GRAFTECH INTERNATIONAL HOLDINGS INC. SAVINGS PLAN Plan Number 091663

Regulations require that Plan sponsors provide retirement plan participants with notices regarding your Plan features. This notice describes your rights and responsibilities in connection with these features. No action is required by you at this time, unless you would like to make changes to your elections in the Plan.

It takes just a few minutes to sign up for e-delivery: If you haven't already signed up to receive notices, statements, and transaction confirmations electronically, you can do so by logging on to your Vanguard[®] retirement plan account at vanguard.com. Click My profile, select Mailing preferences, and follow the prompts.

This notice covers the following point(s):

- When you are eligible to participate in the Plan.
- How much you can contribute to the Plan.
- What amounts the Employer will contribute to the Plan for you.
- How you can direct or change your investments in the Plan.
- When your Plan account will be vested (that is, not lost when you leave your job).
- When you can receive a distribution of your Plan account.

Eligibility

You are eligible to participate in the Plan as full-time regular employees upon date of hire. You are eligible to make percentage contributions to the Plan every pay period via payroll deductions on a pre-tax or after-tax basis. To enroll in the Plan, change your payroll deferral percentage, or change investment elections, contact Vanguard Participant Services using the instructions below.

Payroll deferrals

If you are eligible to participate in the Plan, you may elect a contribution rate to the Plan in an amount of your compensation each year instead of receiving that amount in cash. Your total deferrals in any taxable year may not exceed a dollar limit which is set by law. The dollar limit may increase each year for cost-of-living adjustments. You can change your contribution rate to the Plan as established by the Plan Administrator in a uniform manner. Please refer to the definition of compensation in your Plan's Summary Plan Description (SPD) for information on eligible compensation that may be contributed to the Plan.

If you are age 50 or older and make the maximum allowable deferral to the Plan, you are entitled to contribute an additional "catch-up" contribution. The catch-up contribution is intended to help eligible employees make up for smaller contributions made earlier in their career. These are additional amounts that you may defer, up to an annual limit imposed by law, regardless of any other limits imposed by the Plan. The dollar limit may increase each year for cost-of-living adjustments.

The employer match also applies to any catch-up contributions you are allowed to make to the Plan, subject to the same terms and conditions.

Safe Harbor Contributions

The matching contribution will be a dollar for dollar matching contribution on your contributions up to 5% of your compensation.

You are 100% vested in this matching contribution and your elective deferrals.

Additional Contribution

You may automatically receive the Employer Retirement Contribution when you become a regular full-time employee of GrafTech International Holdings Inc. This means that for each quarter that you are eligible to receive this additional contribution, the Company will make an Employer Retirement Contribution to your account equal to 3% of your eligible compensation.

You will be 100% vested in this contribution after three years of company service credit.

Suspension or reduction of safe harbor company contribution

The company retains the right to reduce or suspend the safe harbor company contribution under the plan. If the company chooses to do so, you will receive a supplemental notice explaining the reduction or suspension of the safe harbor company contribution at least 30 days before the change is effective. The company will contribute any safe harbor company contribution you have earned up to that point. At this time the company has no such intention to suspend or reduce the safe harbor company contribution.

Direct your paycheck deduction

At all times you have the right to elect how much to contribute to your Plan.

If you fail to choose to participate in the Plan (or fail to opt out of participation), you may be automatically enrolled with an initial contribution rate of 5%. After you are enrolled, you may increase or decrease your contribution rate at any time.

Please note that if your payroll deferrals to the Plan have been suspended, special rules may apply to your payroll deduction. Contact Vanguard, using the instructions below, for further information.

How to opt out or make changes

You have the right not to contribute to the Plan. In addition, you always have the right to contribute an amount different than the automatic contribution amount, or to invest in funds other than your Plan's default investment. If you want to make changes, simply contact Vanguard using the instructions below.

