

AMERICAN VANGUARD CORP

Form 10-K

March 07, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For The Year Ended December 31, 2016

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 001-13795

AMERICAN VANGUARD CORPORATION

Delaware  
(State or other jurisdiction of

95-2588080  
(I.R.S. Employer

Incorporation or organization)

Identification Number)

4695 MacArthur Court, Newport Beach, California  
(Address of principal executive offices)

92660  
(Zip Code)

(949) 260-1200

(Registrant's telephone number, including area code)

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

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Title of each class:                      Name of each exchange on which registered:  
Common Stock, \$.10 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 whether 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 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 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, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer    Accelerated filer

Non-accelerated filer    Smaller reporting company

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

The aggregate market value of the voting stock of the registrant held by non-affiliates is \$434.0 million. This figure is estimated as of June 30, 2016 at which date the closing price of the registrant's Common Stock on the New York Stock Exchange was \$15.11 per share. For purposes of this calculation, shares owned by executive officers, directors, and 5% stockholders known to the registrant have been deemed to be owned by affiliates. The number of shares of \$.10 par value Common Stock outstanding as of June 30, 2016, was 29,326,078. The number of shares of \$.10 par value Common Stock outstanding as of February 22, 2017 was 29,388,860.

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December 31, 2016

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PART I

Unless otherwise indicated or the context otherwise requires, the terms “Company,” “we,” “us,” and “our” refer to American Vanguard Corporation and its consolidated subsidiaries (“AVD”).

Forward-looking statements in this report, including without limitation, statements relating to the Company’s plans, strategies, objectives, expectations, intentions, and adequacy of resources, are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that such forward-looking statements involve risks and uncertainties. (Refer to Part I, Item 1A, Risk Factors and Part II, Item 7, Management’s Discussion and Analysis of Financial Condition and Results of Operation, included in this Annual Report.)

ITEM 1 BUSINESS

AVD was incorporated under the laws of the State of Delaware in January 1969 and operates as a holding company. Unless the context otherwise requires, references to the “Company” or the “Registrant,” in this Annual Report refer to AVD. The Company conducts its business through its subsidiaries, AMVAC Chemical Corporation (“AMVAC”), GemChem, Inc. (“GemChem”), 2110 Davie Corporation (“DAVIE”), Quimica Amvac de Mexico S.A. de C.V. (“AMVAC M”), AMVAC Mexico Sociedad de Responsabilidad Limitada (“AMVAC M Srl”), AMVAC de Costa Rica Sociedad de Responsabilidad Limitada (“AMVAC CR Srl”), AMVAC Switzerland GmbH (“AMVAC S”), AMVAC do Brasil Representações Ltda (“AMVAC B”), AMVAC C.V. (“AMVAC CV”), AMVAC Netherlands BV (“AMVAC BV”), Envance Technologies, LLC (“Envance”) and AMVAC Singapore Pte, Ltd (“AMVAC Sgpr”) and Huifeng AMVAC Innovation Co. Limited (“Hong Kong JV”).

Based on similar economic and operational characteristics, the Company’s business is aggregated into one reportable segment. Refer to Part II, Item 7 for selective enterprise information.

AMVAC

AMVAC is a California corporation that traces its history from 1945 and is a specialty chemical manufacturer that develops and markets products for agricultural, commercial and consumer uses. It manufactures and formulates chemicals for crops, turf and ornamental plants, and human and animal health protection. These chemicals, which include insecticides, fungicides, herbicides, molluscicides, growth regulators, and soil fumigants, are marketed in liquid, powder, and granular forms. In prior years, AMVAC considered itself a distributor-formulator, but now AMVAC primarily synthesizes, formulates, and distributes its own proprietary products or custom manufactures or formulates for others. In addition, the Company has carved out a leadership position in closed delivery systems, currently offers certain of its own products in SmartBox, Lock ‘n Load and EZ Load systems, and is developing a precision application technology known as SIMPAS (see “Intellectual Property” below) which will permit the delivery of multiple products (from AMVAC and other companies) at variable rates in a single pass. AMVAC has historically expanded its business through both the acquisition of established chemistries (which it has revived in the marketplace) and the development and commercialization of new compounds through licensing arrangements. Below is a description of the Company’s acquisition/licensing activity over the past five years.

On October 26, 2015, AMVAC entered into a license and supply agreement with Badische Anilin-und Soda Fabrik (“BASF”) under which BASF sold and AMVAC acquired certain assets relating to the imazaquin product line. Imazaquin is an herbicide that is used on soybeans and for certain non-crop applications.

On April 29, 2015 the registrant's international subsidiary, AMVAC CV, completed the acquisition of certain assets related to the bromacil herbicide product line from DuPont Crop Protection. The assets acquired included the Hyvar<sup>®</sup> and Krovar<sup>®</sup> trademarks, product registrations, product registration data, customer lists, certain know-how, technical registrations and associated registration data in all markets outside of North America. Bromacil is a broad spectrum residual herbicide used on crops such as pineapples, citrus, agave and asparagus, and is marketed globally under either the Hyvar<sup>®</sup> or Krovar<sup>®</sup> brands

On April 6, 2015 the registrant's international subsidiary, AMVAC CV, completed the acquisition of certain assets related to the Namacur<sup>®</sup> insecticide/nematicide product line from Adama Agricultural Solutions Ltd ("Adama"). The assets acquired include trademarks, product registrations, associated registration data, and customer information that relate to the marketing and sale of this crop protection product in Europe. Namacur<sup>®</sup> is used to control soil insects and nematodes on many fruit and vegetable crops.

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On March 25, 2013, AVD made an equity investment in TyraTech Inc. (“TyraTech”), a Delaware corporation that specializes in developing, marketing and selling pesticide products containing natural oils and other natural ingredients. As of December 31, 2016, the Company’s ownership position in TyraTech was approximately 15.11%.

Seasonality

The agricultural chemical industry, in general, is cyclical in nature. The demand for AMVAC’s products tends to be seasonal. Seasonal usage, however, does not necessarily follow calendar dates, but more closely follows varying growing seasonal patterns, weather conditions, geography, weather related pressure from pests and customer marketing programs.

Backlog

AMVAC does not believe that backlog is a significant factor in its business. AMVAC primarily sells its products on the basis of purchase orders, although from time to time it has entered into requirements contracts with certain customers.

Customers

The Company’s largest three customers accounted for 15%, 11% and 8% of the Company’s sales in 2016; 14%, 11% and 10% in 2015; and 16%, 10% and 9% in 2014.

Distribution

AMVAC predominantly distributes its products domestically through national distribution companies and buying groups or co-operatives, which purchase AMVAC’s goods on a purchase order basis and, in turn, sell them to retailers/growers/end-users. The Company manages its international sales through its Netherlands’ entity, AMVAC BV, which has sales offices in Mexico and Costa Rica and employed sales force executives or sales agents in other territories. The Company’s domestic and international distributors, agents, or customers typically have long-established relationships with retailers/end-users, far-reaching logistics, transportation capabilities and/or customer service expertise. The markets for AMVAC products vary by region, target crop, use and type of distribution channel. AMVAC’s customers are experts at addressing these various markets.

Competition

In its many marketplaces, AMVAC faces competition from both domestic and foreign manufacturers. Many of our competitors are larger and have substantially greater financial and technical resources than AMVAC. AMVAC’s capacity to compete depends on its ability to develop additional applications for its current products and/or expand its product lines and customer base. AMVAC competes principally on the basis of the quality and efficacy of its products, price and the technical service and support given to its customers.

Generally, the treatment against pests of any kind is broad in scope, there being more than one way, or one product, for treatment, eradication, or suppression. In some cases, AMVAC has attempted to position itself in smaller niche

markets which are no longer addressed by larger companies. In other cases, for example in the Midwestern corn market, the Company competes directly with larger competitors.

#### Manufacturing

Through its four domestic manufacturing facilities (see Item 2, Properties), AMVAC synthesizes many of the technical grade active ingredients that are in its end-use products. Further, AMVAC formulates and packages its end use products at its own facilities or at the facilities of third-party formulators.

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Raw Materials

AMVAC utilizes numerous companies to supply the various raw materials and components used in manufacturing its products. Many of these materials are readily available from domestic sources. In those instances where there is a single source of supply or where the source is not domestic, AMVAC seeks to secure its supply by either long-term (multi-year) arrangements or purchasing on long lead times from its suppliers. AMVAC believes that it is considered to be a valued customer to such sole-source suppliers.

Intellectual Property

AMVAC's proprietary product formulations are protected, to the extent possible, as trade secrets and, to a lesser extent, by patents. Certain of the Company's closed delivery systems are patented and AMVAC has made applications for related inventions to expand its equipment portfolio, particularly with respect to its Smart Integrated Multi-Product Precision Application System, ("SIMPAS") technology. Further, AMVAC's trademarks bring value to its products in both domestic and foreign markets. AMVAC considers that, in the aggregate, its trademarks, licenses, and patents constitute a valuable asset. While it does not regard its business as being materially dependent upon any single trademark, license, or patent, it believes that its developmental equipment technology may bring significant value in future years.

EPA Registrations

In the United States, AMVAC's products also receive protection afforded by the terms of the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA") legislation. The legislation makes it unlawful to sell any pesticide in the United States, unless such pesticide has first been registered by the United States Environmental Protection Agency ("USEPA"). Substantially all of AMVAC's products, sold in United States, are subject to USEPA registration and periodic re-registration requirements and are registered in accordance with FIFRA. This registration by USEPA is based, among other things, on data demonstrating that the product will not cause unreasonable adverse effects on human health or the environment, when used according to approved label directions. In addition, each state requires a specific registration before any of AMVAC's products can be marketed or used in that state. State registrations are predominantly renewed annually with a smaller number of registrations that are renewed on a multiple year basis.

Foreign jurisdictions typically have similar registration requirements by statute. The USEPA, state, and foreign agencies have required, and may require in the future, that certain scientific data requirements be performed on registered products sold by AMVAC. AMVAC, on its own behalf and in joint efforts with other registrants, has furnished, and is currently furnishing, required data relative to specific products.

Under FIFRA, the federal government requires registrants to submit a wide range of scientific data to support U.S. registrations. This requirement results in operating expenses in such areas as regulatory compliance, with USEPA and other such bodies in the markets in which the Company sells its products. In addition the Company is required to generate new formulations of existing products or to produce new products in order to remain compliant. AMVAC expended \$11,544, \$9,831, and \$14,084 during 2016, 2015 and 2014 respectively, on these activities.

	2016	2015	2014
Registration	\$7,750	\$6,375	\$9,188
Product development	3,794	3,456	4,896
	\$11,544	\$9,831	\$14,084

## Environmental

During 2016, AMVAC continued activities to address environmental issues associated with its facility in Commerce, CA. (the “Facility”). An outline of the history of those activities follows.

In 1995, the California Department of Toxic Substances Control (“DTSC”) conducted a Resource Conservation and Recovery Act (“RCRA”) Facility Assessment (“RFA”) of those facilities having hazardous waste storage permits. In March 1997, the RFA culminated in DTSC accepting the Facility into its Expedited Remedial Action Program. Under this program, the Facility was required to conduct an environmental investigation and health risk assessment. Depending on the findings of these investigations, the Facility might also be required to develop and implement remedial measures to address any historical environmental impairment.

This activity then took two paths: first, the RCRA permit closure and second, the larger site characterization.

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With respect to the RCRA permit closure, in 1998, AMVAC began the formal process to close its hazardous waste permit at the Facility (which had allowed AMVAC to store hazardous waste longer than 90 days) as required by federal regulations. Formal regulatory closure actions began in 2005 and were completed in 2008, as evidenced by DTSC's October 1, 2008 acknowledgement of AMVAC's Closure Certification Report.

With respect to the larger site characterization, soil and groundwater characterization activities began in December 2002 in accordance with the Site Investigation Plan that was approved by DTSC. Additional activities were conducted from 2003 to 2014, with oversight provided by DTSC. Additional review of groundwater and soil data is being conducted in response to federally-mandated initiatives of similarly affected sites. Risk assessment activities have been concluded. The Company submitted a revised draft remedial action plan ("RAP") to DTSC in March 2016 which incorporated DTSC's January 2016 comments. Under the provisions of the RAP, the Company is proposing not to disturb sub-surface contaminants, but to continue monitoring, maintain the cover above affected soil, enter into restrictive covenants regarding potential use of the property in the future, and provide financial assurances regarding the requirements of the RAP. In January 2017, the DTSC commenced a public survey as a first step in the public comment process. The Company expects that that process will continue for several months. Until the remedial action plan has been approved by DTSC (including with respect to the nature of financial assurances) after the required public comment period, it is uncertain whether the cost associated with further investigation and potential remediation activities will have a material impact on the Company's consolidated financial statements or its results of operations. Thus, the Company is unable to determine what sort of remediation is probable, nor can the cost of remediation be reasonably estimated. Accordingly, the Company has not recorded a loss contingency with respect thereto.

AMVAC is subject to numerous federal and state laws and governmental regulations concerning environmental matters and employee health and safety at its four manufacturing facilities. The Company continually adapts its manufacturing process to the environmental control standards of the various regulatory agencies. The USEPA and other federal and state agencies have the authority to promulgate regulations that could have an impact on the Company's operations.

AMVAC expends substantial funds to minimize the discharge of materials in the environment and to comply with the governmental regulations relating to protection of the environment. Wherever feasible, AMVAC recovers and recycles raw materials and increases product yield in order to partially offset increasing pollution abatement costs.

The Company is committed to a long-term environmental protection program that reduces emissions of hazardous materials into the environment, as well as to the remediation of identified existing environmental concerns.

#### Employees

As of December 31, 2016, the Company employed 395 employees. The Company employed 369 employees as of December 31, 2015 and 379 employees as of December 31, 2014. From time to time, due to the seasonality of its business, AMVAC uses temporary contract personnel to perform certain duties primarily related to packaging of its products. None of the Company's employees are subject to a collective bargaining agreement. The Company believes it maintains positive relations with its employees.

#### Domestic operations

AMVAC is a California corporation that was incorporated under the name of Durham Chemical in August 1945. The name of the corporation was subsequently changed to AMVAC in January 1973. As the Company's main operating subsidiary, AMVAC owns and/or operates the Company's domestic manufacturing facilities and is also the parent company (owns 99%) of AMVAC CV. AMVAC manufactures, formulates, packages and sells its products in the USA and is a wholly owned subsidiary of AVD.

GemChem is a California corporation that was incorporated in 1991 and was subsequently purchased by the Company in 1994. GemChem sells into the pharmaceutical, cosmetic and nutritional markets, in addition to purchasing key raw materials for the Company. GemChem is a wholly owned subsidiary of AVD.

DAVIE owns real estate for corporate use only. See also Part I, Item 2 of this Annual Report. DAVIE is a wholly owned subsidiary of AVD.

Envance is a Delaware Limited Liability Company and is a majority owned subsidiary of the Company. It was formed in 2012 with joint venture partner, TyraTech. AMVAC's initial shareholding was 60% and its shareholding increased to 87% in 2015.

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Envance has the rights to develop and commercialize pesticide products and technologies made from natural oils in global consumer, commercial, professional, crop protection and seed treatment markets and has begun bringing products to market.

International operations

In July 2012, the Company formed AMVAC CV, which is incorporated in the Netherlands, for the purpose of managing foreign sales on behalf of the Company. AMVAC CV is owned jointly by AMVAC as the general partner, and AVD International, LLC (also formed in July 2012 as a wholly owned subsidiary of AMVAC), as the limited partner, and is therefore a wholly owned subsidiary of AMVAC.

AMVAC BV is a registered Dutch private limited liability company that was formed in July 2012. AMVAC BV is located in the Netherlands and is wholly owned by AMVAC CV. During 2016, the international business sold the Company's products in 59 countries, as compared to 54 countries in 2015.

AMVAC CR Srl is a wholly owned subsidiary of AMVAC BV that was formed in 2008 to conduct the Company's business in Costa Rica and other countries in Central America.

AMVAC M Srl is a wholly owned subsidiary of AMVAC BV and was formed in 1998 (originally formed as AMVAC M and changed to AMVAC Mexico Srl in 2013) to conduct the Company's business in Mexico.

AMVAC Sgpr is a wholly owned subsidiary of AMVAC BV and was opened on April 12, 2016. This new entity was formed to conduct the Company's business in the Asia Pacific and China region.

Hong Kong JV is a 50% owned joint venture with a wholly owned subsidiary of Huifeng Agrochemical Company, Ltd, ("Huifeng") a China based basic chemical manufacturer. The subsidiary, Shanghai Focus Biological Technology Co.,Ltd, is Huifeng's development business. The joint venture was formed on July 7, 2016. The purpose of the joint venture is to be a technology transfer platform between the co-owners, including the development of proprietary agrochemical formulations and precision application systems for crop protection.

The Company classifies as international sales all products bearing foreign labeling shipped to a foreign destination.

	2016	2015	2014
International sales	\$83,259	\$77,295	\$73,706
Percentage of net sales	26.7 %	26.7 %	24.7 %

Risk Management

The Company regularly monitors matters, whether insurable or not, that could pose material risk to its operations, financial performance or the safety of its employees and neighbors. The Risk Committee of the Board of Directors

(“Board”) was formed in 2010, consists of three members of the Board and meets regularly. In fact, all members of the Board attend the majority of Risk Committee meetings. Working with senior management, the committee continuously evaluates the Company’s risk profile, identifies mitigation measures and ensures that the Company is prudently managing these risks. In support of the Risk Committee, senior management has appointed a risk manager and designated several senior executives to lead teams focused on addressing each of several of the most material risks facing the Company; these groups perform analysis with the benefit of operational knowledge. The top risks identified by management and being addressed by risk teams (in no particular order) include: adverse political and regulatory climate; managing high levels of inventory and associated reduced levels of manufacturing activity; succession planning and bench strength; maintaining a competitive edge in the marketplace; the possibility of an environmental event; undervaluation of the Company; availability of acquisition and licensing targets and cyber terrorism. Over the course of 2016, the Company continued to implement its enterprise risk management program, which extends to all areas of potential risk and is a permanent feature in the Company’s operation. In addition, the Company continually evaluates insurance levels for product liability, property damage and other potential areas of risk. Management believes its facilities and equipment are adequately insured against loss from usual business risks. In addition, in January 2017, the Company obtained insurance coverage against cyberterrorism risks.

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Available Information

The Company makes available free of charge (through its website, [www.american-vanguard.com](http://www.american-vanguard.com)), its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with the Securities and Exchange Commission (“SEC”). All reports filed with the SEC are available free of charge on the SEC website, [www.sec.gov](http://www.sec.gov). Also available free of charge on the Company’s website are the Company’s Audit Committee, Compensation Committee, Finance Committee and Nominating and Corporate Governance Committee Charters, the Company’s Corporate Governance Guidelines, the Company’s Code of Conduct and Ethics, the Company’s Employee Complaint Procedures for Accounting and Auditing Matters and the Company’s policy on Stockholder Nomination and Communication. The Company’s Internet website and the information contained therein or incorporated therein are not intended to be incorporated into this Annual Report on Form 10-K.

ITEM 1A. RISK FACTORS

The regulatory climate has grown increasingly challenging to the Company’s interests both domestically and internationally—Various agencies within the U.S. (both federal and state) and foreign governments continue to exercise increased scrutiny in permitting continued uses (or the expansion of such uses) of older chemistries, including many of the Company’s products and, in some cases, have initiated or entertained challenges to these uses. The challenge of the regulatory climate is even more pronounced in certain other geographical regions where the Company faces resistance to the continued use of certain of its products. There is no guarantee that this climate will change in the near term or that the Company will be able to maintain or expand the uses of many of its products in the face of these regulatory challenges.

USEPA has proposed further limitations on the continued registration of organophosphates—On September 25, 2015 the USEPA published in the Federal Register draft human health risk assessments for four of the Company’s organophosphate (“OP”) compounds (marketed under the names Bidrin, Counter, Folex and Mocap) in which it recommends the application of a 10X safety factor under the FQPA (Food Quality Protection Act) in light of the alleged possibility of neurodevelopmental harm to women and children based on epidemiological data. The agency is seeking public comment on these risk assessments and has indicated its current intention to apply this safety factor to all registered OPs, as they come up for review or renewal. The Company, like many in our industry, believes that the basis for applying this safety factor is unsound and that there is no causal link between the perceived harm and the use of its products. Accordingly, the Company intends to take all action necessary to defend its registrations. It is expected we will be joined in this effort by other companies who are similarly concerned about the potential impact of USEPA’s action. Further, there is no guarantee that the Company’s actions will alter the course that USEPA has proposed and, if the agency’s position becomes final, some uses of the company’s OP products could be limited or cancelled. Such action could have a material adverse effect upon the Company’s financial performance in future reporting periods.

Use of the Company’s products is subject to continuing challenges from activist groups—Use of agrochemical products, including the Company’s products is regularly challenged by activist groups in many jurisdictions under a multitude of federal and state statutes, including FIFRA, the Food Quality Protection Act, Endangered Species Act, and the Clean Water Act, to name a few. These challenges typically take the form of lawsuits or administrative proceedings against the USEPA and/or other federal or state agencies, the filing of amicus briefs in pending actions, the introduction of legislation that is inimical to the Company’s interests, and/or adverse comments made in response to public comment

invited by USEPA in the course of registration, re-registration or label expansion. It is possible that one or more of these challenges could succeed, resulting in a material adverse effect upon one or more of the Company's products.

The distribution and sale of the Company's products are subject to prior governmental approvals and thereafter ongoing governmental regulation—The Company's products are subject to laws administered by federal, state and foreign governments, including regulations requiring registration, approval and labeling of its products. The labeling requirements restrict the use of, and type of, application for our products. More stringent restrictions could make our products less available, which would adversely affect our revenues and profitability. Substantially all of the Company's products are subject to the USEPA (and/or similar agencies in the various territories or jurisdictions in which we do business) registration and re-registration requirements, and are registered in accordance with FIFRA. Such registration requirements are based, among other things, on data demonstrating that the product will not cause unreasonable adverse effects on human health or the environment when used according to approved label directions. All states, where any of the Company's products are used, also require registration before products, such as the Company sells, can be marketed or used in that state. Governmental regulatory authorities have required, and may require in the future, that certain scientific data requirements be performed on the Company's products. The Company, on its behalf and also in joint efforts with other registrants, has and is currently furnishing certain required data relative to its products. There can be no assurance, however, that the USEPA or



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similar agencies will not request that certain tests or studies be repeated or that more stringent legislation or requirements will not be imposed in the future. The Company can provide no assurance that any testing approvals or registrations will be granted on a timely basis, if at all, or that its resources will be adequate to meet the costs of regulatory compliance.

The manufacturing of the Company's products is subject to governmental regulations—The Company currently owns and operates three manufacturing facilities in Los Angeles, California; Axis, Alabama; and Marsing, Idaho and owns and has manufacturing services provided in a fourth facility in Hannibal, Missouri (the "Facilities"). The Facilities operate under the terms and conditions imposed by state and local authorities. The manufacturing of key ingredients for certain of the Company's products occurs at the Facilities. An inability to renew or maintain a license or permit, or a significant increase in the fees for such licenses or permits, could impede the Company's manufacture of one or more of its products, and/or increase the cost of production; this, in turn, would materially and adversely affect the Company's ability to provide customers with its products in a timely and affordable manner.

The Company may be subject to environmental liabilities—While the Company expends substantial funds to minimize the discharge of materials into the environment and to comply with governmental regulations relating to protection of the environment and its workforce, federal and state authorities may nevertheless seek fines and penalties for any violation of the various laws and governmental regulations. In addition, while the Company continually adapts its manufacturing processes to the environmental control standards of regulatory authorities, it cannot completely eliminate the risk of accidental contamination or injury from hazardous or regulated materials. Further, these various governmental agencies could, among other things, impose liability on the Company for (i) cleaning up the damage resulting from the release of pesticides and other agents into the environment, including with respect to subsurface environmental contamination at its Los Angeles-based manufacturing facility, which has been the subject of characterization, risk assessment and remediation planning for several years (see, "Environmental" above), and/or (ii) potential civil and criminal enforcement arising under RCRA for the Company's importation (transportation, handling, and storage) of depleted, Thimet containers (see, "Legal Proceedings" below). In short, the Company may be held liable for significant damages or fines relating to any environmental contamination, injury, or compliance violation which could have a material adverse effect on the Company's financial condition and consolidated statements of operations.

The Company's business may be adversely affected by cyclical and seasonal effects—Demand for the Company's products tends to be seasonal. Seasonal usage follows varying agricultural seasonal patterns, weather conditions and weather related pressure from pests, and customer marketing programs and requirements. Weather patterns can have an impact on the Company's operations. For example, the end user of its products may, because of weather patterns, delay or intermittently disrupt field work during the planting season, which may result in a reduction of the use of some products and therefore may, at some point, reduce the Company's revenues and profitability. In light of the possibility of adverse seasonal effects, there can be no assurance that the Company will maintain sales performance at historical levels in any particular region.

The Company is dependent upon certain sole source suppliers for certain of its raw materials and active ingredients—There are a limited number of suppliers of certain important raw materials used by the Company in many of its products. Certain of these raw materials are available solely from sources overseas or from single sources domestically. Further, in conjunction with the purchase and/or licensing of various product lines (including Impact<sup>®</sup>, Force<sup>®</sup>, and Scepter<sup>®</sup>), the Company has entered into multi-year supply arrangements under which such counterparties

are the sole source of either active ingredients and/or formulated end-use product and, in some cases, the manufacturer has entered the market as a competitor. There is no guarantee that any or all of these sole source manufacturers will be willing or able to supply these products to the Company reliably, continuously and at the levels anticipated by the Company or required by the market. If these sources prove to be unreliable and the Company is not able to supplant or otherwise second source these suppliers, it is possible that the Company will not realize its projected sales, which, in turn, could adversely affect the Company's consolidated statements of operations.

