniform and nondiscriminatory standards developed on the basis of objective criteria including, but not limited to, job classification. In no event, however, shall a Missouri Metals Participant's number of regularly scheduled, annual Hours of Services be deemed to exceed 2,080 for purposes of the Plan. For purposes of this section and section 3.03 of this Appendix G, a Missouri Metals Participant shall accrue a Year of Credited Service only in an eligible classification with the Company or a predecessor company to the earliest of (a) transfer to an ineligible classification with the Company or the Employer, (b) transfer to an Affiliated Entity, or (c) termination of employment with the Company or the Employer for any other reason, including early retirement, Total Disability (except as described in section 3.04(b) of this Appendix G), or death.

3.03 Partial Years of Credited Service. Subject to the limitations in section 3.02 of this Appendix G, a Missouri Metals Participant shall accrue a partial Year of Credited Service for any

calendar year in which he is credited with fewer than the number of his regularly scheduled, annual Hours of Service. Such fractional credit shall be in the greater of (a) or (b) below:

(a) one-twelfth (1/12) of a Year of Credited Service for each 83 Hours of Service credited during a calendar year; provided, however, that in no event shall Credited Service under this subsection exceed the actual number of months elapsed, rounded to the next higher month, or

(b) that portion of a Year of Credited Service determined by a fraction, the numerator of which is the number of Hours of Service with which the Missouri Metals Participant is credited in the calendar year and the denominator of which is the number of his regularly scheduled, annual Hours of Service. The fraction described in this subsection shall not exceed one (1).

3.04 Special Rules.

(a) For purposes of section 3.01 and section 3.02 of this Appendix G, service with a predecessor company shall be credited only upon the approval of the Board of Directors.

(b) For purposes of section 3.02 of this Appendix G, a Missouri Metals Employee shall receive credit for service during the twenty-six (26) week waiting period in which no disability retirement benefits are paid, if he thereafter is determined to suffer a Total Disability.

(c) For purposes of section 3.02 and section 3.03 of this Appendix G, a Missouri Metals Employee shall not receive credit for service before November 1, 1980.

3.05 Breaks in Service.

(a) Any calendar year in which a Missouri Metals Employee is credited with not more than 500 Hours of Service shall constitute a one (1) year Break in Service; provided, however, that if a Missouri Metals Employee is absent for the following reasons, he shall be credited with an Hour of Service, for purposes of this section only, for each Hour of Service he would have received if he had continued in the active employ of the Company during the following periods of absence:

(1) layoff, for a period not in excess of one (1) year;

(2) leave of absence with the approval of the Administrative Committee for a period not in excess of one (1) year, unless extended by the Administrative Committee;

(3) disability leave with the approval of the Administrative Committee for a period not in excess of one (1) year;

(4) military service such that his right to reemployment is protected by law;

(5) jury duty.

(b) Service credited under this section shall not be credited for any other purpose under the Plan unless such service is comprised of Hours of Service.

(c) If a Missouri Metals Employee is absent from work by reason of pregnancy, childbirth or adoption, or for purposes of the care of such Missouri Metals Employee's child immediately after birth or adoption, such Missouri Metals Employee shall be credited solely for purposes of this section with sufficient Hours of Service to avoid a Break in Service in the calendar year in which the absence commences or, if the Missouri Metals Employee already has been credited with more than 500 Hours of Service in such calendar year, the immediately following calendar year. Hours of Service during such absence shall be credited in an amount equal to the Hours of Service with which the Missouri Metals Employee would have been credited but for such absence or, if such hours cannot be determined, at the rate of eight (8) hours per normal workday.

3.06 Restoration of Service.

(a) A Missouri Metals Participant who has a vested right to a benefit under section 6.01 of this Appendix G and who incurs a Break in Service shall have his pre-break and post-break service with the Company, the Employer and each Affiliated Entity aggregated for purposes of sections 3.01 and 3.02 of this Appendix G on his reemployment by the Company, Employer or an Affiliated Entity.

(b) A Missouri Metals Participant who does not have a vested right to a benefit under section 6.01 of this Appendix G and who incurs a Break in Service shall have his pre-break and post-break service with the Company, Employer and each Affiliated Entity aggregated for purposes of sections 3.01 and 3.02 of this Appendix G if he is reemployed at a time when the number of his consecutive Breaks in Service is less than the greater of (1) the number of Years of Service he had accrued before his Break in Service, or (2) five. If the number of his consecutive Breaks in Service is equal to or greater than the number of his Years of Service before the break or five, if greater, he shall receive no credit for his pre-break service for purposes of section 3.01 and 3.02 of this Appendix G.

3.07 Uniformity. The provisions of this Article Three shall be applied according to non-discriminatory rules of general application.

ARTICLE FOUR
ELIGIBILITY FOR BENEFITS

4.01 Normal Retirement. A Missouri Metals Participant shall attain Normal Retirement Age on the date he attains age 65. A Missouri Metals Participant shall be eligible for normal retirement benefits as of the first day of the calendar month coincident with or next following the month in which he attains Normal Retirement Age. This date shall be his Normal Retirement Date.

4.02 Late Retirement. If a Missouri Metals Participant continues his employment with the Company, the Employer or an Affiliated Entity beyond his Normal Retirement Date, he shall be eligible for late retirement benefits on the first day of the calendar month coincident with or ne

xt following the date on which he terminates employment with the Company, the Employer and each Affiliated Entity. This date shall be his Late Retirement Date.

4.03 Early Retirement. A Missouri Metals Participant shall be eligible for early retirement benefits as of the first day of the calendar month coincident with or next following the month in which he attains age 55, accrues 15 Years of Service, and terminates employment with the Company, the Employer and each Affiliated Entity. This date shall be his Early Retirement Date.

4.04 Disability Retirement.

(a) A Missouri Metals Participant shall be eligible for the disability retirement benefits described in section 5.04 of this Appendix G if, after he has accrued 15 or more Years of Service, he suffers a Total Disability which continues for at least twenty-six (26) weeks and causes him to terminate his employment with the Company, the Employer and each Affiliated Entity. The first day of the month coincident with or next following the expiration of the twenty-six (26) week period of Total Disability or the Administrative Committee's receipt of medical certification of Total Disability, if later, shall be the Missouri Metals Participant's Disability Retirement Date.

(b) Total Disability shall be established on the basis of an independent medical examination to the satisfaction of the Administrative Committee, using nondiscriminatory standards uniformly applied. The Administrative Committee may direct that any former Missouri Metals Employee receiving Total Disability benefits shall be reexamined without expense to him from time to time, but not more than once in any calendar year, to determine if Total Disability continues to exist. Benefits hereunder shall terminate at any time that the former Missouri Metals Employee ceases to be disabled under this section. Failure to submit to such reexamination shall be cause for termination of Total Disability benefits hereunder.

4.05 Furnishing Data. Each Employee shall furnish such data as the Administrative Committee may consider necessary for the determination of the Employee's rights and benefits under the Plan and shall otherwise cooperate fully with the Administrative Committee in the administration of the Plan.

ARTICLE FIVE
CALCULATION OF BENEFITS

5.01 Normal Retirement. The monthly retirement benefit payable to a Missouri Metals Participant as a life annuity commencing on his Normal Retirement Date shall equal the product of his Years of Credited Service under sections 3.02 and 3.03 of this Appendix G multiplied by the appropriate unit benefit determined for his date of retirement or termination:

(a) $12.00 for retirements or terminations occurring on or after October 15, 1988 but before October 14, 1991;

(b) $13.00 for retirements or terminations occurring on or after October 14, 1991 but before October 14, 1992;

(c) $14.00 for retirements or terminations occurring on or after October 14, 1992 but before October 14, 1993;

(d) $15.00 for retirements or terminations occurring on or after October 14, 1993 but before October 14, 1994; and

(e) $16.00 for retirements or terminations occurring on or after October 14, 1994.

The annual retirement benefit of a Missouri Metals Participant shall equal the monthly retirement benefit as determined above multiplied by twelve (12).

A Missouri Metals Participant's retirement benefit determined in accordance with this section 4.01 of this Appendix G is expressed as a life annuity commencing at his Normal Retirement Date. Retirement benefits payable under any other form of payment shall be the Actuarial Equivalent of the life annuity.

5.02 Late Retirement. A Missouri Metals Participant who is eligible for benefits under section 4.02 of this Appendix G shall receive a monthly pension, calculated as under section 5.01 of this Appendix G but payable as of his Late Retirement Date.

