December 21, 2021

Mr. Tristan Brown  
Acting Administrator  
Pipeline and Hazardous Materials Safety Administration (PHMSA)  
1200 New Jersey Ave. SE  
Washington, DC 20590

The attached letter from the NTSB Chair provides information about the NTSB’s December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at http://www.ntsb.gov.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (for example, P-21-018 through -020). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Executive Secretariat-LRM  
Office of the Managing Director  
National Transportation Safety Board  
490 L’Enfant Plaza SW  
Washington, DC 20594  
Email: ExecutiveSecretariat@ntsb.gov
December 21, 2021

Mr. Tristan Brown  
Acting Administrator  
Pipeline and Hazardous Materials Safety Administration (PHMSA)  
1200 New Jersey Ave. SE  
Washington, DC 20590

Dear Mr. Brown:

This letter provides information about the National Transportation Safety Board’s (NTSB) December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at http://www.ntsb.gov.

As a result of this investigation, we identified the following safety issues:

- Inadequate project planning and risk assessment.
- Ineffective pipeline damage prevention.
- Lack of pipeline hazard training.

Accordingly, the NTSB makes the following safety recommendations to PHMSA. Additional information regarding these recommendations can be found in the noted sections of the report.

- In collaboration with Coastal and Marine Operators and the Council for Dredging and Marine Construction Safety, develop recommended practices and processes for pipeline operators and dredging companies to obtain and use accurate pipeline location data during planning and one-call locating activities for pipelines both in and near project locations. (P-21-018) (See section 2.4.1)

- In collaboration with Coastal and Marine Operators and the Council for Dredging and Marine Construction Safety, develop guidance for
excavators to clearly identify proposed dredging boundaries for dredging projects before notifying one-call centers by either physically marking the boundaries where practicable, or identifying the boundary with accurate location data. (P-21-019) (See section 2.4.2)

- Include criteria for minimum tolerance or safety zones for dredging in state pipeline safety program evaluation guidelines. (P-21-020) (See section 2.4.3)

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (Safety Recommendations P-21-018 through -020). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply, including attachments, exceeds 20 megabytes, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

[Original Signed]

Jennifer Homendy
Chair
Mr. Graham Bacon  
Chief Operating Officer  
Enterprise Products Partners LP  
1100 Louisiana St.  
Houston, TX 77002

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

The attached letter from the NTSB Chair provides information about the NTSB’s December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendation may be found in the attached report, which can also be accessed at http://www.ntsb.gov. For more information about NTSB and our recommendation process, please see the attached one-page summary.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendation by number (for example, P-21-021). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

All communications regarding safety recommendations will be stored by the NTSB and viewable by the public. Please do not send privileged or confidential communications in response to this recommendation. Responses marked as confidential or privileged (or similar designations) will be considered nonresponsive. If you have concerns about this protocol, please contact us at ExecutiveSecretariat@ntsb.gov.

Executive Secretariat-LRM  
Office of the Managing Director  
National Transportation Safety Board  
490 L’Enfant Plaza SW  
Washington, DC 20594  
Email: ExecutiveSecretariat@ntsb.gov
Dear Mr. Bacon:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge Enterprise Products to act on the safety recommendation in this letter because we believe your organization can help reduce the risk of future accidents. For more information about the NTSB and our recommendation process, please see the attached one-page summary.

This letter also includes information about our December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at http://www.ntsb.gov.

As a result of this investigation, we identified the following safety issues:

- Inadequate project planning and risk assessment.
- Ineffective pipeline damage prevention.
- Lack of pipeline hazard training.
Accordingly, the NTSB makes the following safety recommendation to Enterprise Products. Additional information regarding this recommendation can be found in the noted section of the report.

- Revise your damage prevention program guidelines to include a larger tolerance zone for dredging operations. (P-21-021) (See section 2.4.3)

The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement this recommendation. When replying, please refer to the safety recommendation by number (Safety Recommendation P-21-021). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply, including attachments, exceeds 20 megabytes, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

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Sincerely,

[Original Signed]

Jennifer Homendy
Chair
Mr. Ed Landgraf  
Chairman  
Coastal and Marine Operators  
21011 Waterfront East Dr.  
Maurepas, LA 70449

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

The attached letter from the NTSB Chair provides information about the NTSB’s December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendation may be found in the attached report, which can also be accessed at http://www.ntsb.gov. For more information about NTSB and our recommendation process, please see the attached one-page summary.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendation by number (for example, M-21-022 through -024). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

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Executive Secretariat-LRM  
Office of the Managing Director  
National Transportation Safety Board  
490 L’Enfant Plaza SW  
Washington, DC 20594  
Email: ExecutiveSecretariat@ntsb.gov
December 21, 2021

Mr. Ed Landgraf  
Chairman  
Coastal and Marine Operators  
21011 Waterfront East Dr.  
Maurepas, LA 70449

Dear Mr. Landgraf:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge the Coastal and Marine Operators to act on the safety recommendations in this letter because we believe your organization can help reduce the risk of future accidents. For more information about the NTSB and our recommendation process, please see the attached one-page summary.

This letter also includes information about our December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at http://www.ntsb.gov.