To the extent that capacity utilization is not fully realized at its manufacturing facilities, the Company may experience lower profitability—While the Company endeavors continuously to maximize utilization of its manufacturing facilities, our success in these endeavors is dependent upon many factors beyond our control, including fluctuating market conditions, product life cycles, weather conditions, availability of raw materials and regulatory constraints, among other things. There can be no assurance that the Company will be able to maximize the utilization of capacity at its manufacturing facilities. Further, there is no assurance that absorption of factory costs will improve to the point that will enable the Company to return to its historically higher levels of profitability.

The Company's continued success depends, in part, upon a limited number of key employees—Within certain functions, the Company relies heavily on a small number of key employees to manage ongoing operations and to perform strategic planning. In some cases, there are no internal candidates who are qualified to succeed these key personnel in the short term. In the event that the

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Company was to lose one or more key employees, there is no guarantee that Company could replace them with people having comparable skills. Further, the loss of key personnel could adversely affect the operation of the business.

The Company faces competition in certain markets from new technologies and demand for organically produced food—The Company faces competition from larger companies that market new chemistries, genetically modified (“GMO”) seeds and other similar technologies (e.g., RNA interference) in certain of the crop protection sectors in which the Company competes, particularly that of corn. In fact, many growers that have chosen to use GMO seeds have reduced their use of the types of pesticides sold by the Company. At the same time, the demand for organically-produced food, which, generally speaking, is made without the use of synthetic chemicals (which constitute most of the Company’s products) continues to increase. There is no guarantee that the Company will maintain its market share or pricing levels in sectors that are subject to competition from companies that market new technologies. Further, it is possible that increased demand for organic crops may, over time, reduce the demand for the Company’s products.

The Company faces competition from generic competitors that source product from countries having lower cost structures—The Company continues to face competition from competitors around the globe that may enter the market through either offers to pay data compensation, or similar means in foreign jurisdictions, and then subsequently source material from countries having lower cost structures (typically India and China). These competitors typically tend to operate at thinner gross margins and, with low costs of goods, tend to drive pricing and profitability of subject product lines downward. There is no guarantee that the Company will maintain market share and pricing over generic competitors or that such competitors will not offer generic versions of the Company’s products in the future.

The Company’s key customers typically carry competing product lines and may be influenced by the Company’s larger competitors—A significant portion of the Company’s products are sold to national distributors in the United States, which also carry product lines of competitors that are much larger than the Company. Typically, revenues from the sales of these competing product lines and related program incentives constitute a greater part of our distributors’ income than do revenues from sales and program incentives arising from the Company’s product lines. Further, these distributors are often under pressure to market competing product lines rather than the Company’s. In light of these facts, there is no assurance that such customers will continue to market our products aggressively or successfully or that the Company will be able to influence such customers to continue to purchase our products instead of those of our competitors.

Industry consolidation may threaten the Company’s position in various markets—The global agricultural chemical industry continues to undergo significant consolidation. Many of the Company’s competitors have grown or are expected to grow through mergers and acquisitions. As a result, these competitors will tend to realize greater economies of scale, more diverse portfolios and greater influence throughout the distribution channels. Consequently, the Company may find it more difficult to compete in various markets. While such merger activity may generate acquisition opportunities for the Company, there is no guarantee that the Company will benefit from such opportunities. Further, there is a risk that the Company’s future performance may be hindered by the growth of its competitors through consolidation.

The Company is dependent on a limited number of customers, which makes it vulnerable to the continued relationship with and financial health of those customers—In 2016 and 2015, three customers accounted for 34% and 35%,

respectively, of the Company's sales. The Company's future prospects may depend on the continued business of such customers and on our continued status as a qualified supplier to such customers. The Company cannot guarantee that these key customers will continue to buy products from us at current levels. The loss of a key customer could have a material adverse effect on the Company's financial condition and consolidated statements of operations.

The carrying value of certain assets on the Company's consolidated balance sheets may be subject to impairment depending upon market trends and other factors—The Company regularly reviews the carrying value of certain assets, including long-lived assets, inventory, fixed assets and intangibles. Depending upon the class of assets in question, the Company takes into account various factors including, among others, sales, trends, market conditions, cash flows, profit margins and the like. Based upon this analysis, where circumstances warrant the Company may leave such carrying values unchanged or adjust them as appropriate. There is no guarantee that these carrying values can be maintained indefinitely, and it is possible that one or more such assets could be subject to impairment which, in turn, could have an adverse impact upon the Company's financial condition and consolidated statements of operations.

Reduced financial performance may limit the Company's ability to borrow under its credit facility—The Company has historically grown net sales through both expansion of current product lines and acquisition of product lines from third parties. In

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order to finance acquisitions, the Company has usually drawn upon its senior credit facility. However, the Company's borrowing capacity under the senior credit facility depends, in part, upon its satisfaction of a negative covenant that sets a maximum ratio of borrowed debt to earnings (as measured over the trailing 12 month period). There is no guarantee that the Company will continue to generate earnings necessary to ensure that it has sufficient borrowing capacity to support future acquisitions or that, when necessary, the lender group will amend the senior credit facility to provide for such borrowing capacity. Further, despite the Company's excellent long-standing relationship with its lenders, in light of the uncertainties in global financial markets there is no guarantee that the Company's lenders will be either willing or able to continue lending to the Company at such rates and in such amounts as may be necessary to meet the Company's working capital needs.

The Company's growth has been fueled in part by acquisition—Over the past few decades, the Company's growth has been driven by acquisition and licensing of both established and developmental products from third parties. There is no guarantee that acquisition targets or licensing opportunities meeting the Company's investment criteria will remain available or will be affordable. If such opportunities do not present themselves, then the Company may be unable to record consistent growth in future years.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None

ITEM 2 PROPERTIES

AMVAC owns in fee the Facility constituting approximately 152,000 square feet of improved land in Commerce, California ("Commerce") on which its West Coast manufacturing, some of its warehouse facilities and some of its manufacturing administrative offices are located.

DAVIE owns in fee approximately 72,000 square feet of warehouse, office and laboratory space on approximately 118,000 square feet of land in Commerce, California, which is leased to AMVAC. In 2013, the Company made a significant investment in the Glenn A. Wintemute Research Center, which houses the Company's primary research laboratory supporting synthesis, formulation and other new product endeavors.

On December 28, 2007, AMVAC purchased certain manufacturing assets relating to the production of Thimet and Counter and located at BASF's multi-plant facility situated in Hannibal, Missouri (the "Hannibal Site"). Subject to the terms and conditions of the Agreement, AMVAC purchased certain buildings, manufacturing equipment, office equipment, fixtures, supplies, records, raw materials, intermediates and packaging constituting the "T/C Unit" of the Hannibal Site. The parties entered into a ground lease and a manufacturing and shared services agreement, under which BASF continues to supply various shared services to AMVAC for the Hannibal Site.

On March 7, 2008, AMVAC acquired from Bayer CropScience Limited Partnership, ("BCS LP"), a U.S. business of BCS, a facility (the "Marsing Facility") located in Marsing, ID, which consists of approximately 17 acres of improved real property, 15 of which are owned by AMVAC and two of which AMVAC leases from the City of Marsing for a term of 25 years. The Marsing Facility is engaged in the blending of liquid and powder raw materials and the packaging of finished liquid, powder and pelletized products for sale into the US agricultural market. With this acquisition, AMVAC acquired the ability to formulate flowable materials. In connection with the acquisition, AMVAC and BCS LP agreed to enter into a master processor agreement under which AMVAC provides certain third

party manufacturing services to BCS LP on an ongoing basis that continued into 2015. Following the termination of the master supply agreement, AMVAC and BCS LP have continued to trade on a normal commercial basis.

In 2001, AMVAC completed the acquisition of a manufacturing facility (the “Axis Facility”) from E.I. DuPont de Nemours and Company (“DuPont”). The Axis Facility is one of three such units located on DuPont’s 510 acre complex in Axis, Alabama. The acquisition consisted of a long-term ground lease of 25 acres and the purchase of all improvements thereon. The facility is a multi-purpose plant designed for synthesis of active ingredients and formulation and packaging of finished products.

The production areas of AMVAC’s facilities are designed to run on a continuous 24 hour per day basis. AMVAC regularly adds chemical processing equipment to enhance or expand its production capabilities. AMVAC believes its facilities are in good operating condition, are suitable and adequate for current needs, can be modified to accommodate future needs, have flexibility to change products, and can produce at greater rates as required. Facilities and equipment are insured against losses from fire as well as other usual business risks. The Company knows of no material defects in title to, or encumbrances on, any of its properties except that substantially all of the Company’s assets are pledged as collateral under the Company’s loan agreements with its primary lender

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group. For further information, refer to note 2 of the Notes to the Consolidated Financial Statements in Part IV, Item 15 of this Annual Report.

AMVAC owns approximately 42 acres of unimproved land in Texas for possible future expansion.

The Company leases approximately 19,953 square feet of office space located at 4695 MacArthur Court in Newport Beach, California. The lease was amended in September 2015 and was extended (at that time) to expire June 30, 2021. The premises serve as the Company's corporate headquarters.

AMVAC BV's, GemChem's, AMVAC M's, AMVAC M Srl's, AMVAC CR Srl's and AMVAC Sgpr's facilities consist of administration and/or sales offices which are leased.

### ITEM 3 LEGAL PROCEEDINGS

#### A. DBCP Cases

Over the course of the past 30 years, AMVAC and/or the Company have been named or otherwise implicated in a number of lawsuits concerning injuries allegedly arising from either contamination of water supplies or personal exposure to 1, 2-dibromo-3-chloropropane ("DBCP"). DBCP was manufactured by several chemical companies, including Dow Chemical Company, Shell Oil Company and AMVAC and was approved by the USEPA to control nematodes. DBCP was also applied on banana farms in Latin America. The USEPA suspended registrations of DBCP in October 1979, except for use on pineapples in Hawaii. The USEPA suspension was partially based on 1977 studies by other manufacturers that indicated a possible link between male fertility and exposure to DBCP among their factory production workers involved with producing the product.

At present, there are four domestic lawsuits and approximately 85 Nicaraguan lawsuits filed by former banana workers in which AMVAC has been named as a party. Only two of the Nicaraguan actions have actually been served on AMVAC.

As described more fully below, activity in domestic cases during 2016 is as follows: in Hawaii, *Patrickson, et. al. v. Dole Food Company, et. al* which had been dismissed in 2011 (for expiration of the statute of limitations), was appealed and, upon the appellate court's adoption of cross-jurisdictional tolling, remanded to the trial court for adjudication; and *Adams*, from which co-defendant Dole was dismissed, is on appeal with respect to such dismissal and, at any rate, involves claims that pre-dated AMVAC's sales into the relevant market. All but two matters that had been pending in Louisiana and Delaware have been dismissed (and affirmed on appeal) based upon the applicable statutes of limitation. The pending Delaware matters are more fully described below. With respect to Nicaraguan matters, there was no change in status during 2016.

#### Delaware Matter

On or about May 31, 2012, two cases (captioned *Abad Castillo and Marquinez*) were filed with the United States District Court for the District of Delaware (USDC DE No. 1:12-C.V.-00695-LPS) involving claims for physical injury arising from alleged exposure to DBCP over the course of the late 1960's through the mid-1980's on behalf of 2,700 banana plantation workers from Costa Rica, Ecuador, Guatemala, and Panama. Defendant Dole brought a motion to

dismiss 22 plaintiffs from Abad Castillo on the ground that they were parties in cases that had been filed by HendlerLaw, P.C. in Louisiana. On September 19, 2013, the appeals court determined that 14 of the 22 plaintiffs should be dismissed. On May 27, 2014, the district court granted Dole's motion to dismiss the matter without prejudice on the ground that the applicable statute of limitations had expired in 1995. Then, on August 5, 2014, the parties stipulated to summary judgment in favor of defendants (on the same ground as the earlier motion) and the court entered judgment in the matter. Plaintiffs were given an opportunity to appeal; however, only 57 of the 2,700 actually entered an appeal. Thus, at this stage, only 57 plaintiffs remain in the action. We expect that the appellate court will schedule oral argument by March 2017 and may issue a decision by July 2017. The Company believes that a loss is neither probable nor reasonably estimable and has not recorded a loss contingency on this matter.

On or about May 31, 2012, HendlerLaw, P.C. filed several actions involving claims for personal injury allegedly arising from exposure to DBCP on behalf of 230 banana workers from Costa Rica, Ecuador and Panama. Defendant Dole subsequently brought a motion to dismiss these matters under the "first-to-file" theory of jurisdiction, specifically in light of the fact that they involved identical claims and claimants as matters that had been brought by the same law firm in Louisiana. These Delaware matters have been consolidated into one matter (the "Hendler-Delaware Case"). On August 21, 2012, the U.S. District Court in the Hendler-Delaware case granted defendants' motion to dismiss the actions with prejudice, finding that the same claimants and claims had been pending in the Hendler-Louisiana cases where they had been first filed. However, plaintiffs appealed the dismissal, and on September 2, 2016,



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the Third Circuit Court reversed the District Court decision, finding that it was not proper for the trial court to have dismissed these cases with prejudice even though the Louisiana courts had dismissed the same claims for expiration of the statute of limitations. In reaching its decision, the Third Circuit reasoned that no court had yet addressed the merits of the matter, that Delaware's statute of limitations may differ from that of Louisiana, and that it would have been proper for the Delaware trial court to have dismissed the matter without prejudice (that is, with the right to amend and refile). Accordingly, the matter has been remanded to the U.S. District Court in Delaware. The Company believes the Hendler-Delaware case has no merit and, further, that a loss is neither probable nor reasonably estimable; accordingly, it has not recorded a loss contingency.

Hawaiian Matters

Patrickson, et. al. v. Dole Food Company, et al In October 1997, AMVAC was served with two complaints in which it was named as a defendant, filed in the Circuit Court, First Circuit, State of Hawai'i and in the Circuit Court of the Second Circuit, State of Hawai'i (two identical suits) entitled Patrickson, et. al. v. Dole Food Company, et. al ("Patrickson Case") alleging damages sustained from injuries (including sterility) to banana workers caused by plaintiffs' exposure to DBCP while applying the product in their native countries. Other named defendants include: Dole Food Company, Shell Oil Company and Dow Chemical Company. After several years of law and motion activity, the court granted judgment in favor of the defendants based upon the statute of limitations on July 28, 2010. On August 24, 2010, the plaintiffs filed a notice of appeal. On April 8, 2011, counsel for plaintiffs filed a pleading to withdraw and to substitute new counsel. On October 21, 2015, the Hawai'i Supreme Court granted the appeal and overturned the lower court decision, ruling that the State of Hawai'i now recognizes cross-jurisdictional tolling, that plaintiffs filed their complaint within the applicable statute of limitations and that the matter is to be remanded to the lower court for further adjudication. No discovery has taken place in this matter, and, at this stage in the proceedings, the Company does not believe that a loss is either probable or reasonably estimable and, accordingly, has not recorded a loss contingency for this matter.

Adams v. Dole Food Company et al On approximately November 23, 2007, AMVAC was served with a suit filed by two former Hawaiian pineapple workers (and their spouses), alleging that they had testicular cancer due to DBCP exposure: Adams v. Dole Food Company et al in the First Circuit for the State of Hawaii. Plaintiff alleges that they were exposed to DBCP between 1971 and 1975. AMVAC denies that any of its product could have been used at the times and locations alleged by these plaintiffs. Following the dismissal of Dole Food Company on the basis of the exclusive remedy of worker's compensation benefits, plaintiffs appealed the dismissal. The court of appeals subsequently remanded the matter to the lower court in February 2014, effectively permitting plaintiffs to amend their complaint to circumvent the workers' compensation bar. There has been no activity in the case since that time, and there is no estimated date of opinion. The Company does not believe that a loss is either probable or reasonably estimable and has not recorded a loss contingency for this matter.

Nicaraguan Matters

A review of court filings in Chinandega, Nicaragua, has found 85 suits alleging personal injury allegedly due to exposure to DBCP and involving approximately 3,592 plaintiffs have been filed against AMVAC and other parties. Of these cases, only two – Flavio Apolinar Castillo et al. v. AMVAC Chemical Corporation et al., No. 535/04 and Luis Cristobal Martinez Suazo et al. v. AMVAC Chemical Corporation et al., No. 679/04 Castillo and Suazo, (which were

filed in 2004 and involve 15 banana workers) have been served on AMVAC. All but one of the suits in Nicaragua have been filed pursuant to Special Law 364, an October 2000 Nicaraguan statute that contains substantive and procedural provisions that Nicaragua's Attorney General previously expressed as unconstitutional. Each of the Nicaraguan plaintiffs' claims \$1 million in compensatory damages and \$5 million in punitive damages. In all of these cases, AMVAC is a joint defendant with Dow Chemical Company and Dole Food Company, Inc. AMVAC contends that the Nicaragua courts do not have jurisdiction over it and that Public Law 364 violates international due process of law. AMVAC has objected to personal jurisdiction and demanded under Law 364 that the claims be litigated in the United States. In 2007, the court denied these objections, and AMVAC appealed the denial. It is not presently known as to how many of these plaintiffs actually claim exposure to DBCP at the time AMVAC's product was allegedly used nor is there any verification of the claimed injuries. Further, to date, plaintiffs have not had success in enforcing Nicaraguan judgments against domestic companies before U.S. courts. With respect to these Nicaraguan matters, AMVAC intends to defend any claim vigorously. Furthermore, the Company does not believe that a loss is either probable or reasonably estimable and has not recorded a loss contingency for these matters.

#### B. Other Matters

USEPA RCRA/FIFRA Matter On or about March 24, 2015, Region 4 of the USEPA issued to registrant's principal operating subsidiary, AMVAC, an Opportunity to Show Cause ("OSC") why USEPA should not take formal action under Section 3008(a) of the

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RCRA for potential noncompliance arising from AMVAC's importation, transportation and storage of used, depleted Lock 'N Load containers having residual amounts of its product Thimet. The scope of these discussions subsequently expanded to involve USEPA Region 5 and to include the importation of depleted Lock 'N Load containers from Australia in October 2015 and full Lock 'N Load containers from Canada in January 2016. On or about March 25, 2016, USEPA Region 5 issued a Stop Sale, Use or Removal Order ("SSURO") ordering AMVAC to cease the distribution or sale of US Thimet 20G, Canadian Thimet 15G and Australian Thimet 200G on the grounds that the importation of both depleted and full containers of Thimet and the subsequent use of their contents was allegedly inconsistent with FIFRA and RCRA. After hosting a plant inspection by Regions 4 and 5 and providing documentation to the agency, AMVAC requested and received relief from the SSURO in the form of nine amendments. As a consequence of this relief, the Company believes that it will have adequate inventory to meet customers' needs for the foreseeable future.

AMVAC believes that it has lawfully imported used Thimet containers from Canada and Australia for the purpose of potentially refilling, reprocessing or properly disposing of them. Further, the Company believes that it has carried out its Thimet business in good faith, maintained a focus on product stewardship and not posed any increased risk of harm to human health or the environment. Nevertheless, USEPA's Region 5 has expressed its intention to bring a civil enforcement action relating to its overall findings. On October 11, 2016, the Company met with USEPA's Office of Enforcement and Compliance (as well as with Regions 4 and 5) to clarify a path forward to ensure future compliance. However, on November 10, 2016, the Company was served with a grand jury subpoena out of the U.S. District Court for the Southern District of Alabama in which both the Environmental Crimes Section ("ECS") of USEPA and the U.S. Department of Justice ("DoJ") are seeking the production of documents relating to the re-importation of depleted Thimet containers. The Company has retained defense counsel and is cooperating with both ECS and DoJ in the production. At this stage, the company has not yet received a final position from USEPA with regard to civil enforcement, nor have ECS and DoJ made clear their intentions with regard to any potential criminal enforcement. Thus, it is too early to tell whether a loss on either front is probable or reasonably estimable. Accordingly, the Company has not recorded a loss contingency on these matters.

Galvan v. AMVAC In an action entitled Graciela Galvan v. AMVAC Chemical Corp. filed on April 7, 2014 with the Superior Court for the State of California for the County of Orange (No. 00716103CXC) plaintiff, a former employee, alleges violations of wages and hours requirements under the California Labor Code. The Company completed the deposition of putative class representative and participated in mediation on the matter. In February 2016, the court granted plaintiff's motion for class certification with respect to only one of the seven original claims (namely, that allegedly discretionary bonus payments made to class members during the subject period should have been taken into account when calculating overtime). The Company believes that such bonus payments were discretionary and, as such, were properly excluded from overtime calculations. Nevertheless, in the interest of saving defense costs and mitigating downside risk, the Company engaged in settlement discussions with plaintiff's counsel over the course of several months. The proposed settlement is not material to the Company's consolidated financial statements. The terms of the settlement are subject to approval by the presiding judge in the action. If approved by the judge, the matter should be dismissed with prejudice within six to nine months.

DeChene Farms The Company received a claim by a Minnesota-based grower to the effect that the in-furrow use of the Company's insecticide, Mocap<sup>®</sup>, resulted in delayed germination and resulting diminished size of approximately 300 acres of red Norland potatoes. Based upon its then-current understanding of the claim, during third quarter of

2016, the Company recorded a loss contingency for the matter in an amount that was not material to its consolidated financial statements. Subsequently, the Company retained two independent investigators and conducted its own investigation of the matter as to causation. Further, we received information regarding market conditions and crop valuation from the grower, who alleged that he had received a lower price per pound for his crop. The Company held negotiations with grower and, in December 2016, the parties agreed to settle the matter. The settlement amount was not material to the Company's consolidated financial statements.

Harold Reed v. AMVAC et al During January 2017, the Company was served with two Statements of Claim that had been filed on March 29, 2016 with the Court of Queen's Bench of Alberta, Canada (as case numbers 160600211 and 160600237) in which plaintiffs Harold Reed ("Reed,"), an applicator, and 819596 Alberta Ltd. dba Jem Holdings ("Jem"), an application equipment rental company, allege physical injury and damage to equipment, respectively, arising from a fire that occurred during an application of the Company's potato sprout inhibitor, SmartBlock, at a potato storage facility in Coaldale, Alberta, on April 2, 2014. Plaintiffs allege, among other things, that Amvac was negligent and failed to warn them of the risks of such application. Reed seeks damages of \$250K for pain and suffering, while Jem seeks \$60K in lost equipment; both plaintiffs also seek unspecified damages as well. Also during January 2017, counsel for Reed requested that counsel for the Company accept service of four related actions relating to the same incident and pending with the same court: (i) Van Giessen Growers, Inc. v Harold Reed et al (No. 160303906)(in which grower seeks \$400K for loss of potatoes); (ii) James Houweling et al. v. Harold Reed et al. (No. 160104421)(in which equipment owner seeks damages for lost equipment); (iii) Chin Coulee Farms, etc. v. Harold Reed et al. (No. 150600545)(in which owner of potatoes and truck seeks \$530K for loss thereof); and (iv) Houweling Farms v. Harold Reed et al. (No. 15060881)(in which owner of several

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Quonset huts seeks damages for lost improvements, equipment and business income equal to \$4.3 million). The Company was not named in the original complaints in these four actions but has since been added in cross-claims by defendant Reed. In his cross claims, Reed also alleges that other cross-defendants were negligent for using highly flammable insulation and failing to maintain sparking electrical fixtures in the storage units affected by the fire. The Company believes that plaintiffs' and cross-plaintiffs' claims against it are without merit and intends to defend these matters vigorously. At this stage in the proceedings, however, it is too early to determine whether a loss is probable or reasonably estimable; accordingly, the Company has not recorded a loss contingency.

ITEM 4 MINE SAFETY DISCLOSURES

Not Applicable

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## PART II

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

## Market Information

Effective March 6, 2006, the Company listed its \$0.10 par value common stock ("Common Stock") on the New York Stock Exchange under the ticker symbol AVD. From January 1998 through March 5, 2006, the Common Stock was listed on the American Stock Exchange under the ticker symbol AVD. The Company's Common Stock traded on The NASDAQ Stock Market under the symbol AMGD from March 1987 through January 1998.

The following table sets forth the range of high and low sales prices as reported for the Company's Common Stock for the calendar quarters indicated.

	High	Low
Calendar 2016		
First quarter	\$17.07	\$9.63
Second quarter	17.41	12.60
Third quarter	17.92	14.45
Fourth quarter	20.00	14.20
Calendar 2015		
First quarter	\$12.53	\$9.73
Second quarter	15.25	10.48
Third quarter	14.10	10.84
Fourth quarter	16.06	11.50

## Holders

As of February 17, 2017, the number of stockholders of the Company's Common Stock was approximately 4,650, which includes beneficial owners with shares held in brokerage accounts under street name and nominees.

## Dividends

The Company has issued a cash dividend in each of the last nineteen years dating back to 1996. Cash dividends issued during the past three years are summarized in the table below.

Declaration Date	Distribution Date	Record Date	Dividend	Total
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			Per Share	Paid
December 8, 2016	January 6, 2017	December 23, 2016	\$ 0.01	\$289
June 13, 2016	July 12, 2016	June 30, 2016	0.01	289
October 11, 2016	November 11, 2016	October 28, 2016	0.01	289
Total 2016			\$ 0.03	\$867
March 16, 2015	April 17, 2015	April 3, 2015	0.02	572
Total 2015			\$ 0.02	\$572
December 11, 2014	January 9, 2015	December 26, 2014	0.02	569
September 19, 2014	October 22, 2014	October 8, 2014	0.05	1,417
June 9, 2014	July 17, 2014	July 3, 2014	0.05	1,420
March 10, 2014	April 18, 2014	April 4, 2014	0.05	1,417
Total 2014			\$ 0.17	\$4,823

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Purchases of Equity Securities by the Issuer

None

Securities Authorized for Issuance Under Equity Compensation Plans

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants, and rights	Weighted-average exercise price of outstanding options, warrants, rights	Number of securities
			remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	624,239	\$ 9.61	827,000
Total	624,239	\$ 9.61	827,000



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Stock Performance Graph

The following graph presents a comparison of the cumulative, five-year total return for the Company, the S&P 500 Stock Index, and a peer group (Specialty Chemical Industry). The graph assumes that the beginning values of the investments in the Company, the S&P 500 Stock Index, and the peer group of companies each was \$100 on December 31, 2010. All calculations assume reinvestment of dividends. Returns over the indicated period should not be considered indicative of future returns.