Direct your investments

You may direct the investment of your contributions to one or more of the Plan's available funds, which include a broad range of investment alternatives, intended to allow you to achieve a diversified portfolio. All investing is subject to risk. Diversification does not ensure a profit or protect against a loss in a declining market.

Your Plan's default investment¹

Your Plan also designates a Qualified Default Investment Alternative (QDIA) as a default investment where your contributions will be invested if you have not made an alternative investment election. Your default investment is the investment listed below closest to the year you will turn age 65.

Default Investment Fees and Expenses

Certain fees and expenses may be incurred as a result of your investment in the default investment. Those fees and expenses are included in the following list.

Vanguard Institutional Target Retirement 2015 Fund (Inst)

Gross expense ratio: 0.09% Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A

Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2020 Fund (Inst) Gross expense ratio: 0.09% Net expense ratio: 0.09%

Gross expense ratio: 0.09%	Net expense ratio: 0.
Management fee: 0.00%	12b-1 fee: N/A
Redemption fee: N/A	Transaction fee: N/A
Deferred sales charge: N/A	Sales charge: N/A

Vanguard Institutional Target Retirement 2025 Fund (Inst)

Gross expense ratio: 0.09% Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A

Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2030 Fund (Inst)

Gross expense ratio: 0.09% Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2035 Fund (Inst) Gross expense ratio: 0.09% Net expense ratio: 0.09%

Gross expense ratio: 0.09%	Net expense ratio: 0.0
Management fee: 0.00%	12b-1 fee: N/A
Redemption fee: N/A	Transaction fee: N/A
Deferred sales charge: N/A	Sales charge: N/A

Vanguard Institutional Target Retirement 2040 Fund (Inst)

Gross expense ratio: 0.09% I Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A

Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2045 Fund (Inst)

Gross expense ratio: 0.09% Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2050 Fund (Inst)

Gross expense ratio: 0.09% Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2055 Fund (Inst)

Gross expense ratio: 0.09% Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A

Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2060 Fund (Inst)

Gross expense ratio: 0.09% Management fee: 0.00% Redemption fee: N/A Deferred sales charge: N/A

Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement 2065 Fund (Inst)

Gross expense ratio: 0.09% Net ex Management fee: 0.00% 12b-1 Redemption fee: N/A Transa Deferred sales charge: N/A Sales of

Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Vanguard Institutional Target Retirement Income Fund (Inst)

Gross expense ratio: 0.09%Net eManagement fee: 0.00%12b-1Redemption fee: N/ATransDeferred sales charge: N/ASales

Net expense ratio: 0.09% 12b-1 fee: N/A Transaction fee: N/A Sales charge: N/A

Fee/Expense Definitions

- Gross expense ratio The gross expense ratio is the fund's annual operating expenses as a percentage of average net assets. The gross expense ratio does not reflect any fee waivers or reimbursements that may be in effect.
- Net expense ratio The net expense ratio reflects the expenses currently being charged by the fund after taking into account any applicable waivers or reimbursements, without which performance would have been less.
- Management fee The cost of the day-to-day operation and management of the fund.
- 12b-1 fee The 12b-1 fee covers the cost of distributing fund shares to investors, including advertising and sales costs.
- *Redemption fee* The redemption fee is an amount charged when money is withdrawn from the fund. The amount of a redemption fee is generally relative to the amount of time that the investment was held, so that longer-held investments incur smaller rates of charge.
- *Transaction fee* The costs incurred when buying or selling securities. These include brokers' commissions and spreads (the difference between the price the dealer paid for a security and the price at which it can be sold).
- Deferred sales charge imposed when investors redeem shares. The percentage charged generally declines the longer shares are held, and it is usually applied to the lower of the beginning price or ending price.
- Sales charge A one-time deduction from an investment made into the fund. The amount is generally relative to the amount of the investment, so that larger investments incur smaller rates of charge.

Default Investment Performance

The table below provides important information about your default investment options (as of September 30, 2020)

The performance data shown represents past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited.

