

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

Form 10-Q

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

For the quarterly period ended September 30, 2021

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 No. 001-111596

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

(Exact name of registrant as specified in its charter)

Delaware
*(State or other jurisdiction
of incorporation or organization)*

58-1954497
*(IRS Employer
Identification Number)*

8302 Dunwoody Place, Suite 250, Atlanta, GA
(Address of principal executive offices)

30350
(Zip Code)

(770) 587-9898
(Registrant's telephone number)

N/A

(Former name, former address and former fiscal year, if changed since last report)

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

| Title of each class | Trading Symbol | Name of each exchange on which registered |
|--------------------------------|----------------|---|
| Common Stock, \$.001 Par Value | PESI | NASDAQ Capital Markets |

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 whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

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

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

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

Indicate the number of shares outstanding of each of the issuer's classes of Common Stock, as of the close of the latest practical date.

| Class | Outstanding at November 4, 2021 |
|--------------------------------|---------------------------------|
| Common Stock, \$.001 Par Value | 13,214,910 shares |

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

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PART I - FINANCIAL INFORMATION
ITEM 1. – Financial Statements

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Balance Sheets

| (Amounts in Thousands, Except for Share and Per Share Amounts) | September 30, 2021 (Unaudited) | December 31, 2020 (Audited) |
|---|--------------------------------------|-----------------------------------|
| ASSETS | | |
| Current assets: | | |
| Cash | \$ 7,222 | \$ 7,924 |
| Accounts receivable, net of allowance for doubtful accounts of \$60 and \$404, respectively | 11,816 | 9,659 |
| Unbilled receivables | 5,696 | 14,453 |
| Inventories | 543 | 610 |
| Prepaid and other assets | 4,132 | 3,967 |
| Current assets related to discontinued operations | 18 | 22 |
| Total current assets | 29,427 | 36,635 |
| Property and equipment: | | |
| Buildings and land | 20,622 | 20,139 |
| Equipment | 22,104 | 22,090 |
| Vehicles | 454 | 457 |
| Leasehold improvements | 23 | 23 |
| Office furniture and equipment | 1,423 | 1,413 |
| Construction-in-progress | 2,643 | 1,569 |
| Total property and equipment | 47,269 | 45,691 |
| Less accumulated depreciation | (28,906) | (27,908) |
| Net property and equipment | 18,363 | 17,783 |
| Property and equipment related to discontinued operations | 81 | 81 |
| Operating lease right-of-use assets | 2,570 | 2,287 |
| Intangibles and other long term assets: | | |
| Permits | 9,270 | 8,922 |
| Other intangible assets - net | 935 | 875 |
| Finite risk sinking fund (restricted cash) | 11,469 | 11,446 |
| Deferred tax assets | 2,460 | — |
| Other assets | 829 | 890 |
| Total assets | \$ 75,404 | \$ 78,919 |

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Balance Sheets, Continued

| (Amounts in Thousands, Except for Share and per Share Amounts) | September 30, 2021 (Unaudited) | December 31, 2020 (Audited) |
|---|--------------------------------------|-----------------------------------|
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Accounts payable | \$ 9,717 | \$ 15,382 |
| Accrued expenses | 6,654 | 6,381 |
| Disposal/transportation accrual | 1,028 | 1,220 |
| Deferred revenue | 3,435 | 4,614 |
| Accrued closure costs - current | 74 | 75 |
| Current portion of long-term debt | 396 | 3,595 |
| Current portion of operating lease liabilities | 387 | 273 |
| Current portion of finance lease liabilities | 257 | 525 |
| Current liabilities related to discontinued operations | 332 | 898 |
| Total current liabilities | 22,280 | 32,963 |
| Accrued closure costs | 7,026 | 6,290 |
| Deferred tax liabilities | — | 471 |
| Long-term debt, less current portion | 702 | 3,134 |
| Long-term operating lease liabilities, less current portion | 2,134 | 2,070 |
| Long-term finance lease liabilities, less current portion | 776 | 662 |
| Other long-term liabilities | 626 | 626 |
| Long-term liabilities related to discontinued operations | 802 | 252 |
| Total long-term liabilities | 12,066 | 13,505 |
| Total liabilities | 34,346 | 46,468 |
| Commitments and Contingencies (Note 9) | | |
| Stockholders' Equity: | | |
| Preferred Stock, \$.001 par value; 2,000,000 shares authorized, no shares issued and outstanding | — | — |
| Common Stock, \$.001 par value; 30,000,000 shares authorized; 12,304,265 ⁽¹⁾ and 12,161,539 shares issued, respectively; 12,296,623 ⁽¹⁾ and 12,153,897 shares outstanding, respectively | 12 | 12 |
| Additional paid-in capital | 109,954 | 108,931 |
| Common Stock subscriptions | 4,387 | — |
| Accumulated deficit | (71,153) | (74,455) |
| Accumulated other comprehensive loss | (189) | (207) |
| Less Common Stock in treasury, at cost; 7,642 shares | (88) | (88) |
| Total Perma-Fix Environmental Services, Inc. stockholders' equity | 42,923 | 34,193 |
| Non-controlling interest | (1,865) | (1,742) |
| Total stockholders' equity | 41,058 | 32,451 |
| Total liabilities and stockholders' equity | \$ 75,404 | \$ 78,919 |

(1) See Note 15

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Statements of Operations
(Unaudited)

| (Amounts in Thousands, Except for Per Share Amounts) | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|-------------------------------------|-----------------|------------------------------------|-----------------|
| | 2021 | 2020 | 2021 | 2020 |
| Net revenues | \$ 15,797 | \$ 30,172 | \$ 55,075 | \$ 77,079 |
| Cost of goods sold | 13,573 | 25,422 | 49,529 | 64,379 |
| Gross profit | 2,224 | 4,750 | 5,546 | 12,700 |
| Selling, general and administrative expenses | 3,348 | 3,308 | 9,550 | 8,935 |
| Research and development | 243 | 157 | 538 | 598 |
| Loss on disposal of property and equipment | 1 | — | 1 | 27 |
| (Loss) income from operations | (1,368) | 1,285 | (4,543) | 3,140 |
| Other income (expense): | | | | |
| Interest income | 2 | 28 | 23 | 112 |
| Interest expense | (77) | (87) | (209) | (306) |
| Interest expense-financing fees | (11) | (58) | (28) | (187) |
| Other | (1) | 180 | — | 189 |
| Gain (loss) on extinguishment of debt | — | — | 5,381 | (27) |
| (Loss) income from continuing operations before taxes | (1,455) | 1,348 | 624 | 2,921 |
| Income tax benefit | (2,836) | (133) | (2,840) | (128) |
| Income from continuing operations, net of taxes | 1,381 | 1,481 | 3,464 | 3,049 |
| Loss from discontinued operations, net of taxes (Note 10) | (43) | (67) | (285) | (266) |
| Net income | 1,338 | 1,414 | 3,179 | 2,783 |
| Net loss attributable to non-controlling interest | (64) | (32) | (123) | (87) |
| Net income attributable to Perma-Fix Environmental Services, Inc. common stockholders | <u>\$ 1,402</u> | <u>\$ 1,446</u> | <u>\$ 3,302</u> | <u>\$ 2,870</u> |
| Net income (loss) per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic: | | | | |
| Continuing operations | \$.12 | \$.13 | \$.29 | \$.26 |
| Discontinued operations | (.01) | (.01) | (.02) | (.02) |
| Net income per common share | <u>\$.11</u> | <u>\$.12</u> | <u>\$.27</u> | <u>\$.24</u> |
| Net income (loss) per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - diluted: | | | | |
| Continuing operations | \$.12 | \$.13 | \$.29 | \$.25 |
| Discontinued operations | (.01) | (.01) | (.02) | (.02) |
| Net income per common share | <u>\$.11</u> | <u>\$.12</u> | <u>\$.27</u> | <u>\$.23</u> |
| Number of common shares used in computing net income (loss) per share: | | | | |
| Basic | 12,198 | 12,145 | 12,181 | 12,134 |
| Diluted | 12,406 | 12,371 | 12,416 | 12,337 |

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Statements of Comprehensive Income
(Unaudited)

| (Amounts in Thousands) | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|-------------------------------------|----------|------------------------------------|----------|
| | 2021 | 2020 | 2021 | 2020 |
| Net income | \$ 1,338 | \$ 1,414 | \$ 3,179 | \$ 2,783 |
| Other comprehensive (loss) income: | | | | |
| Foreign currency translation adjustment | (22) | 11 | 18 | (40) |
| Comprehensive income | 1,316 | 1,425 | 3,197 | 2,743 |
| Comprehensive loss attributable to non-controlling interest | (64) | (32) | (123) | (87) |
| Comprehensive income attributable to Perma-Fix Environmental Services, Inc. stockholders | \$ 1,380 | \$ 1,457 | \$ 3,320 | \$ 2,830 |

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC
Consolidated Statement of Stockholders' Equity
(Unaudited)
(Amounts in thousands, except for share amounts)

| | Common Stock | | Additional | Common | Stock | Accumulated | Non- | Accumulated | Total |
|---|-------------------|--------------|-------------------|----------------|-----------------|-----------------|-------------------|--------------------|------------------|
| | Shares | Amount | Paid-In | Stock | Sub- | Other | controlling | Deficit | Stockholders' |
| | | | Capital | Held In | scriptions | Loss | Interest in | | Equity |
| | | | | Treasury | | | Subsidiary | | |
| Balance at December 31, 2020 | <u>12,161,539</u> | <u>\$ 12</u> | <u>\$ 108,931</u> | <u>\$ (88)</u> | <u>\$ —</u> | <u>\$ (207)</u> | <u>\$ (1,742)</u> | <u>\$ (74,455)</u> | <u>\$ 32,451</u> |
| Net loss | — | — | — | — | — | — | (30) | (1,123) | (1,153) |
| Foreign currency translation | — | — | — | — | — | 20 | — | — | 20 |
| Issuance of Common Stock for services | 11,837 | — | 79 | — | — | — | — | — | 79 |
| Stock-Based Compensation | — | — | 45 | — | — | — | — | — | 45 |
| Balance at March 31, 2021 | <u>12,173,376</u> | <u>\$ 12</u> | <u>\$ 109,055</u> | <u>\$ (88)</u> | <u>\$ —</u> | <u>\$ (187)</u> | <u>\$ (1,772)</u> | <u>\$ (75,578)</u> | <u>\$ 31,442</u> |
| Net Income (loss) | — | — | — | — | — | — | (29) | 3,023 | 2,994 |
| Foreign currency translation | — | — | — | — | — | 20 | — | — | 20 |
| Issuance of Common Stock upon exercise of options | 290 | — | — | — | — | — | — | — | — |
| Issuance of Common Stock for services | 14,590 | — | 109 | — | — | — | — | — | 109 |
| Stock-Based Compensation | — | — | 42 | — | — | — | — | — | 42 |
| Balance at June 30, 2021 | <u>12,188,256</u> | <u>\$ 12</u> | <u>\$ 109,206</u> | <u>\$ (88)</u> | <u>\$ —</u> | <u>\$ (167)</u> | <u>\$ (1,801)</u> | <u>\$ (72,555)</u> | <u>\$ 34,607</u> |
| Net Income (loss) | — | — | — | — | — | — | (64) | 1,402 | 1,338 |
| Foreign currency translation | — | — | — | — | — | (22) | — | — | (22) |
| Issuance of Common Stock for services | 16,009 | — | 116 | — | — | — | — | — | 116 |
| Sale of Common Stock (Note 15) | 100,000 | — | 570(1) | — | — | — | — | — | 570 |
| Stock Subscriptions (Note 15) | — | — | — | — | 4,387(2) | — | — | — | 4,387 |
| Stock-Based Compensation | — | — | 62 | — | — | — | — | — | 62 |
| Balance at September 30, 2021 | <u>12,304,265</u> | <u>\$ 12</u> | <u>\$ 109,954</u> | <u>\$ (88)</u> | <u>\$ 4,387</u> | <u>\$ (189)</u> | <u>\$ (1,865)</u> | <u>\$ (71,153)</u> | <u>\$ 41,058</u> |
| Balance at December 31, 2019 | <u>12,123,520</u> | <u>\$ 12</u> | <u>\$ 108,457</u> | <u>\$ (88)</u> | <u>\$ —</u> | <u>\$ (211)</u> | <u>\$ (1,619)</u> | <u>\$ (77,315)</u> | <u>\$ 29,236</u> |
| Net Income (loss) | — | — | — | — | — | — | (26) | 1,220 | 1,194 |
| Foreign currency translation | — | — | — | — | — | (79) | — | — | (79) |
| Issuance of Common Stock upon exercise of options | 3,643 | — | 6 | — | — | — | — | — | 6 |
| Issuance of Common Stock for services | 5,128 | — | 48 | — | — | — | — | — | 48 |
| Stock-Based Compensation | — | — | 44 | — | — | — | — | — | 44 |
| Balance at March 31, 2020 | <u>12,132,291</u> | <u>\$ 12</u> | <u>\$ 108,555</u> | <u>\$ (88)</u> | <u>\$ —</u> | <u>\$ (290)</u> | <u>\$ (1,645)</u> | <u>\$ (76,095)</u> | <u>\$ 30,449</u> |
| Net Income (loss) | — | — | — | — | — | — | (29) | 204 | 175 |
| Foreign currency translation | — | — | — | — | — | 28 | — | — | 28 |
| Issuance of Common Stock upon exercise of options | 241 | — | — | — | — | — | — | — | — |
| Issuance of Common Stock for services | 10,239 | — | 56 | — | — | — | — | — | 56 |
| Stock-Based Compensation | — | — | 48 | — | — | — | — | — | 48 |
| Balance at June 30, 2020 | <u>12,142,771</u> | <u>\$ 12</u> | <u>\$ 108,659</u> | <u>\$ (88)</u> | <u>\$ —</u> | <u>\$ (262)</u> | <u>\$ (1,674)</u> | <u>\$ (75,891)</u> | <u>\$ 30,756</u> |
| Net Income (loss) | — | — | — | — | — | — | (32) | 1,446 | 1,414 |
| Foreign currency translation | — | — | — | — | — | 11 | — | — | 11 |
| Issuance of Common Stock for services | 9,592 | — | 62 | — | — | — | — | — | 62 |
| Stock-Based Compensation | — | — | 69 | — | — | — | — | — | 69 |
| Balance at September 30, 2020 | <u>12,152,363</u> | <u>\$ 12</u> | <u>\$ 108,790</u> | <u>\$ (88)</u> | <u>\$ —</u> | <u>\$ (251)</u> | <u>\$ (1,706)</u> | <u>\$ (74,445)</u> | <u>\$ 32,312</u> |

(1) Net of Offering costs incurred of approximately \$50.