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## ITEM 6 SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below with respect to each of the calendar years in the five-year period ended December 31, 2016, have been derived from the Company's consolidated financial statements and are qualified in their entirety by reference to the more detailed consolidated financial statements and the independent registered public accounting firm's reports thereon, which are included elsewhere in this Report on Form 10-K for each of the three years in the period ended December 31, 2016. See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	2016	2015	2014	2013	2012
Net sales	\$312,113	\$289,382	\$298,634	\$381,021	\$366,190
Gross profit	\$128,288	\$111,902	\$114,496	\$171,347	\$161,125
Operating income	\$20,540	\$11,524	\$6,710	\$55,735	\$59,323
Income before income tax expense and loss on equity investment	\$18,917	\$8,962	\$3,644	\$53,834	\$56,852
Net income attributable to American Vanguard	\$12,788	\$6,591	\$4,841	\$34,449	\$36,867
Earnings per common share	\$0.44	\$0.23	\$0.17	\$1.22	\$1.32
Earnings per common share—assuming dilution	\$0.44	\$0.23	\$0.17	\$1.19	\$1.28
Total assets (1)	\$429,956	\$435,270	\$463,590	\$439,917	\$394,686
Working capital (1)	\$130,001	\$139,850	\$197,073	\$132,486	\$103,770
Long-term debt less current installments	\$40,951	\$68,321	\$98,605	\$50,671	\$35,869
Stockholders' equity	\$282,357	\$268,326	\$261,003	\$257,795	\$225,436
Weighted average shares outstanding—basic	28,859	28,673	28,436	28,301	27,914
Weighted average shares outstanding—assuming dilution	29,394	29,237	28,912	28,899	28,756
Dividends per share of common stock	\$0.03	\$0.02	\$0.17	\$0.22	\$0.22

(1)The Company's consolidated balance sheet as of December 31, 2015, 2014, 2013, and 2012 reflected certain reclassifications for deferred income taxes and income taxes payables.

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ITEM 7 MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS  
FORWARD-LOOKING STATEMENTS/RISK FACTORS:

The Company, from time-to-time, may discuss forward-looking statements including assumptions concerning the Company's operations, future results and prospects. Generally, "may," "could," "will," "would," "expect," "believe," "estimate," "anticipate," "intend," "continue" and similar words identify forward-looking statements. Forward-looking statements appearing in this Report are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on our current expectations and are subject to risks and uncertainties that can cause actual results and events to differ materially from those set forth in or implied by the forward-looking statements and related assumptions contained in the entire Report. Such factors include, but are not limited to: product demand and market acceptance risks; the effect of economic conditions; weather conditions; changes in regulatory policy; the impact of competitive products and pricing; changes in foreign exchange rates; product development and commercialization difficulties; capacity and supply constraints or difficulties; availability of capital resources; general business regulations, including taxes and other risks as detailed from time-to-time in the Company's reports and filings filed with the U.S. SEC. It is not possible to foresee or identify all such factors. We urge you to consider these factors carefully in evaluating the forward-looking statements contained in this Report.

MANAGEMENT OVERVIEW

Financial performance for the year ended December 31, 2016 included sales of \$312,113 which were up approximately 8%, as compared to sales of \$289,382 for 2015. Our gross profit performance ended at \$128,288 or 41% of sales, as compared to \$111,902 or 39% of sales last year. Operating costs for the year remained constant at 35% of sales in 2016 and 2015, notwithstanding this constant rate, costs did increase as we made higher accrual on incentive compensation reflecting the improved financial performance, continued to develop our international footprint and to invest in future business and product development. Overall net income was up at \$0.44 per share as compared to \$0.23 per share last year.

When considering the balance sheet, debt reduced by \$3,537 in the three months and by \$27,370 for the year ended December 31, 2016. Inventory ended at \$120,576, which is in line with our sales and inventory planning for 2016. In comparison, inventory at this time last year was \$136,477.

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## Results of Operations

2016 Compared with 2015:

	2016	2015	\$ Change	% Change	
Net sales:					
Insecticides	\$119,226	\$117,180	\$2,046	2	%
Herbicides/soil fumigants/fungicides	123,540	111,897	11,643	10	%
Other, including plant growth regulators	29,438	29,013	425	1	%
Total crop	272,204	258,090	14,114	5	%
Non-crop	39,909	31,292	8,617	28	%
Total net sales	\$312,113	\$289,382	\$22,731	8	%
Cost of sales:					
Insecticides	\$78,945	\$77,288	\$1,657	2	%
Herbicides/soil fumigants/fungicides	66,299	65,507	792	1	%
Other, including plant growth regulators	19,139	18,097	1,042	6	%
Total crop	164,383	160,892	3,491	2	%
Non-crop	19,442	16,588	2,854	17	%
Total cost of sales	\$183,825	\$177,480	\$6,345	4	%
Gross profit:					
Insecticides	\$40,281	\$39,892	\$389	1	%
Herbicides/soil fumigants/fungicides	57,241	46,390	10,851	23	%
Other, including plant growth regulators	10,299	10,916	(617 )	-6	%
Gross profit crop	107,821	97,198	10,623	11	%
Gross profit non-crop	20,467	14,704	5,763	39	%
Total gross profit	\$128,288	\$111,902	\$16,386	15	%
Gross margin crop	40	% 38	%		
Gross margin non-crop	51	% 47	%		
Total gross margin	41	% 39	%		
Net sales:					
U.S	\$228,854	\$212,087	\$16,767	8	%
International	83,259	77,295	5,964	8	%
Total net sales	\$312,113	\$289,382	\$22,731	8	%

The Company's financial performance in 2016 was generally improved when compared to that of 2015; net sales were up 8%. Gross margin increased to 41% in 2016, as a result of manufacturing cost control, improved factory utilization, a good performance on purchasing key raw materials and favorable product mix changes. Operating expenses remained flat compared to net sales, despite higher spending for development projects including SIMPAS and increased performance driven accruals for incentive compensation. Net income improved by approximately 94%. As

sales improved and channel inventory declined, our own inventory reduced in line with our sales and operating plan for 2016 and overall working capital reduced. With increased sales, the business generated cash from operations and used those funds to reduce debt, add capacity and capability to our manufacturing activity and make strategic investments.

Net sales ended 2016 at \$312,113, as compared to \$289,382 in the prior year. Included in that performance both our domestic business and our international business grew at approximately the same rate.

Domestic sales finished the year at \$228,854, as compared to \$212,087 in 2015, an increase of 8%. Sales were positively impacted by strong growth in the Midwest corn market where procurement in the distribution channel appears to have normalized and restocking demand had a positive impact on our corn sales, which increased 10% in 2016, as compared to 2015, and ended at 19% of our total sales in 2016, as compared to 18% in 2015. The main driver for year on year growth were sales of our corn herbicide, Impact<sup>®</sup>, which increased strongly as wet spring weather conditions increased weed proliferation. Furthermore, we also experienced encouraging market demand for our recently licensed herbicide product Scepter<sup>®</sup>. While we experienced slightly lower annual performance from our soil fumigant products, overall we benefited from increased international sales of our insecticides Mocap<sup>®</sup> and

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Nemacur® along with revenue increases in our Growth Regulators, our Pharmaceutical products and our Envance pest control products.

International sales ended at \$83,259, as compared to \$77,295 in 2015, driven by increased sales associated with the key acquisition made in 2015 including European registrations for our nematicide, Nemacur®, and growth of our newly acquired herbicides Hyvar®, Krovar® bromacil, and, regionally; stronger sales in Europe, Mexico, Canada, Central & South America counterbalanced somewhat by lower sales in Asia and Africa. Growth in Europe and Asia was driven by the 2015 acquisitions of Nemacur® and bromacil respectively. Growth in Canada arose primarily from sales of Thimet following the issuance of a new end use registration in 2016, following expiration of an older end use registration in 2015. These increases were offset somewhat by drought conditions in Africa and Australia.

The relative sales performance of our crop and non-crop businesses are as follow: Net sales of our crop business in 2016 were \$272,204, which constitutes an increase of 5.5% as compared to net sales of \$258,090 for that business in 2015. Net sales of our non-crop products in 2016 were \$39,909, which is an increase of approximately 28% as compared to \$31,292 in 2015. A more detailed discussion of product groups and products having a material effect on net sales for each of the crop and non-crop businesses appears below.

In our Crop business, net sales of insecticides in 2016 ended at \$119,226, which was a 2% increase as compared to sales of \$117,180 in 2015. For the same period, annual net sales of our granular soil insecticides were up 1% above 2015. We had increased year-over-year performance from our Nemacur® and Mocap® products sold primarily in international markets along with increased domestic sales of Thimet® used in peanuts, sugar cane and potatoes. While our overall cotton business grew modestly in 2016, net sales of our cotton foliar insecticide Bidrin® were down slightly due to considerably lighter than normal pest pressure. In general, our overall insecticide business showed a solid performance in 2016.

Within the product group of herbicides/soil fumigants/fungicides, our crop net sales in 2016 were up 10% to \$123,540 as compared to \$111,897 in 2015. Our fumigant product line continued to perform well despite a slight year-over-year decline in revenue caused by wet weather along the West Coast which inhibited some on-ground application of this liquid product. Midwest restocking demand along with wet spring weather conditions which increased weed proliferation resulted in significantly increased sales for our post-emergent corn herbicide Impact. Additionally, our newly acquired bromacil products Hyvar® and Krovar® contributed strongly to an overall increase in our herbicide category. Within this group, fungicides were essentially flat with the prior year.

Within our other products group (which includes plant growth regulators, molluscicides and third party manufacturing activity), we experienced an increase of approximately 1.5% in net sales, ending at \$29,438 in 2016, as compared to \$29,013 in 2015. The major drivers of this performance were stronger year-over-year sales of our cotton defoliant Folex®, increased sales of our Citrus Fix® and SmartBlock® products, flat performance of our specialty fruit product NAA® and slightly lower sales of our molluscicide Metaldehyde.

Within our non-crop business, 2016 net sales increased by 28% to \$39,909 as compared to \$31,292 recorded in 2015. Naled sales (our Dibrom® brand mosquito adulticide) rose 2% in 2016, in light of rainy conditions in the southern states, and we posted significant increases in our Pharmaceutical, our Pest Strip® products and our Envance® pest control spray technology.

Our cost of sales for 2016 was \$183,825 or 59% of net sales. This compared to \$177,480 or 61% of net sales for 2015. The decrease in cost of sales as a percentage of net sales in 2016 was primarily as a result of manufacturing cost controls and, at the same time, increased factory utilization. These actions together resulted in a 0.6% reduction in cost of sales. Furthermore, raw material prices reduced overall by approximately 0.4%, driven by domestic cost reductions offset by a significant increase in one key raw material on an international product line driven by a Chinese manufacturer's pricing decision. Finally, the Company made more sales with higher margins in 2016 and this accounted for the balance of the 2% improvement in cost of sales.

Gross profit for 2016 improved by \$16,386 or 15% to end at \$128,288 for the year ended December 31, 2016, as compared to \$111,902 for the prior year. Gross margin percentage for 2016 improved by 2% and ended at 41%, as compared to 39% for 2015. The improvement was driven by improved factory cost recovery, strong performance on raw material purchasing and (as noted above in Cost of Sales) some sales mix improvements.

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Operating expenses in 2016 increased by \$7,370 to \$107,748 or 35% of sales as compared to \$100,378 or 35% in 2015. The differences in operating expenses by department are as follows:

	2016	2015	Change
Selling	\$27,442	\$27,052	\$ 390
General and administrative	32,128	28,516	3,612
Research, product development and regulatory	21,298	19,116	2,182
Freight, delivery and warehousing	26,880	25,694	1,186
	\$107,748	\$100,378	\$7,370

Selling expenses slightly increased by \$390 to end at \$27,442 for the year ended December 31, 2016, as compared to \$27,052 in 2015. The main drivers for the increased costs are expanded activities in our advertising and marketing efforts and an increase in costs associated with both international and domestic field sales operations.

General and administrative expenses increased by \$3,612 to \$32,128 for the year ended December 31, 2016, as compared to \$28,516 in 2015. The main drivers for the increase are accruals for incentive compensation following significantly improved financial performance and increased legal expenses, particularly related to the dispute with USEPA on the re-importation of depleted Thimet containers.

Research, product development and regulatory expenses increased by \$2,182 to \$21,298 for the year ended December 31, 2016, as compared to \$19,116 in 2015. This was driven by increased costs incurred on our SIMPAS product development activities and by timing of product defense studies offset somewhat by benefits from the consolidation and subsequent cost sharing of two industry wide task force groups.

Freight, delivery and warehousing costs for the year ended December 31, 2016 increased by \$1,186 to \$26,880, as compared to \$25,694 in 2015. When expressed as a percentage of sales, freight costs reduced slightly year over year to 8.6% in 2016, as compared to 8.9% in 2015.

Net interest expense was \$1,623 in 2016, as compared to \$2,562 in 2015. Interest costs are summarized in the following table:

	2016			2015		
	Average Debt	Interest Expense	Interest Rate	Average Debt	Interest Expense	Interest Rate
Average Indebtedness and Interest expense	Debt	Expense	Rate	Debt	Expense	Rate
Working capital revolver	\$59,897	\$ 1,382	2.3 %	\$94,765	\$ 2,027	2.1 %
Notes payable	20	1	5.0 %	6,809	266	3.9 %
Interest income	—	(7 )	—	—	—	—
Amortization of deferred loan fees	—	250	—	—	291	—
Amortization of other deferred liabilities	—	37	—	—	135	—
Other interest expense	—	44	—	—	53	—
Subtotal	\$59,917	\$ 1,707	2.8 %	\$101,574	\$ 2,772	2.7 %



Capitalized interest	—	(84 )	—	—	(210 )	—
Total	\$59,917	\$ 1,623	2.7 %	\$101,574	\$ 2,562	2.5 %

The Company's average overall debt for the year ended December 31, 2016 was \$59,917 as compared to \$101,574 for the comparable period of the previous year. As can be seen from the above table, on a gross basis, our effective interest rate increased on our working capital revolver to 2.3%, as compared to 2.1% in 2015. This increase was driven by changes in Libor rate. The Company continues to operate without a fixed rate swap in place. After adjustments related to capitalized interest and including expenses related to the amortization of deferred liabilities, the overall effective rate was 2.7% for 2016 as compared to 2.5% in 2015.

Income tax expense for 2016 was \$5,540, as compared to \$2,009 for 2015. The effective tax rate for 2016 was 29.3%, as compared to 22.4% in 2015. The increase in the effective tax rate was primarily driven by improved earnings in jurisdictions with higher income tax rates. While foreign income has declined in 2016, as compared to 2015, primarily as a result of product market mix and continued price pressure on generic sourced materials, domestic income increased dramatically, as compared to prior year.

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The Company currently is undergoing an examination by the IRS for the tax years ended December 31, 2013 and 2014. While the audit is not yet complete, the Company has agreed to a proposed adjustment. As a result, the Company has increased deferred tax assets and income taxes payable at December 31, 2015 by \$12,598.

For the year ended December 31, 2016, the Company recorded losses on its equity investment of \$353. For the same period of 2015, the Company recorded losses on its equity investment of \$629 and a loss on dilution in the amount of \$7, for a total loss of \$636 on its equity method investment. In 2016, our net income was reduced by \$236, representing the share of net income of our majority owned subsidiary that was allocated to the non-controlling interest. In 2015, a net loss of \$274 was allocated to the non-controlling interest share.

Net income attributable to American Vanguard ended at \$12,788 or 0.44 per diluted share in 2016 as compared to \$6,591 or \$0.23 per diluted share in 2015.

#### Liquidity and Capital Resources

The Company generated \$46,406 of cash from operating activities provided during the year ended December 31, 2016, as compared to \$78,568 in the prior year.

Net income of \$13,024, plus non-cash depreciation, amortization of intangibles, other assets and discounted future liabilities generated a total of \$34,570. Stock based compensation of 3,071, loss from equity method investment of \$353 and change in value of deferred income taxes of \$151, provided a net cash inflow of \$37,843, as compared to \$32,727 for the same period of 2015.

As of December 31, 2016, our working capital has reduced to \$130,001, as compared to \$139,850 as of December 31, 2015. This change included a reduction in inventory offset by an increase in receivables, an increased cash position and higher accounts payable levels reflecting both increased factory activity and some capital spending close to the end of the year.

At December 31, 2016, our receivables (net of allowances) were \$87,206 as compared to \$75,389 at the end of the prior year. This is primarily a result of increased sales in the final quarter of the year and the market mix of sales in the last 4 months of the year.

Deferred revenue as of December 31, 2015 was \$3,848, as compared to \$8,888 at December 31, 2015. Such deferred revenues are primarily driven by customer decisions to take up opportunities to make early payments in return for some early cash incentive programs.

Inventories ended the year at \$120,576, as compared to \$136,477 at December 31, 2015. The decrease in inventory level is mainly driven by our corn products and was achieved as a result of constant attention to working through a disciplined sales and operation plan for all our products, balancing manufacturing cost recovery, plant capacity and customer needs. During the year we closely monitored channel inventory as our products worked through the distribution channel to the growers. By the end of 2016, we determined that channel inventories of our key products were at or near historically normal levels. In addition, it should be noted that the Company purchases and holds raw material, intermediate or finished goods inventory from time to time based on a single annual purchase from a single

source or supplier, potentially resulting in peaks in the carrying value of inventory. Furthermore, in order to achieve efficient manufacturing runs, the Company may manufacture a particular product only one time a year and then carry high levels of that inventory for a period of time.

Timing of payments made on prepaid expenses and other assets caused an increase of \$3,872 during the year. As we increased manufacturing activity and capital spending in the final quarter of the year, accounts payable balances increased by \$9,015, as compared to this time last year. Furthermore, the Company increased its income tax payable by \$1,186 due to improved current year performance.

Our program accruals have decreased by \$1,441 to end at \$42,930 at December 31, 2016, as compared to \$44,371 at December 31, 2015, reflecting primarily the mix of business that has driven the financial performance for 2016. The Company accrues programs in line with the growing season upon which specific products are targeted. Typically crop products have a growing season that ends on September 30<sup>th</sup> of each year. During the 2016 year, the Company made accruals for programs in the amount of \$70,448 and made payments in the amount of \$71,889. During the prior year, the Company made accruals in the amount of \$61,514 and made payments in the amount of \$69,689.

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The Company used \$14,137 in investing activities in the year ended December 31, 2016 as compared to \$43,691 in 2015. The Company spent \$10,630 on fixed assets primarily focused on continuing to invest in manufacturing infrastructure (including putting in place a dedicated manufacturing cell at one of our international toll manufacturing site), \$224 on final payments on product line acquisitions completed in 2016 and \$3,283 on investments.

Our financing activities used a net cash of \$28,545 in 2016, as compared to \$32,864 in 2015. The main usage of funds was the pay down on the Company's senior secured credit facility in the amount of \$27,600. The Company further paid \$578 in dividends, payment of other notes payable and of long-term liabilities primarily associated with liabilities under deferred purchase agreements on product acquisitions in the amount of \$704 and received \$337 from the sales of common stock under its ESPP plan (including associated tax benefits). In 2015, the Company paid down debt in the amount of \$30,520, paid dividends of \$1,141, made payments associated with deferred purchase agreements in the amount of \$1,543 and received \$340 from sales of common stock under its ESPP plan.

The Company has various loans in place that together constitute the short-term and long-term loan balances shown in the consolidated balance sheets as at December 31, 2016 and December 31, 2015. These are summarized in the following table:

Indebtedness \$000's	At December 31, 2016			At December 31, 2015		
	Long-term	Short-term	Total	Long-term	Short-term	Total
Revolving line of credit	\$41,400	\$ —	\$41,400	\$69,000	\$ —	\$69,000
Deferred loan fees	(449 )	—	(449 )	(679 )	—	(679 )
Notes payable	—	—	—	—	55	55
Total indebtedness	\$40,951	\$ —	\$40,951	\$68,321	\$ 55	\$68,376

On June 17, 2013, AMVAC, the Company's principal operating subsidiary, as borrower, and affiliates (including the Company), as guarantors and/or borrowers, entered into a Second Amended and Restated Credit Agreement (the "New Credit Agreement") with a group of commercial lenders led by Bank of the West (AMVAC's primary bank) as agent, swing line lender and L/C issuer. The new facility also includes both AMVAC CV and AMVAC BV (both Dutch subsidiaries) as borrowers. The New Credit Agreement supersedes the Amended and Restated Credit Agreement ("First Amendment") dated as of January 10, 2011. The New Credit Agreement is a senior secured lending facility with a five year term and consists of a revolving line of credit up to \$200 million and an accordion feature for up to \$100 million. In connection with AMVAC's entering into the New Credit Agreement, all outstanding indebtedness under the First Amendment was rolled over into the New Credit Agreement, including the conversion of term loans into revolving debt.

On July 18, 2014, AMVAC, as borrower, and affiliates (including the Company), as guarantors and/or borrowers, entered into a First Amendment to Second Amended and Restated Credit Agreement (the "First Amendment") with a group of commercial lenders led by Bank of the West (AMVAC's primary bank) as agent, swing line lender and L/C issuer. Under the First Amendment, the Consolidated Funded Debt Ratio was increased for the third and fourth quarters of 2014 and the first quarter of 2015, and, further, borrowers were permitted to pay cash dividends to

stockholders during the first and second quarters of 2015 notwithstanding rolling twelve-month net income levels. Under the New Credit Agreement, the Company has three key covenants (with which it was in compliance throughout the year). The covenants are as follows: (1) the Company must maintain its borrowings below a certain consolidated funded debt ratio (taking into account the Company's twelve month trailing EBITDA), (2) the Company has a limitation on its annual spending on the acquisition of fixed asset capital additions, and (3) the Company must maintain a certain consolidated fixed charge coverage ratio.

As of April 14, 2015, AMVAC, registrant's principal operating subsidiary, as borrower, and affiliates (including registrant), as guarantors and/or borrowers, entered into a Second Amendment to the Second Amended and Restated Credit Agreement (the "Second Amendment") with a group of commercial lenders led by Bank of the West (AMVAC's primary bank) as agent, swing line lender and L/C issuer. Under the Second Amendment, the Consolidated Funded Debt Ratio was increased for the second, third and fourth quarters of 2015 (to 3.5-to-1 from 3.25-to-1) and a fixed charge covenant, requiring, in effect, that the ratio of consolidated current assets to consolidated current liabilities exceed 1.2-to-1 for the duration of the term of the credit facility, was added. The Company is in compliance with all key covenants within the New Credit Agreement as amended at December 31, 2016.

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## Contractual Obligations and Off-Balance Sheet Arrangements

We believe that the combination of our cash flows from operations, current cash on hand and the availability under the Company's credit facility will be sufficient to meet our working capital and capital expenditure requirements and will provide us with adequate liquidity to meet our anticipated operating needs for at least the next 12 months. Although operating activities are expected to provide cash, to the extent of growth in the future, our operating and investing activities will use cash and, consequently, this growth may require us to access some or all of the availability under the credit facility. It is also possible that additional sources of finance may be necessary to support additional growth.

The following summarizes our contractual obligations at December 31, 2016, and the effects such obligations are expected to have on cash flows in future periods:

	Payments Due by Period				
	Total	Less than 1 Year	1—3 Years	4—5 Years	After 5 Years
Long-term debt	\$41,400	\$—	\$41,400	\$—	\$—
Estimated interest liability(1)	1,428	952	476	—	—
Licensing obligations	767	200	240	222	105
Deferred earn outs on product acquisitions	26	26	—	—	—
Employment agreements	2,448	1,333	1,115	—	—
Operating leases—rental properties	4,876	885	1,787	1,429	775
Operating leases—vehicles	1,152	565	545	42	—
	\$52,097	\$3,961	\$45,563	\$1,693	\$880

(1) Estimated interest liability has been calculated using the current effective rate for each category of debt over the remaining term of the debt and taking into account scheduled repayments. The revolving line has been assumed to be constant (i.e. \$41,400) throughout the remaining term. All of our debt is linked to LIBOR rates. There were no other off-balance sheet arrangements as of December 31, 2016.

Under the terms of the credit facility, all debt outstanding is due when the agreement expires on June 17, 2018.

In addition to the above contractual obligations, \$1,893 of unrecognized tax benefits and \$408 of accrued penalties and interest have been recorded as long term liabilities as of December 31, 2016. We are uncertain as to if or when such amounts may be settled or any tax benefits may be realized.