5.03 Early Retirement. A Missouri Metals Participant who is eligible for benefits under section 4.03 of this Appendix G shall receive either:

(a) a reduced monthly pension, calculated as under section 5.01 of this Appendix G, based on his Years of Credited Service and reduced by 1/180th for each of the first sixty (60) full calendar months and by 1/360th for each of the next sixty (60) full calendar months by which the commencement of his benefit precedes his Normal Retirement Date; or

(b) a deferred, unreduced monthly pension, calculated as under section 5.01 of this Appendix G, based on his Years of Credited Service, with payment commencing on his Normal Retirement Date.

5.04 Disability Retirement.

(a) A Missouri Metals Participant who is eligible for disability benefits under section 4.04 of this Appendix G shall receive an immediate monthly pension, calculated as under section 5.01 of this Appendix G, based on his Years of Credited Service under section 3.02 of this Appendix G to his Disability Retirement Date, and reduced (1) by 1/180th for each of the first sixty (60) full calendar months by which his disability retirement precedes his Normal Retirement Date and (2) by 1/360th for each of the next sixty (60) full calendar months.

(b) Disability benefits determined under this section shall be reduced by any amounts payable on a periodic basis under workers' compensation, but not by workers' compensation awards payable in a single sum.

5.05 Surviving Spouse's Benefit.

A Missouri Metals Participant (1) who has a surviving Spouse, (2) who at his death has any vested interest in his Accrued Benefit under the Plan, and (3) who either (A) has not yet terminated employment with the Company, the Employer and each Affiliated Entity or (B) has terminated employment with the Company, the Employer and each Affiliated Entity, but whose benefit has not yet commenced, such surviving Spouse shall receive a survivor's benefit. Such benefit shall be a monthly pension for the life of the Spouse, if then living, commencing on the first day of any month following the earliest date on which the Missouri Metals Participant could have elected to receive immediate retirement benefits, but not later than the date that would have been the Missouri Metals Participant's Normal Retirement Date, as elected in writing by the Spouse. The benefit shall be equal to the benefit such Spouse would have received if the Missouri Metals Participant (1) had terminated his employment on the earlier of (A) the date of his death or (B) the date of his actual termination of employment, (2) had survived to the benefit commencement date elected by the Spouse under the preceding sentence, (3) had retired with an immediate retirement benefit in the normal form under section 7.01(a) of this Appendix G, and (4) had died on the following day.

5.06 Post-Retirement Death Benefit. In the event of the death of a Missouri Metals Participant after his retirement and election of a form of benefit under Article Seven, his beneficiary shall be entitled to receive any amount which may be payable under the form of benefit in effect.

5.07 Suspension of Benefits on Reemployment.

(a) (1) If a Missouri Metals Participant is employed in Qualified Reemployment, the benefits otherwise payable to the Missouri Metals Participant shall be suspended for each calendar month in which he continues his Qualified Reemployment. In addition, no benefits shall be paid during the Qualified Reemployment of a Missouri Metals Participant who continues in the employ of the Company, the Employer or an Affiliated Entity after his Normal Retirement Date. The rules relating to such a suspension of benefits and their subsequent resumption are described in this section.

(2) The Administrative Committee shall notify the Missouri Metals Participant by first class mail of the suspension of his pension benefits during the first month in which the Missouri Metals Participant is engaged in Qualified Reemployment.

(3) Each Missouri Metals Participant receiving benefits under the Plan shall be required to give notice to the Administrative Committee of any employment relationship which such Missouri Metals Participant has with the Company, the Employer or any Affiliated Entity. The Administrative Committee shall have the right to use all reasonable efforts to determine whether such employment constitutes Qualified Reemployment. The Administrative Committee shall also have the right to require the Missouri Metals Participant to provide information sufficient to prove that such employment does not constitute Qualified Reemployment.

(4) A Missouri Metals Participant may request the Administrative Committee to make a determination as to whether specific contemplated employment constitutes Qualified Reemployment. The Administrative Committee shall respond to such request in writing within sixty (60) days of the Administrative Committee's receipt of the request.

(5) Pension benefit payments to the Missouri Metals Participant will resume (or commence) no later than the first day of the third calendar month following the month in which his Qualified Reemployment ceases or, if later, the first day of the calendar month following receipt by the Administrative Committee of the Missouri Metals Participant's notice that his Qualified Reemployment has ceased. The initial resumption payment shall include payment for the current month and for all previous calendar months since the cessation of the Missouri Metals Participant's Qualified Reemployment.

(6) The Administrative Committee shall offset resumed pension benefits by an amount equal to any pension benefits which were paid to the Missouri Metals Participant with respect to a calendar month in which the Missouri Metals Participant was engaged in Qualified Reemployment. However, the offset to any monthly pension benefit, other than the initial resumption payment, shall not exceed twenty-five percent (25%) of such monthly benefit. Any remaining offset shall be applied to pension benefits payable in subsequent months.

(b) If a Missouri Metals Participant is employed by the Company, the Employer or an Affiliated Entity under any circumstances other than as described in subsection (a), the benefits otherwise payable to the Missouri Metals Participant shall be continued during such period of reemployment.

5.09 Plan Benefits Frozen. No further benefits shall accrue under the Plan, or any predecessor plan, for any Missouri Metals Employee for any period occurring after December 31, 2000 other than as may be required in accordance with Section 416 of the Code.

ARTICLE SIX
VESTING

6.01 Nonvested Termination. A Missouri Metals Participant who terminates his employment with the Company, the Employer and each Affiliated Entity before:

(i) attaining Normal Retirement Age of 65,

(ii) completing five (5) Years of Service, or

(iii) the complete or partial termination of the Plan with respect to such Missouri Metals Participant shall have no vested interest in his Accrued Benefit and shall not be entitled to receive a retirement benefit from the Plan.

6.02 Vested Termination. A Missouri Metals Participant who attains Normal Retirement Age of 65 while in the employ of the Company, the Employer or an Affiliated Entity sha

ll automatically become 100% vested in his Accrued Benefit. A Missouri Metals Participant who terminates employment with the Company, the Employer and each Affiliated Entity before reaching Normal Retirement Age of 65 shall have his vested interest in his Accrued Benefit determined according to the following schedule:

Years of Service	Vested Percentage
Less than 5	0
5 or more	100

6.03 Payment of Benefit. A Missouri Metals Participant's Vested Accrued Benefit shall be payable at his Normal or Late Retirement Date, whichever is applicable. If a Missouri Metals Participant terminates employment with the Company, the Employer and each Affiliated Entity before attaining age 55 but after completing 15 Years of Service, such Missouri Metals Participant may, upon reaching attainment of age 55, may elect, in lieu of a benefit payable at Normal Retirement Date, to receive a benefit payable at Early Retirement Date calculated in accordance with the provisions of section 5.03 of this Appendix G

ARTICLE SEVEN
PAYMENT OF BENEFITS

7.01 (a) If a Missouri Metals Participant has a Spouse on the date that benefit payments begin and he has not elected and his Spouse has not executed a qualified waiver pursuant to subparagraph (c) below, the retirement benefit payable to him shall be in the form of a joint and contingent survivor annuity with fifty percent (50%) continuation to his Spouse. For purposes of this Article, a joint and contingent survivor annuity form of payment shall be a "qualified joint and survivor annuity" as defined in Section 417(b) of the Code. The joint and contingent survivor annuity shall provide for the payment of a retirement benefit to the Missouri Metals Participant commencing as of the first day of the month coincident with or next following his retirement date and continuing during his lifetime and shall further provide for the continuation of a retirement benefit to his Spouse, if living, after the death of the Missouri Metals Participant. The Missouri Metals Participant may, in place of the fifty percent (50%) continuation of a reduced benefit to his Spouse as described above, choose either seventy-five percent (75%) or one hundred percent (100%) continuation of a reduced benefit to his Spouse.

The payment of the retirement benefit to the surviving Spouse shall commence on the first day of the month following the month in which the Missouri Metals Participant dies and shall continue monthly with the last payment due for the month in which the surviving Spouse's death occurs. It shall be the Missouri Metals Participant's sole responsibility to keep the Administrative Committee informed of his marital status.

(b) All forms of payment other than a life annuity shall be the Actuarial Equivalent of the life annuity form.

(c) A Missouri Metals Participant may elect to waive the Joint and Contingent Survivor Annuity or designate a contingent annuitant other than his Spouse in accordance with Article VIII of the Plan and the procedures established by the Administrative Committee.

7.02 Life Annuity Form.

(a) A Missouri Metals Participant may elect a life annuity which provides for a retirement benefit payable only to the Missouri Metals Participant, commencing as of the first day of the month coincident with or next following his retirement date and ceasing with the last payment due for the month in which the Missouri Metals Participant's death occurs.