(2) Net of stock subscription receivables of \$744 and Offering costs incurred of approximately \$449.

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Statements of Cash Flows
(Unaudited)

| (Amounts in Thousands) | Nine Months Ended September 30, | |
|--|------------------------------------|------------------|
| | 2021 | 2020 |
| Cash flows from operating activities: | | |
| Net income | \$ 3,179 | \$ 2,783 |
| Less: loss from discontinued operations, net of taxes (Note 10) | (285) | (266) |
| Income from continuing operations, net of taxes | 3,464 | 3,049 |
| Adjustments to reconcile income from continuing operations to cash (used in) provided by operating activities: | | |
| Depreciation and amortization | 1,208 | 1,189 |
| Interest on finance lease with purchase option | 7 | 6 |
| (Gain) loss on extinguishment of debt | (5,381) | 27 |
| Amortization of debt issuance/debt discount costs | 28 | 187 |
| Deferred tax benefit | (2,931) | (2) |
| Provision for (recovery of) bad debt reserves | 1 | (94) |
| Loss on disposal of property and equipment | 1 | 27 |
| Issuance of common stock for services | 304 | 166 |
| Stock-based compensation | 149 | 161 |
| Changes in operating assets and liabilities of continuing operations | | |
| Accounts receivable | (2,158) | (170) |
| Unbilled receivables | 8,757 | (6,382) |
| Prepaid expenses, inventories and other assets | 1,700 | 1,284 |
| Accounts payable, accrued expenses and unearned revenue | (9,180) | 4,055 |
| Cash (used in) provided by continuing operations | (4,031) | 3,503 |
| Cash used in discontinued operations | (296) | (329) |
| Cash (used in) provided by operating activities | (4,327) | 3,174 |
| Cash flows from investing activities: | | |
| Purchases of property and equipment | (1,132) | (1,488) |
| Proceeds from sale of property and equipment | 1 | 4 |
| Cash used in investing activities of continuing operations | (1,131) | (1,484) |
| Cash provided by investing activities of discontinued operations | — | 118 |
| Cash used in investing activities | (1,131) | (1,366) |
| Cash flows from financing activities: | | |
| Repayments of revolving credit borrowings | (59,900) | (72,601) |
| Borrowing on revolving credit | 59,900 | 72,280 |
| Proceeds from issuance of long-term debt | — | 5,666 |
| Principal repayments of finance lease liabilities | (281) | (411) |
| Principal repayments of long term debt | (330) | (2,127) |
| Payment of debt issuance costs | (40) | (85) |
| Proceeds from sale of Common Stock, net of Offering costs paid (Note 15) | 618 | — |
| Proceeds from stock subscription, net of Offering costs paid (Note 15) | 4,816 | — |
| Proceeds from issuance of common stock upon exercise of options | — | 6 |
| Cash provided by financing activities of continuing operations | 4,783 | 2,728 |
| Effect of exchange rate changes on cash | (4) | (4) |
| (Decrease) increase in cash and finite risk sinking fund (restricted cash) | (679) | 4,532 |
| Cash and finite risk sinking fund (restricted cash) at beginning of period | 19,370 | 11,697 |
| Cash and finite risk sinking fund (restricted cash) at end of period | <u>\$ 18,691</u> | <u>\$ 16,229</u> |
| Supplemental disclosure: | | |
| Interest paid | \$ 163 | \$ 286 |
| Income taxes paid | 15 | 34 |
| Equipment purchase subject to finance lease | 319 | 856 |
| Equipment purchase subject to financing | 29 | 27 |

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Notes to Consolidated Financial Statements
September 30, 2021
(Unaudited)

Reference is made herein to the notes to consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2020.

1. Basis of Presentation

The consolidated financial statements included herein have been prepared by the Company (which may be referred to as we, us or our), without an audit, pursuant to the rules and regulations of the Securities and Exchange Commission (“the Commission”). Certain information and note disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) have been condensed or omitted pursuant to such rules and regulations, although the Company believes the disclosures which are made are adequate to make the information presented not misleading. Further, the consolidated financial statements reflect, in the opinion of management, all adjustments (which include only normal recurring adjustments) necessary to present fairly the financial position and results of operations as of and for the periods indicated. The results of operations for the nine months ended September 30, 2021 are not necessarily indicative of results to be expected for the fiscal year ending December 31, 2021.

The Company suggests that these consolidated financial statements be read in conjunction with the consolidated financial statements and the notes thereto included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2020.

The consolidated financial statements include our accounts, those of our wholly-owned subsidiaries, and our majority-owned Polish subsidiary, Perma-Fix Medical. Additionally, the Company’s financial statements include the account of a variable interest entity (“VIE”), Perma-Fix ERRG for which we are the primary beneficiary (See “Note 13 - Variable Interest Entity” for a discussion of this VIE).

2. Summary of Significant Accounting Policies

Our accounting policies are set forth in the notes to the December 31, 2020 consolidated financial statements referred to above.

Recently Adopted Accounting Standards

In December 2019, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2019-12, “Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes,” which is intended to simplify various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. The adoption of ASU No. 2019-12 by the Company effective January 1, 2021 did not have a material impact on the Company’s financial statements.

In January 2020, the FASB issued ASU 2020-01, “Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815), clarifying the Interactions between Topic 321, Topic 323, and Topic 815.” This guidance addresses accounting for the transition into and out of the equity method and provides clarification of the interaction of rules for equity securities, the equity method of accounting, and forward contracts and purchase options on certain types of securities. This standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2020. Early adoption is permitted. The adoption of ASU No. 2020-01 by the Company effective January 1, 2021 did not have a material impact on the Company’s financial statements.

In October 2020, the FASB issued ASU No. 2020-10, “Codification Improvements.” ASU 2020-10 updates various codification topics by clarifying or improving disclosure requirements. ASU 2020-10 is effective for public entities for fiscal years beginning after December 15, 2020, with early adoption permitted. The adoption of ASU No. 2020-01 by the Company effective January 1, 2021 did not have a material impact on the Company’s financial statements or disclosures.

Recently Issued Accounting Standards – Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, “Credit Losses (Topic 326) - Measurement of Credit Losses on Financial Instruments,” and various subsequent amendments to the initial guidance (collectively, “Topic 326”). Topic 326 introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables and loans. Entities are required to apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. In November 2019, FASB issued ASU 2019-10, “Financial Instruments – Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842),” which defers the effective date of ASU 2016-13 for public companies that are considered smaller reporting companies (“SRC”) as defined by the Commission to fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. These ASUs are effective January 1, 2023 for the Company as an SRC. Under new guidance issued by the Commission in March 2020, the Company will continue to qualify as a smaller reporting company but will also be an accelerated filer for all filings with the Commission after January 1, 2022. The Company is currently evaluating the impact of these ASU on its consolidated financial statements.

In August 2020, the FASB issued ASU No. 2020-06, “Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity’s Own Equity.” ASU 2020-06 simplifies the accounting for convertible instruments by removing major separation models and removing certain settlement condition qualifiers for the derivatives scope exception for contracts in an entity’s own equity, and simplifies the related diluted net income per share calculation for both Subtopics. ASU 2020-06 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2023, for the Company as an SRC. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The Company is currently evaluating the impact of this ASU on its consolidated financial statements and disclosures.

In May 2021, the FASB issued ASU No. 2021-04, “Earnings Per Share (Topic 206), Debt-Modifications and Extinguishments (Subtopic 470-50), Compensation-Stock Compensation (Topic 718), and Derivatives and Hedging-Contracts in Entity’s Own Equity (Subtopic 815-40): Issuer’s Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options (a consensus of the FASB Emerging Issues Task Force).” ASU 2021-04 addresses issuer’s accounting for certain modifications or exchanges of freestanding equity-classified written call options. This ASU is effective for all entities, for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. Early adoption is permitted. The Company does not expect the adoption of this ASU will have a material impact on its financial statements.

3. Revenue

Disaggregation of Revenue

In general, the Company's business segmentation is aligned according to the nature and economic characteristics of our services and provides meaningful disaggregation of each business segment's results of operations. The nature of the Company's performance obligations within our Treatment and Services Segments result in the recognition of our revenue primarily over time. The following tables present further disaggregation of our revenues by different categories for our Services and Treatment Segments:

Revenue by Contract Type (In thousands)

| | Three Months Ended September 30, 2021 | | | Three Months Ended September 30, 2020 | | |
|--------------------|--|-----------------|------------------|--|------------------|------------------|
| | Treatment | Services | Total | Treatment | Services | Total |
| Fixed price | \$ 8,893 | \$ 3,031 | \$ 11,924 | \$ 7,066 | \$ 2,372 | \$ 9,438 |
| Time and materials | — | 3,873 | 3,873 | — | 20,734 | 20,734 |
| Total | \$ 8,893 | \$ 6,904 | \$ 15,797 | \$ 7,066 | \$ 23,106 | \$ 30,172 |

Revenue by Contract Type (In thousands)

| | Nine Months Ended September 30, 2021 | | | Nine Months Ended September 30, 2020 | | |
|--------------------|---|------------------|------------------|---|------------------|------------------|
| | Treatment | Services | Total | Treatment | Services | Total |
| Fixed price | \$ 24,094 | \$ 7,094 | \$ 31,188 | \$ 24,469 | \$ 6,093 | \$ 30,562 |
| Time and materials | — | 23,887 | 23,887 | — | 46,517 | 46,517 |
| Total | \$ 24,094 | \$ 30,981 | \$ 55,075 | \$ 24,469 | \$ 52,610 | \$ 77,079 |

Revenue by generator (In thousands)

| | Three Months Ended September 30, 2021 | | | Three Months Ended September 30, 2020 | | |
|---------------------|--|-----------------|------------------|--|------------------|------------------|
| | Treatment | Services | Total | Treatment | Services | Total |
| Domestic government | \$ 6,725 | \$ 4,552 | \$ 11,277 | \$ 5,334 | \$ 21,660 | \$ 26,994 |
| Domestic commercial | 1,956 | 399 | 2,355 | 1,598 | 459 | 2,057 |
| Foreign government | 36 | 1,931 | 1,967 | 134 | 966 | 1,100 |
| Foreign commercial | 176 | 22 | 198 | — | 21 | 21 |
| Total | \$ 8,893 | \$ 6,904 | \$ 15,797 | \$ 7,066 | \$ 23,106 | \$ 30,172 |

Revenue by generator (In thousands)

| | Nine Months Ended September 30, 2021 | | | Nine Months Ended September 30, 2020 | | |
|---------------------|---|------------------|------------------|---|------------------|------------------|
| | Treatment | Services | Total | Treatment | Services | Total |
| Domestic government | \$ 16,962 | \$ 24,172 | \$ 41,134 | \$ 19,079 | \$ 48,249 | \$ 67,328 |
| Domestic commercial | 6,284 | 1,185 | 7,469 | 5,256 | 1,352 | 6,608 |
| Foreign government | 577 | 5,556 | 6,133 | 134 | 2,945 | 3,079 |
| Foreign commercial | 271 | 68 | 339 | — | 64 | 64 |
| Total | \$ 24,094 | \$ 30,981 | \$ 55,075 | \$ 24,469 | \$ 52,610 | \$ 77,079 |

Contract Balances

The timing of revenue recognition, billings, and cash collections results in accounts receivable and unbilled receivables (contract assets). The Company's contract liabilities consist of deferred revenues which represents advance payment from customers in advance of the completion of our performance obligation.

The following table represents changes in our contract assets and contract liabilities balances:

| (In thousands) | September 30, 2021 | December 31, 2020 | Year-to-date Change (\$) | Year-to-date Change (%) |
|---------------------------------------|--------------------|-------------------|-----------------------------|----------------------------|
| Contract assets | | | | |
| Account receivables, net of allowance | \$ 11,816 | \$ 9,659 | \$ 2,157 | 22.3% |
| Unbilled receivables - current | 5,696 | 14,453 | (8,757) | (60.6)% |
| Contract liabilities | | | | |
| Deferred revenue | \$ 3,435 | \$ 4,614 | \$ (1,179) | (25.6)% |

The decrease in unbilled receivables was primarily within our Services Segment due to invoicing and collection of accounts receivable on certain large projects which have been completed or are near completion.

During the three and nine months ended September 30, 2021, the Company recognized revenue of \$561,000 and \$6,635,000, respectively, related to untreated waste that was in the Company's control as of the beginning of the year. During the three and nine months ended September 30, 2020, the Company recognized revenue of \$1,134,000 and \$7,673,000, respectively, related to untreated waste that was in the Company's control as of the beginning of the year. All revenue recognized in each period related to performance obligations satisfied within the respective period.

Variable Consideration

The Company's contracts generally do not give rise to variable consideration. However, during the three and nine months ended September 30, 2021, the Company recognized approximately \$1,286,000 in revenue from a request for equitable adjustment ("REA") under one of the Company's Treatment Services contracts that resulted in cumulative catch-up adjustment in the transaction price that had been constrained in prior periods.

Remaining Performance Obligations

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

Within our Services Segment, there are service contracts which provide that the Company has a right to consideration from a customer in an amount that corresponds directly with the value to the customer of our performance completed to date. For those contracts, the Company has utilized the practical expedient in ASC 606-10-55-18, which allows the Company to recognize revenue in the amount for which we have the right to invoice; accordingly, the Company does not disclose the value of remaining performance obligations for those contracts.

4. Leases

At the inception of an arrangement, the Company determines if an arrangement is, or contains, a lease based on facts and circumstances present in that arrangement. Lease classifications, recognition, and measurement are then determined at the lease commencement date.

The Company's operating lease right-of-use ("ROU") assets and operating lease liabilities represent primarily leases for office and building spaces used to conduct our business. Finance leases consist primarily of processing and transport equipment used by our facilities' operations. The Company's finance leases also included a building with land utilized for our waste treatment operations which included a purchase option. During the third quarter of 2021, the Company concluded that it was more likely than not that it would not exercise this purchase option but will continue to lease the property. Accordingly, a reassessment of this lease was performed which resulted in reclassification of this lease to an operating lease.