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## Results of Operations

2015 Compared with 2014:

	2015	2014	\$ Change	% Change	
Net sales:					
Insecticides	\$117,180	\$135,705	\$(18,525)	-14	%
Herbicides/soil fumigants/fungicides	111,897	101,785	10,112	10	%
Other, including plant growth regulators	29,013	30,220	(1,207)	-4	%
Total crop	258,090	267,710	(9,620)	-4	%
Non-crop	31,292	30,924	368	1	%
Total net sales	\$289,382	\$298,634	\$(9,252)	-3	%
Cost of sales:					
Insecticides	\$77,288	\$85,124	\$(7,836)	-9	%
Herbicides/soil fumigants/fungicides	65,507	59,855	5,652	9	%
Other, including plant growth regulators	18,097	21,098	(3,001)	-14	%
Total crop	160,892	166,077	(5,185)	-3	%
Non-crop	16,588	18,061	(1,473)	-8	%
Total cost of sales	\$177,480	\$184,138	\$(6,658)	-4	%
Gross profit:					
Insecticides	\$39,892	\$50,581	\$(10,689)	-21	%
Herbicides/soil fumigants/fungicides	46,390	41,930	4,460	11	%
Other, including plant growth regulators	10,916	9,122	1,794	20	%
Gross profit crop	97,198	101,633	(4,435)	-4	%
Gross profit non-crop	14,704	12,863	1,841	14	%
Total gross profit	\$111,902	\$114,496	\$(2,594)	-2	%
Gross margin crop	38	% 38	%		
Gross margin non-crop	46	% 42	%		
Total gross margin	39	% 38	%		
Net sales:					
U.S	\$212,087	\$224,928	\$(12,841)	-6	%
International	77,295	73,706	3,589	5	%
Total net sales	\$289,382	\$298,634	\$(9,252)	-3	%

Net sales in 2015 declined by approximately 3%, as compared to the prior year. This is largely attributable to lower sales of our cotton insecticide caused by fewer planted acres in several key selling geographies and lighter foliar pest pressure. We experienced another year of solid performance from our soil fumigant products, which are used in the potato and various vegetable/fruit markets. Sales also benefited from the introduction of several new High Concentration (HC) soil insecticides, and from increased international sales of our insecticides Mocap<sup>®</sup> and

Nemacur® along with first year sales of our recently acquired bromacil herbicide products.

Our international business continued to perform well during the twelve months ended December 31, 2015 with net sales of \$77,295 which was a 5% improvement over the prior year. Sales benefited from our April, 2015 acquisition of two product lines – European Nemacur® purchased from Adama and the Hyvar/Krovar (bromacil) products purchased from DuPont. In 2015, the Company recorded stronger sales in Mexico and the Asian market, somewhat lower sales in Europe and Canada, and relatively flat sales in other geographic regions.

In the Midwest corn market, distributors and retailers continued to work down inventories of many crop protection products and growers remained cautious regarding input purchases due to the low corn commodity price. During the year, we have seen excess inventories decline significantly and corn commodity price stabilize, both of which should provide a basis for more normal buying patterns to resume. Despite conservative procurement described above and continued reduced insect pressure as a result of two years of harsh winter weather, the Company's 2015 sales of insecticide and herbicide products for corn remained essentially flat with the prior year.



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The Company's total net sales for the year ended December 31, 2015 were down 3% to \$289,382, as compared to \$298,634 for the year ended December 31, 2014. Net sales of our crop business in 2015 were \$258,090, which constitutes a decrease of nearly 4% as compared to net sales of \$267,710 for that business in 2014. Net sales of our non-crop products in 2015 were \$31,292, which is an increase of approximately 1% as compared to \$30,924 in 2014. A more detailed discussion of product groups and products having a material effect on net sales for each of the crop and non-crop businesses appears below.

In our Crop business, net sales of insecticides in 2015 ended at \$117,180, which was a 14% decline as compared to \$135,705 in 2014. For the same period, annual net sales of our granular soil insecticides were down 4% below 2014, primarily driven by reduced equipment sales, while sales of our corn soil insecticides remained relatively flat. We had increased year-over-year performance from our Nemacur<sup>®</sup> and Mocap<sup>®</sup> products in international markets offset by a decline in domestic Thimet<sup>®</sup> sales due to seasonally delayed purchasing which are likely to shift to later in the 2015-2016 season. Among our non-granular insecticide products for crop applications, net sales of our cotton foliar insecticide Bidrin<sup>®</sup> were down due to fewer planted acres in several prime/high usage areas of the Southeast region and lighter pest pressure.

Within the product group of herbicides/soil fumigants/fungicides, our crop net sales in 2015 were up 10% to \$111,897 as compared to \$101,785 in 2014. Our fumigant product line continued to perform well. Midwest restocking demand for our post-emergent corn herbicide Impact resulted in increased sales and the addition of newly acquired bromacil products Hyvar<sup>®</sup> and Krovar<sup>®</sup> contributed to an overall increase in our herbicide category. Within this group, fungicides were essentially flat with the prior year.

Within our other products group (which includes plant growth regulators, molluscicides and third party manufacturing activity), we experienced a decrease of approximately 4% in net sales, ending at \$29,013 in 2015, as compared to \$30,220 in 2014. The major drivers of this performance were flat year-over-year sales of our cotton defoliant Folex<sup>®</sup>; a decline in our specialty fruit product NAA<sup>®</sup> and toll manufacturing; offset by an increase in sales of our potato sprout inhibitor SmartBlock<sup>®</sup> and our molluscicide Metaldehyde.

Within our non-crop business, 2015 net sales increased by 1% to \$31,292 as compared to \$30,924 recorded in 2014. Naled sales (our Dibrom<sup>®</sup> brand mosquito adulticide) rose 5% in 2015, and we saw slight increases in several of our products that have faced generic competition. Offsetting those gains, we posted either flat or lower year-over-year sales in our consumer bug/insect sprays, pest strips and pharmaceutical product lines.

Our cost of sales for 2015 was \$177,480 or 61% of net sales. This compared to \$184,138 or 62% of net sales for 2014. The decrease in cost of sales as a percentage of net sales in 2015 was driven primarily as a result of reduced factory costs, which reduced cost of sales by approximately 1.8%. This was partially offset by inflation in raw material prices, which on average amounted to an increase in cost of sales approximately  $\frac{3}{4}$  of one percent. Together these factors resulted in the reduction in cost of sales by 1%.

Gross profit for 2015 declined by \$2,594 to end at \$111,902 for the year ended December 31, 2015, as compared to \$114,496 for the prior year. Gross margin percentage for 2015 improved by 1% and ended at 39%, as compared to 38% for 2014. The improvement was driven by improved factory cost recovery.

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Operating expenses in 2015 decreased by \$7,408 to \$100,378 or 34% of sales as compared to \$107,786 or 36% in 2014. The differences in operating expenses by department are as follows:

	2015	2014	Change
Selling	\$27,052	\$31,593	\$(4,541)
General and administrative	28,516	27,057	1,459
Research, product development and regulatory	19,116	21,206	(2,090)
Freight, delivery and warehousing	25,694	27,930	(2,236)
	\$100,378	\$107,786	\$(7,408)

Selling expenses decreased by \$4,541 to end at \$27,052 for the year ended December 31, 2015, as compared to \$31,593 in 2014. The main drivers for the decrease are cost reduction actions in our advertising and marketing efforts and reductions in costs associated with both international and domestic field sales operations.

General and administrative expenses increased by \$1,459 to \$28,516 for the year ended December 31, 2015, as compared to \$27,057 in 2014. The main drivers for the increase are primarily due to increase in legal expense, amortization expense from the product line acquisitions completed during the early part of 2015 and incentive compensation costs.

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Research, product development and regulatory expenses decreased by \$2,090 to \$19,116 for the year ended December 31, 2015, as compared to \$21,206 in 2014. This was driven by timing of product defense studies and from the benefits of the consolidation of two industry wide task force groups.

Freight, delivery and warehousing costs for the year ended December 31, 2015 decreased by \$2,236 to \$25,694, as compared to \$27,930 in 2014. As a percentage of sales, freight costs reduced slightly year over year, at 8.9% in 2015, as compared to 9.3% in 2014.

Net interest expense was \$2,562 in 2015, as compared to \$3,066 in 2014. Interest costs are summarized in the following table:

	2015			2014		
	Average Debt	Interest Expense	Interest Rate	Average Debt	Interest Expense	Interest Rate
Average Indebtedness and Interest expense						
Working capital revolver	\$94,765	\$ 2,027	2.1 %	\$94,899	\$ 2,385	2.5 %
Notes payable	6,809	266	3.9 %	161	5	3.1 %
Amortization of deferred						
loan fees	—	291	—	—	328	—
Amortization of other deferred liabilities	—	135	—	—	322	—
Other interest expense	—	53	—	—	113	—
Subtotal	\$101,574	\$ 2,772	2.7 %	\$95,060	\$ 3,153	3.3 %
Capitalized interest	—	(210 )	—	—	(87 )	—
Total	\$101,574	\$ 2,562	2.5 %	\$95,060	\$ 3,066	3.2 %

The Company's average overall debt for the year ended December 31, 2015 was \$101,574 as compared to \$95,060 for the comparable period of the previous year. As can be seen from the above table, on a gross basis, the effective interest rate on our working capital revolver decreased to 2.1%, as compared to 2.5% in 2014, due to lower interest rates on our new senior credit facility agreement and the absence of a fixed rate swap. After adjustments related to capitalized interest and including expenses related to the amortization of deferred liabilities, the overall effective rate was 2.5% for 2015 as compared to 3.2% in 2014. Reduction in deferred liabilities related to product line acquisitions contributed to the reduction in our effective interest rate in 2015. The table below shows the amount of outstanding debt and the related notional amount on the interest rate swap contract at each of the balance sheet dates:

Outstanding	Notional	Percentage
Variable	Amount	of
Rate Debt	on	Notional
	Amount	Amount

		Interest	to Debt	
		Rate		
		Swap		
At December 31, 2013	\$ 51,550	\$36,750	71.3	%
At December 31, 2014	\$ 99,400	—	—	
At December 31, 2015	\$ 69,000	—	—	

Income tax expense for 2015 was \$2,009, as compared to a benefit of \$451 for 2014. The effective tax rate for 2015 was 22.4%, whereas for 2014 the benefit was 12.4%. The increase in the effective tax rate was driven by additional income generated in the U.S. as compared to the previous year. The ratio of domestic to foreign income has a material impact on the Company's overall effective tax rate.

For the year ended December 31, 2015, the Company recorded losses on its equity investment of \$629 and a loss on dilution of the Company's stockholding in the amount of \$7. This resulted in a total loss for 2015 of \$636. For the same period of 2014, the Company recorded losses on its equity investment of \$983 and offset the losses with gains on dilution in the amount of \$954. This resulted in a net loss for 2014 of \$29. In 2015 we adjusted our net income attributable to American Vanguard by \$274 for the non-controlling interest's share of the net losses of our majority-owned subsidiary, Envance, as compared to \$775 in 2014.

Net income attributable to American Vanguard ended at \$6,591 or \$0.23 per diluted share in 2015 as compared to \$4,841 or \$.17 per diluted share in 2014.

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Recently Issued Accounting Guidance

In November 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-18, Statement of Cashflows (Topic 230). The new 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 new standard is effective for fiscal years beginning after December 15, 2017. Based on the composition of the Company’s cash and cash equivalent, adoption of the new standard is not expected to have a material impact on our consolidated cash flows statements. We expect to adopt the standard for the financial year beginning January 1, 2018.

In October 2016 FASB issued ASU 2016-16, Income Taxes (Topic 740). Current Generally Accepted Accounting Principles in the United States of America (“GAAP”) prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. Under the new standard, an entity is to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The new standard does not include new disclosure requirements; however, existing disclosure requirements might be applicable when accounting for the current and deferred income taxes for an intra-entity transfer of an asset other than inventory. The new standard is effective for annual periods beginning after December 15, 2017, including interim reporting periods within those annual periods. The Company has considered its activities with regard to such intra-entity transfers, does not expect the adoption of ASU 2016-16 to have a material impact on our consolidated financial statements and will adopt the standard for the financial year beginning January 1, 2018.

In August 2016, FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230). The new standard addresses eight specific classification issues within the current practice regarding the manner in which certain cash receipts and cash payments are presented. The new standard is effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The Company has reviewed the eight specific issues addressed and does not believe that the adoption of ASU 2016-15 will have a material impact on its statement of cash flows. Further, the Company is currently considering the possible option for early adoption. At the latest the Company will adopt the revised standard for the financial year beginning January 1, 2018.

In March 2016, FASB issued ASU 2016-09, Compensation—Stock Compensation (Topic 718). The new standard changes the accounting for certain aspects of share-based payments to employees. The standard requires the recognition of the income tax effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid in capital (“APIC”) pools. The standard also allows for the employer to repurchase more of an employee’s shares for tax withholding purposes without triggering liability accounting. Cash paid by an employer when directly withholding shares for tax-withholding purposes should be classified as a financing activity in the statement of cash flows. In addition, the standard allows for a policy election to account for forfeitures as they occur rather than on an estimated basis. The new standard is effective for fiscal years beginning after December 15, 2016 with early adoption permitted. The Company assessed the impact of the adoption of this new standard and determined there was no material impact on the 2016 consolidated financial statements. The Company has considered the different options for treatment of forfeitures in accounting for stock compensation and has elected to continue to account for such adjustments on the estimated basis. The Company will evaluate the impact of all future vestings of

such compensation in accordance with ASU 2016-09 and will adopt the new standard effective January 1, 2017.

In March 2016, FASB issued ASU 2016-07, Investments—Equity Method and Joint Ventures. The new standard eliminates the requirement that an investor retrospectively apply equity method accounting when an investment that it had accounted for by another method initially qualifies for the equity method. The guidance requires that an equity method investor add the cost of acquiring the additional interest in the investee to the current basis of the investor's previously held interest and adopt the equity method of accounting as of the date the investment becomes qualified for equity method accounting. The Company has early adopted the standard in 2016. The Company has reviewed its various equity method investments as at December 31, 2016, and determined that no changes are necessary.

In February 2016, FASB issued ASU 2016-02, Leases. The new standard establishes a right-of-use (ROU) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the consolidated financial statements, with certain practical expedients available. We will evaluate our operating lease arrangements to determine the impact of this amendment on the financial statements. The evaluation will include an extensive review of our leases, which are primarily related to our manufacturing sites, regional sales

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offices, lease vehicles, and office equipment. The ultimate impact will depend on the Company's lease portfolio at the time the new standard is adopted. The Company expects to adopt ASU 2016-02 for the financial year beginning on January 1, 2019.

In January 2016, FASB issued ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities. The update provides that equity investments with readily determinable values be measured at fair value and changes in the fair value flow through net income. These changes historically have run through other comprehensive income. Equity investments without readily determinable fair values have the option to be measured at fair value or at cost adjusted for changes in observable prices minus impairment. Changes in either method are also recognized in net income. The standard requires a qualitative assessment of impairment indicators at each reporting period. For financial liabilities, entities that elect the fair value option must recognize the change in fair value attributable to instrument-specific credit risk in other comprehensive income rather than net income. Lastly, regarding deferred tax assets, the need for a valuation allowance on a deferred tax asset will need to be assessed related to available-for-sale debt securities. ASU 2016-01 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Earlier adoption is permitted. The Company expects to adopt ASU 2016-01 in its financial statements beginning in January 1, 2018 and does not expect adoption to have a material impact on the Company's consolidated financial statements.

In November 2015, FASB issued ASU 2015-17, Balance Sheet Classification of Deferred Taxes. The standard requires all deferred tax assets and liabilities, as well as any related valuation allowance, to be classified as a net non-current position on the balance sheet. ASU 2015-17 is effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years and earlier adoption is permitted. The Company elected to adopt ASU 2015-17 in connection with the preparation of the Form 10-K for the year ended December 31, 2016. Prior period information presented in the Company's consolidated financial statements was retrospectively adjusted, resulting in the reclassification of \$20,699 of deferred tax assets (see Note 3) from current assets to noncurrent assets within the Company's consolidated balance sheet at December 31, 2015.

In July 2015, FASB issued ASU 2015-11, Inventory (Topic 330). Topic 330 currently requires an entity to measure inventory at the lower of cost or market, where market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. This ASU limits the scope to inventory that is measured using first-in, first-out (FIFO) or average cost and requires inventory be measured at the lower of costs or net realizable value. The new standard is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. The Company expects to adopt ASU 2015-11 in its financial statements beginning in January 1, 2017 and does not expect adoption to have a material impact on the Company's consolidated financial statements.

In May 2014, FASB issued ASU 2014-09, Revenue from Contracts with Customers. ASU 2014-09 outlines a new, single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. This new revenue recognition model provides a five-step analysis in determining when and how revenue is recognized. The new model will require revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration a company expects to receive in exchange for those goods or services. In March 2016, FASB issued an amendment to the standard, ASU 2016-08, to clarify the implementation guidance on principal versus agent

considerations. Under the amendment, an entity is required to determine whether the nature of its promise is to provide the specified good or service itself (that is, the entity is a principal) or to arrange for that good or service to be provided by the other party (that is, the entity is an agent). In April 2016, FASB issued another amendment to the standard, ASU 2016-10, to clarify identifying performance obligations and the licensing implementation guidance, which retaining the related principles for those areas. The standard and the amendments are effective for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption (which includes additional footnote disclosures). This standard also requires enhanced disclosures regarding the nature, amount, timing, and uncertainty of revenue and cash flows. The adoption methods available ASU 2014-09 are being evaluated by the Company, and at this point, the adoption is not expected to have significant impact on the Company's consolidated financial statements. The Company expects to adopt the new revenue recognition standard for the financial year beginning January 1, 2018.

#### Foreign Exchange

Management does not believe that the fluctuation in the value of the dollar in relation to the currencies of its customers in the last two fiscal years has adversely affected the Company's ability to sell products at agreed upon prices denominated in U.S. dollars, where applicable. No assurance can be given, however, that adverse currency exchange rate fluctuations will not occur in the future.



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Should adverse currency exchange rate fluctuations occur in geographies where the Company sells/exports its products, management is not certain such fluctuations will or will not materially impact the Company's operating results.

Inflation

Management continues to believe inflation has not had a significant impact on the Company's operations during the past two years. The Company is working diligently with its critical raw material suppliers to control inflationary pressures, conducting contract negotiations with focus on two key market shifts: first, the low global price of oil and natural gas has arrested some suppliers' ability to implement price increases to the Company, and second, the Company monitors our international suppliers' for possible currency gains versus the U.S. dollar, and where appropriate uses this knowledge to forestall inflation in raw materials that are purchased in dollar terms. The Company recognizes there is long-term pressure on demand for raw materials in the developing world and is utilizing its expertise to minimize inflationary pressure.

CRITICAL ACCOUNTING POLICIES

Certain of the Company's policies require the application of judgment by management in selecting the appropriate assumptions for calculating financial estimates. These judgments are based on historical experience, terms of existing contracts, commonly accepted industry practices and other assumptions that the Company believes are reasonable under the circumstances. These estimates and assumptions are reviewed periodically and the effects of revisions are reflected in the consolidated financial statements in the period that revisions are determined to be necessary. Actual results may differ from these estimates under different outcomes or conditions.

The Company's critical accounting policies and estimates include:

Revenue Recognition and Allowance for Doubtful Accounts—Revenue from sales are recognized at the time title and the risks of ownership pass. This is when the customer has made the fixed commitment to purchase the goods, the products are shipped per the customer's instructions, the sales price is fixed and determinable, and collection is reasonably assured. The Company has in place procedures to ensure that revenue is recognized when earned. The procedures are subject to management's review and from time to time certain sales are excluded until it is clear that the title has passed and there is no further recourse to the Company. From time to time, the Company may offer a program to eligible customers, in good standing, that provides extended payment terms on a portion of the sales on selected products. The Company analyzes these extended payment programs in connection with its revenue recognition policy to ensure all revenue recognition criteria are satisfied at the time of sale. Allowance for doubtful accounts is established based on estimates of losses related to customer receivable balances. Estimates are developed using either standard quantitative measures based on historical losses, adjusted for current economic conditions or by evaluating specific customer accounts for risk of loss.

Accrued Program Costs—In accordance with FASB's Accounting Standards Codification ("ASC") 605, the Company classifies certain payments to its customers as a reduction of sales revenues. The Company describes these payments as "Programs". Programs are a critical part of doing business in the U.S. agricultural chemicals business market place. For accounting purposes, programs are recorded as a reduction in gross sales and include market pricing adjustments,

volume take up or other key performance indicator driven payments made to distributors, retailers or growers predominantly at the end of a growing season. Each quarter management compares each sale transaction with program guidelines to determine what program liability has been incurred. Once this initial calculation is made for the specific quarter, sales and marketing management along with executive and financial management review the accumulated program balance and make assessments of whether or not customers are tracking in a manner that indicates that they will meet the requirements set out in the terms and conditions attached to each program. If management believes that customers are falling short of or exceeding their previously anticipated annual goals, then periodic adjustments will be made to the accumulated accrual to properly reflect the Company's best estimate of the liability at the balance sheet date. The majority of adjustments are made at the end of the crop season, at which time customer performance can be fully assessed. Programs are paid out predominantly on an annual basis, usually in the final quarter of the financial year or the first quarter of the following year. The Company recorded program reserves of \$42,930 at December 31, 2016, as compared to \$44,371 at December 31, 2015.

**Inventories** — The Company values its inventories at lower of cost or market. Cost is determined by the first-in, first-out ("FIFO") method, including, as appropriate, material, labor, factory overhead and subcontracting services. The Company writes down and makes adjustments to its inventory net realizable value following assessments of slow moving and obsolete inventory and other annual adjustments to ensure that our standard costs continue to closely reflect manufacturing cost. The Company recorded an inventory reserve allowance of \$3,594 at December 31, 2016, as compared to \$4,020 at December 31, 2015.

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**Long-lived Assets**—Long-lived assets primarily consist of the costs of Smartbox and Lock and Load containers and intangible assets. The carrying value of long-lived assets is reviewed for impairment quarterly and/or whenever events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. The Company evaluates recoverability of an asset group by comparing the carrying value to the future undiscounted cash flows that it expects to generate from the asset group. If the comparison indicates that the carrying value of an asset group is not recoverable, measurement of the impairment loss is based on the fair value of the asset. There were no circumstances that would indicate any impairment of the carrying value of these long-lived assets and no material impairment losses were recorded in 2016 or 2015.

**Property, Plant and Equipment and Depreciation**— Property, plant and equipment includes the cost of land, buildings, machinery and equipment, office furniture and fixtures, automobiles, construction projects and significant improvements to existing plant and equipment. Interest costs related to significant construction projects are capitalized at the Company's current weighted average effective interest rate. Expenditures for minor repairs and maintenance are expensed as incurred. When property or equipment is sold or otherwise disposed of, the related cost and accumulated depreciation is removed from the respective accounts and the gain or loss realized on disposition is reflected in earnings. All plant and equipment is depreciated using the straight-line method, utilizing the estimated useful property lives. Building lives range from 10 to 30 years; machinery and equipment lives range from 3 to 15 years; office furniture and fixture lives range from 3 to 10 years; automobile lives range from 3 to 6 years; construction projects and significant improvements to existing plant and equipment lives range from 3 to 15 years when placed in service. During the years ended December 31, 2016, 2015 and 2014 the Company eliminated from assets and accumulated depreciation \$16,652, \$549, and \$5,358, respectively, of fully depreciated assets.

**Foreign Currency Translation**—Assets and liabilities of foreign subsidiaries, where the local currency is the functional currency, have been translated at period end exchange rates, and profit and loss accounts have been translated using weighted average annual exchange rates. Adjustments resulting from translation have been recorded in the equity section of the balance sheet as cumulative translation adjustments in other comprehensive income (loss). The effects of foreign currency exchange gains and losses on transactions that are denominated in currencies other than the Company's functional currency are remeasured to the functional currency using the end of the period exchange rates. The effects of remeasurement related to foreign currency transactions are included in the consolidated statements of operations.

**Goodwill and Other Intangible Assets**—The primary identifiable intangible assets of the Company relate to assets associated with its product acquisitions. The Company adopted the provisions of ASC 350, under which identifiable intangibles with finite lives are amortized and those with indefinite lives are not amortized. The estimated useful life of an identifiable intangible asset to the Company is based upon a number of factors including the effects of demand, competition, and expected changes in the marketability of the Company's products. The Company re-evaluates whether these intangible assets are impaired on both a quarterly and an annual basis and anytime when there is a specific indicator for impairment, relying on a number of factors including operating results, business plans and future cash flows. Identifiable intangible assets that are subject to amortization are evaluated for impairment using a process similar to that used to evaluate long-lived assets. The impairment test for identifiable intangible assets not subject to amortization consists of either a qualitative assessment or a comparison of the fair value of the intangible asset with its carrying amount. An impairment loss, if any, is recognized for the amount by which the carrying value exceeds the fair value of the asset. Fair value is typically estimated using a discounted cash flow analysis. When determining

future cash flow estimates, the Company considers historical results adjusted to reflect current and anticipated operating conditions. Estimating future cash flows requires significant judgment by the Company, in such areas as: future economic conditions, industry-specific conditions, product pricing and necessary capital expenditures. The use of different assumptions or estimates for future cash flows could produce different impairment amounts (or none at all) for long-lived assets, goodwill and identifiable intangible assets. The Company performed an impairment review for the year ended December 31, 2016 and 2015 and recorded immaterial impairment losses.

**Fair Value of Financial Instruments**—The carrying values of cash, receivables and accounts payable approximate their fair values because of the short maturity of these instruments. The fair value of the Company's long-term debt and note payable to our lender group is estimated based on the quoted market prices for the same or similar issues or on the current rates offered to the Company for debt of the same remaining maturities. Such fair value approximates the respective carrying values of the Company's long-term debt and note payable to bank.

**Income taxes**—Income tax expense, deferred tax assets and liabilities, and liabilities for unrecognized tax benefits reflect management's best estimate of current and future taxes to be paid. The Company is subject to income taxes in the United States and numerous foreign jurisdictions. The Company assessed the realizability of deferred tax assets and determined that based on the available evidence, including a history of taxable income and estimates of future taxable income, it is more likely than not that the deferred tax assets will be realized. Significant management judgment is required in determining the provision for income taxes and

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deferred tax assets and liabilities. In the event that actual results differ from these estimates, we will adjust these estimates in future periods, which may result in a change in the effective tax rate in a future period. Accounting for income taxes involves uncertainty and judgment on how to interpret and apply tax laws and regulations within the Company's annual tax filings. Such uncertainties from time to time may result in a tax position that may be challenged and overturned by a tax authority in the future which could result in additional tax liability, interest charges and possibly penalties. The Company classifies interest and penalties as a component of income tax expense.