	Average Annual Return					
Balanced	1 year	5 year	10 year	Since fund's inception*	Fund inception date	
Vanguard Institutional Target Retirement 2015 Fund (Inst)	7.77%	7.11%	N/A	5.77%	06/26/2015	
Benchmark: Target Retirement 2015 Composite Index	8.37%	7.35%	N/A	N/A		

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2015 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2020 Fund (Inst)	8.55%	8.01%	N/A	6.38%	06/26/2015
Benchmark: Target Retirement 2020 Composite Index	9.31%	8.30%	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2020 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2025 Fund (Inst)	9.08%	8.66%	N/A	6.78%	06/26/2015
Benchmark: Target Retirement 2025 Composite Index	9.92%	8.97%	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2025 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2030 Fund (Inst)	9.43%	9.13%	N/A	7.00%	06/26/2015
Benchmark: Target Retirement 2030 Composite Index	10.24%	9.44%	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2030 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

	Average Annual Return					
Balanced	1 year	5 year	10 year	Since fund's inception*	Fund inception date	
Vanguard Institutional Target Retirement 2035 Fund (Inst)	9.70%	9.58%	N/A	7.22%	06/26/2015	
Benchmark: Target Retirement 2035 Composite Index	10.51%	9.90%	N/A	N/A		

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2035 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2040 Fund (Inst)	9.93%	10.00%	N/A	7.39%	06/26/2015
Benchmark: Target Retirement 2040 Composite Index	10.73%	10.35%	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2040 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2045 Fund (Inst)	10.17%	10.16%	N/A	7.53%	06/26/2015
Benchmark: Target Retirement 2045 Composite Index	10.95%	10.50%	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2045 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2050 Fund (Inst)	10.21%	10.16%	N/A	7.53%	06/26/2015
Benchmark: Target Retirement 2050 Composite Index	10.97%	10.50%	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2050 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

	Average Annual Return						
Balanced	1 year	5 year	10 year	Since fund's inception*	Fund inception date		
Vanguard Institutional Target Retirement 2055 Fund (Inst)	10.24%	10.17%	N/A	7.55%	06/26/2015		
Benchmark: Target Retirement 2055 Composite Index	10.97%	10.50%	N/A	N/A			

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2055 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2060 Fund (Inst)	10.30%	10.17%	N/A	7.54%	06/26/2015
Benchmark: Target Retirement 2060 Composite Index	10.97%	10.50%	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2060 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in target-date funds are not guaranteed at any time.

Vanguard Institutional Target Retirement 2065 Fund (Inst)	10.06%	N/A	N/A	8.13%	07/12/2017
Benchmark: Target Retirement 2065 Composite Index	10.97%	N/A	N/A	N/A	

Objective: The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. **Strategy:** The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2065 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Risk: Investments in targetdate funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in targetdate funds are not guaranteed at any time.

Vanguard Institutional Target Retirement Income Fund (Inst)	7.52%	6.10%	N/A	5.29%	06/26/2015
Benchmark: Target Retirement Income Composite Index	8.07%	6.31%	N/A	N/A	

Objective: The investment seeks to provide current income and some capital appreciation.

Strategy: The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors currently in retirement. Its indirect bond holdings are a diversified mix of short, intermediate, and long term U.S. government, U.S. agency, and investment grade U.S. corporate bonds; inflation protected public obligations issued by the U.S. Treasury; mortgage backed and asset backed securities; and government, agency, corporate, and securitized investment grade foreign bonds issued in currencies other than the U.S. dollar.

Risk: Investments in targetdate funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year when an investor would retire and leave the work force. Target-date funds gradually shift emphasis from more aggressive investments to more conservative investments based on the target date. Investments in targetdate funds are not guaranteed at any time.

*Performance data is since inception date of the fund, if less than 10 years of performance is available.

Change your investments

You can redirect your future contributions and change the way your Plan account balance is invested anytime, subject to each fund's trading restrictions and any purchase fees (if applicable). If you make an exchange out of the default investment, you cannot put money back into the same fund online or by phone within 30 days; however, you may be able to make an exchange via U.S. mail. Please refer to the fund's prospectus or contact Vanguard for more information.