The components of lease cost for the Company's leases for the three and nine months ended September 30, 2021 and 2020 were as follows (in thousands):

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|-------------------------------|-------------------------------------|--------|------------------------------------|--------|
| | 2021 | 2020 | 2021 | 2020 |
| Operating Leases: | | | | |
| Lease cost | \$ 115 | \$ 114 | \$ 341 | \$ 342 |
| Finance Leases: | | | | |
| Amortization of ROU assets | 53 | 109 | 170 | 161 |
| Interest on lease liability | 50 | 47 | 85 | 97 |
| | 103 | 156 | 255 | 258 |
| Short-term lease rent expense | 4 | 3 | 10 | 7 |
| Total lease cost | \$ 222 | \$ 273 | \$ 606 | \$ 607 |

The weighted average remaining lease term and the weighted average discount rate for operating and finance leases at September 30, 2021 were:

| | Operating Leases | Finance Leases |
|--|------------------|----------------|
| Weighted average remaining lease terms (years) | 7.1 | 2.6 |
| Weighted average discount rate | 7.6% | 4.6% |

The following table reconciles the undiscounted cash flows for the operating and finance leases at September 30, 2021 to the operating and finance lease liabilities recorded on the balance sheet (in thousands):

| | Operating Leases | Finance Leases |
|---|------------------|----------------|
| 2021 (Remaining) | \$ 132 | \$ 64 |
| 2022 | 576 | 271 |
| 2023 | 560 | 150 |
| 2024 | 420 | 146 |
| 2025 | 327 | 146 |
| 2025 and thereafter | 1,260 | 341 |
| Total undiscounted lease payments | 3,275 | 1,118 |
| Less: Imputed interest | (754) | (85) |
| Present value of lease payments | \$ 2,521 | \$ 1,033 |
| Current portion of operating lease obligations | \$ 387 | \$ — |
| Long-term operating lease obligations, less current portion | \$ 2,134 | \$ — |
| Current portion of finance lease obligations | \$ — | \$ 257 |
| Long-term finance lease obligations, less current portion | \$ — | \$ 776 |

Supplemental cash flow and other information related to our leases were as follows for the three and nine months ended September 30, 2021 and 2020 (in thousands):

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|-------------------------------------|--------|------------------------------------|--------|
| | 2021 | 2020 | 2021 | 2020 |
| Cash paid for amounts included in the measurement of lease liabilities: | | | | |
| Operating cash flow used in operating leases | \$ 103 | \$ 111 | \$ 307 | \$ 331 |
| Operating cash flow used in finance leases | \$ 50 | \$ 47 | \$ 85 | \$ 97 |
| Financing cash flow used in finance leases | \$ 76 | \$ 182 | \$ 281 | \$ 411 |
| ROU assets obtained in exchange for lease obligations for: | | | | |
| Finance liabilities | \$ 323 | \$ 751 | \$ 323 | \$ 874 |
| Operating liabilities | \$ 184 | \$ — | \$ 350 | \$ — |
| Reduction to ROU assets resulting from reassessment for: | | | | |
| Finance liabilities | \$ (364) | \$ — | \$ (364) | \$ — |

5. Intangible Assets

The following table summarizes information relating to the Company's definite-lived intangible assets:

| | | September 30, 2021 | | | December 31, 2020 | | |
|---|--|-----------------------------|-----------------------------|---------------------------|-----------------------------|-----------------------------|---------------------------|
| | Weighted Average Amortization Period (Years) | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount |
| Other Intangibles (amount in thousands) | | | | | | | |
| Patent | 12.5 | \$ 784 | \$ (348) | \$ 436 | \$ 742 | \$ (334) | \$ 408 |
| Software | 3 | 588 | (415) | 173 | 418 | (411) | 7 |
| Customer relationships | 10 | 3,370 | (3,044) | 326 | 3,370 | (2,910) | 460 |
| Total | | \$ 4,742 | \$ (3,807) | \$ 935 | \$ 4,530 | \$ (3,655) | \$ 875 |

he intangible assets noted above are amortized on a straight-line basis over their useful lives with the exception of customer relationships which are being amortized using an accelerated method.

The following table summarizes the expected amortization over the next five years for our definite-lived intangible assets:

| Year | (In thousands) |
|------------------|----------------|
| 2021 (remaining) | \$ 59 |
| 2022 | 227 |
| 2023 | 187 |
| 2024 | 57 |
| 2025 | 14 |

Amortization expense relating to the definite-lived intangible assets as discussed above was \$51,000 and \$152,000 for the three and nine months ended September 30, 2021, respectively, and \$58,000 and \$167,000 for the three and nine months ended September 30, 2020, respectively.

6. Capital Stock, Stock Plans and Stock-Based Compensation

The Company has certain stock option plans under which it may awards incentive stock options ("ISOs") and/or non-qualified stock options ("NQSOs") to employees, officers, outside directors, and outside consultants.

On July 20, 2021, the Company issued a NQSO to each of the Company's seven reelected outside directors for the purchase, under the Company's 2003 Outside Directors Stock Plan (the "2003 Plan"), of up to 10,000 shares of the Company's common stock, par value \$0.001 per share (the "Common Stock"). Dr. Louis Centofanti, the Company's Executive Vice President ("EVP") of Strategic Initiatives and also a member of the Company's Board of Directors (the "Board"), was not eligible to receive an option under the 2003 Plan as an employee of the Company. Each NQSO granted is for a contractual term of ten years with one-fourth vesting annually over a four-year period. The exercise price of the NQSO is \$5.93 per share, which was equal to the fair market value of the Company's Common Stock the day preceding the grant date, pursuant to the 2003 Plan.

On May 4, 2021, the Company issued a NQSO to a new director elected by the Company's Board, for the purchase, under the Company's 2003 Plan, of up to 6,000 shares of the Company's Common Stock. The option granted is for a contractual term of ten years with a vesting period of six months. The exercise price of the option is \$7.50 per share, which was equal to the fair market value of the Company's Common Stock the day preceding the grant date, pursuant to the 2003 Plan.

The Company granted a NQSO to Robert Ferguson on July 27, 2017 from the Company's 2017 Stock Option Plan ("2017 Plan") for the purchase of up to 100,000 shares of the Company's Common Stock ("Ferguson Stock Option") in connection with his work as a consultant to the Company's Test Bed Initiative ("TBI") at our Perma-Fix Northwest Richland, Inc. ("PFNWR") facility at an exercise price of \$3.65 per share, which was the fair market value of the Company's Common Stock on the date of grant. The term of the Ferguson Stock Option is seven years from the grant date. The vesting of the Ferguson Stock Option is subject to the achievement of three separate milestones by certain dates. The 10,000 options under the first milestone were exercised by Robert Ferguson in 2018. The vesting date for the second and third milestones for the purchase of up to 30,000 and 60,000 shares of the Company's Common Stock was previously extended to December 31, 2021 and December 31, 2022, respectively. The Company has not recognized compensation costs (fair value of approximately \$262,000 at September 30, 2021) for the remaining 90,000 Ferguson Stock Option under the remaining two milestones since achievement of the performance obligation under each of the two remaining milestones is uncertain at September 30, 2021. All other terms of the Ferguson Stock Option remain unchanged.

The Company estimates fair value of stock options using the Black-Scholes valuation model. Assumptions used to estimate the fair value of stock options granted include the exercise price of the award, the expected term, the expected volatility of the Company's stock over the option's expected term, the risk-free interest rate over the option's expected term, and the expected annual dividend yield. The fair value of the options granted as discussed above and the related assumptions used in the Black-Scholes option model used to value the options granted for the nine months ended September 30, 2021 were as follows:

| | Outside Director Stock Option Granted | |
|---|---------------------------------------|---------------|
| | Nine Months Ended September 30, | |
| | 2021 | |
| Weighted-average fair value per share | \$ | 3.90 |
| Risk -free interest rate ⁽¹⁾ | | 1.23%-1.61% |
| Expected volatility of stock ⁽²⁾ | | 55.84%-55.91% |
| Dividend yield | | None |
| Expected option life ⁽³⁾ | | 10.0 years |

(1) The risk-free interest rate is based on the U.S. Treasury yield in effect at the grant date over the expected term of the option.

(2) The expected volatility is based on historical volatility from our traded Common Stock over the expected term of the option.

(3) The expected option life is based on historical exercises and post-vesting data.

The following table summarizes stock-based compensation recognized for the three and nine months ended September 30, 2021 and 2020 for our employee and director stock options.

| Stock Options | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|------------------------|-------------------------------------|------------------|------------------------------------|-------------------|
| | 2021 | 2020 | 2021 | 2020 |
| Employee Stock Options | \$ 34,000 | \$ 34,000 | \$ 100,000 | \$ 99,000 |
| Director Stock Options | 28,000 | 35,000 | 49,000 | 62,000 |
| Total | <u>\$ 62,000</u> | <u>\$ 69,000</u> | <u>\$ 149,000</u> | <u>\$ 161,000</u> |

At September 30, 2021, the Company has approximately \$420,000 of total unrecognized compensation costs related to unvested options for employee and directors. The weighted average period over which the unrecognized compensation costs are expected to be recognized is approximately 2.9 years.

The summary of the Company's total stock option plans as of September 30, 2021 and September 30, 2020, and changes during the periods then ended, are presented below. The Company's plans consist of the 2010 Stock Option Plan, the 2017 Plan and the 2003 Plan:

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (years) | Aggregate Intrinsic Value ⁽⁴⁾ |
|--|----------------|---------------------------------------|--|---|
| Options outstanding January 1, 2021 | 658,400 | \$ 3.87 | | |
| Granted | 76,000 | \$ 6.05 | | |
| Exercised | (500) | \$ 3.15 | | \$ 2,175 |
| Forfeited/expired | (19,500) | \$ 6.75 | | |
| Options outstanding end of period ⁽¹⁾ | <u>714,400</u> | <u>\$ 4.02</u> | <u>3.6</u> | <u>\$ 1,888,695</u> |
| Options exercisable at September 30, 2021 ⁽²⁾ | <u>416,400</u> | <u>\$ 3.91</u> | <u>2.9</u> | <u>\$ 1,146,320</u> |

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (years) | Aggregate Intrinsic Value ⁽⁴⁾ |
|--|----------------|---------------------------------------|--|---|
| Options outstanding January 1, 2020 | 681,300 | \$ 3.84 | | |
| Granted | 24,000 | \$ 6.92 | | |
| Exercised | (12,500) | \$ 3.47 | | \$ 16,060 |
| Forfeited/expired | (34,400) | \$ 5.52 | | |
| Options outstanding end of period ⁽²⁾ | <u>658,400</u> | <u>\$ 3.87</u> | <u>3.7</u> | <u>\$ 2,096,355</u> |
| Options exercisable at September 30, 2020 ⁽³⁾ | <u>340,400</u> | <u>\$ 4.01</u> | <u>3.6</u> | <u>\$ 1,036,255</u> |

(1) Options with exercise prices ranging from \$2.79 to \$7.50

(2) Options with exercise prices ranging from \$2.79 to \$7.29

(3) Options with exercise prices ranging from \$2.79 to \$7.05

(4) The intrinsic value of a stock option is the amount by which the market value of the underlying stock exceeds the exercise price.

During the nine months ended September 30, 2021, the Company issued a total of 42,436 shares of its Common Stock under the 2003 Plan to its outside directors as compensation for serving on our Board. The Company has recorded approximately \$343,000 in compensation expenses (included in selling, general and administration ("SG&A") expenses) in connection with the issuance of shares of its Common Stock to outside directors..

During the nine months ended September 30, 2021, the Company issued 290 shares of its Common Stock from a cashless exercise of an option for the purchase of 500 shares of the Company's Common Stock at \$3.15 per share.

See “Note 15 – Common Stock Subscription Agreements” for a discussion on the sale of 1,000,000 shares of the Company’s Common Stock in a registered direct offering during the third quarter of 2021 and completed during the first part of October 2021.

7. Income Per Share

Basic income per share is calculated based on the weighted-average number of outstanding common shares during the applicable period. Diluted income per share is based on the weighted-average number of outstanding common shares plus the weighted-average number of potential outstanding common shares. In periods where they are anti-dilutive, such amounts are excluded from the calculations of dilutive earnings per share. The following table reconciles the income and average share amounts used to compute both basic and diluted income per share:

| (Amounts in Thousands, Except for Per Share Amounts) | Three Months Ended September 30, (Unaudited) | | Nine Months Ended September 30, (Unaudited) | |
|---|--|-----------------|---|-----------------|
| | 2021 | 2020 | 2021 | 2020 |
| Net income attributable to Perma-Fix Environmental Services, Inc., common stockholders: | | | | |
| Income from continuing operations, net of taxes | \$ 1,381 | 1,481 | 3,464 | 3,049 |
| Net loss attributable to non-controlling interest | (64) | (32) | (123) | (87) |
| Income from continuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders | \$ 1,445 | \$ 1,513 | \$ 3,587 | \$ 3,136 |
| Loss from discontinuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders | (43) | (67) | (285) | (266) |
| Net income attributable to Perma-Fix Environmental Services, Inc. common stockholders | <u>\$ 1,402</u> | <u>\$ 1,446</u> | <u>\$ 3,302</u> | <u>\$ 2,870</u> |
| Basic income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders | <u>\$.11</u> | <u>\$.12</u> | <u>\$.27</u> | <u>\$.24</u> |
| Diluted income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders | <u>\$.11</u> | <u>\$.12</u> | <u>\$.27</u> | <u>\$.23</u> |
| Weighted average shares outstanding: | | | | |
| Basic weighted average shares outstanding | 12,198 | 12,145 | 12,181 | 12,134 |
| Add: dilutive effect of stock options | 183 | 201 | 206 | 181 |
| Add: dilutive effect of warrant | 25 | 25 | 29 | 22 |
| Diluted weighted average shares outstanding | <u>12,406</u> | <u>12,371</u> | <u>12,416</u> | <u>12,337</u> |
| Potential shares excluded from above weighted average share calculations due to their anti-dilutive effect include: | | | | |
| Stock options | 30 | 30 | 30 | 42 |
| Warrant | — | — | — | — |

As disclosed in “Note 15 – Common Stock Subscription Agreement,” the Company entered into subscription agreements for the sale of an aggregate of 1,000,000 shares of the Company’s Common Stock in a registered direct offering during the third quarter of 2021 and completed during the first part of October 2021. The above earnings per share calculation does not include 900,000 shares of the Common Stock as these shares were issued and became outstanding in October 2021.