ITEM 7A QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company is exposed to market risk related to changes in interest rates, primarily from its borrowing activities. The Company's indebtedness to its primary lender is evidenced by a line of credit with a variable rate of interest, which fluctuates with changes in the lender's reference rate. The Company may use derivative financial instruments for trading purposes to protect trading performance from exchange rate fluctuations on material contracts.

The Company conducts business in various foreign currencies, primarily when doing business in Europe, Mexico, Central and South America. Therefore changes in the value of the currencies of such countries or regions affect the Company's financial position and cash flows when translated into U.S. Dollars. The Company has mitigated, and will continue to mitigate, a portion of its currency exchange exposure through natural hedges based on the operation of decentralized foreign operating companies in which the majority of all costs are local-currency based. A 10% change in the value of all foreign currencies would have an immaterial effect on the Company's financial position and cash flows. As part of an on-going process of assessing business risk, management has identified risk factors which are disclosed in Item 1A. Risk Factors of this Report.

ITEM 8 FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Financial Statements and Supplementary Data required by this item are listed at Part IV, Item 15, Exhibits, Financial Statement Schedules.

ITEM 9 CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Management, under the supervision of the Company's Chief Executive Officer and Chief Financial Officer, periodically evaluate the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)). Based upon this evaluation, as of December 31, 2016, the Chief Executive Officer and the Chief Financial Officer have concluded that these disclosure controls and procedures are effective in ensuring that the information required to be disclosed in reports filed under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported on a timely basis, and (ii) accumulated and communicated to the Company's management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934 for AVD and its subsidiaries ("the Company"). The Company's internal control system over financial reporting is designed to provide reasonable assurance to management and the Board of Directors as to the fair, reliable and timely preparation and presentation of consolidated financial statements in accordance with accounting principles generally accepted in the United States of America filed with the SEC.

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even processes determined to be effective can provide only reasonable assurance with respect to the financial statement preparation and presentation.

Management conducted an evaluation of the Company's internal controls over financial reporting based on a framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control—Integrated Framework (2013). This evaluation included review of the documentation of controls, evaluation of the design effectiveness of controls, testing of the effectiveness of controls and a conclusion on the evaluation. Based on this evaluation, management believes that as of December 31, 2016, the Company's internal control over financial reporting is effective.

BDO USA, LLP, the independent registered public accounting firm that audited the consolidated financial statements included in the Annual Report on Form 10-K, was engaged to attest to and report on the effectiveness of AVD's internal control over financial reporting as of December 31, 2016. Its reports are included herein.

#### Changes in Internal Controls over Financial Reporting

There were no changes in internal controls over financial reporting during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders

American Vanguard Corporation

Newport Beach, California

We have audited American Vanguard Corporation and Subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). American Vanguard Corporation and Subsidiaries' 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 Item 9A, 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 consolidated 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 consolidated 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 consolidated 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 conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, American Vanguard Corporation and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of American Vanguard Corporation and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations and comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2016 and our report dated March 6, 2017 expressed an unqualified opinion thereon.

/s/ BDO USA, LLP



Costa Mesa, California

March 6, 2017

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AMERICAN VANGUARD CORPORATION

AND SUBSIDIARIES

ITEM 9B OTHER INFORMATION

None.

PART III

ITEM 10 DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information set forth under the captions “Executive Officers of the Company,” “Election of Directors,” “Information about the Board of Directors and Committees of the Board” and “Transactions with Management and Others—Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive proxy statement for our Annual Meeting of Stockholders to be held in 2017 (the “Proxy Statement”), which will be filed with the SEC within 120 days of the end of our fiscal year ended December 31, 2016, is incorporated herein by reference.

ITEM 11 EXECUTIVE  
COMPENSATION

Except as specifically provided, the information set forth under the captions “Compensation of Executive Officers” and “Information about the Board of Directors and Committees of the Board—Compensation of Directors” in the Proxy Statement is incorporated herein by reference.

ITEM 12 SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND  
RELATED STOCKHOLDER MATTERS

The disclosure contained in Part II, Item 5 under “Equity Compensation Plan Information” is incorporated herein by reference. Information regarding security ownership of certain beneficial owners and management is incorporated by reference to the information set forth under the caption “Security Ownership of Certain Beneficial Owners and Management” in the Proxy Statement.

ITEM 13 CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information set forth under the captions “Transactions with Management and Others” and “Information about the Board of Directors and Committees of the Board” in the Proxy Statement is incorporated herein by reference.

ITEM 14 PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information regarding principal accountant fees and services is incorporated herein by reference to the information set forth under the caption “Ratification of the Selection of Independent Registered Public Accounting Firm—Relationship of the Company with Independent Registered Public Accounting Firm” in the Proxy Statement.

## AMERICAN VANGUARD CORPORATION

## AND SUBSIDIARIES

## PART IV

## ITEM 15 EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

Index to Consolidated Financial Statements and Supplementary Data:

## ITEM 16 FORM 10-K SUMMARY

None

Description	Page No
Financial Statements:	
<u>Report of Independent Registered Public Accounting Firm</u>	38
<u>Consolidated Balance Sheets as of December 31, 2016 and 2015</u>	39
<u>Consolidated Statements of Operations for the Years Ended December 31, 2016, 2015, and 2014</u>	40
<u>Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2016, 2015, and 2014</u>	41
<u>Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2016, 2015 and 2014</u>	42
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2016, 2015, and 2014</u>	43
<u>Summary of Significant Accounting Policies and Notes to Consolidated Financial Statements</u>	44

(b) Exhibits:

The exhibits listed on the accompanying Index to Exhibits, pages 63-64 are filed as part of this annual report.

(c) Valuation and qualifying accounts:

## Schedule II-A—Valuation and Qualifying Accounts

## Allowance for Doubtful Accounts Receivable (in thousands)

Fiscal Year Ended	Balance at Beginning of Period	Additions Charged to Costs and Expense	Other Deductions	Balance at End of Period
December 31, 2016	\$ 423	\$ 3	\$ —	\$ (384) ) \$ 42
December 31, 2015	\$ 166	\$ 332	\$ —	\$ (75) ) \$ 423
December 31, 2014	\$ 392	\$ 75	\$ —	\$ (301) ) \$ 166

Inventory Reserve (in thousands)

	Balance at Beginning of			Balance at End of Period
Fiscal Year Ended	Period	Additions	Deductions	
December 31, 2016	\$ 4,020	\$ —	\$ (426 )	\$ 3,594
December 31, 2015	\$ 2,995	\$ 1,025	\$ —	\$ 4,020
December 31, 2014	\$ 2,602	\$ 393	\$ —	\$ 2,995

AMERICAN VANGUARD CORPORATION

AND SUBSIDIARIES

SIGNATURES

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

AMERICAN VANGUARD CORPORATION

(Registrant)

By: /s/ ERIC G. WINTEMUTE Eric G. Wintemute Chief Executive Officer and Chairman of the Board March 6, 2017	By: /s/ DAVID T. JOHNSON David T. Johnson Chief Financial Officer and Principal Accounting Officer March 6, 2017
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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 indicated.

By: /s/ ERIC G. WINTEMUTE Eric G. Wintemute Principal Executive Officer and Chairman of the Board March 6, 2017	By: /s/ DAVID T. JOHNSON David T. Johnson Principal Financial Officer and Principal Accounting Officer March 6, 2017
By: /s/ DEBRA EDWARDS Debra Edwards Director March 6, 2017	By: /s/ JOHN L. KILLMER John L. Killmer Director March 6, 2017
By: /s/ LAWRENCE S. CLARK Lawrence S. Clark	By: /s/ SCOTT D. BASKIN Scott D. Baskin

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Director

Director

March 6, 2017

March 6, 2017

By: /s/ MORTON D. ERLICH  
Morton D. Erlich

By: /s/ ALFRED INGULLI  
Alfred Ingulli

Director

Director

March 6, 2017

March 6, 2017

By: /s/ ESMAIL ZIRAKPARVAR  
Esmail Zirakparvar

Director

March 6, 2017

AMERICAN VANGUARD CORPORATION

AND SUBSIDIARIES

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders

American Vanguard Corporation

Newport Beach, California

We have audited the accompanying consolidated balance sheets of American Vanguard Corporation and Subsidiaries (the "Company") as of December 31, 2016 and 2015 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 31, 2016. In connection with our audits of the consolidated financial statements, we have also audited the financial statement schedule listed in the accompanying index under Item 15(c). These consolidated financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and schedule. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of American Vanguard Corporation and Subsidiaries at December 31, 2016 and 2015, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

As discussed in notes to the consolidated financial statements in paragraph Recently Issued Accounting Guidance, the Company changed its method of presentation of deferred taxes in 2016 due to the adoption of Financial Accounting Standards Board Accounting Standards Update 2015-17, Balance Sheet Classification of Deferred Taxes. This change was applied retrospectively to all periods presented.

Also, in our opinion, the financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), American Vanguard Corporation and Subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated March 6, 2017 expressed an unqualified opinion thereon.

/s/ BDO USA, LLP

Costa Mesa, California

March 6, 2017

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## AMERICAN VANGUARD CORPORATION

## AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS

December 31, 2016 and 2015

(In thousands, except share data)

	2016	2015
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$7,869	\$5,524
Receivables:		
Trade, net of allowance for doubtful accounts of \$42 and \$423, respectively	83,777	72,835
Other	3,429	2,554
	87,206	75,389
Inventories	120,576	136,477
Prepaid expenses	11,424	11,172
Total current assets	227,075	228,562
Property, plant and equipment, net	50,295	47,972
Intangible assets, net of applicable amortization	121,433	129,160
Other assets	31,153	29,576
Total assets	\$429,956	\$435,270
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Current installments of other notes payable	\$—	\$55
Current installments of other liabilities	26	514
Accounts payable	24,358	15,343
Deferred revenue	3,848	8,888
Accrued program costs	42,930	44,371
Accrued expenses and other payables	12,072	7,111
Income taxes payable	13,840	12,430
Total current liabilities	97,074	88,712
Long-term debt and other notes payable, excluding current installments	40,951	68,321
Other liabilities, excluding current installments	2,868	3,054
Deferred income tax liabilities, net	6,706	6,857
Total liabilities	147,599	166,944
<b>Commitments and contingent liabilities</b>		
<b>Stockholders' equity:</b>		
Preferred stock, \$.10 par value per share; authorized 400,000 shares; none issued	—	—
Common stock, \$.10 par value per share; authorized 40,000,000 shares; issued 31,819,695 shares in 2016 and 31,638,225 shares in 2015	3,183	3,164
Additional paid-in capital	71,699	68,534
Accumulated other comprehensive loss	(4,851 )	(3,541 )
Retained earnings	220,428	208,507

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	290,459	276,664
Less treasury stock at cost, 2,450,634 shares in 2016 and in 2015	(8,269 )	(8,269 )
American Vanguard Corporation stockholders' equity	282,190	268,395
Non-controlling interest	167	(69 )
Total stockholders' equity	282,357	268,326
Total liabilities and stockholders' equity	\$429,956	\$435,270

See summary of significant accounting policies and notes to consolidated financial statements.

## AMERICAN VANGUARD CORPORATION

## AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 2016, 2015 and 2014

(In thousands, except per share data)

	2016	2015	2014
Net sales	\$312,113	\$289,382	\$298,634
Cost of sales	183,825	177,480	184,138
Gross profit	128,288	111,902	114,496
Operating expenses	107,748	100,378	107,786
Operating income	20,540	11,524	6,710
Interest expense, net	1,623	2,562	3,066
Income before provision for income taxes and loss on equity investment	18,917	8,962	3,644
Income taxes expense (benefit)	5,540	2,009	(451 )
Income before loss on equity investment	13,377	6,953	4,095
Less net loss from equity method investment	(353 )	(636 )	(29 )
Net income	13,024	6,317	4,066
Net (income) loss attributable to non-controlling interest	(236 )	274	775
Net income attributable to American Vanguard	\$12,788	\$6,591	\$4,841
Earnings per common share—basic	\$0.44	\$0.23	\$0.17
Earnings per common share—assuming dilution	\$0.44	\$0.23	\$0.17
Weighted average shares outstanding—basic	28,859	28,673	28,436
Weighted average shares outstanding—assuming dilution	29,394	29,237	28,912

See summary of significant accounting policies and notes to consolidated financial statements.



## AMERICAN VANGUARD CORPORATION

## AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years ended December 31, 2016, 2015 and 2014

(In thousands)

	2016	2015	2014
Net income	\$13,024	\$6,317	\$4,066
Other comprehensive income			
Change in fair value of interest rate swaps	—	—	340
Foreign currency translation adjustment	(1,310)	(1,571)	(1,262)
Comprehensive income	11,714	4,746	3,144
Less: Comprehensive income (loss) attributable to non-controlling interest	236	(274)	(775)
Comprehensive income attributable to American Vanguard	\$11,478	\$5,020	\$3,919

See summary of significant accounting policies and notes to consolidated financial statements

## AMERICAN VANGUARD CORPORATION

## AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

Years ended December 31, 2016, 2015 and 2014

(In thousands, except share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Income/(Loss)	Retained Earnings	Treasury Stock Shares	Treasury Stock Amount	AVD Total	Non- Controlling Interest	Total
Balance, December 31, 2013	31,092,782	\$3,109	\$60,160	\$(1,048)	\$202,470	2,380,634	\$(6,738)	\$257,953	\$(158)	\$257,795
Stocks issued under ESPP	47,213	6	800	—	—	—	—	806	—	806
Cash dividends on common stock (\$0.17 per share)	—	—	—	—	(4,823 )	—	—	(4,823 )	—	(4,823 )
Foreign currency translation adjustment, net	—	—	—	(1,262)	—	—	—	(1,262 )	—	(1,262 )
Stock based compensation	—	—	4,153	—	—	—	—	4,153	—	4,153
Changes in fair value of interest swap	—	—	—	340	—	—	—	340	—	340
Stock options exercised and grants of restricted stock units	410,482	41	819	—	—	—	—	860	—	860
Excess tax benefits from share based payment arrangements	—	—	300	—	—	—	—	300	—	300
Shares repurchased	—	—	—	—	—	70,000	(1,531)	(1,531 )	—	(1,531 )

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Non-controlling interest contribution	—	—	—	—	—	—	—	-	299	299
Net income (loss)	—	—	—	—	4,841	—	—	4,841	(775)	4,066
Balance, December 31, 2014	31,550,477	3,156	66,232	(1,970)	202,488	2,450,634	(8,269)	261,637	(634)	261,003
Stocks issued under ESPP	50,452	5	568	—	—	—	—	573	—	573
Cash dividends on common stock (\$0.02 per share)	—	—	—	—	(572 )	—	—	(572 )	—	(572 )
Foreign currency translation adjustment, net	—	—	—	(1,571)	—	—	—	(1,571 )	—	(1,571 )
Stock based compensation	—	—	3,881	—	—	—	—	3,881	—	3,881
Stock options exercised and grants of restricted stock units	37,296	3	(259 )	—	—	—	—	(256 )	—	(256 )
Tax effect from share based compensation	—	—	(924 )	—	—	—	—	(924 )	—	(924 )
Adjustment and purchase of non-controlling interest	—	—	(964 )	—	—	—	—	(964 )	839	(125 )
Net income (loss)	—	—	—	—	6,591	—	—	6,591	(274)	6,317
Balance, December 31, 2015	31,638,225	3,164	68,534	(3,541)	208,507	2,450,634	(8,269)	268,395	(69 )	\$268,326
Stocks issued under ESPP	42,730	4	558	—	—	—	—	562	—	562
Cash dividends on common stock (\$0.03 per share)	—	—	—	—	(867 )	—	—	(867 )	—	(867 )
Foreign currency translation adjustment, net	—	—	—	(1,310)	—	—	—	(1,310 )	—	(1,310 )

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Stock based compensation	—	—	3,167	—	—	—	—	3,167	—	3,167
Stock options exercised and grants of										
restricted stock units	138,740	15	(336 )	—	—	—	—	(321 )	—	(321 )
Tax effect from share based compensation	—	—	(224 )	—	—	—	—	(224 )	—	(224 )
Net income	—	—	—	—	12,788	—	—	12,788	236	13,024
Balance, December 31, 2016	31,819,695	\$3,183	\$71,699	\$(4,851)	\$220,428	2,450,634	\$(8,269)	\$282,190	\$167	\$282,357

See summary of significant accounting policies and notes to consolidated financial statements



## AMERICAN VANGUARD CORPORATION

## AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 2016, 2015 and 2014

(In thousands)

	2016	2015	2014
Increase cash			
Cash flows from operating activities:			
Net income	\$ 13,024	\$ 6,317	\$ 4,066
Adjustments to reconcile net income to net cash provided by (used in)			
operating activities:			
Depreciation and amortization of fixed and intangible assets	16,327	16,474	16,332
Amortization of other long term assets	5,203	5,275	5,811
Amortization of discounted liabilities	16	140	324
Stock-based compensation	3,167	3,881	4,153
Excess tax benefit from share based compensation	(96 )	(23 )	(300 )
Increase in deferred income taxes	(151 )	27	2,619
Operating loss from equity method investment	353	629	983
Loss (gain) from dilution of equity method investment	—	7	(954 )
Changes in assets and liabilities associated with operations:			
(Increase) decrease in net receivables	(11,817 )	13,034	(13,471)
Decrease (increase) in inventories	15,901	29,154	(25,801)
Increase in income tax receivable/payable, net	1,186	4,872	4,424
(Increase) decrease in prepaid expenses and other assets	(3,872 )	2,082	(4,743 )
Increase (decrease) in accounts payable	9,015	(5,068 )	(19,951)
(Decrease) increase in deferred revenue	(5,040 )	7,990	(2,890 )
Increase (decrease) in other payables, accrued program costs and			
expenses	3,190	(6,223 )	(4,697 )
Net cash provided by (used in) operating activities	46,406	78,568	(34,095)
Cash flows from investing activities:			
Capital expenditures	(10,630 )	(6,899 )	(7,180 )
Investment	(3,283 )	(125 )	(500 )
Acquisitions of intangible assets	(224 )	(36,667 )	—
Net cash used in investing activities	(14,137 )	(43,691 )	(7,680 )
Cash flows from financing activities:			
Payments under line of credit agreement	(107,600)	(121,400)	(44,600)
Borrowings under line of credit agreement	80,000	90,880	92,450
Payment on other long-term liabilities	(704 )	(1,543 )	(1,756 )
Excess tax benefit from share based compensation	96	23	300
Repurchases of common stock	—	—	(1,531 )

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Proceeds from the issuance of common stock (sale of stock under ESPP and exercise of stock options)	241	317	1,666
Non-controlling interest contribution	—	—	299
Payment of cash dividends	(578 )	(1,141 )	(5,672 )
Net cash (used in) provided by financing activities	(28,545 )	(32,864 )	41,156
Net increase (decrease) in cash and cash equivalents	3,724	2,013	(619 )
Effect of exchange rate changes on cash	(1,379 )	(1,374 )	(1,176 )
Cash and cash equivalents at beginning of year	5,524	4,885	6,680
Cash and cash equivalents at end of year	\$7,869	\$5,524	\$4,885
Supplemental cash flow information:			
Cash paid (received) during the year for:			
Interest	\$1,748	\$2,750	\$2,298
Income taxes, net	\$4,947	\$(3,697 )	\$(8,206 )

See summary of significant accounting policies and notes to the consolidated financial statements

## AMERICAN VANGUARD CORPORATION

## AND SUBSIDIARIES

## SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Years Ended December 31, 2016, 2015 and 2014

(Dollars in thousands, except per share data)

## Description of Business, Basis of Consolidation, Basis of Presentation and Significant Accounting Policies

American Vanguard Corporation (the “Company”) is primarily a specialty chemical manufacturer that develops and markets safe and effective products for agricultural, commercial and consumer uses. The Company manufactures and formulates chemicals for crops, human and animal protection. The consolidated financial statements include the accounts of the Company, its wholly-owned subsidiaries and Envance, its majority owned subsidiary. All significant intercompany accounts and transactions have been eliminated in consolidation. The Company operates within a single operating segment.

Based on similar economic and operational characteristics, the Company’s business is aggregated into one reportable segment. Selective enterprise information is as follows:

	2016	2015	2014
Net sales:			
Insecticides	\$ 119,226	\$ 117,180	\$ 135,705
Herbicides/soil fumigants/fungicides	123,540	111,897	101,785
Other, including plant growth regulators	29,438	29,013	30,220
Total crop	272,204	258,090	267,710
Non-crop	39,909	31,292	30,924
	\$ 312,113	\$ 289,382	\$ 298,634
Gross profit:			
Crop	\$ 107,821	\$ 97,198	\$ 101,633
Non-crop	20,467	14,704	12,863
	\$ 128,288	\$ 111,902	\$ 114,496

Due to elements inherent to the Company’s business, such as differing and unpredictable weather patterns, crop growing cycles, changes in product mix of sales and ordering patterns that may vary in timing, measuring the Company’s performance on a quarterly basis (for example, gross profit margins on a quarterly basis may vary significantly) even when such comparisons are favorable, is not as good an indicator as full-year comparisons.

Reclassifications — The Company has revised the amount of net deferred tax liabilities and income tax payable on its consolidated balance sheet as of December 31, 2015. It was concluded that timing differences relating to certain accrued amounts were not properly considered. Consequently, the Company decreased the net deferred tax liability and increased income tax payable balances by \$12,598 and also revised the related tax disclosures in Note 3

accordingly. This revision did not impact the previously reported net income, stockholders' equity or cash flows. Certain other prior years' amounts have been reclassified to conform to the current year's presentation.

Cost of Sales—In addition to normal cost centers (i.e., direct labor, raw materials), the Company also includes such cost centers as Health and Safety, Environmental, Maintenance and Quality Control in cost of sales.

Operating Expenses—Operating expenses include cost centers for Selling, General and Administrative, Research, Product Development, and Regulatory, and finally, Freight, Delivery and Warehousing.

	2016	2015	2014
Selling	\$27,442	\$27,052	\$31,593
General and administrative	32,128	28,516	27,057
Research, product development and regulatory	21,298	19,116	21,206
Freight, delivery and warehousing	26,880	25,694	27,930
	\$107,748	\$100,378	\$107,786

Advertising Expense—The Company expenses advertising costs in the period incurred. Advertising expenses, which include promotional costs, are recognized in operating costs (specifically in selling expenses) in the consolidated statements of operations and were \$2,271 in 2016, \$3,535 in 2015 and \$4,322 in 2014.

Cash and cash equivalent—The Company’s cash and cash equivalent consist primarily of certificates of deposit with an initial term of less than three months. For purposes of the consolidated statements of cash flows, the Company considers all highly liquid debt instruments with original maturities of three months or less to be cash equivalents.

Inventories — The Company values its inventories at lower of cost or market. Cost is determined by the first-in, first-out (“FIFO”) method, including material, labor, factory overhead and subcontracting services. The Company writes down and makes adjustments to its inventory carrying values as a result of net realizable value assessments of slow moving and obsolete inventory and other annual adjustments to ensure that our standard costs continue to closely reflect manufacturing cost. The Company recorded an inventory reserve allowance of \$3,594 at December 31, 2016, as compared to \$4,020 at December 31, 2015.

The components of inventories consist of the following:

	2016	2015
Finished products	\$ 103,832	\$ 120,456
Raw materials	16,744	16,021
	\$ 120,576	\$ 136,477

Revenue Recognition and Allowance for Doubtful Accounts—Revenue from sales is recognized at the time title and the risks of ownership pass. This is when the customer has made the fixed commitment to purchase the goods, the products are shipped per the customer’s instructions, the sales price is fixed and determinable, and collection is reasonably assured. The Company has in place procedures to ensure that revenue is recognized when earned. The procedures are subject to management’s review and from time to time certain sales are excluded until it is clear that the title has passed and there is no further recourse to the Company. From time to time, the Company may offer a program to eligible customers, in good standing, that provides extended payment terms on a portion of the sales on selected products. The Company analyzes these extended payment programs in connection with its revenue recognition policy to ensure all revenue recognition criteria are satisfied at the time of sale. Allowance for doubtful accounts is established based on estimates of losses related to customer receivable balances. Estimates are developed using either standard quantitative measures based on historical losses, adjusted for current economic conditions or by evaluating specific customer accounts for risk of loss.

Accrued Program Costs—In accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) 605, the Company classifies certain payments to its customers as a reduction of sales revenues. The Company describes these payments as “Programs”. Programs are a critical part of doing business in the U.S. agricultural chemicals business market place. For accounting purposes, programs are recorded as a reduction in gross sales and include market pricing adjustments, volume take up or other key performance indicator driven payments made to distributors, retailers or growers predominantly at the end of a growing season. Each quarter management compares each sale transaction with program guidelines to determine what program liability has been incurred. Once

this initial calculation is made for the specific quarter, sales and marketing management along with executive and financial management review the accumulated program balance and make assessments of whether or not customers are tracking in a manner that indicates that they will meet the requirements set out in the terms and conditions attached to each program. If management believes that customers are falling short of or exceeding their previously anticipated annual goals, then periodic adjustments will be made to the accumulated accrual to properly reflect the Company's best estimate of the liability at the balance sheet date. The majority of adjustments are made at the end of the crop season, at which time customer performance can be fully assessed. Programs are paid out predominantly on an annual basis, usually in the final quarter of the financial year or the first quarter of the following year. The Company recorded program reserves of \$42,930 at December 31, 2016, as compared to \$44,371 at December 31, 2015.