(b) This form may be elected by the Missouri Metals Participant by written notice to the Administrative Committee; however, if such Missouri Metals Participant has a Spouse, such notice must contain the written consent of the Missouri Metals Participant's Spouse to the waiver of the joint and contingent survivor annuity as prescribed elsewhere in Article VIII of the Plan. The life annuity form will automatically take effect if a Missouri Metals Participant has no surviving Spouse on the date of his retirement and if no other form of payment as described herein has been elected by the Missouri Metals Participant during the ninety (90) day period ending on the Annuity Starting Date.

(c) If this form has been elected by a Missouri Metals Participant who has a Spouse, and such Missouri Metals Participant dies before the scheduled commencement of retirement benefit payments, his Spouse shall receive monthly benefits in accordance with section 5.05 of this Appendix G. If such Missouri Metals Participant has no eligible Spouse, then no benefit shall be payable under the Plan.

7.03 Lump Sum Distribution. Lump sum payments may be made in accordance with Section 13.10 of the Plan.

If a Missouri Metals Employee is deemed to receive a distribution, and the Missouri Metals Employee resumes employment covered under the Plan before the date the Missouri Metals Employee incurs five consecutive Breaks in Service, upon the reemployment of such Missouri Metals Employee, the Accrued Benefit will be restored to the amount of such Accrued Benefit on the date of such deemed distribution.

7.04 Applicability of Plan. Distributions shall otherwise be governed by the provisions of the Plan, including Article VIII thereof.

APPENDIX H

PROVISIONS APPLICABLE TO SHOP UNION EMPLOYEES

Notwithstanding any other provisions of the Plan, the following provisions shall apply in determining the amount of benefit for a Shop Union Employee:

SECTION 1

Definitions and Construction

The following terms shall have the meanings defined herein unless a different meaning is clearly indicated by the context.

1.1 "Accrued Benefit" means the amount of retirement income as of the calculation date determined in accordance with Section 3 of this Appendix H.

1.2 "Active Service" means actual performance of duties as a Shop Union Employee.

1.3 "Actuarial Equivalence" means a benefit of equivalent value to the benefit which otherwise would have been provided determined on the basis of the following actuarial assumptions:

Interest 7%

Mortality The 1971 Group Annuity Mortality Table with no loading, and projected by Scale E, with a one-year age setback for the Shop Union Participant and a five-year setback for any Beneficiary.

Except, the for purposes of applying the limitations of Section 415 of the Code, for distributions with a required beginning date which is on or after January 1, 1994, the following actuarial assumptions shall apply:

Interest The annual interest rate on 30-year Treasury securities as specified by the Commissioner of Internal Revenue for the month preceding the month as of which Actuarial Equivalence is being determined.

Mortality The mortality table prescribed by the Secretary of the Treasury under Section 417(e)(3)(A)(ii)(I) of the Code as in effect on the date as of which Actuarial Equivalence is being determined.

1.4 "Beneficiary" means a person(s), trust, or other entity designated by the Shop Union Participant, on a form and in a manner prescribed by the Administrative Committee to receive any benefits which shall be payable under this Plan upon the death of a Shop Union Participant, or in the absence of such designation, the Shop Union Participant's spouse, if living, or if deceased, the Shop Union Participant's issue then living, per stirpes, or if none, the Shop Union Participant's estate.

1.5 "Collective Bargaining Agreement" shall mean the then current collective bargaining agreement between the Company and the Union.

1.6 "Credited Service" means that portion of a Shop Union Participant's Employment, as determined in accordance with Section 6 of this Appendix H, which will be used in determining the amount of a Shop Union Participant's retirement benefit under this Plan.

1.7 "Disabled Shop Union Participant" means a Shop Union Participant who incurs a physical or mental condition which, as determined by the Federal Social Security Administration, renders the Shop Union Participant eligible to receive disability benefits under Title II of the Federal Social Security Act, as amended from time to time. If the Shop Union Participant is denied Social Security disability benefits for any reason other than the fact that he is not permanently and totally disabled, then a determination of disability shall be made by a medical doctor selected by the Administrative Committee.

1.8 "Normal Retirement Date" shall mean the first day of the month coinciding with or next succeeding the later of a) the date the Shop Union Participant shall have attained age 65; or b) the 5th anniversary of the date the Shop Union Participant commenced participation in the plan. The Normal Retirement Benefit is nonforfeitable upon attaining the Normal Retirement Date.

1.9 "Period of Service," measured in calendar months, means the period commencing in the calendar month during which a Shop Union Employee first performs an hour of service, within the meaning of Section 2530.200b-2(a)(1) of the Department of Labor Regulations, for the Employer and terminating in the calendar month in which the earlier of the following takes place: (i) a Shop Union Employee quits, retires, is discharged or dies, or (ii) the occurrence of the first anniversary of the date on which a Shop Union Employee has been absent from service with the Company for reasons other than those listed in (i) above, provided that if a Shop Union Participant is absent on an approved leave of absence that extends beyond such one-year period, such period of absence shall be included in his Period of Service to the same extent that he would accrue seniority as provided for in the Collective Bargaining Agreement; and provided further that any period during which a Shop Union Employee retains seniority rights under the Collective Bargaining Agreement for recall purposes shall be included in his Period of Service if such Shop Union Employee returns to Active Service within such period. If the Shop Union Employee does not return to Active Service within such period, whether by reason of not being recalled or by reason of being recalled but not returning to Active Service, his Period of Service shall terminate on the earlier of (i) or (ii) above.

1.10 "Pre-Retirement Surviving Spouse Option" means the pre-retirement surviving spouse benefit described in Section 7.4 of this Appendix H.

1.11 "Separation from Service Date" means the date on which a Shop Union Participant's Period of Service ends.

1.12 "Shop Union Employee" shall mean any hourly employee employed by the Company and who is represented by the Union under the terms and provisions of the Collective Bargaining Agreement, or who pays dues to the Union.

1.13 "Shop Union Participant" shall mean a Shop Union Employee who is participating in the Plan under the provisions of Section 2 of this Appendix H, or a former employee who is receiving benefits under the plan or who has vested rights under the Plan.

1.14 “Surviving Spouse Option” shall mean the normal form of retirement benefit payable to a married Shop Union Participant under the provisions of Section 7.1(b) of this Appendix H.

1.15 “Union” shall mean the PerkinElmer/John Crane/EKK Eagle Shop Union.

1.16 “Years of Service” shall mean that portion of a Shop Union Employee’s Employment, as determined in accordance with Section 4 of this Appendix H, which will be used in determining a Shop Union Participant’s eligibility for a retirement benefit under the Plan.

The masculine gender words include both sexes, the single includes the plural and the plural includes the single, unless the context otherwise requires.

SECTION 2

Participation

2.1 General

Each Shop Union Employee who was a Shop Union Participant in the Plan as of the Transaction Date (as defined in Section 2.3 of this Appendix H) shall continue to participate in accordance with the provisions of the amended Plan and this Appendix H. Each Shop Union Employee shall become a Shop Union Participant after the completion of a Period of Service of 60 days. For purposes of this Section 2.1 of this Appendix H, a Shop Union Employee shall be deemed to have completed a Period of Service of 60 days if he is still in the employ of the Company two months after his date of hire (i.e., after he completes his first hour of service).

2.2 Former Employees

A former Shop Union Employee receiving or entitled to receive a retirement benefit under the Plan shall continue as a Shop Union Participant until the date of his death.

2.3 Sale of Division

Active Shop Union Participants ceased to be employed by the Company as of December 6, 2005 (the "Transaction Date"). Any such Shop Union Participant who remains fully employed through the Transaction Date shall have a fully vested and nonforfeitable right to his Accrued Benefit as determined as of the Transaction Date. No further benefits shall accrue under the Plan, or any predecessor plan of the Company, for Shop Union Participants for any period after the Transaction Date. No Shop Union Employee shall first become a Shop Union Participant after the Transaction Date.

SECTION 3

Amount of Retirement Income

3.1 General

In order to establish his eligibility for a pension benefit, a Shop Union Participant shall file an application for such benefit on a form and in a manner prescribed by the Administrative Committee.

3.2 Normal Retirement Income

A Shop Union Participant retiring on or after his Normal Retirement Date shall be entitled to receive a monthly retirement income for life, with payments guaranteed for sixty (60) months, payable from his Normal Retirement Date, which shall be equal to the product of the Shop Union Participant's years of Credited Service multiplied by the dollar amount as may be specified in the then current Collective Bargaining Agreement at the time of the Shop Union Participant's termination of Employment. If a Shop Union Participant retires after his Normal Retirement Date, his accrued benefit shall not be less than the greater of: (i) the Actuarial Equivalence of the benefit payable at his actual retirement date; or (ii) the benefit payable at the beginning of the year of his actual retirement date plus the additional accrual earned for service during the year.