For further information: Please refer to your Summary Plan Description (SPD) for more information on your Plan's default investment options in addition to a complete explanation of the Plan features. This notice is not a substitute for the SPD. The provisions of the Plan are very complex and you should always look at the SPD if you have any questions about the Plan. You can also contact Vanguard to discuss Plan related questions.

Vesting and Withdrawal options

You will always be fully vested in your payroll deferrals. To be fully vested means that the contributions (together with any investment gain or loss) will always belong to you, and you will not lose them when you leave your job. See your SPD for more information regarding vesting.

You will also be fully vested in employer contributions as follows:

100% VESTED	
Sources	PRE 1998 BEFORETAX UCAR MATCH EMPLOYER MATCH
3 year cliff	
Years of service Less than 3 3 or more	Percent vested 0% 100%
Sources	POST 06 RET ACT MILITARY CONT POST 06 RET ACT

Even if you are vested in your Plan account, there are limits on when you may withdraw your funds. These limits may be important to you in deciding how much, if any, to contribute to the Plan. Generally you may only withdraw vested money after you leave your job, reach age 59-1/2, or become disabled. Also, there is generally an extra 10% tax on distributions before age 59-1/2. Your beneficiary can get any vested amount remaining in your account when you die. You also may be able to take out certain vested money if you have a financial hardship. See your SPD for more information regarding distributions that are available from the Plan.

Employer's right to terminate Plan

Pursuant to the terms of the Plan, your Employer has the right, at any time, to terminate the Plan. Termination of the Plan will result in the discontinuation of all contributions to the Plan (including the safe harbor contribution) with respect to any compensation you receive after the effective date of the termination. Termination of the Plan will not affect your right to receive any contributions you have accrued as of the effective date of the termination.

Connect with Vanguard®

To contact Vanguard to make changes to your current elections or for more information about any fund, including investment objectives, risks, charges, and expenses, or to obtain a prospectus, please refer to the instructions below.

The prospectus contains important information about the fund. Read and consider the prospectus information carefully before you invest. You can also download Vanguard fund prospectuses at www.vanguard.com.

- Online. Go to Vanguard.com for 24-hour access to financial-planning tools and information. Once you've enrolled, you can register for immediate secure online account access at www.vanguard.com/register. You will need your Plan number: 091663.
- By phone. Call Vanguard's 24-hour automated VOICE[®] Network at 800-523-1188. To use VOICE, you will

need a personal identification number (PIN).

• With personal assistance. Vanguard Participant Services associates are available to assist you, Monday through Friday from 8:30 a.m. to 9 p.m. at, 800-523-1188 (English); 800-828-4487 (Spanish); or 800-749-7273 (TTY text telephone for the deaf or hard of hearing).

Sincerely,

Vanguard

All investing is subject to risk, including the possible loss of the money you invest.

¹This is the investment in which your contributions will be invested if you do not actively make a different investment allocation decision. If your default investment is a date-specific target date investment, your contributions will be invested in the most appropriate investment for someone your age, based on the investments offered by your Plan as of the date you are enrolled in the Plan. Should your Plan subsequently offer a different date-specific target date investment that also may be appropriate for someone your age, your contributions will continue to be invested in the initial target date investment. You can choose different investments for your contributions at any time.

Vanguard Retirement Savings Trust and Vanguard Target Retirement Trusts are not mutual funds. These are collective trusts available only to tax-qualified plans and their eligible participants. The collective trust mandates are managed by Vanguard Fiduciary Trust Company, a subsidiary of The Vanguard Group, Inc.

Tax implications: You will be responsible for paying any applicable federal, state, local, or foreign taxes on a distribution or withdrawal. Early withdrawals may be subject to a 10% federal penalty tax. To the extent required by law, Vanguard will make the appropriate withholding for tax purposes.

Vanguard Marketing Corporation, Distributor.

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