**Long-lived Assets**—Long-lived assets primarily consist of the costs of Smartbox Lock and Load containers and intangible assets. The carrying value of long-lived assets is reviewed for impairment quarterly and/or whenever events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. The Company evaluates recoverability of an asset group by comparing the carrying value to the future undiscounted cash flows that it expects to generate from the asset group. If the comparison indicates that the carrying value of an asset group is not recoverable, measurement of the impairment loss is based on the fair value of the asset. There were no circumstances that would indicate any impairment of the carrying value of these long-lived assets and no material impairment losses were recorded in 2016 or 2015.

**Property, Plant and Equipment and Depreciation**—Property, plant and equipment includes the cost of land, buildings, machinery and equipment, office furniture and fixtures, automobiles, construction projects and significant improvements to existing plant and equipment. Interest costs related to significant construction projects are capitalized at the Company's current weighted average effective interest rate. Expenditures for minor repairs and maintenance are expensed as incurred. When property or equipment is sold or otherwise disposed of, the related cost and accumulated depreciation is removed from the respective accounts and the gain or loss realized on disposition is reflected in operations. All plant and equipment is depreciated using the straight-line method, utilizing the estimated useful property lives. Building lives range from 10 to 30 years; machinery and equipment lives range from 3 to 15 years; office furniture and fixture lives range from 3 to 10 years; automobile lives range from 3 to 6 years; construction projects and significant improvements to existing plant and equipment lives range from 3 to 15 years when placed in service. During the years ended December 31, 2016, 2015 and 2014 the Company eliminated from assets and accumulated depreciation \$16,652, \$549, and \$5,358, respectively, of fully depreciated assets.

**Foreign Currency Translation**—Assets and liabilities of foreign subsidiaries, where the local currency is the functional currency, have been translated at period end exchange rates, and profit and loss accounts have been translated using weighted average yearly exchange rates. Adjustments resulting from translation have been recorded in the equity section of the balance sheet as cumulative translation adjustments in other comprehensive income (loss). The effects of foreign currency exchange gains and losses on transactions that are denominated in currencies other than the Company's functional currency are remeasured to the functional currency using the end of the period exchange rates. The effects of remeasurement related to foreign currency transactions are included in the consolidated statements of operations.

**Goodwill and Other Intangible Assets**—The primary identifiable intangible assets of the Company relate to assets associated with its product acquisitions. The Company adopted the provisions of FASB ASC 350, under which identifiable intangibles with finite lives are amortized and those with indefinite lives are not amortized. The estimated useful life of an identifiable intangible asset to the Company is based upon a number of factors including the effects of demand, competition, and expected changes in the marketability of the Company's products. The Company re-evaluates whether these intangible assets are impaired on both a quarterly and an annual basis and anytime when there is a specific indicator for impairment, relying on a number of factors including operating results, business plans and future cash flows. Identifiable intangible assets that are subject to amortization are evaluated for impairment using a process similar to that used to evaluate long-lived assets. The impairment test for identifiable intangible assets not subject to amortization consists of either a qualitative assessment or a comparison of the fair value of the intangible asset with its carrying amount. An impairment loss, if any, is recognized for the amount by which the carrying value exceeds the fair value of the asset. Fair value is typically estimated using a discounted cash flow analysis. When determining future cash flow estimates, the Company considers historical results adjusted to reflect current and anticipated operating conditions. Estimating future cash flows requires significant judgment by the Company, in such areas as: future economic conditions, industry-specific conditions, product pricing and necessary capital expenditures. The use of different assumptions or estimates for future cash flows could produce different impairment amounts (or none at all) for long-lived assets, goodwill and identifiable intangible assets. The Company has performed an impairment review for the years ended December 31, 2016 and 2015 and recorded immaterial impairment losses.

**Fair Value of Financial Instruments**—The carrying values of cash, receivables and accounts payable approximate their fair values because of the short maturity of these instruments. The fair value of the Company's long-term debt and note payable to our lender group is estimated based on the quoted market prices for the same or similar issues or on the current rates offered to the Company for debt of the same remaining maturities. Such fair value approximates the respective carrying values of the Company's long-term debt and note payable to bank.

The Company measures fair value based on the prices that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements are

based on a three-tier hierarchy that prioritizes the inputs used to measure fair value. These tiers include the following:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that are accessible at the measurement date. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2: Observable prices that are based on inputs not quoted on active markets, but corroborated by market data. These inputs include quoted prices for similar assets or liabilities; quoted market prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

Income Taxes—The Company utilizes the liability method of accounting for income taxes as set forth in ASC 740. Under the liability method, deferred taxes are determined based on the temporary differences between the financial statement and tax basis of assets and liabilities using tax rates expected to be in effect during the years in which the basis differences reverse. A valuation



allowance is recorded when it is more likely than not that some of the deferred tax assets will not be realized. In determining the need for valuation allowances, the Company considers projected future taxable income and the availability of tax planning strategies. If in the future the Company determines that it would not be able to realize its recorded deferred tax assets, an increase in the valuation allowance would be recorded, decreasing earnings in the period in which such determination is made.

The Company assesses its income tax positions and records tax benefits for all years subject to examination based upon the Company's evaluation of the facts, circumstances and information available at the reporting date. For those tax positions where there is greater than 50% likelihood that a tax benefit will be sustained, the Company has recorded the largest amount of tax benefit that may potentially be realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where there is less than 50% likelihood that a tax benefit will be sustained, no tax benefit has been recognized in the consolidated financial statements. At December 31, 2016 and 2015, the Company recorded unrecognized tax benefits of \$1,893 and \$2,007, respectively.

Per Share Information—FASB ASC 260 requires dual presentation of basic earnings per share (“EPS”) and diluted EPS on the face of all consolidated statements of operations. Basic EPS is computed as net income divided by the weighted average number of shares of common stock outstanding during the period. Diluted EPS reflects potential dilution to EPS that could occur if securities or other contracts, which, for the Company, consists of restricted stock grants and options to purchase shares of the Company's common stock, are exercised as calculated using the treasury stock method.

The components of basic and diluted earnings per share were as follows:

	2016	2015	2014
<b>Numerator:</b>			
Net income attributable to American Vanguard	\$ 12,788	\$ 6,591	\$ 4,841
<b>Denominator:</b>			
Weighted average shares outstanding—basic	28,859	28,673	28,436
Dilutive effect of stock options and grants	535	564	476
	29,394	29,237	28,912

The Company excluded 1,616 stock options from the computation of diluted earnings per share for the year ended December 31, 2014, because, at the time, they were anti-dilutive. For the years ended December 31, 2016 and 2015, no options were excluded from the computation.

Accounting Estimates—The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses at the date that the consolidated financial statements are prepared. Significant estimates relate to the allowance for doubtful accounts, inventory reserves, impairment of long-lived assets, accrued program costs, and stock based compensation and actual results could materially differ from those estimates.

Total comprehensive income—In addition to net income, total comprehensive income includes changes in equity that are excluded from the consolidated statements of operations and are recorded directly into a separate section of stockholders' equity on the consolidated balance sheets. For the years ended December 31, 2016 and 2015, total comprehensive income consisted of net income attributable to American Vanguard and foreign currency translation

adjustments. In 2014, total comprehensive income consisted of net income attributable to American Vanguard, foreign currency translation adjustments and, in addition, the change in fair value of interest rate swaps.

**Stock-Based Compensation**—The Company accounts for stock-based awards to employees and directors pursuant to ASC 718. When applying the provisions of ASC 718, the Company also applies the provisions of Staff Accounting Bulletin (“SAB”) No. 107 and SAB No. 110.

ASC 718 requires companies to estimate the fair value of share-based payment awards on the date of grant. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in the Company’s Consolidated Statements of Operations.

Stock-based compensation expense recognized during the period is based on the fair value of the portion of share-based payment awards that is ultimately expected to vest during the period. Stock-based compensation expense recognized is reduced for estimated forfeitures pursuant to ASC 718. Estimated forfeitures recognized in the Company’s Consolidated Statements of Operations reduced compensation expense by \$118, \$144, and \$303 for the years ended December 31, 2016, 2015, and 2014, respectively. The

Company estimates that 16.6% of all restricted stock grants, 16.6% of the performance based restricted shares and 7.5% of all stock option grants that are currently vesting will be forfeited. These estimates are reviewed quarterly and revised as necessary.

The below tables illustrate the Company's stock based compensation, unamortized stock-based compensation, and remaining weighted average period for the years ended December 31, 2016, 2015 and 2014. This projected expense will change if any stock options and restricted stock are granted or cancelled prior to the respective reporting periods, or if there are any changes required to be made for estimated forfeitures.

	Stock-Based Compensation	Unamortized Stock-Based Compensation	Remaining Weighted Average Period (years)
<b>December 31, 2016</b>			
Incentive Stock Options	\$ 354	\$ 397	1.0
Performance Based Options	188	178	1.0
Restricted Stock	1,630	2,153	1.6
Performance Based Restricted Stock	995	796	1.7
<b>Total</b>	<b>\$ 3,167</b>	<b>\$ 3,524</b>	
<b>December 31, 2015</b>			
Incentive Stock Options	\$ 431	\$ 887	2.0
Performance Based Options	149	331	2.0
Restricted Stock	2,972	2,153	1.3
Performance Based Restricted Stock	329	583	1.5
<b>Total</b>	<b>\$ 3,881</b>	<b>\$ 3,954</b>	
<b>December 31, 2014</b>			
Incentive Stock Options	\$ 22	\$ 1,457	3.0
Performance Based Options	—	551	3.0
Restricted Stock	3,963	4,829	1.8
Performance Based Restricted Stock	168	1,249	2.1
<b>Total</b>	<b>\$ 4,153</b>	<b>\$ 8,086</b>	

The Company uses the Black-Scholes option-pricing model ("Black-Scholes model") to value option grants using the following weighted average assumptions:

	2014
Risk free interest rate	2.0%
Dividend yield	0.9%
Volatility factor	48.9%
Weighted average life (years)	

6.5  
years

The weighted average grant-date fair values of options granted during 2014 was \$5.27. There were no option shares granted during either 2016 or 2015.

The expected volatility and expected life assumptions are highly complex and use subjective variables. The variables take into consideration, among other things, actual and projected employee stock option exercise behavior. The Company estimates the expected term or vesting period using the “safe harbor” provisions of SAB 107 and SAB 110. The Company used historical volatility as a proxy for estimating expected volatility.

The Company values restricted stock grants using the Company’s traded stock price on the date of grant. The weighted average grant-date fair values of restricted stock grants during 2016, 2015, and 2014 were \$15.22, \$12.68, and \$14.81, respectively.

Recently Issued Accounting Guidance—In November 2016, FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230). The new 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 new standard is effective for fiscal years beginning after December 15, 2017. Based on the composition of the Company’s cash and cash equivalent, adoption of the new

standard is not expected to have a material impact on our consolidated cash flows statements. We expect to adopt the standard for the financial year beginning January 1, 2018.

In October 2016 FASB issued ASU 2016-16, Income Taxes (Topic 740). Current GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. Under the new standard, an entity is to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The new standard does not include new disclosure requirements; however, existing disclosure requirements might be applicable when accounting for the current and deferred income taxes for an intra-entity transfer of an asset other than inventory. The new standard is effective for annual periods beginning after December 15, 2017, including interim reporting periods within those annual periods. The Company has considered its activities with regard to such intra-entity transfers, does not expect the adoption of ASU 2016-16 to have a material impact on our consolidated financial statements and will adopt the standard for the financial year beginning January 1, 2018.

In August 2016, FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230). The new standard addresses eight specific classification issues within the current practice regarding the manner in which certain cash receipts and cash payments are presented. The new standard is effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The Company has reviewed the eight specific issues addressed and does not believe that the adoption of ASU 2016-15 will have a material impact on its statement of cash flows. Further, the Company is currently considering the possible option for early adoption. At the latest the Company will adopt the revised standard for the financial year beginning January 1, 2018.

In March 2016, FASB issued ASU 2016-09, Compensation—Stock Compensation (Topic 718). The new standard changes the accounting for certain aspects of share-based payments to employees. The standard requires the recognition of the income tax effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid in capital (“APIC”) pools. The standard also allows for the employer to repurchase more of an employee’s shares for tax withholding purposes without triggering liability accounting. Cash paid by an employer when directly withholding shares for tax-withholding purposes should be classified as a financing activity in the statement of cash flows. In addition, the standard allows for a policy election to account for forfeitures as they occur rather than on an estimated basis. The new standard is effective for fiscal years beginning after December 15, 2016 with early adoption permitted. The Company assessed the impact of the adoption of this new standard and determined there was no material impact on the 2016 consolidated financial statements. The Company has considered the different options for treatment of forfeitures in accounting for stock compensation and has elected to continue to account for such adjustments on the estimated basis. The Company will evaluate the impact of all future vestings of such compensation in accordance with ASU 2016-09 and will adopt the new standard effective January 1, 2017.

In March 2016, FASB issued ASU 2016-07, Investments—Equity Method and Joint Ventures. The new standard eliminates the requirement that an investor retrospectively apply equity method accounting when an investment that it had accounted for by another method initially qualifies for the equity method. The guidance requires that an equity method investor add the cost of acquiring the additional interest in the investee to the current basis of the investor’s previously held interest and adopt the equity method of accounting as of the date the investment becomes qualified for equity method accounting. The Company has early adopted the standard in 2016. The Company has reviewed its various equity method investments as at December 31, 2016, and determined that no changes are necessary.

In February 2016, FASB issued ASU 2016-02, Leases. The new standard establishes a right-of-use (ROU) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. A modified retrospective transition approach is required for lessees

for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the consolidated financial statements, with certain practical expedients available. We will evaluate our operating lease arrangements to determine the impact of this amendment on the financial statements. The evaluation will include an extensive review of our leases, which are primarily related to our manufacturing sites, regional sales offices, lease vehicles, and office equipment. The ultimate impact will depend on the Company's lease portfolio at the time the new standard is adopted. The Company expects to adopt ASU 2016-02 for the financial year beginning on January 1, 2019.

In January 2016, FASB issued ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities. The update provides that equity investments with readily determinable values be measured at fair value and changes in the fair value flow through net income. These changes historically have run through other comprehensive income. Equity investments without readily determinable fair values have the option to be measured at fair value or at cost adjusted for changes in observable prices minus impairment. Changes in either method are also recognized in net income. The standard requires a qualitative assessment of impairment indicators at each reporting period. For financial liabilities, entities that elect the fair value option must recognize the change in fair value attributable to instrument-specific credit risk in other comprehensive income rather than net income. Lastly, regarding deferred

tax assets, the need for a valuation allowance on a deferred tax asset will need to be assessed related to available-for-sale debt securities. ASU 2016-01 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Earlier adoption is permitted. The Company expects to adopt ASU 2016-01 in its financial statements beginning in January 1, 2018 and does not expect adoption to have a material impact on the Company's consolidated financial statements.

In November 2015, FASB issued ASU 2015-17, Balance Sheet Classification of Deferred Taxes. The standard requires all deferred tax assets and liabilities, as well as any related valuation allowance, to be classified as a net non-current position on the balance sheet. ASU 2015-17 is effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years and earlier adoption is permitted. The Company elected to adopt ASU 2015-17 in connection with the preparation of the Form 10-K for the year ended December 31, 2016. Prior period information presented in the Company's consolidated financial statements was retrospectively adjusted, resulting in the reclassification of \$20,699 of deferred tax assets (see Note 3) from current assets to noncurrent assets within the Company's consolidated balance sheet at December 31, 2015.

In July 2015, FASB issued ASU 2015-11, Inventory (Topic 330). Topic 330 currently requires an entity to measure inventory at the lower of cost or market, where market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. This ASU limits the scope to inventory that is measured using first-in, first-out (FIFO) or average cost and requires inventory be measured at the lower of costs or net realizable value. The new standard is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. The Company expects to adopt ASU 2015-11 in its financial statements beginning in January 1, 2017 and does not expect adoption to have a material impact on the Company's consolidated financial statements.

In May 2014, FASB issued ASU 2014-09, Revenue from Contracts with Customers. ASU 2014-09 outlines a new, single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. This new revenue recognition model provides a five-step analysis in determining when and how revenue is recognized. The new model will require revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration a company expects to receive in exchange for those goods or services. In March 2016, FASB issued an amendment to the standard, ASU 2016-08, to clarify the implementation guidance on principal versus agent considerations. Under the amendment, an entity is required to determine whether the nature of its promise is to provide the specified good or service itself (that is, the entity is a principal) or to arrange for that good or service to be provided by the other party (that is, the entity is an agent). In April 2016, FASB issued another amendment to the standard, ASU 2016-10, to clarify identifying performance obligations and the licensing implementation guidance, which retaining the related principles for those areas. The standard and the amendments are effective for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption (which includes additional footnote disclosures). This standard also requires enhanced disclosures regarding the nature, amount, timing, and uncertainty of revenue and cash flows. The adoption methods available ASU 2014-09 are being evaluated by the Company, and at this point, the adoption is not expected to have significant impact on the Company's consolidated financial statements. The Company expects to adopt the new revenue recognition standard for the financial year beginning January 1, 2018.

#### (1) Property, Plant and Equipment

Property, plant and equipment at December 31, 2016 and 2015 consist of the following:

	2016	2015	Estimated useful lives
Land	\$2,458	\$2,458	
Buildings and improvements	15,515	14,726	10 to 40 years
Machinery and equipment	102,146	113,506	3 to 15 years
Office furniture, fixtures and equipment	5,016	4,997	3 to 10 years
Automotive equipment	387	491	3 to 6 years
Construction in progress	8,047	3,413	
Total gross value	133,569	139,591	
Less accumulated depreciation	(83,274 )	(91,619 )	
Total net value	\$50,295	\$47,972	



For the years ended December 31, 2016, 2015, and 2014, the Company's aggregate depreciation expense related to property and equipment was \$8,307, \$8,953, and \$9,622, respectively. For the years ended December 31, 2016, 2015, and 2014, the Company eliminated from assets and accumulated depreciation \$16,652, \$549 and \$5,358 of fully depreciated assets, respectively.

## (2) Long-Term Debt

Long-term debt of the Company at December 31, 2016 and 2015 is summarized as follows:

	2016	2015
Revolving line of credit(a)	\$41,400	\$69,000
Notes payable	—	55
	41,400	69,055
Less current installments	—	(55 )
Less deferred loan fees	(449 )	(679 )
	\$40,951	\$68,321

Approximate principal payments on long-term debt at December 31, 2016 are as follows:

2017	\$—
2018	41,400
	\$41,400

a) As of June 17, 2013, AMVAC Chemical Corporation ("AMVAC"), the Company's principal operating subsidiary, as borrower, and affiliates (including the Company), as guarantors and/or borrowers, entered into a Second Amended and Restated Credit Agreement (the "2013 Credit Agreement") with a group of commercial lenders led by Bank of the West (AMVAC's primary bank) as agent, swing line lender and L/C issuer. On July 11, 2014, AMVAC, as borrower, and affiliates (including registrant), as guarantors and borrowers, entered into a First Amendment to the Second Amended and Restated Credit Agreement (the "First Amendment"), under which the Consolidated Funded Debt Ratio was increased for the third and fourth quarters of 2014 and the first quarter of 2015 and borrowers were permitted to pay cash dividends to stockholders during the first and second quarters of 2015, notwithstanding prior levels of net income. As of April 14, 2015, AMVAC, registrant's principal operating subsidiary, as borrower, and affiliates (including registrant), as guarantors and/or borrowers, entered into a Second Amendment to Second Amended and Restated Credit Agreement (the "Second Amendment"), under which the Consolidated Funded Debt Ratio was increased for the second, third and fourth quarters of 2015 (to 3.5-to-1 from 3.25-to-1) and a fixed charge covenant, requiring, in effect, that the ratio of consolidated current assets to consolidated current liabilities exceed 1.2-to-1 for the duration of the term of the credit facility, was added. The 2013 Credit Agreement, as amended by the First Amendment and the Second Amendment (the "Credit Agreement") is a senior secured lending facility with a five year term and consisting of a revolving line of credit of \$200 million and an accordion feature for up to \$100 million. The Credit Agreement includes both AMVAC CV and AMVAC BV as borrowers. Under the Credit Agreement, revolving loans bear interest at a variable rate based, at borrower's election with proper notice, on either (i) LIBOR plus the "Applicable Rate" which is based upon the Consolidated Funded Debt Ratio ("Eurocurrency Rate Loan") or (ii) the greater of (x) the Prime Rate, (y) the Federal Funds Rate plus 0.5%, and (z) the Daily One-Month

LIBOR Rate plus 1.00%, plus, in the case of (x), (y) or (z) the Applicable Rate (“Alternate Base Rate Loan”). Interest payments for Eurocurrency Rate Loans are payable on the last day of each interest period (either one, two, three or six months, as selected by the borrower) and the maturity date, while interest payments for Alternate Base Rate Loans are payable on the last business day of each month and the maturity date. The senior secured revolving line of credit matures on June 17, 2018. Under the Credit Agreement, the Company has three key covenants (with which it was in compliance throughout the year and as of December 31, 2016). The covenants are as follows: (1) the Company must maintain its borrowings below a certain consolidated funded debt ratio, (2) the Company has a limitation on its annual spending on the acquisition of fixed asset capital additions, and (3) the Company must maintain a certain consolidated fixed charge coverage ratio.

At December 31, 2016, total indebtedness was \$41,400 as compared to \$69,055 at December 31, 2015. At December 31, 2016, based on its performance against the most restrictive covenants listed above, the Company had the capacity to increase its borrowings by up to the maximum of \$104,853 according to the terms of the Credit Agreement.

Substantially all of the Company’s assets are pledged as collateral under the Credit Agreement.

The Company’s main bank is Bank of the West, a wholly-owned subsidiary of the French bank, BNP Paribas. Bank of the West has been the Company’s bank for more than 30 years and is the syndication manager for the Company’s loans.

The Company has various loans in place that together constitute the short-term and long-term loan balances shown in the consolidated balance sheets at December 31, 2016 and December 31, 2015. The average amount outstanding on the senior secured revolving line of credit during the years ended December 31, 2016 and 2015 was \$59,897 and \$94,765, respectively. The weighted average interest rate on the revolving credit line during the years ended December 31, 2016, 2015, and 2014 was 2.3%, 2.1%, and 2.5% respectively.

### (3) Income Taxes

The components of income tax (benefit) expense are:

	2016	2015	2014
<b>Current:</b>			
Federal	\$5,136	\$573	\$(4,256)
State	(122 )	417	251
Foreign	655	991	934
<b>Deferred:</b>			
Federal	(1,345)	(319 )	3,492
State	1,216	347	(872 )
	\$5,540	\$2,009	\$(451 )

Total income tax expense differed from the amounts computed by applying the U.S. Federal income tax rate of 35.0% to income before income tax expense as a result of the following:

	2016	2015	2014
Computed tax expense at statutory federal rates	\$6,415	\$3,010	\$1,536
Increase (decrease) in taxes resulting from:			
State taxes, net of federal income tax benefit	702	454	(11 )
Domestic production deduction	(1,272)	(179 )	420
Income tax credits	(335 )	(662 )	(728 )
Foreign tax rate differential	(1,587)	(1,590)	(2,159)
Subpart F income	14	9	338
Equity investment	123	223	10
Stock based compensation	208	244	219
State tax rate change	116	185	(257 )
Tax interest	920	-	-
Other expenses	236	315	181
	\$5,540	\$2,009	\$(451 )

Income before provision for income taxes and losses on equity investment are:

	2016	2015	2014
Domestic	\$12,513	\$1,589	\$(5,196)
Foreign	6,404	7,373	8,840
	\$18,917	\$8,962	\$3,644

Temporary differences between the financial statement carrying amounts and tax bases of assets and liabilities that give rise to significant portions of the net deferred tax liability at December 31, 2016 and 2015 relate to the following:

	2016	2015
Deferred tax asset		
Inventories	\$5,359	\$5,949
State income taxes	213	(215 )
Program accrual	12,318	12,598
Vacation pay accrual	818	796
Accrued bonuses	2,072	543
Bad debt	6	45
Stock compensation	1,614	1,781
NOL carryforward	351	658
Tax credit	14	524
Other	2,707	1,659
Deferred tax asset	\$25,472	\$24,338
Deferred tax liability		
Plant and equipment, principally due to differences in		
depreciation and capitalized interest	\$30,636	\$30,038
Prepaid expenses	1,542	1,157
Deferred tax liability	32,178	31,195
Total net deferred tax liability	\$6,706	\$6,857

The following is a roll-forward of the Company's total gross unrecognized tax liabilities, not including interest and penalties, for the fiscal years ended December 31, 2016 and 2015:

	2016	2015
Balance at beginning of year	\$2,007	\$1,958
Additions for tax positions related to the current year	65	85
Additions for tax positions related to the prior year	86	86
Deletion for tax positions related to the prior year	(265 )	(122 )
Balance at end of year	\$1,893	\$2,007

The Company recognizes accrued interest and penalties related to unrecognized tax benefits in the provision for income taxes in the Company's consolidated financial statements. For the year ended December 31, 2016 and 2015, the Company had recognized approximately \$408 and \$335, respectively in interest and penalties related to unrecognized tax benefits accrued.

It is expected that the amount of unrecognized tax benefits will change within the next 12 months; however we do not expect the change to have a significant impact on our consolidated financial statements. At this time, an estimate of the range of the reasonable possible outcomes cannot be made.

The Company believes it is more likely than not that the deferred tax assets detailed in the table above will be realized in the normal course of business. It is the intent of the Company that undistributed earnings of foreign subsidiaries are permanently reinvested and, accordingly, no deferred liability for federal and state income taxes has been recorded. The amount of undistributed earnings was \$35,586 and \$29,774 as of December 31, 2016 and December 31, 2015, respectively. Upon distribution of earnings in the form of dividends or otherwise, the Company would be subject to both federal and state income taxes (less any applicable foreign tax credits) and withholding taxes payable to the various foreign countries. Determination of the unrecognized deferred income tax liability is not practical due to the complexities of a hypothetical calculation.