3.3 Early Retirement Income

A Shop Union Participant retiring on an Early Retirement Date shall be entitled to receive a retirement income which shall be determined in accordance with either (a) or (b) below, as elected by the Shop Union Participant:

(a) The Shop Union Participant may elect to defer commencement of his retirement income until his Normal Retirement Date. The amount of his retirement income will be determined in accordance with Section 3.2 of this Appendix H based on his Credited Service as of his Early Retirement Date.

(b) The Shop Union Participant may elect at his Early Retirement Date or at any time prior to his Normal Retirement Date to have his retirement income commence on the first day of any month after the date of his retirement but no later than his Normal Retirement Date. The amount of his retirement income shall be equal to the amount calculated in accordance with Section 3.2 of this Appendix H reduced by one-half percent for each month by which the date that retirement payments are to commence precedes his Normal Retirement Date.

3.4 Termination Prior to Retirement

(a) A Shop Union Participant whose Employment terminates prior to retirement but after the completion of at least 5 Years of Service, by reason of quit, discharge, death, or having become a Disabled Shop Union Participant as defined in Section 1.7 of this Appendix H, shall be 100% vested in his or her accrued benefit, and except as provided in subparagraphs (b) through (d) below, such Shop Union Participant shall be entitled to receive a monthly retirement income for life, with payments guaranteed for sixty (60) months, payable from such Shop Union Participant's Normal Retirement Date, which monthly retirement income shall be determined in accordance with Section 3.2 of this Appendix H, based upon the benefit schedule in effect on the date of his termination. Such a Shop Union Participant shall also be eligible to elect an Early Retirement Date, in which case the amount of his retirement income shall be determined in accordance with

Section 4.3(b) and shall be paid in accordance with the provisions of Article VIII of the Plan.

(b) Provided, however, that if the Shop Union Participant's Employment shall have terminated on account of such Shop Union Participant having become a Disabled Shop Union Participant as defined in Section 1.7, and such Shop Union Participant as of his or her death had attained age 45 and completed at least 15 Years of Service, such Shop Union Participant's entitlements to benefits shall be determined under Section 5 of this Appendix H rather than under this Section 3.4 of this Appendix H.

(c) Provided further that if the Shop Union Participant's Employment terminates by reason of death and such Shop Union Participant has an Eligible Spouse, such Eligible Spouse shall receive a benefit as described in Article VIII of this Plan and no benefit shall be payable under this Section 3.4 of this Appendix H.

(d) Provided further that if the Shop Union Participant's Employment terminates by reason of death and such Shop Union Participant is unmarried, the Shop Union Participant's Beneficiary shall be entitled to the same 60 months certain benefit that would have been payable to the Shop Union Participant and such Beneficiary had the deceased Shop Union Participant elected an Early Retirement Benefit under Section 3.3(b) of this Appendix H which commenced on the first day of the month of his death.

3.5 Re-Employment of Retired Shop Union Participant

In the event a retired Shop Union Participant is re-employed by the Company, his retirement income shall be suspended during the period of such re-employment, and he shall become eligible to accrue Credited Service in accordance with the terms of the Plan. Upon his subsequent retirement, his retirement income shall be reduced by the Actuarial Equivalence of any retirement income payments made to him prior to the earlier of his re-employment or his Normal Retirement Date.

3.6 Early Retirement Incentive - December 10, 2001 to January 31, 2002

Notwithstanding any other provision of this Plan, any Shop Union Participant who has reached age 62 by December 1, 2001, who has not previously arranged his retirement and who elects to retire during the period December 10, 2001 to January 31, 2002 may elect to increase his age for purposes of the Plan and/or his Credited Service for purposes of the Plan by a number or numbers totaling 3 for purposes of computing his eligibility for and amount of benefits under the Plan. In a case where the number of years totaling 3 is to be split between age and Credited Service, the Shop Union Participant may increase either age or Credited Service by whole years or by twelfths of whole years. To be eligible for increased retirement benefits under this subsection, the Shop Union Participant must execute a release of claims agreement in the form prescribed by the Administrative Committee. Not more than two Shop Union Participants per Company department and not more than 8 Shop Union Participants in all shall be eligible to retire as provided in this subsection. In the event that more than 2 Shop Union Participants per Company department or 8 Shop Union Participants in all wish to take advantage of the election under this subsection, the seniority rules as provided in the Collective Bargaining Agreement will apply.

SECTION 4

Years of Service

4.1 General

A Shop Union Participant's eligibility for retirement income benefits under the Plan shall be based on his Years of Service. Years of Service shall be determined in accordance with Section 4.2 of this Appendix H below.

4.2 Determination of Years of Service

A Shop Union Participant's Years of Service for vesting purposes shall be determined in accordance with the following:

(a) For a Shop Union Participant who as of the Effective Date had been covered under the prior provisions of the Plan, the Shop Union Participant's continuous service with the Company prior to the Effective Date, determined in accordance with the provisions of the Plan in effect prior to the Effective Date, shall be counted as Years of Service.

(b) Subject to Section 4.2(a) of this Appendix H, a Shop Union Participant who has attained age 18 shall accrue 1/12th of a Year of Service for each calendar month after the Effective Date within the Shop Union Participant's Period of Service. If a Shop Union Participants Employment is terminated (either voluntarily or involuntarily) and he is later reemployed into Active Service within 12 months, the period between his Separation from Service Date and the date of reemployment shall be included in his Years of Service. However, if his Employment is terminated while absent from Active Service for reasons other than a quit, discharge, or retirement (e.g., leave of absence), Years of Service shall be counted for the period from his Separation from Service Date to the date of reemployment only if he is reemployed within 12 months of the first day of that absence.

(c) Upon the re-employment of a Shop Union Participant who had previously been a Shop Union Participant on or after the Effective Date, his Years of Service shall be reinstated as of the date of his re-employment.

(d) In no event shall a Shop Union Participant be deemed to receive credit for more than one Year of Service with respect to any Year.

4.3 For purposes of Section 4.2(b) of this Appendix H, a Shop Union Participant shall be considered as accruing Years of Service in accordance with his normal workweek for each month.

(a) Where specifically required by ERISA all or part of the Shop Union Participant's service with a member of the same controlled group (as such term is defined in

IRC Section 1563), while such member was a member of the same controlled group, immediately preceding or following Employment with the Company, shall be counted as Years of Service. Such Years of Service shall be determined in accordance with the provisions of this Section 4 of this Appendix H. The following situations in (a)(i) through (a)(iii) are specifically excepted from being counted as Years of Service unless otherwise required by ERISA.

(i) The Administrative Committee shall not give credit for service with a controlled group member immediately preceding or following Employment with the Company under any of the following conditions:

1) The controlled group member was not a part of the same controlled group at the time the service was rendered, or

2) The controlled group member at the time the service was rendered maintained a qualified plan which required voluntary contributions from the Shop Union Employee as a prerequisite for participation and the Shop Union Employee elected not to participate, or

3) The controlled group member at the time the service was rendered maintained a qualified plan which provided in the terms of such plan that certain service was not to be counted in determining Years of Service.

SECTION 5

Disability Pension Benefit

5.1 A Shop Union Participant who has attained age 45 and completed at least 15 Years of Service, and who becomes a Disabled Shop Union Participant while a Shop Union Employee, will be eligible to receive a disability pension benefit upon proper application to the Plan.

5.2 The amount of a disability pension benefit shall be calculated as if such Disabled Shop Union Participant had attained age 65 prior to such disability, based on the Years of Service that have been credited to such Disabled Shop Union Participant upon application for the disability pension benefit. The amount of a disability pension benefit shall not be actuarially reduced based on the Disabled Shop Union Participant's failure to attain age 65.

5.3 A Disabled Shop Union Participant may elect to receive a disability pension benefit in any form of distribution otherwise available under Section 7 of this Appendix H to a Shop Union Participant who has attained his Normal Retirement Date. Specifically, a Disabled Shop Union Participant may elect to receive his disability pension benefit in the form of one of the following: (1) a lifetime income, with payments guaranteed for 60 months; (2) a Surviving Spouse Option (with payments calculated by also increasing the age of the Shop Union Participant's Eligible Spouse by the number of days between the Shop Union Participant's actual age and age 65, and with lifetime payments to the surviving Eligible Spouse equal to 50%, 66-2/3%, or 100% of the Shop Union Participant's monthly pension); or (3) a lifetime income option.