8. Long Term Debt

Long-term debt consists of the following:

| (Amounts in Thousands) | September 30, 2021 | December 31, 2020 |
|---|----------------------|----------------------|
| Revolving Credit facility dated May 8, 2020, borrowings based upon eligible accounts receivable, subject to monthly borrowing base calculation, balance due on May 15, 2024. Effective interest rate for the first nine month of 2021 was 5.3%. ⁽¹⁾ | \$ — | \$ — |
| Term Loan dated May 8, 2020, payable in equal monthly installments of principal, balance due on May 15, 2024. Effective interest rate for the first nine months of 2021 was 4.4%. ⁽¹⁾ | 1,056 ⁽²⁾ | 1,388 ⁽²⁾ |
| Promissory Note dated April 14, 2020, balance of loan forgiven. Interest accrued at annual rate of 1.0%. ⁽³⁾ | — ⁽⁴⁾ | 5,318 ⁽⁴⁾ |
| Notes Payable to 2023 and 2025, annual interest rate of 5.6% and 9.1%. | 42 | 23 |
| Total debt | 1,098 | 6,729 |
| Less current portion of long-term debt | 396 | 3,595 |
| Long-term debt | \$ 702 | \$ 3,134 |

(1) Our revolving credit facility is collateralized by our accounts receivable and our term loan is collateralized by our property, plant, and equipment.

(2) Net of debt issuance costs of (\$117,000) and (\$105,000) at September 30, 2021 and December 31, 2020, respectively.

(3) Uncollateralized note.

(4) Entered into with the Company's credit facility lender under the Paycheck Protection Program ("PPP") under the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") (see "PPP Loan" below for information regarding forgiveness on the entire loan balance, along with accrued interest, effective June 15, 2021).

Revolving Credit and Term Loan Agreement

The Company entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated May 8, 2020 ("Loan Agreement"), with PNC National Association ("PNC"), acting as agent and lender. The Loan Agreement provides the Company with the following credit facility with a maturity date of March 15, 2024: (a) up to \$18,000,000 revolving credit ("revolving credit") and (b) a term loan ("term loan") of approximately \$1,742,000, requiring monthly installments of \$35,547. The maximum that the Company can borrow under the revolving credit is based on a percentage of eligible receivables (as defined) at any one time reduced by outstanding standby letters of credit and borrowing reductions that our lender may impose from time to time.

On May 4, 2021, the Company entered into an amendment to the Loan Agreement with its lender which provided the following, among other things:

- revised the Company's fixed charge coverage ratio ("FCCR") calculation requirement which allows for the add-back of approximately \$5,318,000 in eligible expenses that were incurred and covered by the PPP Loan that the Company received in 2020. The add-back is to be applied retroactively to the second and third quarters of 2020. (see below for a discussion of the PPP Loan); and
- a capital expenditure line of up to \$1,000,000 with advances on the line, subject to certain limitations, permitted for up to twelve months starting May 4, 2021 (the "Borrowing Period"). Only interest is payable on advances during the Borrowing Period (see annual rate of interest below on the capital expenditure line). At the end of the Borrowing Period, the total amount advanced under the line will amortize equally based on a five-year amortization schedule with principal payment due monthly plus interest. At the maturity date of the Loan Agreement, any unpaid principal balance plus interest, if any, will become due. No advance on the capital line has been made as of September 30, 2021.

In connection with the amendment, the Company paid its lender a fee of \$15,000 which is being amortized over the remaining term of the Loan Agreement, as amended, as interest expense-financing fees.

On August 10, 2021, the Company entered into another amendment to the Loan Agreement with its lender which provided, among other things, the following:

- waived the Company's failure to meet the minimum quarterly FCCR requirement for the second quarter of 2021;
- removes the quarterly FCCR testing requirement for the third quarter of 2021;
- reinstates the quarterly FCCR testing requirement starting for the fourth quarter of 2021 and revises the methodology to be used in calculating the FCCR for the quarters ending December 31, 2021, March 31, 2022, and June 30, 2022 (with no change to the minimum 1.15:1 ratio requirement for each quarter); and
- requires maintenance of a minimum of \$3,000,000 in borrowing availability under the revolving credit until the minimum FCCR requirement for the quarter ended December 31, 2021 has been met and certified to the lender.

In connection with the amendment, the Company paid its lender a fee of \$15,000 which is being amortized over the remaining term of the Loan Agreement, as amended, as interest expense-financing fees.

Pursuant to the Loan Agreement, as amended, payment of annual rate of interest due on the revolving credit is at prime (3.25% at September 30, 2021) plus 2% or London InterBank Offer Rate ("LIBOR") plus 3.00% and the term loan and the capital expenditure line at prime plus 2.50% or LIBOR plus 3.50%. Under the LIBOR option of interest payment, a LIBOR floor of 0.75% applies in the event that LIBOR falls below 0.75% at any point in time.

The Company may terminate its Loan Agreement, as amended upon 90 days' prior written notice upon payment in full of our obligations under the Loan Agreement. The Company agreed to pay PNC 1.0% of the total financing had the Company paid off its obligations on or before May 7, 2021 and 0.5% of the total financing if the Company pays off its obligations after May 7, 2021 but prior to or on May 7, 2022. No early termination fee will apply if the Company pays off its obligations under the Loan Agreement after May 7, 2022.

At September 30, 2021, the borrowing availability under the Company's revolving credit was approximately \$10,804,000 based on our eligible receivables and includes a reduction in borrowing availability of approximately \$3,020,000 from outstanding standby letters of credit.

The Company's credit facility under its Loan Agreement, as amended, with PNC contains certain financial covenants, along with customary representations and warranties. A breach of any of these financial covenants, unless waived by PNC, could result in a default under the credit facility allowing our lender to immediately require the repayment of all outstanding debt under our credit facility and terminate all commitments to extend further credit. The Company met its financial covenant requirements in the first quarter of 2021. The Company's FCCR calculation in the first quarter of 2021 included the add-back of approximately \$5,318,000 in eligible expenses that were incurred and covered by the PPP Loan that the Company received in 2020 as permitted by the amendment dated May 4, 2021 to the Company's Loan Agreement as discussed above. The Company did not meet its FCCR requirement in the second quarter of 2021. However, this FCCR non-compliance was waived by the Company's lender pursuant to the amendment dated August 10, 2021 to the Company's Loan Agreement as discussed above. The Company was not required to test its FCCR for the third quarter 2021 pursuant to the August 10, 2021 amendment to the Loan Agreement.

PPP Loan

On April 14, 2020, the Company entered into a promissory note under the PPP with PNC, our credit facility lender, which had a balance of approximately \$5,318,000 (the “PPP Loan”). The PPP was established under the CARES Act and is administered by the U.S. Small Business Administration (“SBA”). The CARES Act was subsequently amended by the Paycheck Protection Program Flexibility Act of 2020 (“Flexibility Act”). Proceeds from the promissory note was used by the Company for eligible payroll costs, mortgage interest, rent and utility costs as permitted under the Flexibility Act. The annual interest rate on the PPP Loan is 1.0%

On October 5, 2020, the Company applied for forgiveness on repayment of the PPP Loan as permitted under the Flexibility Act. On July 1, 2021, the Company was notified by PNC that the entire balance of the PPP Loan of approximately \$5,318,000, along with accrued interest of approximately \$63,000 was forgiven by the SBA, effective June 15, 2021. Accordingly, the Company recorded the entire forgiven PPP Loan balance, along with accrued interest, totaling approximately \$5,381,000 as “Gain on extinguishment of debt” on its Consolidated Statement of Operations in the second quarter of 2021.

9. Commitments and Contingencies

Hazardous Waste

In connection with our waste management services, the Company processes both hazardous and non-hazardous waste, which we transport to our own, or other, facilities for destruction or disposal. As a result of disposing of hazardous substances, in the event any cleanup is required at the disposal site, the Company could be a potentially responsible party for the costs of the cleanup notwithstanding any absence of fault on our part.

Legal Matters

In the normal course of conducting our business, we are involved in various litigation. We are not a party to any litigation or governmental proceeding which our management believes could result in any judgments or fines against us that could would have a material adverse effect on our financial position, liquidity or results of future operations.

During July 2020, Tetra Tech EC, Inc. (“Tetra Tech”) filed a complaint in the United States District Court for the Northern District of California (the “Court”) against CH2M Hill, Inc. (“CH2M”) and four subcontractors of CH2M, including the Company (“Defendants”). The complaint alleges claims for negligence, negligent misrepresentation and equitable indemnification against all defendants related to alleged damages suffered by Tetra Tech in respect of certain draft reports prepared by defendants at the request of the U.S. Navy as part of an investigation and review of certain whistleblower complaints about Tetra Tech’s environmental restoration at the Hunter’s Point Naval Shipyard in San Francisco.

CH2M was hired by the Navy in 2016 to review Tetra Tech’s work. CH2M subcontracted with environmental consulting and cleanup firms Battelle Memorial Institute, Cabrera Services, Inc., SC&A, Inc. and the Company to assist with the review, according to the complaint.

The complaint alleges that the subject draft reports were prepared negligently and in a biased manner, made public, and caused damage to Tetra Tech’s reputation; triggering related lawsuits and costing it opportunities for both government and commercial contracts.

The Company has provided notice of this lawsuit to our insurance carrier. Our insurance carrier is providing a defense on our behalf in connection with this lawsuit, subject to a \$100,000 self-insured retention and the terms and limitations contained in the insurance policy.

On January 7, 2021, Defendants' motion to dismiss the complaint in its entirety was granted without prejudice, with leave to amend. Tetra Tech subsequently filed a First Amended Complaint ("FAC") and Defendants filed a motion to dismiss Tetra Tech's FAC. Tetra Tech filed an opposition to Defendant's motion to dismiss Tetra Tech's FAC. Defendants, subsequently filed a joint reply to Tetra Tech's motion in opposition. A decision and Order on Defendants' motion to dismiss is pending from the Court while discovery is allowed to proceed. At this time, the Company continues to believe it does not have any liability to Tetra Tech.

Insurance

The Company has a 25-year finite risk insurance policy entered into in June 2003 ("2003 Closure Policy") with AIG Specialty Insurance Company ("AIG"), which provides financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure. The 2003 Closure Policy, as amended, provides for a maximum allowable coverage of \$28,177,000 which includes available capacity to allow for annual inflation and other performance and surety bond requirements. Total coverage under the 2003 Closure Policy, as amended, was \$19,898,000 at September 30, 2021. At September 30, 2021 and December 31, 2020, finite risk sinking funds contributed by the Company related to the 2003 Closure Policy which is included in other long term assets on the accompanying Consolidated Balance Sheets totaled \$11,469,000 and \$11,446,000, respectively, which included interest earned of \$1,998,000 and \$1,975,000 on the finite risk sinking funds as of September 30, 2021 and December 31, 2020, respectively. Interest income for the three and nine months ended September 30, 2021 was approximately \$2,000 and \$23,000, respectively. Interest income for the three and nine months ended September 30, 2020 was approximately \$28,000 and \$111,000, respectively. If we so elect, AIG is obligated to pay the Company an amount equal to 100% of the finite risk sinking fund account balance in return for complete release of liability from both the Company and any applicable regulatory agency using this policy as an instrument to comply with financial assurance requirements.

Letter of Credits and Bonding Requirements

From time to time, the Company is required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At September 30, 2021, the total amount of standby letters of credit outstanding was approximately \$3,020,000 and the total amount of bonds outstanding was approximately \$50,092,000.

10. Discontinued Operations

The Company's discontinued operations consist of all our subsidiaries included in our Industrial Segment which encompasses subsidiaries divested in 2011 and prior and three previously closed locations.

The Company's discontinued operations had net losses of \$43,000 and \$67,000 for the three months ended September 30, 2021 and 2020, respectively (net of tax benefit of \$98,000 and tax expense of \$0 for the three month ended September 30, 2021 and 2020, respectively) and net losses of \$285,000 and \$266,000 for the nine months ended September 30, 2021 and 2020, respectively, (net of tax benefit of \$98,000 and tax expense of \$0 for the nine month ended September 30, 2021 and 2020, respectively). The losses (excluding the tax benefits) were primarily due to costs incurred in the administration and continued monitoring of our discontinued operations. The Company's discontinued operations had no revenues for any of the periods noted above.

The following table presents the major class of assets of discontinued operations at September 30, 2021 and December 31, 2020. No assets and liabilities were held for sale at each of the periods noted.

| (Amounts in Thousands) | September 30, 2021 | December 31, 2020 |
|---|-----------------------|----------------------|
| Current assets | | |
| Other assets | \$ 18 | \$ 22 |
| Total current assets | 18 | 22 |
| Long-term assets | | |
| Property, plant and equipment, net ⁽¹⁾ | 81 | 81 |
| Other assets | — | — |
| Total long-term assets | 81 | 81 |
| Total assets | <u>\$ 99</u> | <u>\$ 103</u> |
| Current liabilities | | |
| Accounts payable | \$ 3 | \$ 4 |
| Accrued expenses and other liabilities | 207 | 150 |
| Environmental liabilities | 122 | 744 |
| Total current liabilities | 332 | 898 |
| Long-term liabilities | | |
| Closure liabilities | 148 | 142 |
| Environmental liabilities | 654 | 110 |
| Total long-term liabilities | 802 | 252 |
| Total liabilities | <u>\$ 1,134</u> | <u>\$ 1,150</u> |

(1) net of accumulated depreciation of \$10,000 for each period presented.

11. Operating Segments

Our reporting segments are defined as below:

TREATMENT SEGMENT, which includes:

- nuclear, low-level radioactive, mixed waste (containing both hazardous and low-level radioactive constituents), hazardous and non-hazardous waste treatment, processing and disposal services primarily through four uniquely licensed and permitted treatment and storage facilities; and
- Research & Development (“R&D”) activities to identify, develop and implement innovative waste processing techniques for problematic waste streams.