As a result of this investigation, we identified the following safety issues:

- Inadequate project planning and risk assessment.
- Ineffective pipeline damage prevention.
- Lack of pipeline hazard training.

Accordingly, the NTSB makes the following safety recommendations to the Coastal and Marine Operators (additional information regarding these recommendations can be found in the noted sections of the report):
• Modify the existing “Working Safely Near Underwater Pipelines” online pipeline safety training to incorporate lessons learned from this accident. (M-21-022) (See section 2.5)

• Work with the Pipeline and Hazardous Materials Safety Administration to develop recommended practices and processes for pipeline operators and dredging companies to obtain and use accurate pipeline coordinates during planning and one-call locating activities for pipelines both in and near project locations. (M-21-023) (See section 2.4.1)

• Work with the Pipeline and Hazardous Materials Safety Administration to develop guidance for excavators to clearly identify proposed dredging boundaries for dredging projects before notifying one-call centers by either physically marking the boundaries where practicable or identifying the boundary with accurate location data. (M-21-024) (See section 2.4.2)

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (Safety Recommendations M-21-022 through -024). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply, including attachments, exceeds 20 megabytes, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

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Sincerely,

[Original Signed]

Jennifer Homendy
Chair
Mr. Devon Carlock  
President 
Council for Dredging and Marine Construction Safety 
503 D St. NW #150  
Washington, DC 20001 

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

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December 21, 2021

Mr. Devon Carlock  
President  
Council for Dredging and Marine Construction Safety  
503 D St. NW #150  
Washington, DC 20001

Dear Mr. Carlock:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge the Council for Dredging and Marine Construction Safety to act on the safety recommendations in this letter because we believe your organization can help reduce the risk of future accidents. For more information about the NTSB and our recommendation process, please see the attached one-page summary.

This letter also includes information about our December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at http://www.ntsb.gov.

As a result of this investigation, we identified the following safety issues:

- Inadequate project planning and risk assessment.
- Ineffective pipeline damage prevention.
- Lack of pipeline hazard training.
Accordingly, the NTSB makes the following safety recommendations to the Council for Dredging and Marine Construction Safety (additional information regarding these recommendations can be found in the noted sections of the report):

- Work with the Pipeline and Hazardous Materials Safety Administration to develop recommended practices and processes for pipeline operators and dredging companies to obtain and use accurate pipeline coordinates during planning and one-call locating activities for pipelines both in and near project locations. (M-21-023) (See section 2.4.1)

- Work with the Pipeline and Hazardous Materials Safety Administration to develop guidance for excavators to clearly identify proposed dredging boundaries for dredging projects before notifying one-call centers by either physically marking the boundaries where practicable or identifying the boundary with accurate location data. (M-21-024) (See section 2.4.2)

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Sincerely,

[Original Signed]

Jennifer Homendy
Chair
Mr. Mark Stauffer  
President and Chief Executive Officer  
Orion Group Holdings Inc.  
12000 Aerospace Ave., Suite 300  
Houston, TX 77034

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

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The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendation by number (for example, M-21-025 through -027. We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply exceeds 20 megabytes, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

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Dear Mr. Stauffer:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge Orion Group Holdings to act on the safety recommendations in this letter because we believe your organization can help reduce the risk of future accidents. For more information about the NTSB and our recommendation process, please see the attached one-page summary.

This letter also includes information about our December 7, 2021, report Hazardous Liquid Pipeline Strike and Subsequent Explosion and Fire aboard Dredging Vessel Waymon Boyd, EPIC Marine Terminal, Corpus Christi Ship Channel, Corpus Christi, Texas, August 21, 2020, NTSB/MAR-21/05. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at http://www.ntsb.gov.

As a result of this investigation, we identified the following safety issues:

- Inadequate project planning and risk assessment.
- Ineffective pipeline damage prevention.
- Lack of pipeline hazard training.
Accordingly, the NTSB makes the following safety recommendations to Orion Group Holdings. Additional information regarding these recommendations can be found in the noted sections of the report.

- **Require Orion Marine Group to, for all future dredging projects, conduct a formal, documented risk assessment with risk analysis, such as a risk matrix, before starting work, and based on the risk assessment, develop a hazard control plan.** (M-21-025) (See section 2.3)

- **Require Orion Marine Group to develop standardized, written policies and procedures for planning dredging operations near pipelines that include pipeline operator engagement on pipeline avoidance measures, minimum tolerance zones, minimum requirements for marking and verifying pipelines, and uploading of pipeline information into DREDGEPACK or other navigation software.** (M-21-026) (See section 2.4.4)

- **Require Schneider Engineering and Consulting to develop specifications and quality control measures to ensure pipeline and other hazard data is included and clearly represented in engineering plans and drawings, to include depicting tolerance distances from underwater pipelines.** (M-21-027) (See section 2.4.4)

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days of the date of this letter, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (Safety Recommendations M-21-025 through -027). We encourage you to submit your response to ExecutiveSecretariat@ntsb.gov. If your reply, including attachments, exceeds 20 megabytes, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

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Sincerely,

[Original Signed]

Jennifer Homendy
Chair