Notwithstanding the above, a Disabled Shop Union Participant who is married may be required to sign a waiver and/or obtain a spousal consent, with respect to an election to obtain a disability pension benefit in any form of payment other than a Surviving Spouse Option in favor of his surviving Eligible Spouse.

5.4 Disability pension benefit payments shall be suspended in the event that a Shop Union Participant receiving a disability pension benefit is no longer determined to be a Disabled Shop Union Participant, as defined in Section 1.7 of this Appendix H. In the event that a disability pension benefit is suspended, payments may resume as early or normal retirement benefits, with any early retirement benefit reduced in accordance with Section 3.3(b) of this Appendix H if not deferred to the Shop Union Participant's Normal Retirement Date, once the Shop Union Participant otherwise qualifies for a Normal Retirement Income or an Early Retirement Income.

5.5 Upon the attainment of his Normal Retirement Date, a Disability Shop Union Participant's disability pension benefit shall be converted to a Normal Retirement Income (subject to the waiver and spousal consent requirements of Article VIII if the Disabled Shop Union Participant is married), with the Shop Union Participant having the right to elect any form of distribution otherwise available to a Shop Union Participant who has attained his Normal Retirement Date.

5.6 Notwithstanding anything to the contrary, a Shop Union Participant shall not accrue any further Years of Service or Credited Service for any period with respect to, or during, which he is receiving a disability pension benefit pursuant to this Section 5 of this Appendix H.

SECTION 6

Credited Service

6.1 A Shop Union Participant's years of Credited Service shall be determined in accordance with the following:

(a) For a Shop Union Participant as of the Effective Date, who has been covered under the prior provisions of the Plan, the Shop Union Participant's period of continuous employment with the Company prior to the Effective Date, determined in accordance with the provisions of the Plan in effect prior to the Effective Date, shall be counted as years of Credited Service.

(b) A Shop Union Participant shall accrue 1/12th of a year of Credited Service for each calendar month within the Period of Service.

(c) A Shop Union Participant shall in no event be deemed to accrue more than one full year of Credited Service with respect to any Plan Year.

(d) Upon the re-employment of a Shop Union Participant who had previously been a Shop Union Participant on or after the Effective Date, his years of Credited

Service accrued during his prior period of Employment shall be reinstated as of the date of his re-employment.

SECTION 7

Payment of Retirement Benefits

7.1 Normal form of Payment

The retirement income to which a Shop Union Participant may be entitled at his Normal or Early Retirement Date shall be payable in the following method unless the Participant elections one of the optional forms of payments provided in Section 7.2 of this Appendix H.

(a) The retirement income payable to a Shop Union Participant at his Normal Retirement Date who does not have an Eligible Spouse on the date payments commence shall be in the form of a lifetime income, with payments guaranteed for sixty (60) months, in an amount calculated in accordance with Section 3.2 of this Appendix H.

(b) The retirement income payable to a Shop Union Participant who has an Eligible use on the date payments commence shall be in the form of a Surviving Spouse Option with his Eligible Spouse as the survivor, subject to the following:

(i) Under a Surviving Spouse Option, a reduced amount shall be paid to the Shop Union Participant for his lifetime, and his Eligible Spouse, if surviving at the Participant's death, shall be entitled to receive thereafter a lifetime benefit equal to 50 percent, 66-2/3 percent or 100 percent (depending on the election made) of the reduced benefit which had been payable to the Participant. The amount of the reduced benefit payable to the Participant and survivor shall be the Actuarial Equivalence of the lifetime benefit as determined in Section 3.2 of this Appendix H.

(ii) The Surviving Spouse Option may be waived pursuant to Article VIII.

7.2 Optional Forms of Payments

A Shop Union Participant may elect, at any time prior to 60 days preceding the commencement of his retirement income, by giving written notice on a form and in a manner prescribed by the Administrative Committee, to convert the amount of retirement income payable to him under the normal form of payment into the Actuarial Equivalence under one of the following options:

(a) Lifetime Income Option. Under this option, retirement income will cease at the death of the Shop Union Participant.

(b) Joint and Survivor Option. Under this option, a married Shop Union Participant can elect to receive a reduced income, but after the Shop Union Participant's death 50%, 66 2/3% or 100% (depending on the election made) of such reduced income shall be paid for life to his designated joint annuitant.

(c) Five (5) Year Certain Option. Under this option, retirement income shall be in the form of a lifetime income with payments guaranteed for 60 months.

7.3 Election Process.

Elections shall be made in accordance with the procedures established by the Administrative Committee.

7.4 Pre-Retirement Surviving Spouse Option

In the event a Shop Union Participant is married and dies before his retirement date, his Eligible Spouse shall receive a Pre-Retirement Surviving Spouse Option unless such benefit is waived in accordance with Article VIII. If a vested Shop Union Participant who has not revoked the Pre-Retirement Surviving Spouse Option dies before his retirement date, he will be deemed to have: (a) terminated employment on the date of death (unless he had terminated employment prior to his death), (b) survived to his Early Retirement Date, (c) retired on his Early Retirement Date with an immediate 50% Surviving Spouse Option; and (d) died on the date after his Early Retirement Date.

7.5 Applicability of Plan

Distributions shall otherwise be governed by the provisions of the Plan, including Article VIII thereof.

EXECUTION VERSION

PERKINELMER, INC. EMPLOYEES RETIREMENT PLAN

(Amended and Restated Effective as of January 1, 2012) First Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Employees Retirement Plan, as amended and restated effective January 1, 2012 (the "Plan");

WHEREAS, the Company wishes to amend the Plan in connection with obtaining a favorable determination letter from the Internal Revenue Service as to the Plan's continued qualified status; and

WHEREAS, the Company reserves the right pursuant to Section 12.1 to amend the Plan. NOW, THEREFORE, the Company

hereby amends the Plan as follows, effective as set
forth herein:

1. Section 2.34 is amended effective on the date hereof in its entirety to read as follows:

"Normal Retirement Age" means social security retirement age as defined in Code Section 415(b)(8), based on the year of a Participant's birth (age 65 in the case of a Participant born in 1942 and earlier; age 66 in the case of a Participant born in 1943 through 1959; age 67 in the case of a Participant born in or after 1960). Prior to January 1, 1989, the Normal Retirement Age was 65; provided, however, that the Employee is 100% vested on the day the Employee attained 65.

2. Section 6.2(i)(ii)(A) is amended effective for limitation years beginning on or after July 1, 2007 by designating paragraph (2) thereof as paragraph (2)(I) and adding a new subparagraph (2)(II) to read as follows:

If the annuity starting date for the Participant's benefit is prior to age 62 and occurs in a Limitation Year beginning on or after July 1, 2007, and the Plan has an immediately commencing straight life annuity payable at both age 62 and the age of benefit commencement, the Defined Benefit Dollar Limitation for the Participant's annuity starting date is the lesser of the limitation determined under Section 6.2(i)(ii)(A)(2)(I) and the Defined Benefit Dollar Limitation (adjusted under Section 6.2(i)(i) for years of participation less than 10, if required) multiplied by the ratio of the annual amount of the immediately commencing straight life annuity under the Plan at the Participant's annuity starting date to the annual amount of the

immediately commencing straight life annuity under the Plan at age 62, both determined without applying the limitations of this article.

3. Section 6.2(i)(ii)(B) is amended effective for limitation years beginning on or after July 1, 2007 by designating paragraph (2) thereof as paragraph (2)(I) and adding a new subparagraph (2)(II) to read as follows:

If the annuity starting date for the Participant's benefit is after age 65 and occurs in a Limitation Year beginning on or after July 1, 2007, and the Plan has an immediately commencing straight life annuity payable at both age 65 and the age of benefit commencement, the Defined Benefit Dollar Limitation at the Participant's annuity starting date is the lesser of the limitation determined under Section 6.2(i)(ii)(B)(2)(I) above, and the Defined Benefit Dollar Limitation (adjusted under Section 6.2(i)(i) for years of participation less than 10, if required) multiplied by the ratio of the annual amount of the adjusted immediately commencing straight life annuity under the Plan at the Participant's annuity starting date to the annual amount of the adjusted immediately commencing straight life annuity under the Plan at age 65, both determined without applying the limitations of this article. For this purpose, the adjusted immediately commencing straight life annuity under the Plan at the Participant's annuity starting date is the annual amount of such annuity payable to the Participant, computed disregarding the Participant's accruals after age 65 but including actuarial adjustments even if those actuarial adjustments are used to offset accruals; and the adjusted immediately commencing straight life annuity under the Plan at age 65 is the annual amount of such annuity that would be payable under the Plan to a hypothetical Participant who is age 65 and has the same accrued benefit as the Participant.