SERVICES SEGMENT, which includes:

- Technical services, which include:
 - o professional radiological measurement and site survey of large government and commercial installations using advanced methods, technology and engineering;
 - o health physics services including health physicists, radiological engineers, nuclear engineers and health physics technicians support to government and private radioactive materials licensees;
 - o integrated Occupational Safety and Health services including industrial hygiene (“IH”) assessments; hazardous materials surveys, e.g., exposure monitoring; lead and asbestos management/abatement oversight; indoor air quality evaluations; health risk and exposure assessments; health & safety plan/program development, compliance auditing and training services; and Occupational Safety and Health Administration (“OSHA”) citation assistance;
 - o global technical services providing consulting, engineering (civil, nuclear, mechanical, chemical, radiological and environmental), project management, waste management, environmental, and decontamination and decommissioning field, technical, and management personnel and services to commercial and government customers; and
 - o waste management services to commercial and governmental customers.
- Nuclear services, which include:
 - o decontamination and decommissioning (“D&D”) of government and commercial facilities impacted with radioactive material and hazardous constituents including engineering, technology applications, specialty services, logistics, transportation, processing and disposal;
 - o license termination support of radioactive material licensed and federal facilities over the entire cycle of the termination process: project management, planning, characterization, waste stream identification and delineation, remediation/demo, final status survey, compliance demonstration, reporting, transportation, disposal and emergency response.
- A company owned equipment calibration and maintenance laboratory that services, maintains, calibrates, and sources (i.e., rental) health physics, IH and customized nuclear, environmental, and occupational safety and health (“NEOSH”) instrumentation.
- A company owned gamma spectroscopy laboratory for the analysis of oil and gas industry solids and liquids.

MEDICAL SEGMENT, which is currently involved on a limited basis in the R&D of the Company’s medical isotope production technology, has not generated any revenue and has substantially reduced its R&D costs and activities due to the need for capital to fund these activities. The Company anticipates that the Medical Segment will not resume full R&D activities until the necessary capital is obtained through its own credit facility or additional equity raise, or obtains partners willing to provide funding for its R&D.

Our reporting segments exclude our corporate headquarters and our discontinued operations (see “Note 10 – Discontinued Operations”) which do not generate revenues.

The table below presents certain financial information of our operating segments for the three and nine months ended September 30, 2021 and 2020 (in thousands).

Segment Reporting for the Quarter Ended September 30, 2021

| | Treatment | Services | Medical | Segments Total | Corporate ⁽¹⁾ | Consolidated Total |
|---|-----------|----------|---------|-------------------|--------------------------|------------------------|
| Revenue from external customers | \$ 8,893 | \$ 6,904 | — | \$ 15,797 | \$ — | \$ 15,797 |
| Intercompany revenues | 220 | 5 | — | 225 | — | — |
| Gross profit (negative gross profit) | 2,487 | (263) | — | 2,224 | — | 2,224 |
| Research and development | 52 | 18 | 162 | 232 | 11 | 243 |
| Interest income | — | — | — | — | 2 | 2 |
| Interest expense | (51) | (1) | — | (52) | (25) | (77) |
| Interest expense-financing fees | — | — | — | — | (11) | (11) |
| Depreciation and amortization | 319 | 85 | — | 404 | 5 | 409 |
| Segment income (loss) before income taxes | 1,317 | (984) | (162) | 171 | (1,626) | (1,455) |
| Income tax expense (benefit) | 1 | — | — | 1 | (2,837) | (2,836) ⁽⁵⁾ |
| Segment income (loss) | 1,316 | (984) | (162) | 170 | 1,211 | 1,381 |
| Expenditures for segment assets | 482 | — | — | 482 | — | 482 ⁽²⁾ |

Segment Reporting for the Quarter Ended September 30, 2020

| | Treatment | Services | Medical | Segments Total | Corporate ⁽¹⁾ | Consolidated Total |
|---|-----------|-----------|---------|-------------------|--------------------------|-----------------------|
| Revenue from external customers | \$ 7,066 | \$ 23,106 | — | \$ 30,172 | \$ — | \$ 30,172 |
| Intercompany revenues | 226 | 6 | — | 232 | — | — |
| Gross profit | 1,094 | 3,656 | — | 4,750 | — | 4,750 |
| Research and development | 49 | 7 | 81 | 137 | 20 | 157 |
| Interest income | — | — | — | — | 28 | 28 |
| Interest expense | (34) | (3) | — | (37) | (50) | (87) |
| Interest expense-financing fees | — | — | — | — | (58) | (58) |
| Depreciation and amortization | 373 | 97 | — | 470 | 8 | 478 |
| Segment income (loss) before income taxes | 280 | 2,813 | (81) | 3,012 | (1,664) | 1,348 |
| Income tax (benefit) expense | (170) | 2 | — | (168) | 35 | (133) |
| Segment income (loss) | 450 | 2,811 | (81) | 3,180 | (1,699) | 1,481 |
| Expenditures for segment assets | 95 | 24 | — | 119 | 3 | 122 ⁽³⁾ |

Segment Reporting for the Nine Months Ended September 30, 2021

| | Treatment | Services | Medical | Segments Total | Corporate ⁽¹⁾ | Consolidated Total |
|---|-----------|-----------|---------|-------------------|--------------------------|------------------------|
| Revenue from external customers | \$ 24,094 | \$ 30,981 | — | \$ 55,075 | \$ — | \$ 55,075 |
| Intercompany revenues | 1,199 | 44 | — | 1,243 | — | — |
| Gross profit | 4,845 | 701 | — | 5,546 | — | 5,546 |
| Research and development | 142 | 50 | 311 | 503 | 35 | 538 |
| Interest income | — | — | — | — | 23 | 23 |
| Interest expense | (88) | (9) | — | (97) | (112) | (209) |
| Interest expense-financing fees | — | — | — | — | (28) | (28) |
| Depreciation and amortization | 939 | 255 | — | 1,194 | 14 | 1,208 |
| Segment income (loss) before income taxes | 1,669 | (1,721) | (311) | (363) | 987 ⁽⁴⁾ | 624 |
| Income tax (benefit) expense | (13) | 10 | — | (3) | (2,837) | (2,840) ⁽⁵⁾ |
| Segment income (loss) | 1,682 | (1,731) | (311) | (360) | 3,824 | 3,464 |
| Expenditures for segment assets | 1,109 | 14 | — | 1,123 | 9 | 1,132 ⁽²⁾ |

Segment Reporting for the Nine Months Ended September 30, 2020

| | Treatment | Services | Medical | Segments Total | Corporate ⁽¹⁾ | Consolidated Total |
|---|-----------|-----------|---------|-------------------|--------------------------|-----------------------|
| Revenue from external customers | \$ 24,469 | \$ 52,610 | — | \$ 77,079 | \$ — | \$ 77,079 |
| Intercompany revenues | 879 | 19 | — | 898 | — | — |
| Gross profit | 5,533 | 7,167 | — | 12,700 | — | 12,700 |
| Research and development | 194 | 119 | 221 | 534 | 64 | 598 |
| Interest income | 1 | — | — | 1 | 111 | 112 |
| Interest expense | (80) | (13) | — | (93) | (213) | (306) |
| Interest expense-financing fees | — | — | — | — | (187) | (187) |
| Depreciation and amortization | 912 | 259 | — | 1,171 | 18 | 1,189 |
| Segment income (loss) before income taxes | 2,577 | 5,162 | (221) | 7,518 | (4,597) | 2,921 |
| Income tax (benefit) expense | (165) | 2 | — | (163) | 35 | (128) |
| Segment income (loss) | 2,742 | 5,160 | (221) | 7,681 | (4,632) | 3,049 |
| Expenditures for segment assets | 1,095 | 385 | — | 1,480 | 8 | 1,488 ⁽³⁾ |

- (1) Amounts reflect the activity for corporate headquarters not included in the segment information.
- (2) Net of financed amount of \$271,000 and \$348,000 for the three and nine months ended September 30, 2021, respectively.
- (3) Net of financed amount of \$751,000 and \$883,000 for the three and nine months ended September 30, 2020, respectively.
- (4) Amounts includes approximately \$5,381,000 of “Gain on extinguishment of debt” recorded in connection with the Company’s PPP Loan which was forgiven by the SBA effective June 15, 2021 (see “Note 8 – Long Term Debt – PPP Loan” for information of this loan forgiveness).
- (5) Includes tax benefit recorded in amount of approximately \$2,351,000 resulting from release of valuation allowance on the Company’s deferred tax assets (see “Note 12 – Income Taxes” below a discussion of this tax benefit).

12. Income Taxes

The Company regularly assesses the likelihood that the deferred tax asset will be recovered from future taxable income. The Company considers projected future taxable income and ongoing tax planning strategies, then records a valuation allowance to reduce the carrying value of the net deferred income taxes to an amount that is more likely than not to be realized. For the year ended December 31, 2020, the Company maintained a full valuation allowance against net deferred income tax assets because insufficient evidence existed to support the realization of any future income tax benefits. As of September 30, 2021, however, the Company has reassessed this conclusion. Based upon the Company’s assessment of all available evidence, including a number of new contracts awarded to the Company’s Services Segment since the latter part of the second quarter of 2021 (including a contract award with a value of approximately \$40,000,000 for the decommissioning of a navy ship), a return to profitability, expectation of future profitability, and the Company’s overall prospects of future business, the Company has determined that it is more likely than not that the Company will be able to realize a portion of the deferred income tax assets as of September 30, 2021. As a result, a deferred income tax benefit in the amount of approximately \$2,351,000 attributable to the valuation allowance release on beginning of year deferred tax assets was realized in the three months ended September 30, 2021.

The Company had income tax benefits of \$2,836,000 and \$133,000 for continuing operations for the three months ended September 30, 2021 and 2020, respectively and income tax benefits of \$2,840,000 and \$128,000 for the nine months ended September 30, 2021 and 2020, respectively. Our effective tax rates were approximately 194.9% and (9.9%) for the three months ended September 30, 2021 and 2020, respectively, and (455.1%) and (4.4%) for the nine months ended September 30, 2021 and 2020, respectively. The Company’s effective tax rates for the three and nine months ended September 30, 2021 were substantially impacted by the release of valuation allowance as discussed above. The Company’s tax rates for the three and nine months ended September 30, 2020 were impacted by the Company’s full valuation on its net deferred tax assets. For the three and nine months ended September 30, 2021, the primary reasons for the differences between the Company’s effective tax rate and statutory tax rate were due to the aforementioned release of valuation allowance and the forgiveness of the Company’s PPP Loan which is included in the Company’s Consolidated Statement of Operations as “Gain on extinguishment of debt” but is exempt from income taxes.

13. Variable Interest Entities (“VIE”)

The Company and Engineering/Remediation Resources Group, Inc. (“ERRG”) previously entered into an unpopulated joint venture agreement for project work bids within the Company’s Services Segment with the joint venture doing business as Perma-Fix ERRG, a general partnership. The Company has a 51% partnership interest in the joint venture and ERRG has a 49% partnership interest in the joint venture.

The Company determines whether joint ventures in which it has invested meet the criteria of a VIE at the start of each new venture and when a reconsideration event has occurred. A VIE is a legal entity that satisfies any of the following characteristics: (a) the legal entity does not have sufficient equity investment at risk; (b) the equity investors at risk as a group, lack the characteristics of a controlling financial interest; or (c) the legal entity is structured with disproportionate voting rights.

The Company consolidates a VIE if it is determined to be the primary beneficiary of the VIE. The primary beneficiary has both the power to direct the activities of the VIE that most significantly impact the entity's economic performance and the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

Based on the Company's evaluation of Perma-Fix ERRG and related agreements with Perma-Fix ERRG, the Company determined that Perma-Fix ERRG continues to be a VIE in which the Company is the primary beneficiary. At September 30, 2021, Perma-Fix ERRG had total assets of \$2,535,000 and total liabilities of \$2,535,000 which are all recorded as current.

14. Deferral of Employment Tax Deposits

The Flexibility Act provides employers the option to defer the payment of an employer's share of social security taxes beginning on March 27, 2020 through December 31, 2020 with 50% of the amount of social security taxes deferred to become due on December 31, 2021 with the remaining 50% due on December 31, 2022. The Company elected to defer such taxes starting in mid-April 2020. At September 30, 2021, the Company has deferred payment of approximately \$1,252,000 in its share of social security taxes, of which approximately \$626,000 is included in "Other long-term liabilities," with the remaining balance included in "Accrued expenses" within current liabilities in the Company's Consolidated Balance Sheets.

15. Common Stock Subscription Agreements

On September 30, 2021, the Company entered into subscription agreements (the "Subscription Agreements") with certain institutional and retail investors (the "Purchasers"), pursuant to which the Company agreed to sell and issue, in a registered direct offering (the "Offering"), an aggregate of 1,000,000 shares (the "Shares") of the Company's Common Stock, at a negotiated purchase price per share of \$6.20 (the "Share Price"), for aggregate gross proceeds to the Company of approximately \$6,200,000. The offering price per share was negotiated based on the average closing price of the Company's Common Stock as quoted on Nasdaq over the three-week period immediately preceding the date of the Subscription Agreements, less a five percent discount. As of September 30, 2021, the Company received proceeds of approximately \$5,456,000 from the Subscription Agreements with the remaining \$744,000 proceeds received on October 5, 2021. As of September 30, 2021, 100,000 shares of the 1,000,000 Shares were issued with the remaining 900,000 Shares issued in early October 2021. As such, the Company's issued and outstanding shares of Common Stock on its Consolidated Balance Sheets as of September 30, 2021 do not include the 900,000 Shares. The 900,000 Shares were recorded as stock subscriptions in the Company's Consolidated Statement of Stockholder's Equity at September 30, 2021 and will be reclassified to additional-paid-in capital in October 2021.

The Shares were offered and sold by the Company through a prospectus supplement pursuant to the Company's "shelf" registration statement on Form S-3, which was previously filed with the Commission on May 13, 2019 and subsequently declared effective on May 22, 2019 (the "Registration Statement").

Wellington Shields & Co., LLC ("Wellington") served as the exclusive placement agent in connection with the Offering, pursuant to a placement agency agreement dated as of September 23, 2021 (the "Placement Agency Agreement"), between the Company and Wellington. The Company agreed to pay Wellington a cash fee of 6.00% of the aggregate gross proceeds in the Offering which totaled \$372,000. The Company also agreed to reimburse Wellington for certain expenses in connection with the Offering in an aggregate amount not to exceed \$50,000. After deducting total costs incurred directly in connection with the Offering of approximately \$499,000, which were recorded as deduction to equity, net proceeds to the Company totaled approximately \$5,701,000. As of September 30, 2021, approximately \$22,000 of the \$499,000 in incurred Offering costs were paid.