The Company is subject to both U.S. federal income tax and income tax in multiple state jurisdictions on income generated in the United States. Federal income tax returns, of the Company are subject to Internal Revenue Service ("IRS") examination for the 2013 through 2015 tax years. State income tax returns are subject to examination for the 2012 through 2015 tax years.

The Company currently is undergoing an examination by the IRS for the tax years ended December 31, 2013 and 2014. While the audit is ongoing, the Company has agreed to a proposed adjustment. As a result, the Company has increased deferred tax assets and income taxes payable at December 31, 2015 by \$12,598.

#### (4) Litigation and Environmental

##### A. DBCP Cases

Over the course of the past 30 years, AMVAC and/or the Company have been named or otherwise implicated in a number of lawsuits concerning injuries allegedly arising from either contamination of water supplies or personal exposure to 1, 2-dibromo-3-chloropropane (“DBCP”). DBCP was manufactured by several chemical companies, including Dow Chemical Company, Shell Oil Company and AMVAC and was approved by the USEPA to control nematodes. DBCP was also applied on banana farms in Latin America. The USEPA suspended registrations of DBCP in October 1979, except for use on pineapples in Hawaii. The USEPA suspension was partially based on 1977 studies by other manufacturers that indicated a possible link between male fertility and exposure to DBCP among their factory production workers involved with producing the product.

At present, there are four domestic lawsuits and approximately 85 Nicaraguan lawsuits filed by former banana workers in which AMVAC has been named as a party. Only two of the Nicaraguan actions have actually been served on AMVAC.

As described more fully below, activity in domestic cases during 2016 is as follows: in Hawaii, *Patrickson, et. al. v. Dole Food Company, et. al* which had been dismissed in 2011 (for expiration of the statute of limitations), was appealed and, upon the appellate court’s adoption of cross-jurisdictional tolling, remanded to the trial court for adjudication; and *Adams*, from which co-defendant Dole was dismissed, is on appeal with respect to such dismissal and, at any rate, involves claims that pre-dated AMVAC’s sales into the relevant market. All but two matters that had been pending in Louisiana and Delaware have been dismissed (and affirmed on appeal) based upon the applicable statutes of limitation. The pending Delaware matters are more fully described below. With respect to Nicaraguan matters, there was no change in status during 2016.

##### Delaware Matter

On or about May 31, 2012, two cases (captioned *Abad Castillo and Marquinez*) were filed with the United States District Court for the District of Delaware (USDC DE No. 1:12-C.V.-00695-LPS) involving claims for physical injury arising from alleged exposure to DBCP over the course of the late 1960’s through the mid-1980’s on behalf of 2,700 banana plantation workers from Costa Rica, Ecuador, Guatemala, and Panama. Defendant Dole brought a motion to dismiss 22 plaintiffs from *Abad Castillo* on the ground that they were parties in cases that had been filed by *HendlerLaw, P.C.* in Louisiana. On September 19, 2013, the appeals court determined that 14 of the 22 plaintiffs should be dismissed. On May 27, 2014, the district court granted Dole’s motion to dismiss the matter without prejudice on the ground that the applicable statute of limitations had expired in 1995. Then, on August 5, 2014, the parties stipulated to summary judgment in favor of defendants (on the same ground as the earlier motion) and the court entered judgment in the matter. Plaintiffs were given an opportunity to appeal; however, only 57 of the 2,700 actually entered an appeal. Thus, at this stage, only 57 plaintiffs remain in the action. We expect that the appellate court will schedule oral argument by March 2017 and may issue a decision by July 2017. The Company believes that a loss is neither probable nor reasonably estimable and has not recorded a loss contingency on this matter.

On or about May 31, 2012, *HendlerLaw, P.C.* filed several actions involving claims for personal injury allegedly arising from exposure to DBCP on behalf of 230 banana workers from Costa Rica, Ecuador and Panama. Defendant Dole subsequently brought a motion to dismiss these matters under the “first-to-file” theory of jurisdiction, specifically in light of the fact that they involved identical claims and claimants as matters that had been brought by the same law firm in Louisiana. These Delaware matters have been consolidated into one matter (the “*Hendler-Delaware Case*”). On August 21, 2012, the U.S. District Court in the *Hendler-Delaware* case granted defendants’ motion to dismiss the actions with prejudice, finding that the same claimants and claims had been pending in the *Hendler-Louisiana* cases

where they had been first filed. However, plaintiffs appealed the dismissal, and on September 2, 2016, the Third Circuit Court reversed the District Court decision, finding that it was not proper for the trial court to have dismissed these cases with prejudice even though the Louisiana courts had dismissed the same claims for expiration of the statute of limitations. In reaching its decision, the Third Circuit reasoned that no court had yet addressed the merits of the matter, that Delaware's statute of limitations may differ from that of Louisiana, and that it would have been proper for the Delaware trial court to have dismissed the matter without prejudice (that is, with the right to amend and refile). Accordingly, the matter has been remanded to the U.S. District Court in Delaware. The Company believes the Hendler-Delaware case has no merit and, further, that a loss is neither probable nor reasonably estimable; accordingly, it has not recorded a loss contingency.

#### Hawaiian Matters

Patrickson, et. al. v. Dole Food Company, et al In October 1997, AMVAC was served with two complaints in which it was named as a defendant, filed in the Circuit Court, First Circuit, State of Hawai'i and in the Circuit Court of the Second Circuit, State of Hawai'i (two identical suits) entitled Patrickson, et. al. v. Dole Food Company, et. al ("Patrickson Case") alleging damages sustained from injuries (including sterility) to banana workers caused by plaintiffs' exposure to DBCP while applying the product in their native countries. Other named defendants include: Dole Food Company, Shell Oil Company and Dow Chemical Company. After several



years of law and motion activity, the court granted judgment in favor of the defendants based upon the statute of limitations on July 28, 2010. On August 24, 2010, the plaintiffs filed a notice of appeal. On April 8, 2011, counsel for plaintiffs filed a pleading to withdraw and to substitute new counsel. On October 21, 2015, the Hawai'i Supreme Court granted the appeal and overturned the lower court decision, ruling that the State of Hawai'i now recognizes cross-jurisdictional tolling, that plaintiffs filed their complaint within the applicable statute of limitations and that the matter is to be remanded to the lower court for further adjudication. No discovery has taken place in this matter, and, at this stage in the proceedings, the Company does not believe that a loss is either probable or reasonably estimable and, accordingly, has not recorded a loss contingency for this matter.

*Adams v. Dole Food Company et al* On approximately November 23, 2007, AMVAC was served with a suit filed by two former Hawaiian pineapple workers (and their spouses), alleging that they had testicular cancer due to DBCP exposure: *Adams v. Dole Food Company et al* in the First Circuit for the State of Hawaii. Plaintiff alleges that they were exposed to DBCP between 1971 and 1975. AMVAC denies that any of its product could have been used at the times and locations alleged by these plaintiffs. Following the dismissal of *Dole Food Company* on the basis of the exclusive remedy of worker's compensation benefits, plaintiffs appealed the dismissal. The court of appeals subsequently remanded the matter to the lower court in February 2014, effectively permitting plaintiffs to amend their complaint to circumvent the workers' compensation bar. There has been no activity in the case since that time, and there is no estimated date of opinion. The Company does not believe that a loss is either probable or reasonably estimable and has not recorded a loss contingency for this matter.

#### Nicaraguan Matters

A review of court filings in Chinandega, Nicaragua, has found 85 suits alleging personal injury allegedly due to exposure to DBCP and involving approximately 3,592 plaintiffs have been filed against AMVAC and other parties. Of these cases, only two – *Flavio Apolinar Castillo et al. v. AMVAC Chemical Corporation et al.*, No. 535/04 and *Luis Cristobal Martinez Suazo et al. v. AMVAC Chemical Corporation et al.*, No. 679/04 Castillo and Suazo, (which were filed in 2004 and involve 15 banana workers) have been served on AMVAC. All but one of the suits in Nicaragua have been filed pursuant to Special Law 364, an October 2000 Nicaraguan statute that contains substantive and procedural provisions that Nicaragua's Attorney General previously expressed as unconstitutional. Each of the Nicaraguan plaintiffs' claims \$1 million in compensatory damages and \$5 million in punitive damages. In all of these cases, AMVAC is a joint defendant with Dow Chemical Company and Dole Food Company, Inc. AMVAC contends that the Nicaragua courts do not have jurisdiction over it and that Public Law 364 violates international due process of law. AMVAC has objected to personal jurisdiction and demanded under Law 364 that the claims be litigated in the United States. In 2007, the court denied these objections, and AMVAC appealed the denial. It is not presently known as to how many of these plaintiffs actually claim exposure to DBCP at the time AMVAC's product was allegedly used nor is there any verification of the claimed injuries. Further, to date, plaintiffs have not had success in enforcing Nicaraguan judgments against domestic companies before U.S. courts. With respect to these Nicaraguan matters, AMVAC intends to defend any claim vigorously. Furthermore, the Company does not believe that a loss is either probable or reasonably estimable and has not recorded a loss contingency for these matters.

#### B. Other Matters

**USEPA RCRA/FIFRA Matter** On or about March 24, 2015, Region 4 of the USEPA issued to registrant's principal operating subsidiary, AMVAC, an Opportunity to Show Cause ("OSC") why USEPA should not take formal action under Section 3008(a) of the RCRA for potential noncompliance arising from AMVAC's importation, transportation and storage of used, depleted Lock 'N Load containers having residual amounts of its product Thimet. The scope of these discussions subsequently expanded to involve USEPA Region 5 and to include the importation of depleted Lock 'N Load containers from Australia in October 2015 and full Lock 'N Load containers from Canada in January 2016. On or about March 25, 2016, USEPA Region 5 issued a Stop Sale, Use or Removal Order ("SSURO") ordering

AMVAC to cease the distribution or sale of US Thimet 20G, Canadian Thimet 15G and Australian Thimet 200G on the grounds that the importation of both depleted and full containers of Thimet and the subsequent use of their contents was allegedly inconsistent with FIFRA and RCRA. After hosting a plant inspection by Regions 4 and 5 and providing documentation to the agency, AMVAC requested and received relief from the SSURO in the form of nine amendments. As a consequence of this relief, the Company believes that it will have adequate inventory to meet customers' needs for the foreseeable future.

AMVAC believes that it has lawfully imported used Thimet containers from Canada and Australia for the purpose of potentially refilling, reprocessing or properly disposing of them. Further, the Company believes that it has carried out its Thimet business in good faith, maintained a focus on product stewardship and not posed any increased risk of harm to human health or the environment. Nevertheless, USEPA's Region 5 has expressed its intention to bring a civil enforcement action relating to its overall findings. On October 11, 2016, the Company met with USEPA's Office of Enforcement and Compliance (as well as with Regions 4 and 5) to clarify a path forward to ensure future compliance. However, on November 10, 2016, the Company was served with a grand jury subpoena out of the U.S. District Court for the Southern District of Alabama in which both the Environmental Crimes Section ("ECS") of USEPA and the U.S. Department of Justice ("DoJ") are seeking the production of documents relating to the re-importation of depleted Thimet containers.

The Company has retained defense counsel and is cooperating with both ECS and DoJ in the production. At this stage, the company has not yet received a final position from USEPA with regard to civil enforcement, nor have ECS and DoJ made clear their intentions with regard to any potential criminal enforcement. Thus, it is too early to tell whether a loss on either front is probable or reasonably estimable. Accordingly, the Company has not recorded a loss contingency on these matters.

**Galvan v. AMVAC** In an action entitled *Graciela Galvan v. AMVAC Chemical Corp.* filed on April 7, 2014 with the Superior Court for the State of California for the County of Orange (No. 00716103CXC) plaintiff, a former employee, alleges violations of wages and hours requirements under the California Labor Code. The Company completed the deposition of putative class representative and participated in mediation on the matter. In February 2016, the court granted plaintiff's motion for class certification with respect to only one of the seven original claims (namely, that allegedly discretionary bonus payments made to class members during the subject period should have been taken into account when calculating overtime). The Company believes that such bonus payments were discretionary and, as such, were properly excluded from overtime calculations. Nevertheless, in the interest of saving defense costs and mitigating downside risk, the Company engaged in settlement discussions with plaintiff's counsel over the course of several months. The proposed settlement is not material to the Company's consolidated financial statements. The terms of the settlement are subject to approval by the presiding judge in the action. If approved by the judge, the matter should be dismissed with prejudice within six to nine months.

**DeChene Farms** The Company received a claim by a Minnesota-based grower to the effect that the in-furrow use of the Company's insecticide, Moca<sup>®</sup>, resulted in delayed germination and resulting diminished size of approximately 300 acres of red Norland potatoes. Based upon its then-current understanding of the claim, during third quarter of 2016, the Company recorded a loss contingency for the matter in an amount that was not material to its consolidated financial statements. Subsequently, the Company retained two independent investigators and conducted its own investigation of the matter as to causation. Further, we received information regarding market conditions and crop valuation from the grower, who alleged that he had received a lower price per pound for his crop. The Company held negotiations with grower and, in December 2016, the parties agreed to settle the matter. The settlement was not material to the Company's consolidated financial statements.

**Harold Reed v. AMVAC et al** During January 2017, the Company was served with two Statements of Claim that had been filed on March 29, 2016 with the Court of Queen's Bench of Alberta, Canada (as case numbers 160600211 and 160600237) in which plaintiffs Harold Reed ("Reed,"), an applicator, and 819596 Alberta Ltd. dba Jem Holdings ("Jem"), an application equipment rental company, allege physical injury and damage to equipment, respectively, arising from a fire that occurred during an application of the Company's potato sprout inhibitor, SmartBlock, at a potato storage facility in Coaldale, Alberta, on April 2, 2014. Plaintiffs allege, among other things, that Amvac was negligent and failed to warn them of the risks of such application. Reed seeks damages of \$250K for pain and suffering, while Jem seeks \$60K in lost equipment; both plaintiffs also seek unspecified damages as well. Also during January 2017, counsel for Reed requested that counsel for the Company accept service of four related actions relating to the same incident and pending with the same court: (i) *Van Giessen Growers, Inc. v Harold Reed et al* (No. 160303906)(in which grower seeks \$400K for loss of potatoes); (ii) *James Houweling et al. v. Harold Reed et al.* (No. 160104421)(in which equipment owner seeks damages for lost equipment); (iii) *Chin Coulee Farms, etc. v. Harold Reed et al.* (No. 150600545)(in which owner of potatoes and truck seeks \$530K for loss thereof); and (iv) *Houweling Farms v. Harold Reed et al.* (No. 15060881)(in which owner of several Quonset huts seeks damages for lost improvements, equipment and business income equal to \$4.3 million). The Company was not named in the original complaints in these four actions but has since been added in cross-claims by defendant Reed. In his cross claims, Reed also alleges that other cross-defendants were negligent for using highly flammable insulation and failing to maintain sparking electrical fixtures in the storage units affected by the fire. The Company believes that plaintiffs' and cross-plaintiffs' claims against it are without merit and intends to defend these matters vigorously. At this stage in the proceedings, however, it is too early to determine whether a loss is probable or reasonably estimable; accordingly, the Company has not

recorded a loss contingency.

(5) Employee Deferred Compensation Plan and Employee Stock Purchase Plan

The Company maintains a deferred compensation plan (“the Plan”) for all eligible employees. The Plan calls for each eligible employee, at the employee’s election, to participate in an income deferral arrangement under Internal Revenue Code Section 401(k). The plan allows eligible employees to make contributions which cannot exceed 100% of compensation, or the annual dollar limit set by the Internal Revenue Code. The Company matches the first 5% of employee contributions. The Company’s contributions to the Plan amounted to \$1,258, \$1,261 and \$1,445 in 2016, 2015 and 2014, respectively.

During 2001, the Company’s Board of Directors adopted the AVD Employee Stock Purchase Plan (the “ESPP Plan”). The Plan allows eligible employees to purchase shares of common stock through payroll deductions at a discounted price. An original aggregate number of approximately 1,000,000 shares of the Company’s Common Stock, par value \$.10 per share (subject to adjustment for any stock dividend, stock split or other relevant changes in the Company’s capitalization) were allowed to be sold pursuant to the Plan, which is intended to qualify under Section 423 of the Internal Revenue Code. The Plan allows for purchases in a series of offering periods, each six months in duration, with new offering periods (other than the initial offering period) commencing on January 1 and

July 1 of each year. The initial offering period commenced on July 1, 2001. Pursuant to action taken by the Company's Board of Directors in December 10, 2010, the expiration of the Plan was extended to December 31, 2013. The Plan was amended and restated on June 30, 2011 following stockholders' ratification of the extended expiration date. In December 2013, the Board of Directors resolved to extend the expiration date of the Plan five years, that is, until December 31, 2018. Under the Plan, as amended as of June 30, 2011, 995,000 shares of the Company's common stock were authorized. As of December 31, 2016, 2015, and 2014, 760,825 803,555, and 854,007 shares, respectively, remained available under the plan. The expense recognized under the Plan was immaterial during the years ended December 31, 2016, 2015 and 2014, respectively.

Shares of common stock purchased through the Plan in 2016, 2015 and 2014 were 42,730, 50,452 and 47,213, respectively.

#### (6) Major Customers and International Sales

In 2016, there were three companies that accounted for 15%, 11% and 8% of the Company's consolidated sales. In 2015, there were three companies that accounted for 14%, 11%, and 10% of the Company's consolidated sales. In 2014, there were three companies that accounted for 16%, 10% and 9% of the Company's consolidated sales.

The Company primarily sells its products to large distributors, buying cooperatives and groups and extends credit based on an evaluation of the customer's financial condition. The Company had three significant customers who each accounted for approximately 15%, 11% and 8% of the Company's receivables as of December 31, 2016. The Company had three significant customers who each accounted for approximately 14%, 11% and 10% of the Company's receivables as of December 31, 2015. The Company has long-standing relationships with its customers and the Company considers its overall credit risk for accounts receivables to be low.

International sales for 2016, 2015 and 2014 were as follows:

	2016	2015	2014
Mexico	\$16,690	\$17,096	\$14,601
South & Central America	16,234	15,970	16,585
Europe	14,519	12,350	13,249
Asia	17,138	13,847	7,683
Africa	7,111	8,622	9,310
Australia	3,735	4,158	4,202
Canada	3,690	1,585	4,910
Middle East	4,041	3,230	3,166
Other	101	437	—
	\$83,259	\$77,295	\$73,706

#### (7) Royalties

The Company has two licensing agreements that require minimum annual royalty payments. Those agreements related to the acquisition of certain products. The Company also has two other licensing arrangements in which royalty are paid based on percentage of annual sales. Certain royalty agreements contain confidentiality covenants. Royalty expenses were \$83, \$111 and \$33 for 2016, 2015 and 2014, respectively.

(8) Product Acquisitions

During 2015, the Company entered into two acquisitions with a combined purchase consideration of \$36,667. Subsequently, in 2016, the Company paid an additional amount of \$224 related to certain studies for one of the acquisitions, pursuant to the purchase agreement of the acquisition. The amount of goodwill allocated to the product acquisitions was not material. Results of the 2015 acquisitions were included in the Company's consolidated statements of operations from the dates of the respective acquisitions and are immaterial.

Pro forma financial information for these acquisitions has not been included since they were immaterial. The acquisitions completed in 2015 were as follows:

On April 29, 2015, AMVAC CV completed the acquisition of certain assets relating the bromacil herbicide product line from Dupont Crop Protection. The assets acquired included the Hyvar® and Krovar® trademarks, product registrations, product registration data, customer information, access to certain know-how, technical registrations and associated registration data in all markets outside of North America. Bromacil is a broad spectrum residual herbicide used on crops such as pineapples, citrus, agave and asparagus, and

is marketed globally under the Hyvar<sup>®</sup> and Krovar<sup>®</sup> brands. Bromacil herbicides are important weed control tools and are used in countries such as Japan, Philippines, Thailand, Mexico, Cost Rica and Brazil. The acquisition is consistent with the Company's long term strategic plan. The Company assessed the acquisition as a business combination under ASC 805 (Business Combinations).

On April 6, 2015, AMVAC CV completed the acquisition of certain assets relating to the Nemacur<sup>®</sup> insecticide/nematicide product line from Adama Agricultural Solutions Ltd ("Adama"). The assets acquired include all trademarks, product registrations, associated registration data, and customer information that relate to the marketing and sale of this crop protection product in Europe. Nemacur<sup>®</sup> is a highly effective insecticide/nematicide used to control soil insects and nematodes on many fruit and vegetable crops. The acquisition is consistent with the Company's long term strategic plan. The Company assessed the acquisition as a business combination under ASC 805 (Business Combinations).

The following schedule represents intangible assets recognized in connection with product acquisitions (See description of Business, Basis of Consolidation and Significant Accounting Policies for the Company's accounting policy regarding intangible assets):

	Amount
Intangible assets at December 31, 2013	\$107,007
Write off during fiscal 2014	(319 )
Impact of movement in exchange rates	(86 )
Amortization expense	(6,391 )
Intangible assets at December 31, 2014	\$100,211
Additions during fiscal 2015	36,667
Write offs during fiscal 2015	(33 )
Impact of movement in exchange rates	(197 )
Amortization expense	(7,488 )
Intangible assets at December 31, 2015	\$129,160
Additions during fiscal 2016	224
Write offs during fiscal 2016	(78 )
Impact of movement in exchange rates	69
Amortization expense	(7,942 )
Intangible assets at December 31, 2016	\$121,433

The following schedule represents the gross carrying amount and accumulated amortization of the intangible assets. Product rights are amortized over their expected useful lives of 25 years. Customer lists are amortized over their expected useful lives of ten years, and trademarks are amortized over their expected useful lives of 25 years.

	2016			2015		
	Gross	Accumulated Amortization	Net Book Value	Gross	Accumulated Amortization	Net Book Value
\$000's						
Product Rights	\$167,906	\$ 63,141	\$104,765	\$167,694	\$ 56,233	\$111,461
Customer Lists	3,091	1,053	2,038	3,091	744	2,347

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Trademarks	18,041	3,411	14,630	18,041	2,689	15,352
Total Intangibles	\$ 189,038	\$ 67,605	\$ 121,433	\$ 188,826	\$ 59,666	\$ 129,160

The following schedule represents future amortization charges related to intangible assets:

Year ending December 31,	
2017	\$7,911
2018	7,793
2019	7,793
2020	7,523
2021	7,438
Thereafter	82,975
	\$121,433



The following schedule represents the Company's obligations under product acquisitions and licensing agreements:

	Amount
Obligations under acquisition agreements at December 31, 2013	\$3,886
Adjustment to deferred liabilities	(32 )
Amortization of discounted liabilities	324
Payments on existing obligations	(1,686)
Obligations under acquisition agreements at December 31, 2014	\$2,492
Additional obligations acquired	1,367
Adjustment to deferred liabilities	65
Amortization of discounted liabilities	135
Payments on existing obligations	(2,524)
Obligations under acquisition agreements at December 31, 2015	\$1,535
Additional obligations acquired	224
Adjustment to deferred liabilities	(22 )
Amortization of discounted liabilities	38
Payments on existing obligations	(960 )
Obligations under acquisition agreements at December 31, 2016	\$815

In each of the past three fiscal years, the Company has remeasured the fair value of the earn out liabilities related to the acquisitions completed in the first quarter of 2010. Based on the remeasurement; in 2016, the fair value was decreased by \$22 and thereby decreased operating expenses by \$22; in 2015, the fair value was increased by \$65, thereby increasing operating expenses by \$65; and in 2014, the fair value was reduced by \$32, thereby reduced operating expenses by \$32.

As of December 31, 2016, the \$815 in remaining obligations under product acquisitions and licensing agreements is included in other liabilities.

#### (9) Commitments

The Company has various lease agreements for offices as well as long-term ground leases for its facilities at Axis, AL, Hannibal, MO and Marsing, ID. The office leases contain provisions to pass through to the Company its pro-rata share of certain of the building's operating expenses. The long-term ground lease at Axis, AL is for twenty years (commencing May 2001) with up to five automatic renewals of three years each for a total of thirty-five years. The long-term ground lease at Hannibal, MO is for a period of 20 years (commencing December 2007) with automatic one year extensions thereafter, subject to termination with a twelve-month notice. At its Marsing facility, the Company owns 15 acres and holds a long-term ground lease on two acres for a period of 25 years (commencing in March 2008). Rent expense for the years ended December 31, 2016, 2015 and 2014 was \$946, \$947 and \$1,012. In addition, the Company has various vehicle lease agreements for its sales force. Vehicle lease expense for the years ended December 31, 2016, 2015 and 2014 was \$555, \$435, and \$442 respectively.

Future minimum lease payments under the terms of the leases are as follows:

Year ending December 31,

2017	\$1,450
2018	1,301
2019	1,031
2020	948
2021	523
Thereafter	775
	\$6,028

(10) Research and Development

Research and development expenses which are included in operating expenses were \$6,998, \$6,337 and \$8,591 for the years ended December 31, 2016, 2015 and 2014, respectively.

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## (11) Equity Plan Awards

Under the Company's Equity Incentive Plan of 1993, as amended ("the Plan"), all employees are eligible to receive non-assignable and non-transferable restricted stock, options to purchase common stock, and other forms of equity. As of December 31, 2016, the number of securities remaining available for future issuance under the Plan is 827,000.

## Incentive Stock Option Plans ("ISOP")

Under the terms of the Company's ISOP, under which options to purchase common stock can be issued, all employees are eligible to receive non-assignable and non-transferable options to purchase shares. The exercise price of any option may not be less than the fair market value of the shares on the date of grant; provided, however, that the exercise price of any option granted to an eligible employee owning more than 10% of the outstanding common stock may not be less than 110% of the fair market value of the shares underlying such option on the date of grant. No options granted may be exercisable more than ten years after the date of grant.