IN WITNESS WHEREOF, the Company has caused this First Amendment to be executed this 14th day of November 2013.

(CORPORATE SEAL) PerkinElmer, Inc.

By: /s/ John R. Letcher

Its: SVP HR

EXECUTION COPY

PERKINELMER, INC. EMPLOYEES RETIREMENT PLAN

(Amended and Restated Effective as of January 1, 2012) Second Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Employees Retirement Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First Amendment thereto;

WHEREAS, the Company wishes to amend the Plan to reflect certain changes in the law and make certain other changes; and

WHEREAS, the Company reserves the right pursuant to Section 12.1 to amend the Plan. NOW, THEREFORE, the Company hereby amends the Plan as follows, effective as set forth herein:

1. Section 2.22 is amended, effective June 26, 2013, to read in its entirety as follows: "2.22 **"Eligible Spouse"** means a person who was legally married to the Participant on the date or retirement or death of the Participant. For all purposes under the Plan prior to June 26, 2013, the Plan's determination of “spouse" and "marriage" was made in accordance with Federal law as in effect prior to the decision in United States v. Windsor. On and after June 26, 2013, "spouse" and "marriage" shall be interpreted consistent with United States v. Windsor and IRS guidance, including Rev. Rul. 2013-17 and IRS Notice 2014-19."

2. Section 9.4 is amended, effective for claims made on or after the date hereof, to add the following paragraph to the end thereof:

"A Participant must exhaust the Plan's claims review procedures before filing an action in court making claim for benefits. Any such action in court must be filed within three years from the date of the initial failure regarding the benefit claimed."

3. A new Section 9.6A is amended, effective on the date hereof, to add the following new Section 9.6A.

"9.6A **Missing Persons.** If the Administrative Committee shall be unable to make payment to a Participant or Beneficiary because the identity or whereabouts of such person cannot be ascertained, the Administrative Committee may, after notice of Plan benefit by registered mail to the last known address of such person and diligent search conducted through a third party with experience in locating missing retirement plan participants, direct that such amount and all further benefits with respect to such person shall be forfeited and that the Participant or Beneficiary be removed from the Plan census; provided, however, that in the event of the subsequent reappearance of the Participant or Beneficiary, the benefit which was forfeited shall be reinstated in full."

IN WITNESS WHEREOF, the Company has caused this Second Amendment to be executed this 16th day of December 2014.

(CORPORATE SEAL)

PerkinElmer, Inc.

By: /s/ John R. Letcher

Its: SVP HR

PERKINELMER, INC. EMPLOYEES RETIREMENT PLAN

(Amended and Restated Effective as of January 1, 2012)

Third Amendment

WI IEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc. Employees Retirement Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First Amendment and Second Amendment thereto;

WHEREAS, the Company wishes to amend the Plan regarding lump sum benefits; and

WHEREAS, the Company reserves the right pursuant to Section 12.1 to amend the Plan. NOW, THEREFORE, the

Company hereby amends the Plan as follows, effective as of
the date hereof:

Section 13.10 is amended to read in its entirety as follows:

'"Section 13.10 **Lump Sum Payments.**

(a) Automatic Cash Out. Notwithstanding any provision in the Plan to the contrary, including the requirement to obtain spousal consent to a distribution, if the Actuarial Equivalent present value of the benefit from the Trust Fund payable to any person shall not exceed $5,000 and the benefit has not yet commenced, a lump sum payment of such Actuarial Equivalent present value shall automatically be made to the appropriate recipient as soon as practicable following the date the Actuarial Equivalent present value was determined, in lieu of all other benefits under the Plan. Such determination shall be made on or after the date the Participant terminates Employment or dies, as applicable. Such determination shall also be made as of July

1, 2015 and the first day of each subsequent Plan Year (provided no benefit has yet commenced) based on the Actuarial Equivalent assumptions then in effect.

(b) Default Rollover of Lump Sums between $1,000 and $5,000. In the event of a mandatory distribution greater than $1,000 in accordance with the provisions of paragraph (a), if the Participant docs not elect to have such distribution paid directly to an eligible retirement plan specified by the Participant in a direct rollover or to receive the distribution directly, then the distribution will be paid in a direct rollover to an individual retirement plan designated by the Administrative Committee.

(c) Zero Balances. If the Actuarial Equivalent present value of the benefit from the Trust fund payable to a Participant is $0, the Participant shall be deemed to have received a distribution of his vested Accrued Benefit. If a Participant who is deemed to have received a distribution in accordance with this Section 13.10 resumes Employment with the Employer before incurring five (5) consecutive one-year Breaks in Service, the Participant will be deemed to have made repayment in accordance with Section 13.11 of the amount of the deemed distribution upon his resumption of Employment.

(d) 2015 Lump Sum Window· If the Actuarial Equivalent present value determined as of July 1, 2015, of the vested benefit from the Trust Fund payable at the later of Normal Retirement Date or the annuity starting date to a Participant who has terminated employment with the Company prior to July 1, 2015 (other than a Participant excluded from eligibility pursuant to the last sentence of this Section 13.10(d)) is less than $20,000 (and such benefit is not subject to the mandatory lump sum provisions of paragraph (a) above), then such Participant may elect to receive an immediate payment of such Actuarially Equivalent lump

sum benefit (or a benefit payable in the Normal Form, the Qualified Optional Survivor Annuity form, or, to the extent the Participant is otherwise eligible to commence a distribution, any optional form offered under Section 8.2, all computed using the Applicable Mortality Table and Applicable Interest Rate (each as defined in Section 2.3) in lieu of the assumptions generally applicable to non-lump sum forms of payment). subject to the Participant and spousal consent requirements of Article VIII, during the 45-day election period commencing September 1, 2015. Benefits shall be paid under this Section 13.10(d) as soon as practicable following the close of the election window. For the avoidance of doubt, no lump sum benefit shall be payable from the Plan unless the Participant is eligible to make and does make an election in accordance with the procedures established by the Administrative Committee during the window period described above (with the exception of mandatory lump sum payments of small benefits pursuant to (a) above). Notwithstanding the foregoing, Participants with a pending domestic relations order or Participants at the Astrophysics or Rotron sites who have grandfathered benefits subject to availability in a lump sum or partial lump sum form shall not be eligible for the lump sum window benefit described in this Section 1310(d)."

IN WITNESS WHEREOF, the Company has caused this Third Amendment to be executed this 22nd day of June 2015.

(CORPORATE SEAL)

PerkinElmer, Inc.

By: /s/ Joel S. Goldberg
Name: Joel G. Goldberg
Its: Chair, Administrative Committee

PERKINELMER, INC. EMPLOYEES RETIREMENT PLAN

(Amended and Restated Effective as of January 1, 2012) Fourth Amendment

WHEREAS, PerkinElmer, Inc. (the "Company") maintains the PerkinElmer, Inc.

Employees Retirement Plan, as amended and restated effective January 1, 2012 (the "Plan") and as further amended by the First, Second and Third Amendments thereto;

WHEREAS, the Company wishes to amend the Plan to document the election made to use the alternative mortality table permitted by IRS Notice 2017-60, finding that the use of the mortality tables in accordance with Treas. Reg. §1.430(h)(3)-1 would have an adverse business impact that is greater than *de minimis;* and

WHEREAS, the Company reserves the right pursuant to Section 12.1 to amend the Plan. NOW, THEREFORE, the Company hereby amends the Plan as follows, effective as of the date hereof:

A new Section 9.12 is added to the Plan to read in its entirety as follows:

"9.12 Use of Alternative Mortality for Minimum Funding Requirements for 2018. In accordance with Treas. Reg. §1.430(h)(3)-l(f)(2), the Plan uses the 2018 mortality table provided in Appendix A of IRS Notice 2017-60 for the Plan Year commencing January 1, 2018. The table, used for purposes of Section 430 of the Code, uses the methodology in place for 2017 mortality determination under former Treas. Reg. §1.430(h)(3)-1(c)."

IN WITNESS WHEREOF, the Company has caused this Fourth Amendment to be executed this 19th day of December, 2018.

(CORPORATE SEAL) PerkinElmer, Inc.

By: /s/ Christine Hargrave
Its: Vice President, Compensation, Benefits & HRIM

EXHIBIT 21

Subsidiaries of the Registrant

As of February 26, 2019, the following is a list of the parent (Registrant) and its active subsidiaries, together with their subsidiaries. Except as noted, all voting securities of the listed subsidiaries are 100% beneficially owned by the Registrant or a subsidiary thereof. The subsidiaries are arranged alphabetically by state and then country of incorporation or organization.