The Company plans to use the aggregate net proceeds from the Offering primarily for working capital and general corporate purposes, including for certain facility expansion and upgrades, with the use of such proceeds subject to changes, based on the judgment of management.

16. Subsequent Events

Management evaluated events occurring subsequent to September 30, 2021 through November 12, 2021, the date these consolidated financial statements were available for issuance, and other than as noted below determined that no material recognizable subsequent events occurred.

Incentive Stock Option Agreements

On October 14, 2021, the Company's Compensation and Stock Option Committee (the "Compensation Committee") and the Board approved the grant of ISOs to certain employees for the purchase, under the Company's 2017 Plan, of up to an aggregate 305,000 shares of the Company's Common Stock. The total ISOs granted included an ISO for each of the Company's executive officers for the purchase set forth in his respective Incentive Stock Option Agreement, as follows: 50,000 shares for the Chief Executive Officer; 25,000 shares for the Chief Financial Officer; 20,000 shares for the EVP of Strategic Initiatives; 25,000 shares for the EVP of Waste Treatment Operations; and 25,000 shares for the EVP of Nuclear and Technical Services. Each of the ISOs granted is for a contractual term of six years with one-fifth yearly vesting over a five-year period. The exercise price of the ISO is \$7.005 per share, which is equal to the closing price of the Company's Common Stock on the date of grant as quoted on Nasdaq.

Common Stock Offering

See "Note 15 – Common Stock Subscription Agreements" above for a description of the Offering of Shares and the collection of the proceeds and issuance of such Shares in connection with the Offering during September 2021 and October 2021.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Forward-looking Statements

Certain statements contained within this report may be deemed "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (collectively, the "Private Securities Litigation Reform Act of 1995"). All statements in this report other than a statement of historical fact are forward-looking statements that are subject to known and unknown risks, uncertainties and other factors, which could cause actual results and performance of the Company to differ materially from such statements. The words "believe," "expect," "anticipate," "intend," "will," and similar expressions identify forward-looking statements. Forward-looking statements contained herein relate to, among other things,

- demand for our services;
- reductions in the level of government funding in future years;
- R&D activity and necessary capital of our Medical Segment;
- reducing operating costs and non-essential expenditures;
- ramp up of activities under contract awards;
- ability to meet loan agreement covenant requirements;
- cash flow requirements;
- accounts receivable impact and collections;
- sufficient liquidity to continue business;
- future results of operations and liquidity;
- effect of economic disruptions on our business;
- curtail capital expenditures;
- government funding for our services;
- may not have liquidity to repay debt if our lender accelerates payment of our borrowings;
- manner in which the applicable government will be required to spend funding to remediate various sites;
- funding operations;
- fund capital expenditures from cash from operations, credit facility availability, and/or financing;
- impact from COVID-19;
- contract awards;
- fund remediation expenditures for sites from funds generated internally;
- collection of accounts receivables;
- compliance with environmental regulations;
- potential effect of being a PRP;
- potential sites for violations of environmental laws and remediation of our facilities;
- continuation of contracts with federal government;
- partial or full shutdown of any of our facilities;
- continued waste shipments delays by clients; and
- R&D costs.

While the Company believes the expectations reflected in such forward-looking statements are reasonable, it can give no assurance such expectations will prove to be correct. There are a variety of factors, which could cause future outcomes to differ materially from those described in this report, including, but not limited to:

- general economic conditions;
- contract bids, including international markets;
- material reduction in revenues;
- inability to meet PNC covenant requirements;
- inability to collect in a timely manner a material amount of receivables;
- increased competitive pressures;
- inability to maintain and obtain required permits and approvals to conduct operations;
- public not accepting our new technology;
- inability to develop new and existing technologies in the conduct of operations;
- inability to maintain and obtain closure and operating insurance requirements;
- inability to retain or renew certain required permits;
- discovery of additional contamination or expanded contamination at any of the sites or facilities leased or owned by us or our subsidiaries which would result in a material increase in remediation expenditures;
- delays at our third-party disposal site can extend collection of our receivables greater than twelve months;
- refusal of third-party disposal sites to accept our waste;
- changes in federal, state and local laws and regulations, especially environmental laws and regulations, or in interpretation of such;
- requirements to obtain permits for TSD activities or licensing requirements to handle low level radioactive materials are limited or lessened;
- potential increases in equipment, maintenance, operating or labor costs;
- management retention and development;
- financial valuation of intangible assets is substantially more/less than expected;
- the requirement to use internally generated funds for purposes not presently anticipated;
- inability to continue to be profitable on an annualized basis;
- inability of the Company to maintain the listing of its Common Stock on the NASDAQ;
- terminations of contracts with government agencies (domestic and foreign) or subcontracts involving government agencies (domestic or foreign), or reduction in amount of waste delivered to the Company under the contracts or subcontracts;

- renegotiation of contracts involving government agencies (domestic and foreign);
- federal government's inability or failure to provide necessary funding to remediate contaminated federal sites;
- disposal expense accrual could prove to be inadequate in the event the waste requires re-treatment;
- inability to raise capital on commercially reasonable terms;
- inability to increase profitable revenue;
- impact of the COVID-19;
- delays in waste shipments and contract awards;
- new governmental regulations;
- lender refuses to waive non-compliance or revise our covenant so that we are in compliance;
- other unanticipated factors; and
- risk factors and other factors set forth in "Special Note Regarding Forward-Looking Statements" contained in the Company's 2020 Form 10-K and the "Forward-Looking Statements" contained in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" ("MD&A") of the first and second quarter 2021 Form 10-Qs and this third quarter 2021 Form 10-Q.

COVID-19 Impact

Our management team continues to proactively update our ongoing business operations and safety plans in an effort to mitigate any potential impact of COVID-19. We continue to monitor government mandates and recommendations and remain focused on protecting the health and well-being of our employees and the communities in which we operate while assuring the continuity of our business operations. As previously disclosed, our Treatment Segment's revenue has been negatively impacted by continued waste shipment delays from certain customers since the latter part of the first quarter of 2020 at the start of the pandemic. However, we are beginning to see a gradual return in waste receipts from these customers starting in the latter part of the third quarter of 2021. As previously disclosed, within our Services Segment, we experienced delays in procurement actions and contract awards resulting primarily from the impact of COVID-19. However, since the end of the second quarter of 2021, we have been awarded a number of new contracts, including a fixed price contract awarded to us at the end of the third quarter of 2021 with a value of approximately \$40,000,000 for the decommissioning of a navy ship. Project work under this contract is expected to be completed over an eighteen to twenty-four months period. We expect to see ramp-up of activities from these new projects starting in the fourth quarter of 2021. Within our Treatment and Services Segments, we continue to have bids currently submitted and awaiting awards.

As the situations surrounding COVID-19 continues to remain fluid, the full impact and extent of the pandemic on our financial results and liquidity cannot be estimated with any degree of certainty. We continue to closely monitor the impact of the COVID-19 pandemic on all aspects of our business, including our customers' payment performance. However, since a significant portion of our revenues is derived from government related contracts, we do not expect our accounts receivable collections to be materially impacted due to COVID-19.

At this time, we believe we have sufficient liquidity on hand to continue business operations during the next twelve months. At September 30, 2021, our borrowing availability under our revolving credit facility was approximately \$10,804,000 which was based on a percentage of eligible receivables and subject to certain reserves. On September 30, 2021, we entered into subscription agreements with certain institutional and retail investors for the sale and issuance of 1,000,000 shares of our Common Stock in a registered direct offering for gross proceeds of approximately \$6,200,000 (see "Liquidity and Capital Resources - Financing Activities within this MD&A for a discussion of this direct offering, including the planned usage of the proceeds). We continue to assess the need in reducing operating costs during this volatile time, which may include curtailing certain capital expenditures and eliminating non-essential expenditures. Based on our current projection, we believe that we will be able to meet our current covenant requirements under our loan agreement for the next twelve months, however, such may not be the case due to, among other things, the uncertainty of COVID on our operations and continued delays in waste shipments as discussed above.

Overview

Our overall revenue decreased \$14,375,000 or 47.6% to \$15,797,000 for the three months ended September 30, 2021 from \$30,172,000 for the corresponding period of 2020. The revenue decrease was entirely within our Services Segment where revenue decreased by approximately \$16,202,000 or 70.1% to \$6,904,000 for the three months ended September 30, 2021 from \$23,106,000 for the corresponding period of 2020 primarily due to delays in contract awards resulting primarily from the impact of COVID-19 which was further exacerbated by the completion of a certain large project in the Services Segment in the second quarter and the near completion of a certain other project. However, as disclosed above, since the end of the second quarter of 2021, Our Services Segment has been awarded a number of new contracts, including a fixed price contract awarded to us at the end of the third quarter of 2021 with a value of approximately \$40,000,000 for the decommissioning of a navy ship over a period of approximately twenty-four months. We expect to see ramp-up of activities from these new projects starting in the fourth quarter of 2021. Revenue within our Treatment Segment increased by approximately \$1,827,000 for the third quarter of 2021 primarily due to revenue recognized in the amount of approximately \$1,286,000 from a request for equitable adjustment (“REA”) under a government waste generator contract. As previously disclosed, our Treatment Segment’s revenue has been negatively impacted by continued waste shipment delays from certain customers since the latter part of the first quarter of 2020 at the start of the pandemic. However, we are beginning to see a gradual return in waste receipts from these customers starting in the latter part of the third quarter of 2021. Gross profit decreased \$2,526,000 or 53.2% primarily due to the revenue decrease in the Services Segment. Selling, General, and Administrative (“SG&A”) expenses increased slightly by approximately \$40,000 or 1.2% for the three months ended September 30, 2021 as compared to the corresponding period of 2020.

Our overall revenue decreased \$22,004,000 or 28.5% to \$55,075,000 for the nine months ended September 30, 2021 from \$77,079,000 for the corresponding period of 2020. The decrease was primarily within our Services Segment where revenue decreased by \$21,629,000 or 41.1% to \$30,981,000 for the nine months ended September 30, 2021 from \$52,610,000 for the corresponding period of 2020 primarily due to delays in procurement actions and contract awards resulting primarily from the impact of COVID-19. Additionally, as discussed above, the completion of a certain large project in the Services Segment in the second quarter of 2021 and the near completion of a certain other project exacerbated the decrease in revenue. Treatment Segment revenue decreased by \$375,000 or 1.5% to \$24,094,000 for the nine months ended September 30, 2021 from \$24,469,000 for the corresponding period of 2020 primarily due to continued delays in waste shipments from certain customers as discussed above. Total gross profit decreased \$7,154,000 or 56.3% for the nine months ended September 30, 2021 as compared to the corresponding period of 2020. Total SG&A expenses increased \$615,000 or 6.9% for the nine months ended September 30, 2021 as compared to the corresponding period of 2020.

Business Environment

Our Treatment and Services Segments’ business continues to be heavily dependent on services that we provide to governmental clients, primarily as subcontractors for others who are prime contractors to government entities or directly as the prime contractor. We believe demand for our services will continue to be subject to fluctuations due to a variety of factors beyond our control, including, without limitation, the economic conditions, the manner in which the applicable government will be required to spend funding to remediate various sites, and/or the impact resulting from COVID-19 as discussed above. In addition, our governmental contracts and subcontracts relating to activities at governmental sites in the United States are generally subject to termination or renegotiation on 30 days’ notice at the government’s option, and our governmental contracts/task orders with the Canadian government authorities allow the authorities to terminate the contract/task orders at any time for convenience. Significant reductions in the level of governmental funding or specifically mandated levels for different programs that are important to our business could have a material adverse impact on our business, financial position, results of operations and cash flows. As previously disclosed, our Medical Segment has not generated any revenues and has substantially reduced its R&D costs and activities due to the need for capital to fund such activities. We anticipate that our Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

We are continually reviewing methods to raise additional capital to supplement our liquidity requirements, when needed, and reducing our operating costs. We continue to aggressively bid on various contracts, including potential contracts within the international markets.

Results of Operations

The reporting of financial results and pertinent discussions are tailored to our three reportable segments: The Treatment, Services, and Medical Segments. Our Medical Segment has not generated any revenue and all costs incurred are included within R&D.

Summary – Three and Nine Months Ended September 30, 2021 and 2020

| Consolidated (amounts in thousands) | Three Months Ended September 30, | | | | Nine Months Ended September 30, | | | |
|--|-------------------------------------|--------|-----------|-------|------------------------------------|-------|-----------|-------|
| | 2021 | % | 2020 | % | 2021 | % | 2020 | % |
| Net revenues | \$ 15,797 | 100.0 | \$ 30,172 | 100.0 | \$ 55,075 | 100.0 | \$ 77,079 | 100.0 |
| Cost of goods sold | 13,573 | 85.9 | 25,422 | 84.3 | 49,529 | 89.9 | 64,379 | 83.5 |
| Gross profit | 2,224 | 14.1 | 4,750 | 15.7 | 5,546 | 10.1 | 12,700 | 16.5 |
| Selling, general and administrative | 3,348 | 21.2 | 3,308 | 11.0 | 9,550 | 17.3 | 8,935 | 11.6 |
| Research and development | 243 | 1.5 | 157 | .4 | 538 | 1.0 | 598 | .8 |
| Loss on disposal of property and equipment | 1 | — | — | — | 1 | — | 27 | — |
| (Loss) income from operations | (1,368) | (8.6) | 1,285 | 4.3 | (4,543) | (8.2) | 3,140 | 4.1 |
| Interest income | 2 | — | 28 | .1 | 23 | — | 112 | .1 |
| Interest expense | (77) | (.5) | (87) | (.3) | (209) | (.4) | (306) | (.4) |
| Interest expense-financing fees | (11) | (.1) | (58) | (.2) | (28) | (.1) | (187) | (.2) |
| Other | (1) | — | 180 | .6 | — | — | 189 | .2 |
| Gain (loss) on extinguishment of debt | — | — | — | — | 5,381 | 9.8 | (27) | — |
| (Loss) income from continuing operations before taxes | (1,455) | (9.2) | 1,348 | 4.5 | 624 | 1.1 | 2,921 | 3.8 |
| Income tax benefit | (2,836) | (17.9) | (133) | (.4) | (2,840) | (5.2) | (128) | (.2) |
| Income (loss) from continuing operations, net of taxes | \$ 1,381 | 8.7 | \$ 1,481 | 4.9 | \$ 3,464 | 6.3 | \$ 3,049 | 4.0 |

Revenues

Consolidated revenues decreased \$14,375,000 for the three months ended September 30, 2021, compared to the three months ended September 30, 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change | % Change |
|--|-----------|-----------|-----------|-----------|-------------|----------|
| Treatment | | | | | | |
| Government waste | \$ 6,164 | 39.0 | \$ 4,950 | 16.4 | \$ 1,214 | 24.5 |
| Hazardous/non-hazardous ⁽¹⁾ | 1,094 | 6.9 | 964 | 3.2 | 130 | 13.5 |
| Other nuclear waste | 1,635 | 10.4 | 1,152 | 3.8 | 483 | 41.9 |
| Total | 8,893 | 56.3 | 7,066 | 23.4 | 1,827 | 25.9 |
| Services | | | | | | |
| Nuclear services | 6,505 | 41.2 | 22,647 | 75.1 | (16,142) | (71.3) |
| Technical services | 399 | 2.5 | 459 | 1.5 | (60) | (13.1) |
| Total | 6,904 | 43.7 | 23,106 | 76.6 | (16,202) | (70.1) |
| Total | \$ 15,797 | 100.0 | \$ 30,172 | 100.0 | \$ (14,375) | (47.6) |

⁽¹⁾ Includes wastes generated by government clients of \$597,000 and \$518,000 for the three month ended September 30, 2021 and the corresponding period of 2020, respectively.