In 2014, the Company granted incentive stock options to purchase 277,025 shares of common stock to employees. Of these options, 26,483 option shares will vest one-third each year on the first, second, and third anniversaries of the date of grant and the balance will cliff vest after three years of service. All options granted are non-assignable and non-transferable. In 2016 and 2015, no options were granted.

Option activity within each plan is as follows:

		Exercisable	
	Incentive	Weighted	Weighted
	Stock	Average	Average
	Option	Price Per	Price
	Plans	Share	Per Share
Balance outstanding, December 31, 2013	561,029	\$ 7.76	\$ 7.70
Options granted,	277,025	11.49	
Options exercised,	(113,150)	7.50	
Balance outstanding, December 31, 2014	724,904	\$ 9.22	\$ 7.82
Options exercised,	(63,950 )	7.50	
Options forfeited,	(34,109 )	12.00	
Balance outstanding, December 31, 2015	626,845	\$ 9.25	\$ 7.73
Options exercised,	(58,900 )	7.50	
Options forfeited,	(26,040 )	11.49	
Balance outstanding, December 31, 2016	541,905	\$ 9.33	\$ 7.97

Information relating to stock options at December 31, 2016 summarized by exercise price is as follows:

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Exercise Price Per Share	Outstanding Weighted Average Remaining			Exercisable Weighted Average	
	Shares	Life (Months)	Exercise Price	Shares	Exercise Price
<b>Incentive Stock Option Plan:</b>					
\$7.50	298,350	47	\$ 7.50	298,350	\$ 7.50
\$11.32-\$14.75	243,555	92	\$ 11.57	34,334	\$ 12.07
	541,905		\$ 9.33	332,684	\$ 7.97

During 2016, 2015 and 2014, the Company recognized stock-based compensation expense related to incentive stock options of \$354, \$431, and \$22, respectively.

The weighted average exercise prices for options granted and exercisable and the weighted average remaining contractual life for options outstanding as of December 31, 2016 and 2015 was as follows:

		Weighted	Weighted	Remaining	Intrinsic
		Average	Average	Contractual	Value
	Number	Exercise	Life	(Months)	(thousands)
	of	Price			
	Shares				
As of December 31, 2016:					
Incentive Stock Option Plans:					
Outstanding	541,905	\$ 9.33	67		\$ 5,321
Expected to Vest	536,531	\$ 9.31	67		\$ 5,280
Exercisable	332,684	\$ 7.97	49		\$ 3,719
As of December 31, 2015:					
Incentive Stock Option Plans:					
Outstanding	626,845	\$ 9.25	79		\$ 2,990
Expected to Vest	616,987	\$ 9.21	78		\$ 2,965
Exercisable	373,929	\$ 7.73	59		\$ 2,353

The total intrinsic value of options exercised during 2016, 2015 and 2014 was \$493, \$361, and \$1,480, respectively. Cash received from stock options exercised during 2016, 2015, and 2014 was \$442, \$480, and \$849, respectively.

#### Nonstatutory Stock Options (“NSSO”)

The Company did not grant any non-statutory stock options during the three years ended December 31, 2016.

#### Common Stock Grants

During 2016, the Company issued a total of 150,009 shares of common stock to certain employees and non-executive board members. Of these, 21,139 shares vest immediately, 2,600 shares vest after 90 days from date of grant, 1,200 shares will vest one-half each year on the anniversaries of the employee’s employment date, 3,000 shares will vest one year from the employee’s employment date, and the balance will cliff vest after three years of service. The fair values of the grants range from \$15.08 to \$17.35 per share based on the publicly traded share prices at the date of grants. The total fair value of \$2,283 is being recognized over the vesting period, which is representative of the related service periods. During 2016, 35,615 shares of common stock granted to employees were forfeited.

During 2015, the Company issued a total of 73,201 shares of common stock to certain employees and non-executive board members. Of these, 21,005 shares vest immediately, 7,500 shares vest after 90 days from date of grant, 3,196 shares will vest one-third each year on the anniversaries of the employee’s employment date and the balance will cliff vest after three years of service. The fair values of the grants range from \$11.42 to \$14.28 per share based on the

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publicly traded share prices at the date of grants. The total fair value of \$928 is being recognized over the vesting period, which is representative of the related service periods. During 2015, 31,431 shares of common stock granted to employees were forfeited.

A status summary of non-vested shares as of December 31, 2016 and 2015, are presented below:

	December 31, 2016		December 31, 2015	
	Weighted		Weighted	
	Average		Average	
	Grant		Grant	
	Number	Date Fair	Number	Date Fair
	of Shares	Value	of Shares	Value
Nonvested shares at January 1 <sup>st</sup>	362,841	\$ 20.43	560,842	\$ 21.44
Granted	150,009	15.22	73,201	12.68
Vested	(152,479)	15.19	(239,771)	20.23
Forfeited	(35,615 )	18.89	(31,431 )	22.02
Nonvested shares at December 31 <sup>st</sup>	324,756	\$ 14.75	362,841	\$ 20.43

During 2016, 2015 and 2014, the Company recognized stock-based compensation expense related to restricted shares of \$1,630, \$2,972, and \$3,963, respectively.

### Performance Based Stock Grants

On January 6, 2016, the Company granted a total of 52,170 performance based shares that will cliff vest on January 6, 2019 with a measurement period commencing January 1, 2016 through December 31, 2018, provided that the participating employees are continuously employed by the Company during the vesting period. Eighty percent of these performance based shares are based upon financial performance of the Company, specifically, an earnings before income tax (“EBIT”) goal weighted at 50% and a net sales goal weighted at 30%. The remaining 20% of performance based shares are based upon AVD stock price appreciation over the same performance measurement period. The EBIT and net sales goals measure the relative growth of the Company’s EBIT and net sales for the performance measurement period, as compared to the median growth of EBIT and net sales for an identified peer group. The stockholder return goal measures the relative growth of the fair market value of the Company’s stock price over the performance measurement period, as compared to that of the Russell 2000 Index and the median fair market value of the common stock of the comparator companies, identified in the Company’s 2016 Proxy Statement. All parts of these awards vest in three years, but are subject to reduction to a minimum (or even zero) for meeting less than the targeted performance and to increase to a maximum of 200% for meeting in excess of the targeted performance.

For this award, the performance based shares related to EBIT and net sales have a fair value of \$15.08 per share and the shares related to the Company’s stock price have a fair value of \$11.63 per share. The fair value for shares related to stock price was determined by using the Monte Carlo valuation method. (It should be noted that the Company’s Equity Incentive Plan expired on May 12, 2015, future issuances were not permitted until stockholders’ approval to extend the term of the plan during its 2016 Annual Stockholders’ Meeting, which took place on June 8, 2016. The fair value for shares related to EBIT and net sales was therefore, determined by using the publicly traded share price as of the Plan extension approval date (June 8, 2016)). For such performance based stock awards, the Company recognizes share-based compensation cost on a straight-line basis for each performance criteria over the implied service period.

During 2015, the Company granted a total of 10,696 performance based shares. Of these, 7,500 shares will cliff vest on January 5, 2018 with a measurement period commencing January 1, 2015 and ending December 31, 2017 and 3,196 shares will cliff vest on August 1, 2018 with a measurement period commencing July 1, 2015 and ending June 30, 2018, provided that the participating employees are continuously employed by the Company during the vesting period. Eighty percent of these performance based shares are based upon financial performance of the Company, specifically, an earnings before income tax (“EBIT”) goal weighted at 50% and a net sales goal weighted at 30%. The remaining 20% of performance based shares are based upon AVD stock price appreciation over the same performance measurement period. The EBIT and net sales goals measure the relative growth of the Company’s EBIT and net sales for the performance measurement period, as compared to the median growth of EBIT and net sales for an identified peer group. The stockholder return goal measures the relative growth of the fair market value of the Company’s stock price over the performance measurement period, as compared to that of the Russell 2000 Index and the median fair market value of the common stock of the comparator companies, identified in the Company’s 2015 Proxy Statement. All parts of these awards vest in three years, but are subject to reduction to a minimum (or even zero) for meeting less than the targeted performance and to increase to a maximum of 200% for meeting in excess of the targeted performance.

As of December 31, 2015, performance based shares related to EBIT and net sales have an average fair value of \$11.86 per share. The fair value was determined by using the publicly traded share price as of the date of grant. The performance based shares related to the Company’s stock price have an average fair value of \$9.48 per share. The fair value was determined by using the Monte Carlo valuation method. For awards with performance conditions, the

Company recognizes share-based compensation cost on a straight-line basis for each performance criteria over the implied service period.

On May 23, 2014, the Company granted a total of 79,270 performance based shares that will cliff vest on May 23, 2017, provided that participating employees are continuously employed by the Company during the vesting period. Of these performance based shares, 80% are based upon financial performance of the Company, specifically, EBIT goal weighted at 50% and a net sales goal weighted at 30% for the period commencing April 1, 2014 and ending December 31, 2016; the remaining 20% of performance based shares are based upon AVD stock price appreciation (stockholder return) over the same performance measurement period. The net sales and EBIT goal measures the relative growth of the Company's net sales and EBIT for the performance measurement period, as compared to the median growth of net sales and EBIT for an identified peer group. The stockholder return goal measures the relative growth of the fair market value of the Company's stock price over the performance measurement period, as compared to that of the Russell 2000 Index and the median fair market value of the common stock of the comparator companies. All parts of these awards vest in three years, but are subject to reduction to a minimum (or even zero) for meeting less than the targeted performance and to increase to a maximum of 200% for meeting in excess of the targeted performance.

As of December 31, 2014, performance based shares related to net sales and EBIT were fair valued at \$14.92 per share and the shares related to AVD stock price were fair valued at \$12.85 per share. The fair value was determined by using the publicly traded



share price as of the date of grant. Fair value for shares related to AVD stock price was determined by using the Monte Carlo valuation method. The Company is recognizing as expense the value of these shares over the required service period of three years.

During 2016, 2015 and 2014, the Company recognized stock-based compensation expense related to performance based shares of \$995, \$329, and \$168, respectively. In 2016, the Company assessed the likelihood of achieving the performance measures based on peer group information currently available for the performance based shares granted in 2014. Based on the performance thus far, the Company has concluded that it is likely that the performance measure based on EBIT and net sales will be met at 200% of targeted performance and have considered the related additional expense in 2016. The performance shares based on market price, however, are not expected to meet targeted performance and in that event, will be forfeited. Any forfeiture related to market condition shares are included in the grant date fair value valuation and no forfeitures were recognized in 2016.

As of December 31, 2016, the Company had approximately \$796 of unamortized stock-based compensation expenses related to unvested performance based shares. This amount will be recognized over the weighted-average period of 1.7 years. This projected expense will change if any performance based shares are granted or cancelled prior to the respective reporting periods or if there are any changes required to be made for estimated forfeitures.

A status summary of non-vested shares as of December 31, 2016 and 2015, are presented below:

	December 31, 2016		December 31, 2015	
	Weighted		Weighted	
	Average		Average	
	Grant		Grant	
	Number	Date Fair	Number	Date Fair
	of	Value	of	Value
	Shares		Shares	Value
Nonvested shares at January 1 <sup>st</sup>	104,403	\$ 17.05	103,907	\$ 17.77
Granted	52,170	14.39	10,696	11.38
Forfeited	(37,551 )	22.45	(10,200 )	18.43
Nonvested shares at December 31 <sup>st</sup>	119,022	\$ 14.18	104,403	\$ 17.05

#### Performance Incentive Stock Option Plan

During 2016 and 2015, the Company did not grant any employees performance incentive stock options to acquire shares of common stock.

During 2014, the Company granted performance incentive stock options to purchase 107,689 shares of common stock to employees. These options will cliff vest on December 30, 2017 provided that the participating employees are continuously employed by the Company during the vesting period. Of these performance based stock options, 80% are based upon financial performance of the Company, specifically, an earnings before interest and tax (“EBIT”) goal weighted at 50% and a net sales goal weighted at 30% for the period commencing January 1, 2015 and ending December 31, 2017; the remaining 20% of performance based shares are based upon AVD stock price appreciation

(stockholder return) over the same performance measurement period. The net sales and EBIT goal measures the relative growth of the Company's net sales and EBIT for the performance measurement period, as compared to the median growth of net sales and EBIT for an identified peer group. The stockholder return goal measures the relative growth of the fair market value of the Company's stock price over the performance measurement period, as compared to that of the Russell 2000 Index and the median fair market value of the common stock of the comparator companies. All parts of these options vest in three years, but are subject to reduction to a minimum (or even zero) for meeting less than the targeted performance and to increase to a maximum of 200% for meeting in excess of the targeted performance. There were no performance based stock options issued by the Company prior to those issued during 2014.

Performance option activity is as follows:

		Exercisable	
	Incentive	Weighted	Weighted
	Stock	Average	Average
	Option	Price Per	Price
	Plans	Share	Per Share
Balance outstanding, December 31, 2014	107,689	\$ 11.49	\$ —
Options forfeited	(9,279 )	11.49	
Balance outstanding, December 31, 2015	98,410	\$ 11.49	\$ —
Options forfeited	(16,076 )	11.49	
Balance outstanding, December 31, 2016	82,334	\$ 11.49	\$ —

Information relating to performance stock options at December 31, 2016 summarized by exercise price is as follows:

Exercise Price Per Share	Outstanding Weighted Average Remaining			Exercisable Weighted Average	
	Shares	Life (Months)	Exercise Price	Shares	Exercise Price
<b>Performance Incentive Stock Option Plan:</b>					
\$11.49	82,334	12	\$ 11.49	—	\$ —
	82,334		\$ 11.49	—	\$ —

The weighted average exercise prices for performance options granted and exercisable and the weighted average remaining contractual life for performance options outstanding as of December 31, 2016 and 2015 was as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Remaining Contractual Life (Months)	Intrinsic Value (thousands)
<b>As of December 31, 2016:</b>				
<b>Performance Incentive Stock Option Plans:</b>				
Outstanding	82,334	\$ 11.49	12	\$ 631
Expected to Vest	75,312	\$ 11.49	12	\$ 577
Exercisable	—	\$ —	—	\$ —
<b>As of December 31, 2015:</b>				
<b>Performance Incentive Stock Option Plans:</b>				
Outstanding	98,410	\$ 11.49	24	\$ 248
Expected to Vest	58,410	\$ 11.49	24	\$ 147
Exercisable	—	\$ —	—	\$ —

During 2016, 2015 and 2014, the Company recognized stock-based compensation expense related to performance incentive stock options of \$188, \$149, and \$0, respectively. In 2016, the Company assessed the likelihood of achieving the performance measures based on peer group information currently available for the performance

incentive stock options awarded in 2014. Based on the performance thus far, the Company has concluded that it is greater than 70% likely that the performance measure based on EBIT will be met at 150% of targeted performance and net sales will be met at 125% of targeted performance and have considered the related additional expense in 2016. While the performance incentive stock options based on market price is likely to be met at 200% targeted performance, no additional expenses were recognized in 2016 as the grant date valuation of these awards reflects market conditions.

(12) Accumulated Other Comprehensive Loss

The following table lists the beginning balance, annual activity and ending balance of each component of accumulated other comprehensive loss:

	Interest			Total
	Rate	FX		
		Swap	Translation	
Balance, December 31, 2013	\$ (340 )	\$ (708 )		\$(1,048)
Other comprehensive loss before reclassifications	(30 )	(1,262 )		(1,292)
Amounts reclassified from AOCI	594	-		594
Tax effect	(224 )	-		(224 )
Balance, December 31, 2014	\$ —	\$ (1,970 )		\$(1,970)
Other comprehensive loss before reclassifications	—	(1,571 )		(1,571)
Balance, December 31, 2015	\$ —	\$ (3,541 )		\$(3,541)
Other comprehensive loss before reclassifications	—	(1,310 )		(1,310)
Balance, December 31, 2016	\$ —	\$ (4,851 )		\$(4,851)

## (13) Equity Method Investments

The Company utilizes the equity method of accounting with respect to its investment in TyraTech Inc. (“TyraTech”), a Delaware corporation that specializes in developing, marketing and selling pesticide products containing essential oils and other natural ingredients. In February 2014, TyraTech issued 37,391,763 shares, raising approximately £1.87 (\$3.1, based on exchange rate at the time) million. In July 2014, TyraTech issued a further 50,000,000 shares and raised approximately £3.5 (\$5.9, based on the exchange rate at the time) million. Due to the share issuance in both periods, the Company recognized a total gain of \$954 from the dilution of the Company’s ownership position as required by ASC 323. In October 2014, the Company exercised warrants in the amount of \$500 and purchased 6,155,000 shares in TyraTech. In November 2015, TyraTech issued a further 105,333,333 shares and raised approximately £3.2 (\$4.8, based on the exchange rate at the time) million. Due to the share issuance, the Company recognized a loss of \$7 (for 2015) from the dilution of the Company’s ownership position, as required by ASC 323. As of December 31, 2016 and 2015, the Company’s ownership position in TyraTech was approximately 15.11%. As a result of the reduced equity share, the Company re-assessed its choice of equity method accounting for the investment and determined that it retains significant influence by retaining one out of five board seats and accordingly, this method of accounting continues to be appropriate. At December 31, 2016, the carrying value of the Company’s investment in TyraTech was \$2,184 and the quoted market value based on TyraTech’s share price (Level 1 input) was \$1,292.

At December 31, 2016, the Company performed an impairment review of its investment in TyraTech and concluded that the current condition was temporary and consequently determined that no impairment charge was appropriate. TyraTech’s shares trade on the AIM market of the London Stock Exchange under the trading symbol ‘TYR’. The Company’s equity investment is included in other assets on the consolidated balance sheet.

On August 2, 2016, AMVAC BV entered into a joint venture with Huifeng. The new entity, Hong Kong JV is intended to focus on activities such as market access and technology transfer between the two members. AMVAC BV is a 50% owner of the new entity. No material contribution has been made to this joint venture in 2016.

## (14) Cost Method Investment

In February 2016, AMVAC BV made an equity investment in Biological Products for Agriculture (“Bi-PA”). Bi-PA develops biological plant protection products that can be used for the control of pests and disease of agricultural crops. As of June 30, 2016, the Company’s ownership position in Bi-PA was 15%. The Company utilizes the cost method of accounting with respect to this investment and will periodically review the investment for possible impairment. There was no impairment on the investment as of December 31, 2016. The investment is not material and is recorded within other assets on the consolidated balance sheets.

## (15) Quarterly Data—Unaudited

	March 31	June 30	September 30	December 31
Quarterly Data—2016				
Net sales	\$69,474	\$72,724	\$82,447	\$87,468
Gross profit	27,503	31,395	32,986	36,404
Net income attributable to American Vanguard	2,794	3,246	2,877	3,871
Basic net income per share	0.10	0.11	0.10	0.13
Diluted net income per share	0.10	0.11	0.10	0.13

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Quarterly Data—2015				
Net sales	\$66,565	\$66,523	\$ 72,486	\$ 83,808
Gross profit	24,650	25,121	31,433	30,698
Net income attributable to American Vanguard	51	781	2,772	2,987
Basic net income per share	—	0.03	0.10	0.10
Diluted net income per share	—	0.03	0.09	0.10

Note: Totals may not agree with full year amounts due to rounding and separate calculations each quarter.

(16) Subsequent Event

The Company has evaluated events subsequent to December 31, 2016, to assess the need for potential recognition or disclosure in this filing. Based on this evaluation, it was determined that no subsequent events occurred that require recognition in the consolidated financial statements.

EXHIBIT INDEX

ITEM 15

Exhibit

Number Description of Exhibit

- 3.1 Amended and Restated Certificate of Incorporation of American Vanguard Corporation (filed as Exhibit 3.1 to the Company's Form 10-K for the year ended December 31, 2003, which was filed on March 30, 2004 with the Securities Exchange Commission and incorporated herein by reference).
- 3.2 Certificate of Amendment of Amended and Restated Certificate of Incorporation of American Vanguard Corporation (filed as Exhibit 3.2 to the Company's Form 10-Q/A for the period ended June 30, 2004, which was filed with the Securities Exchange Commission on February 23, 2005 and incorporated herein by reference).
- 3.3 Amended and Restated Bylaws of American Vanguard Corporation dated as of June 5, 2014 (filed as Exhibit 99.1 to the Company's Form 8-K, which was filed with the Securities Exchange Commission on June 7, 2014 and incorporated herein by reference.)
- 4 Form of Indenture (filed as Exhibit 4 to the Company's Registration Statement on Form S-3 (File No. 333-122981) and incorporated herein by reference).
- 10.1 American Vanguard Corporation Employee Stock Purchase Plan (filed as Appendix B to the Company's Proxy Statement filed with the Securities and Exchange Commission on May 31, 2001 and incorporated herein by reference).
- 10.2 American Vanguard Corporation Amended and Restated Stock Incentive Plan as of June 8, 2016 (filed as Appendix A to the Company's Proxy Statement filed with the Securities and Exchange Commission on April 25, 2016 and incorporated herein by reference).
- 10.3 Form of Incentive Stock Option Agreement under the American Vanguard Corporation Fourth Amended and Restated Stock Incentive Plan , (filed as Exhibit 10.3 with the Company's Annual Report on Form 10-K for the period ended December 31, 2004, which was filed with the Securities and Exchange Commission on March 16, 2005 and incorporated herein by reference).
- 10.4 Form of Non-Qualified Stock Option Agreement under the American Vanguard Corporation Fourth Amended and Restated Stock Incentive Plan , (filed as Exhibit 10.4 with the Company's Annual Report on Form 10-K for the period ended December 31, 2004, which was filed with the Securities and Exchange Commission on March 16, 2005 and incorporated herein by reference).
- 10.5 Employment Agreement between American Vanguard Corporation and Eric G. Wintemute dated January 15, 2008 (filed as Exhibit 10.5 to the Company's Annual Report on Form 10-K for the year ended December 31, 2007, which was filed with the Securities Exchange Commission on March 17, 2008 and incorporated herein by reference).

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- 10.8 Form of Change of Control Severance Agreement, dated effective as of January 1, 2004, between American Vanguard Corporation and its executive and senior officers (filed as Exhibit 10.2 to the Company's Form 10-Q for the period ended March 31, 2004, which was filed with the Securities Exchange Commission on May 10, 2005 and incorporated herein by reference.)
- 10.9 Form of Amendment of Change of Control Severance Agreement, dated effective as of July 11, 2008, between American Vanguard Corporation and named executive officers and senior officers (filed as Exhibit 99.1 to the Company's Form 8-K, which was filed on July 11, 2008 with the Securities and Exchange Commission and incorporated herein by reference).
- 10.10 Form of Indemnification Agreement between American Vanguard Corporation and its Directors (filed with the Company's Annual Report on Form 10-K for the period ended December 31, 2004, which was filed with the Securities and Exchange Commission on March 16, 2005 and incorporated herein by reference).
- 10.11 Description of Compensatory Arrangements Applicable to Non-Employee Directors for 2005 (filed as Exhibit 10.1 to the Company's Form 8-K, which was filed with the Securities and Exchange Commission on June 15, 2005 and incorporated herein by reference).
- 10.12 American Vanguard Corporation Employee Stock Purchase Plan amended and restated as of June 30, 2011 (filed as Exhibit A to the Company's Proxy Statement which was filed with the Securities Exchange Commission on April 2011 and is incorporated herein by reference).



Exhibit

Number Description of Exhibit

- 10.13 Form of Restricted Stock Agreement between American Vanguard Corporation and named executive officers (filed as Exhibit 99.1 to the Company's Form 8-K, which was filed with the Securities Exchange Commission on July 24, 2008 and incorporated herein by reference).
- 10.14 Form of Amended and Restated Change of Control Severance Agreement effective as of January 1, 2014 (filed as Exhibit 10.14 to the Company's 10-K, which was filed with the Securities Exchange Commission on February 28, 2014 and incorporated herein by reference).
- 10.15 Form of American Vanguard Corporation Amended and Restated Stock Incentive Plan TSR-Based Restricted Stock Units Award Agreement dated June 6, 2013 (filed as Exhibit 10.15 to the Company's 10-K, which was filed with the Securities Exchange Commission on February 28, 2014 and incorporated herein by reference).
- 10.16 Form of American Vanguard Corporation Amended and Restated Stock Incentive Plan Performance-Based Restricted Stock Units Award Agreement dated June 6, 2013 (filed as Exhibit 10.16 to the Company's 10-K, which was filed with the Securities Exchange Commission on February 28, 2014 and incorporated herein by reference).
- 10.17 Second Amended and Restated Credit Agreement dated as of June 17, 2013 among AMVAC Chemical Corporation [and certain affiliates] and Bank of the West (as Agent, Swing Line Lender, L/C Issuer, Sole Arranger and Syndication Agent), BMO Harris Bank, N.A. and Wells Fargo Bank, N.A. (as Documentation Agents) and the Lenders (filed as Exhibit 10.1 to the Company's Form 8-K, which was filed with the Securities Exchange Commission on June 20, 2013 and incorporated herein by reference).
- 10.18 Employment Agreement dated as of December 31, 2014 by and between AMVAC Chemical Corporation and Ulrich Trogele.\*
- 21 List of Subsidiaries of the Company.\*
- 23 Consent of BDO USA, LLP, Independent Registered Public Accounting Firm.\*
- 31.1 Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.\*
- 31.2 Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.\*
- 32.1 Certifications Pursuant to 18 U.S.C. Section 1350 as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.\*
- 101 The following materials from American Vanguard Corp's Annual Report on Form 10-K for the year ended December 31, 2016, formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets; (ii) Consolidated Statements of Operations; (iii) Consolidated Statements of Stockholders' Equity; (iv) Consolidated Statements of Comprehensive Income; (v) Consolidated Statements of Cash Flows; and (vi) Notes to Consolidated Financial Statements, tagged as blocks of text.\*

\* Filed herewith.

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