	Name of Company	State or Country of Incorporation or Organization	Name of Parent
1.	PerkinElmer, Inc.	Massachusetts	N/A
2.	Caliper Life Sciences, Inc.	Delaware	PerkinElmer Holdings, Inc.
3.	Cambridge Research & Instrumentation, Inc.	Delaware	Caliper Life Sciences, Inc.
4.	PerkinElmer CV Holdings, LLC	Delaware	PerkinElmer Global Holdings S.à r.l.
5.	PerkinElmer Diagnostics Holdings, Inc.	Delaware	PerkinElmer Holdings, Inc.
6.	PerkinElmer Health Sciences, Inc.	Delaware	PerkinElmer Holdings, Inc.
7.	PerkinElmer Informatics, Inc.	Delaware	PerkinElmer Holdings, Inc.
8	ViaCord, LLC	Delaware	PerkinElmer Diagnostics Holdings, Inc.
9.	VisEn Medical Inc.	Delaware	PerkinElmer Health Sciences, Inc.
10.	Xenogen Corporation	Delaware	Caliper Life Sciences, Inc.
11.	NovaScreen Biosciences Corporation	Maryland	Caliper Life Sciences, Inc.
12.	PerkinElmer Holdings, Inc.	Massachusetts	PerkinElmer, Inc.
13.	EUROIMMUN US Inc.	New Jersey	PerkinElmer Diagnostics Holdings, Inc.
14.	EUROIMMUN US Real Estate LLC	New Jersey	EUROIMMUN US Inc.
15.	Perten Instruments, Inc.	Nevada	PerkinElmer Health Sciences, Inc.
16.	PerkinElmer Genetics, Inc.	Pennsylvania	PerkinElmer Diagnostics Holdings, Inc.
17.	Bioo Scientific Corporation	Texas	PerkinElmer Holdings, Inc.
18.	PerkinElmer Automotive Research, Inc.	Texas	PerkinElmer Holdings, Inc.
19.	Perkin-Elmer Argentina S.R.L.	Argentina	PerkinElmer Holdings, Inc. (98%)[1]
20.	PerkinElmer Health Sciences (Australia) Pty. Ltd.	Australia	PerkinElmer Holdings Pty. Ltd.
21.	PerkinElmer Holdings Pty. Ltd.	Australia	PerkinElmer Diagnostics Global Holdings S.à r.l.
22.	PerkinElmer Pty. Ltd.	Australia	PerkinElmer Holdings, Inc.
23.	Perten Instruments of Australia Pty Ltd.	Australia	Perten Instruments AB
24.	RHS Subsidiary Pty. Ltd.	Australia	PerkinElmer Health Sciences (Australia) Pty. Ltd.
25.	PerkinElmer Vertriebs GmbH	Austria	Wellesley B.V.
26.	PerkinElmer BVBA	Belgium	PerkinElmer Life Sciences International Holdings[2]
27.	EUROIMMUN Brasil Importação e Distribuição Ltda.	Brazil	EUROIMMUN Medizinische Labordiagnostika AG[3]
28.	PerkinElmer do Brasil Ltda.	Brazil	PerkinElmer Diagnostics Global Holdings S.à r.l. (99%)[4]
29.	EUROIMMUN Medical Diagnostics Canada Inc.	Canada	EUROIMMUN Medizinische Labordiagnostika AG
30.	PerkinElmer Health Sciences Canada, Inc.	Canada	PerkinElmer Life Sciences International Holdings
31.	Perten Instruments Inc.	Canada	Perten Instruments AB
32.	Perkin Elmer Chile Ltda.	Chile	PerkinElmer Health Sciences, Inc. (68%)[5]
33.	Beijing OUMENG Biotechnology Co. Ltd.	China	EUROIMMUN Medizinische Labordiagnostika AG
34.	Chengdu PerkinElmer Medical Laboratory Co., Ltd.	China	Suzhou PerkinElmer Medical Laboratory Co., Ltd.
35.	EUROIMMUN (Hangzhou) Medical Laboratory Diagnostics Co., Ltd.	China	EUROIMMUN Medical Diagnostics (China) Co., Ltd.
36.	EUROIMMUN Medical Diagnostics (China) Co., Ltd.	China	EUROIMMUN Medizinische Labordiagnostika AG
37.	EUROIMMUN (Tianjin) Medical Diagnostic Technology Co., Ltd.	China	EUROIMMUN Medical Diagnostics (China) Co., Ltd.
38.	Guangzhou EUROIMMUN Medical Diagnostic Products Co., Ltd.	China	EUROIMMUN Medical Diagnostics (China) Co., Ltd.
39.	Hangzhou EUROIMMUN Medical Laboratory Diagnostic Products Co., Ltd.	China	EUROIMMUN Medical Diagnostics (China) Co., Ltd.
40.	PerkinElmer Healthcare Diagnostics (Shanghai) Co., Ltd.	China	PerkinElmer IVD Pte Ltd.
41.	PerkinElmer Instruments (Suzhou) Co., Ltd.	China	Wellesley B.V.
42.	PerkinElmer Management (Shanghai) Co., Ltd.	China	PerkinElmer Singapore Pte Ltd.
43.	PerkinElmer (Shanghai) Equity Investment Fund, L.P.	China	PerkinElmer Singapore Pte Ltd. (98%)[6]
44.	PerkinElmer (Shanghai) Equity Investment Fund Management Co., Ltd.	China	PerkinElmer Singapore Pte Ltd.

	Name of Company	State or Country of Incorporation or Organization	Name of Parent
45.	Perten Instruments (Beijing) Co., Ltd.	China	Perten Instruments AB
46.	Shanghai Haoyuan Biotech Co., Ltd.	China	PerkinElmer Holding Luxembourg S.à r.l.
47.	Shanghai Spectrum Instruments Co., Ltd.	China	Wellesley B.V.
48.	Suzhou PerkinElmer Medical Laboratory Co., Ltd.	China	PerkinElmer Healthcare Diagnostics (Shanghai) Co., Ltd. (70%)[7]
49.	Suzhou Sym-Bio Lifescience Co., Ltd.	China	PerkinElmer Healthcare Diagnostics (Shanghai) Co., Ltd.
50.	PerkinElmer Danmark A/S	Denmark	Wallac Oy
51.	PerkinElmer Finland Oy	Finland	Wallac Oy
52.	PerkinElmer Investments Ky	Finland	PerkinElmer Finance Luxembourg S.à r.l.[8]
53.	PerkinElmer Oy	Finland	Wellesley B.V.
54.	Wallac Oy	Finland	PerkinElmer Oy
55.	Bio Evolution SAS	France	EUROIMMUN France SAS
56.	EUROIMMUN France SAS	France	EUROIMMUN Medizinische Labordiagnostika AG
57.	PerkinElmer SAS	France	PerkinElmer Nederland B.V.
58.	Perten Instruments France SASU	France	Perten Instruments AB
59.	EUROIMMUN Medizinische Labordiagnostika AG	Germany	PerkinElmer Germany Diagnostics GmbH
60.	PerkinElmer Cellular Technologies Germany GmbH	Germany	PerkinElmer LAS (Germany) GmbH
61.	PerkinElmer chemagen Technologie GmbH	Germany	PerkinElmer Cellular Technologies Germany GmbH
62.	PerkinElmer Germany Diagnostics Financing GmbH	Germany	PerkinElmer Diagnostics Global Holdings S.à r.l.
63.	PerkinElmer Germany Diagnostics GmbH	Germany	PerkinElmer Global Diagnostics S.à r.l.
64.	PerkinElmer LAS (Germany) GmbH	Germany	PerkinElmer Germany Diagnostics GmbH
65.	Perten Instruments GmbH	Germany	Perten Instruments AB
66.	PerkinElmer (Hong Kong) Ltd.	Hong Kong	PerkinElmer Holdings, Inc.
67.	Orchid Biomedical Systems Pvt Ltd.	India	Tulip Diagnostics Pvt Ltd.
68.	PerkinElmer Health Sciences Pvt Ltd.	India	PerkinElmer IVD Pte Ltd. (91%)[9]
69.	PerkinElmer (India) Pvt Ltd.	India	PerkinElmer Singapore Pte Ltd.[10]
70.	Tulip Diagnostics Pvt Ltd.	India	PerkinElmer Holding Luxembourg S.à r.l. (99%)[11]
71.	PerkinElmer (Ireland) Ltd.	Ireland	Wellesley B.V.
72.	PerkinElmer Israel Ltd.	Israel	PerkinElmer Holding Luxembourg S.à r.l.
73.	Dani Analitica S.r.l.	Italy	PerkinElmer Diagnostics Global Holdings S.à r.l.
74.	EUROIMMUN Italia Diagnostica Medica S.r.l.	Italy	EUROIMMUN Medizinische Labordiagnostika AG
75.	Perkin Elmer Italia SpA	Italy	Wellesley B.V.
76.	Perten Instruments Italia S.r.l.	Italy	Perten Instruments AB
77.	PerkinElmer Japan Co. Ltd.	Japan	PerkinElmer Life Sciences International Holdings (97%)[12]
78.	Perkin Elmer Yuhan Hoesa	Korea	PerkinElmer Diagnostics Global Holdings S.à r.l.
79.	PerkinElmer Diagnostics Global Holdings S.à r.l.	Luxembourg	PerkinElmer Global Holdings S.à r.l.
80.	PerkinElmer Finance Luxembourg S.à r.l.	Luxembourg	PerkinElmer Holding Luxembourg S.à r.l.
81.	PerkinElmer Global Diagnostics S.à r.l.	Luxembourg	PerkinElmer Global Financing S.à r.l.
82.	PerkinElmer Global Financing S.à r.l.	Luxembourg	PerkinElmer Global Holdings S.à r.l.
83.	PerkinElmer Global Holdings S.à r.l.	Luxembourg	PerkinElmer Holdings, Inc.
84.	PerkinElmer Holding Luxembourg S.à r.l.	Luxembourg	PerkinElmer Diagnostics Global Holdings S.à r.l.
85.	DNA Laboratories Sdn. Bhd.	Malaysia	Perkin Elmer Sdn. Bhd.
86.	Perkin Elmer Sdn. Bhd.	Malaysia	PerkinElmer Diagnostics Global Holdings S.à r.l.
87.	Perkin Elmer de Mexico, S.A.	Mexico	PerkinElmer Holdings, Inc.[13]
88.	Delta Instruments B.V.	Netherlands	PerkinElmer Health Sciences B.V.
89.	PerkinElmer Health Sciences B.V.	Netherlands	PerkinElmer Life Sciences International Holdings
90.	PerkinElmer International C.V.	Netherlands	PerkinElmer Global Holdings S.à r.l.[14]
91.	PerkinElmer Nederland B.V.	Netherlands	Wellesley B.V.
92.	Wellesley B.V.	Netherlands	PerkinElmer Holding Luxembourg S.à r.l.
93.	PerkinElmer Norge AS	Norway	Wallac Oy
94.	Perkin-Elmer Instruments (Philippines) Corporation	Philippines	PerkinElmer Holdings, Inc.
95.	EUROIMMUN Polska Spólka z o.o.	Poland	EUROIMMUN Medizinische Labordiagnostika AG
96.	PerkinElmer Polska Sp z o.o.	Poland	Wellesley B.V.
97.	PerkinElmer Shared Services Sp z o.o.	Poland	Wellesley B.V.
98.	EUROIMMUN Portugal Unipessoal Lda.	Portugal	EUROIMMUN Medizinische Labordiagnostika AG