Treatment Segment revenue increased \$1,827,000 or 25.9% for the three months ended September 30, 2021 over the same period in 2020. Treatment Segment revenue for the three months ended September 30, 2021 included approximately \$1,286,000 recognized from a REA under a government waste generator contract resulting from certain pricing provisions of the contract. Revenue generated from other nuclear waste increased primarily due to higher waste volume generated from commercial customers. Since the latter part of the first quarter of 2020 at the start of the COVID-19 pandemic, our overall Treatment Segment revenue has been negatively impacted by continued waste shipment delays from certain customers, however, higher averaged price waste from revenue mix and the REA contributed to the revenue increase in the third quarter of 2021. Services Segment revenue decreased by approximately \$16,202,000 or 70.1%. The decrease was primarily due to the completion of a certain large project in the second quarter of 2021 and the near completion of a certain other project which were not replaced with new projects due to delays in procurement actions and contract awards resulting from the impact of COVID-19. However, since the end of the second quarter of 2021, our Services Segment has been awarded a number of contracts with activities expected to ramp up starting in the fourth quarter of 2021. Our Services Segment revenues are project based; as such, the scope, duration and completion of each project vary. As a result, our Services Segment revenues are subject to differences relating to timing and project value.

Consolidated revenues decreased \$22,004,000 for the nine months ended September 30, 2021, as compared to the nine months ended September 30, 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change | % Change |
|--|-----------|-----------|-----------|-----------|-------------|----------|
| Treatment | | | | | | |
| Government waste | \$ 15,653 | 28.4 | \$ 17,576 | 22.7 | \$ (1,923) | (10.9) |
| Hazardous/non-hazardous ⁽¹⁾ | 3,722 | 6.8 | 3,426 | 4.4 | 296 | 8.6 |
| Other nuclear waste | 4,719 | 8.5 | 3,467 | 4.5 | 1,252 | 36.1 |
| Total | 24,094 | 43.7 | 24,469 | 31.7 | (375) | (1.5) |
| Services | | | | | | |
| Nuclear services | 29,832 | 54.2 | 51,257 | 66.5 | (21,425) | (41.8) |
| Technical services | 1,149 | 2.1 | 1,353 | 1.8 | (204) | (15.1) |
| Total | 30,981 | 56.3 | 52,610 | 68.3 | (21,629) | (41.1) |
| Total | \$ 55,075 | 100.0 | \$ 77,079 | 100.0 | \$ (22,004) | (28.5) |

⁽¹⁾ Includes wastes generated by government clients of \$1,886,000 and \$1,637,000 for the nine month ended September 30, 2021 and the corresponding period of 2020, respectively.

Treatment Segment revenue decreased \$375,000 or 1.5% for the nine months ended September 30, 2021 over the same period in 2020 primarily due to lower waste volume from government waste generators. Treatment Segment revenue for the nine months ended September 30, 2021 included approximately \$1,286,000 recognized from a REA under a government waste generator contract resulting from certain pricing provisions of the contract as discussed above. Revenue generated from other nuclear waste increased primarily due to higher waste volume generated from commercial customers. Our overall Treatment Segment revenue has been negatively impacted by continued waste shipment delays from certain customers since the latter part of the first quarter of 2020 at the start of the COVID-19 pandemic, however, the negative impact from lower waste volume was reduced by higher averaged price waste from revenue mix. Services Segment revenue decreased \$21,629,000 or 41.4% for the nine months ended September 30, 2021 over the same period in 2020. As previously disclosed, our Services Segment revenue for the first half of 2021 were impacted primarily by delays in procurement actions and contract awards resulting from the impact of COVID-19 and the completion of a certain large contract in the second quarter of 2021 and the near completion of a certain other project. However, since the end of the second quarter of 2021, our Services Segment has been awarded a number of contracts with activities expected to ramp up starting in the fourth quarter of 2021. Our Services Segment revenues are project based; as such, the scope, duration and completion of each project vary. As a result, our Services Segment revenues are subject to differences relating to timing and project value.

Cost of Goods Sold

Cost of goods sold decreased \$11,849,000 for the quarter ended September 30, 2021, as compared to the quarter ended September 30, 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change |
|----------------|------------------|--------------|------------------|--------------|--------------------|
| Treatment | \$ 6,406 | 72.0 | \$ 5,972 | 84.5 | \$ 434 |
| Services | 7,167 | 103.8 | 19,450 | 84.2 | (12,283) |
| Total | <u>\$ 13,573</u> | <u>85.9</u> | <u>\$ 25,422</u> | <u>84.3</u> | <u>\$ (11,849)</u> |

Cost of goods sold for the Treatment Segment increased by approximately \$434,000 or 7.3%. Treatment Segment's variable costs increased by approximately \$427,000 primarily in disposal, transportation, material and supplies and lab services. Treatment Segment's overall fixed costs were slightly higher by approximately \$7,000 resulting from the following: salaries and payroll related expenses were higher by approximately \$138,000; regulatory expenses were higher by \$26,000; general expenses were slightly higher by \$8,000; maintenance expenses were lower by \$111,000; and depreciation and amortization expenses were lower by approximately \$54,000. Services Segment cost of goods sold decreased \$12,283,000 or 63.2% primarily due to lower revenue. The decrease in cost of goods sold was primarily due to lower salaries/payroll related, travel, and outside services expenses totaling approximately \$11,258,000 with the remaining lower costs in material and supplies, disposal, regulatory, and general expenses. Included within cost of goods sold is depreciation and amortization expense of \$403,000 and \$469,000 for the three months ended September 30, 2021, and 2020, respectively.

Cost of goods sold decreased \$14,850,000 for the nine months ended September 30, 2021, as compared to the nine months ended September 30, 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change |
|----------------|------------------|--------------|------------------|--------------|--------------------|
| Treatment | \$ 19,249 | 79.9 | \$ 18,936 | 77.4 | \$ 313 |
| Services | 30,280 | 97.7 | 45,443 | 86.4 | (15,163) |
| Total | <u>\$ 49,529</u> | <u>89.9</u> | <u>\$ 64,379</u> | <u>83.5</u> | <u>\$ (14,850)</u> |

Cost of goods sold for the Treatment Segment increased by approximately \$313,000 or 1.7%. Treatment Segment's variable costs increased by approximately \$138,000 primarily in disposal, transportation, material and supplies and lab services. Treatment Segment's overall fixed costs were higher by approximately \$175,000 resulting from the following: general expenses were higher by \$179,000 in various categories; salaries and payroll related expenses were higher by approximately \$122,000; depreciation expenses were higher by approximately \$26,000; regulatory expenses were higher by approximately \$48,000; and maintenance expenses were lower by \$200,000. Services Segment cost of goods sold decreased \$15,163,000 or 33.4% primarily due to lower revenue. The decrease in cost of goods sold was primarily due to lower salaries/payroll related, travel, and outside services expenses totaling approximately \$13,340,000 with the remaining lower costs in material and supplies, disposal, regulatory, and general expenses. Included within cost of goods sold is depreciation and amortization expense of \$1,191,000 and \$1,169,000 for the nine months ended September 30, 2021, and 2020, respectively.

Gross Profit (Negative Gross Profit)

Gross profit for the quarter ended September 30, 2021 decreased \$2,526,000 over the same period of 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change |
|----------------|-----------------|--------------|-----------------|--------------|-------------------|
| Treatment | \$ 2,487 | 28.0 | \$ 1,094 | 15.5 | \$ 1,393 |
| Services | (263) | (3.8) | 3,656 | 15.8 | (3,919) |
| Total | <u>\$ 2,224</u> | 14.1 | <u>\$ 4,750</u> | 15.7 | <u>\$ (2,526)</u> |

Treatment Segment gross profit increased by \$1,393,000 and gross margin increased to 28.0% from 15.5% primarily due to revenue from the REA as discussed previously. Additionally, higher averaged price waste from revenue mix positively impacted Treatment Segment's gross profit and margin. Services Segment gross profit decreased by \$3,919,000 or 107.2% and gross margin decreased from 15.8% to a negative 3.8% primarily due to lower revenue from fewer projects and lower margin projects. Our overall Services Segment gross margin is impacted by our current projects which are competitively bid on and will therefore, have varying margin structures.

Gross profit for the nine months ended September 30, 2021 decreased \$7,154,000 over the same period in 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change |
|----------------|-----------------|--------------|------------------|--------------|-------------------|
| Treatment | \$ 4,845 | 20.1 | \$ 5,533 | 22.6 | \$ (688) |
| Services | 701 | 2.3 | 7,167 | 13.6 | (6,466) |
| Total | <u>\$ 5,546</u> | 10.1 | <u>\$ 12,700</u> | 16.5 | <u>\$ (7,154)</u> |

Treatment Segment gross profit decreased by \$688,000 or 12.4% and gross margin decreased to 20.1% from 22.6% primarily due to lower revenue from lower waste volume and the impact of our fixed costs. However, revenue from the REA reduced the negative impact of the decreases in gross profit and gross margin. The decrease in gross profit and gross margin in the Services Segment was primarily due to lower revenue from fewer projects and overall lower margin projects. Our overall Services Segment gross margin is impacted by our current projects which are competitively bid on and will therefore, have varying margin structures.

SG&A

SG&A expenses increased \$40,000 for the three months ended September 30, 2021, as compared to the corresponding period for 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change |
|----------------|-----------------|--------------|-----------------|--------------|--------------|
| Administrative | \$ 1,580 | — | \$ 1,564 | — | \$ 16 |
| Treatment | 1,066 | 12.0 | 910 | 12.9 | 156 |
| Services | 702 | 10.2 | 834 | 3.6 | (132) |
| Total | <u>\$ 3,348</u> | 21.2 | <u>\$ 3,308</u> | 11.0 | <u>\$ 40</u> |

Administrative SG&A expenses were higher primarily due to the following: director fees were higher by approximately \$68,000 resulting from one additional director and fee increases that went into effect January 1, 2021; general expenses were slightly higher by \$8,000; outside services expenses were lower by approximately \$28,000 due to fewer consulting/subcontract/legal matters; and salaries and payroll related expenses were lower by approximately \$32,000 primarily due to lower estimated progress expenses related to our incentive plans which was partially offset by higher salaries and other payroll related expenses. Treatment Segment SG&A expenses were higher due to the following: salaries and payroll related expenses were higher by approximately \$200,000 as in 2020 more of the resources were supporting a large Services Segment project; travel expenses were higher by approximately \$29,000 due to ease of travel restrictions since the start of the pandemic; and general expenses were lower by approximately \$73,000 in various categories. Services Segment SG&A expenses were lower due to the following: salaries and payroll related expenses were lower by approximately \$106,000; outside services expenses were lower by approximately \$23,000 primarily due to fewer consulting matters; and general expenses were lower by \$3,000. Included in SG&A expenses is depreciation and amortization expense of \$6,000 and \$9,000 for the three months ended September 30, 2021, and 2020, respectively.

SG&A expenses increased \$615,000 for the nine months ended September 30, 2021, as compared to the corresponding period for 2020, as follows:

| (In thousands) | 2021 | % Revenue | 2020 | % Revenue | Change |
|----------------|-----------------|--------------|-----------------|--------------|---------------|
| Administrative | \$ 4,243 | — | \$ 4,219 | — | \$ 24 |
| Treatment | 2,945 | 12.2 | 2,838 | 11.6 | 107 |
| Services | 2,362 | 7.6 | 1,878 | 3.6 | 484 |
| Total | <u>\$ 9,550</u> | 17.3 | <u>\$ 8,935</u> | 11.6 | <u>\$ 615</u> |

Administrative SG&A expenses were higher primarily due to the following: director fees were higher by approximately \$179,000 resulting from one additional director and fee increases that went into effect January 1, 2021; general expenses were higher by approximately \$11,000 in various categories; travel expenses were lower by approximately \$7,000; outside services expenses were lower by approximately \$48,000 resulting from fewer consulting/subcontract/legal matters; and salaries and payroll related expenses were lower by approximately \$111,000 primarily due to lower estimated progress expenses related to our incentive plans and forfeiture of 401(k) plan matching funds contributed by us for former employees which failed to meet the 401(k) plan vesting requirements, offset by higher salaries and other payroll related expenses. Treatment Segment SG&A expenses were higher due to the following: salaries and payroll related expenses were higher by approximately \$235,000 as in 2020 more of the resources were supporting a large Services Segment project; bad debt expenses were higher by approximately \$50,000 as in the third quarter of 2020, certain customer accounts which had previously been reserved for were collected; and general expenses were lower by \$178,000 in various categories. The increase in SG&A expenses within our Services Segment was primarily due to the following: salaries and payroll related expenses were higher by approximately \$260,000 primarily due to increased resources for bid and proposals; outside services expenses were higher by approximately \$169,000 due to more consulting matters related to bid and proposals; bad debt expenses were higher by approximately \$44,000 as in the first quarter of 2020, certain customer accounts which had previously been reserved for were collected; and general expenses were slightly higher by \$11,000. Included in SG&A expenses is depreciation and amortization expense of \$17,000 and \$20,000 for the nine months ended September 30, 2021 and 2020, respectively.