99.	EUROIMMUN (South East Asia) Pte Ltd.	Singapore	EUROIMMUN Medizinische Labordiagnostika AG
100.	PerkinElmer IVD Pte Ltd.	Singapore	Wallac Oy
101.	PerkinElmer Singapore Pte Ltd.	Singapore	PerkinElmer International C.V.

	Name of Company	State or Country of Incorporation or Organization	Name of Parent
102.	EUROIMMUN Medical Laboratory Diagnostics South Africa (Pty) Ltd.	South Africa	EUROIMMUN Medizinische Labordiagnostika AG
103.	PerkinElmer South Africa (Pty) Ltd.	South Africa	Wellesley B.V.
104.	EUROIMMUN Diagnostics España, S.L.U.	Spain	EUROIMMUN Medizinische Labordiagnostika AG
105.	Integromics, S.L.	Spain	PerkinElmer España, S.L.
106.	PerkinElmer España, S.L.	Spain	Wellesley B.V.
107.	PerkinElmer Sverige AB	Sweden	Wallac Oy
108.	PerkinElmer Sweden Health Sciences Holdings AB	Sweden	Perten Instruments AB
109.	Perten Instruments AB	Sweden	PerkinElmer Holding Luxembourg S.à r.l. (73%)[15]
110.	Vanadis Diagnostics AB	Sweden	Perten Instruments AB
111.	EUROIMMUN Schweiz AG	Switzerland	EUROIMMUN Medizinische Labordiagnostika AG
112.	PerkinElmer (Schweiz) AG	Switzerland	Wellesley B.V.
113.	PerkinElmer Taiwan Corporation	Taiwan	PerkinElmer Holding Luxembourg S.à r.l.
114.	PerkinElmer Limited	Thailand	PerkinElmer, Inc.
115.	Özmen Tibbi Laboratuar Teshisleri A.S.	Turkey	EUROIMMUN Medizinische Labordiagnostika AG[16]
116.	PerkinElmer Saðlýk ve Çevre Bilimleri Ltd.	Turkey	PerkinElmer Holding Luxembourg S.à r.l.
117.	EUROIMMUN UK Ltd.	United Kingdom	EUROIMMUN Medizinische Labordiagnostika AG
118.	PerkinElmer LAS (UK) Ltd.	United Kingdom	PerkinElmer (UK) Holdings Ltd.
119.	PerkinElmer Life Sciences International Holdings	United Kingdom	PerkinElmer Health Sciences, Inc.
120.	PerkinElmer Ltd.	United Kingdom	PerkinElmer (UK) Holdings Ltd.
121.	PerkinElmer (UK) Holdings Ltd.	United Kingdom	Wellesley B.V.

1 PerkinElmer Health Sciences, Inc. owns 2%.
2 PerkinElmer Holdings, Inc. owns a de minimus share.
3 PerkinElmer Holdings, Inc. owns a de minimus share.
4 PerkinElmer Holdings, Inc. owns 1%; PerkinElmer Health Sciences, Inc. owns a de minimus share.
5 PerkinElmer Holdings, Inc. owns 32%.
6 PerkinElmer (Shanghai) Equity Investment Fund Management Co., Ltd. owns 2%.
7 Shanghai Sai Ke Si Medical Technology L.P. owns 30%.
8 PerkinElmer Holding Luxembourg S.à r.l. owns a de minimus share.
9 Surendra Genetic Laboratory & Research Centre Pvt Ltd. owns 9%.
10 Wellesley B.V. owns a de minimus share.
11 Individual shareholders own 1%.
12 Wallac Oy owns 3%.
13 PerkinElmer, Inc. owns a de minimus share.
14 PerkinElmer CV Holdings, LLC owns 1%.
15 PerkinElmer Diagnostics Global Holdings S.à r.l. owns 27%.
16 Individual shareholders own de minimus shares.

EXHIBIT 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-61615, 333-65367, 333-81759, 333-61938, 333-73350, 333-92228, 333-129407 and 333-158877 on Form S-8 and 333-210279 on Form S-3 of our reports dated February 26, 2019, relating to the financial statements and financial statement schedule of PerkinElmer, Inc. and subsidiaries, (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the adoption of Accounting Standards Codification Topic 606, “Revenue from Contracts with Customers,” on January 1, 2018), and the effectiveness of PerkinElmer, Inc. and subsidiaries' internal control over financial reporting appearing in this Annual Report on Form 10-K of PerkinElmer, Inc. for the year ended December 30, 2018.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 26, 2019

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302

EXHIBIT 31.1

CERTIFICATION

I, Robert F. Friel, certify that:

1. I have reviewed this Annual Report on Form 10-K of PerkinElmer, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting that are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2019

/s/ ROBERT F. FRIEL

Robert F. Friel
Chairman and Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 302

EXHIBIT 31.2

CERTIFICATION

I, James M. Mock, certify that:

1. I have reviewed this Annual Report on Form 10-K of PerkinElmer, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting that are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2019

/s/ JAMES M. MOCK

James M. Mock
Senior Vice President and Chief Financial Officer

CERTIFICATION OF CEO AND CFO PURSUANT TO SECTION 906

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of PerkinElmer, Inc. (the "Company") for the period ended December 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Robert F. Friel, Chairman and Chief Executive Officer of the Company, and James M. Mock, Senior Vice President and Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) Based on my knowledge, the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) Based on my knowledge, the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 26, 2019

/s/ ROBERT F. FRIEL

Robert F. Friel
Chairman and Chief Executive Officer

Date: February 26, 2019

/s/ JAMES M. MOCK

James M. Mock
Senior Vice President and Chief Financial Officer