R&D

R&D expenses increased \$86,000 and decreased \$60,000 for the three and nine months ended September 30, 2021, respectively, as compared to the corresponding period of 2020.

| (In thousands) | Three Months Ended September 30, | | | Nine Months Ended September 30, | | |
|----------------|----------------------------------|---------------|--------------|---------------------------------|---------------|----------------|
| | 2021 | 2020 | Change | 2021 | 2020 | Change |
| Administrative | \$ 11 | \$ 20 | \$ (9) | \$ 35 | \$ 64 | \$ (29) |
| Treatment | 52 | 49 | 3 | 142 | 194 | (52) |
| Services | 18 | 7 | 11 | 50 | 119 | (69) |
| PF Medical | 162 | 81 | 81 | 311 | 221 | 90 |
| Total | <u>\$ 243</u> | <u>\$ 157</u> | <u>\$ 86</u> | <u>\$ 538</u> | <u>\$ 598</u> | <u>\$ (60)</u> |

R&D costs consist primarily of employee salaries and benefits, laboratory costs, third party fees, and other related costs associated with the development of new technologies and technological enhancement of new potential waste treatment processes.

Interest Income

Interest income decreased by approximately \$26,000 and \$89,000 for the three and nine months ended September 30, 2021, respectively, as compared to the corresponding period of 2020 primarily due to lower interest earned from lower finite risk sinking fund.

Interest Expense

Interest expense decreased by approximately \$10,000 and \$97,000 for the three and nine months ended September 30, 2021, respectively, as compared to the corresponding period of 2020 primarily due to lower interest expense from our declining term loan balance outstanding. Also, interest expense was lower resulting from the payoff of the \$2,500,000 loan at year end 2020 that we had previously entered into with Robert Ferguson on April 1, 2019.

Interest Expense- Financing Fees

Interest expense-financing fees decreased by approximately \$47,000 and \$159,000 for the three and six months ended June 30, 2021, respectively, as compared to the corresponding period 2020 primarily due to debt discount/debt issuance costs that became fully amortized as financing fees at year end 2020 in connection with the issuance of our Common Stock and a purchase Warrant as consideration for us receiving the \$2,500,000 loan from Robert Ferguson dated April 1, 2019.

Income Taxes

We regularly assess the likelihood that the deferred tax asset will be recovered from future taxable income. We consider projected future taxable income and ongoing tax planning strategies, then records a valuation allowance to reduce the carrying value of the net deferred income taxes to an amount that is more likely than not to be realized. For the year ended December 31, 2020, we maintained a full valuation allowance against net deferred income tax assets because insufficient evidence existed to support the realization of any future income tax benefits. As of September 30, 2021, however, we reassessed this conclusion. Based upon our assessment of all available evidence, including a number of new contracts awarded to our Services Segment since the latter part of the second quarter of 2021 (including a contract award with a value of approximately \$40,000,000 for decommissioning of a navy ship), a return to profitability, expectation of future profitability, and our overall prospects of future business, we have determined that it is more likely than not that we will be able to realize a portion of the deferred income tax assets as of September 30, 2021. As a result, a deferred income tax benefit in the amount of approximately \$2,351,000 attributable to the valuation allowance release on beginning of year deferred tax assets was realized in the three months ended September 30, 2021.

We had income tax benefits of \$2,836,000 and \$133,000 for continuing operations for the three months ended September 30, 2021 and 2020, respectively and income tax benefits of \$2,840,000 and \$128,000 for the nine months ended September 30, 2021 and 2020, respectively. Our effective tax rates were approximately 194.9% and (9.9%) for the three months ended September 30, 2021 and 2020, respectively, and (455.1%) and (4.4%) for the nine months ended September 30, 2021 and 2020, respectively. Our effective tax rates for the three and nine months ended September 30, 2021 were substantially impacted by the release of valuation allowance as discussed above. Our tax rates for the three and nine months ended September 30, 2020 were impacted by the full valuation on our net deferred tax assets. For the three and nine months ended September 30, 2021, the primary reasons for the differences between our effective tax rate and statutory tax rate were due to the aforementioned release of valuation allowance and the forgiveness of our PPP Loan which is included in our Consolidated Statement of Operations as "Gain on extinguishment of debt" but is exempt from income taxes.

Liquidity and Capital Resources

Our cash flow requirements during the nine months ended September 30, 2021 were primarily financed by our operations, cash on hand and credit facility availability. Our cash on hand at September 30, 2021 was approximately \$7,222,000 and included approximately \$5,456,000 of the \$6,200,000 in gross proceeds received from subscription agreements that we entered into with certain institutional and retail investors, for the sale and issuance of 1,000,000 shares of our Common Stock in a registered direct offering. On October 5, 2021, the remaining \$744,000 from the direct offering was received by us (see “Financing Activities” below for a discussion of this direct offering, including the planned usage of the proceeds). Subject to the impact of COVID-19 as discussed above, our cash flow requirements for the next twelve months will consist primarily of general working capital needs, scheduled principal payments on our debt obligations, remediation projects, and planned capital expenditures. We plan to fund these requirements from our operations, credit facility availability, our capital expenditure line, and cash on hand. We are continually reviewing operating costs and reviewing the possibility of further reducing operating costs and non-essential expenditures to bring them in line with revenue levels, when necessary. At this time, we believe that our cash flows from operations, our available liquidity from our credit facility, our capital expenditure line and our cash on hand should be sufficient to fund our operations for the next twelve months. However, due to the uncertainty of COVID-19, which has resulted in continued delays in waste shipments from certain customers and delays in contract awards on certain bids already submitted, there are no assurances such will be the case. As previously disclosed, our Medical Segment, which has not generated any revenues, has substantially reduced its R&D costs and activities due to the need for capital to fund such activities. We continue to seek various sources of potential funding for our Medical Segment. We anticipate that our Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

The following table reflects the cash flow activities during the first nine months of 2021:

(In thousands)

| | | |
|---|----|---------|
| Cash used in operating activities of continuing operations | \$ | (4,031) |
| Cash used in operating activities of discontinued operations | | (296) |
| Cash used in investing activities of continuing operations | | (1,131) |
| Cash provided by financing activities of continuing operations | | 4,783 |
| Effect of exchange rate changes in cash | | (4) |
| Decrease in cash and finite risk sinking fund (restricted cash) | \$ | (679) |

At September 30, 2021, we were in a positive cash position with no revolving credit balance. At September 30, 2021, we had cash on hand of approximately \$7,222,000, which includes account balances of our foreign subsidiaries totaling approximately \$349,000.

Operating Activities

Accounts receivable, net of allowances for doubtful accounts, totaled \$11,816,000 at September 30, 2021, an increase of \$2,157,000 from the December 31, 2020 balance of \$9,659,000. The increase was primarily due to timing of accounts receivable collection and timing of invoicing. Our contracts with our customers are subject to various payment terms and conditions; therefore, our accounts receivable are impacted by these terms and conditions and the related timing of accounts receivable collections. Additionally, contracts with our customers may sometimes result in modifications which can cause delays in collections.

Unbilled receivables totaled \$5,696,000 at September 30, 2021, a decrease of \$8,757,000 from the December 31, 2020 balance of \$14,453,000. The decrease in unbilled receivables was primarily within our Services Segment due to invoicing and collection of accounts receivable on certain large projects which have been completed or are near completion.

Accounts payable, totaled \$9,717,000 at September 30, 2021, a decrease of \$5,665,000 from the December 31, 2020 balance of \$15,382,000. Our accounts payable are impacted by the timing of payments as we are continually managing payment terms with our vendors to maximize our cash position throughout all segments.

We had working capital of \$7,147,000 (which included working capital of our discontinued operations) at September 30, 2021, as compared to working capital of \$3,672,000 at December 31, 2020. Our working capital was positively impacted by the forgiveness of the entire balance of our PPP Loan, along with accrued interest, by the SBA effective June 15, 2021 (see “CARES Act – PPP Loan” for information on this loan). Our working capital was also positively impacted by proceeds that we received from subscription agreements that we entered into with certain institutional and retail investors, for the sale and issuance of 1,000,000 shares of our Common Stock in a registered direct offering (see “Financing Activities” below for a discussion of this direct offering, including the planned usage of the proceeds).

Investing Activities

For the nine months ended September 30, 2021, our purchases of capital equipment totaled approximately \$1,480,000, of which \$348,000 was subject to financing, with the remaining funded from cash from operations and our credit facility. We have budgeted approximately \$2,000,000 for 2021 capital expenditures primarily for our Treatment and Services Segments to maintain operations and regulatory compliance requirements and support revenue growth. Certain of these budgeted projects may either be delayed until later years or deferred altogether. We plan to fund our capital expenditures from cash from operations and/or financing. The initiation and timing of projects are also determined by financing alternatives or funds available for such capital projects.

Financing Activities

We entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated May 8, 2020 ("Loan Agreement"), with PNC National Association ("PNC"), acting as agent and lender. The Loan Agreement provides us with the following credit facility with a maturity date of March 15, 2024: (a) up to \$18,000,000 revolving credit ("revolving credit") and (b) a term loan ("term loan") of approximately \$1,742,000, requiring monthly installments of \$35,547. The maximum that we can borrow under the revolving credit is based on a percentage of eligible receivables (as defined) at any one time reduced by outstanding standby letters of credit and borrowing reductions that our lender may impose from time to time.

On May 4, 2021, we entered into an amendment to our Loan Agreement with our lender which provided the following, among other things:

- revised our fixed charge coverage ratio ("FCCR") calculation requirement which allows for the add-back of approximately \$5,318,000 in eligible expenses that were incurred and covered by the PPP Loan that we received in 2020. The add-back is to be applied retroactively to the second and third quarters of 2020. (see below for a discussion of the PPP Loan); and
- a capital expenditure line of up to \$1,000,000 with advances on the line, subject to certain limitations, permitted for up to twelve months starting May 4, 2021 (the "Borrowing Period"). Only interest is payable on advances during the Borrowing Period (see annual rate of interest below on the capital expenditure line). At the end of the Borrowing Period, the total amount advanced under the line will amortize equally based on a five-year amortization schedule with principal payment due monthly plus interest. At the maturity date of the Loan Agreement, any unpaid principal balance plus interest, if any, will become due. No advance on the capital line has been made as of June 30, 2021.

In connection with the amendment, we paid our lender a fee of \$15,000.

On August 10, 2021, we entered into an amendment to our Loan Agreement with our lender which provided, among other things, the following:

- waived our failure to meet the minimum quarterly FCCR requirement for the second quarter of 2021;
- removes the quarterly FCCR testing requirement for the third quarter of 2021;
- reinstates the quarterly FCCR testing requirement starting for the fourth quarter of 2021 and revises the methodology to be used in calculating the FCCR for the quarters ending December 31, 2021, March 31, 2022, and June 30, 2022 (with no change to the minimum 1.15:1 ratio requirement for each quarter); and
- requires maintenance of a minimum of \$3,000,000 in borrowing availability under the revolving credit until the minimum FCCR requirement for the quarter ended December 31, 2021 has been met and certified to the lender.

In connection with the amendment, we paid our lender a fee of \$15,000.

Pursuant to our Loan Agreement, as amended, payment of annual rate of interest due on the revolving credit is at prime (3.25% at June 30, 2021) plus 2% or London InterBank Offer Rate (“LIBOR”) plus 3.00% and the term loan and capital expenditure line at prime plus 2.50% or LIBOR plus 3.50%. Under the LIBOR option of interest payment, a LIBOR floor of 0.75% applies in the event that LIBOR falls below 0.75% at any point in time.

We may terminate our Loan Agreement, as amended, upon 90 days’ prior written notice upon payment in full of our obligations under the Loan Agreement. We agreed to pay PNC 1.0% of the total financing had we paid off our obligations on or before May 7, 2021 and 0.5% of the total financing if we pay off our obligations after May 7, 2021 but prior to or on May 7, 2022. No early termination fee will apply if we pay off our obligations under the Loan Agreement after May 7, 2022.

Our credit facility under our Loan Agreement, as amended, with PNC contains certain financial covenants, along with customary representations and warranties. A breach of any of these financial covenants, unless waived by PNC, could result in a default under our credit facility allowing our lender to immediately require the repayment of all outstanding debt under our credit facility and terminate all commitments to extend further credit. We met our financial covenant requirements in the first quarter of 2021. Our FCCR calculation in the first quarter of 2021 included the add-back of approximately \$5,318,000 in eligible expenses that were incurred and covered by the PPP Loan that we received in 2020 as permitted by the amendment dated May 4, 2021 as discussed above. We did not meet our FCCR requirement in the second quarter of 2021; however, this non-compliance was waived by our lender as discussed above. Testing of our FCCR was not required for the third quarter 2021 pursuant to the August 10, 2021 amendment to the Loan Agreement as discussed above. We expect to meet our quarterly financial covenant requirements for the next twelve months under our Loan Agreement, as amended, as discussed above.

On September 30, 2021, we entered into subscription agreements (the “Subscription Agreements”) with certain institutional and retail investors (the “Purchasers”), pursuant to which we agreed to sell and issue, in a registered direct offering, an aggregate of 1,000,000 shares (the “Shares”) of our Common Stock, at a negotiated purchase price per share of \$6.20 (the “Shares”), for aggregate gross proceeds to us of approximately \$6,200,000. The offering price per share was negotiated based on the average closing price of our Common Stock as quoted on Nasdaq over the three-week period immediately preceding the date of the Subscription Agreements, less a five percent discount. As of September 30, 2021, we received proceeds of approximately \$5,456,000 from the Subscription Agreements with the remaining \$744,000 proceeds received on October 5, 2021. As of September 30, 2021, 100,000 shares of the 1,000,000 Shares were issued with the remaining Shares issued in early October 2021. As such, our issued and outstanding shares of Common Stock on our Consolidated Balance Sheets as of September 30, 2021 do not include the 900,000 Shares. The 900,000 Shares were recorded as stock subscriptions in our Consolidated Statement of Stockholder’s Equity at September 30, 2021 and will be reclassified to additional-paid-in capital in October 2021.

The Shares were offered and sold by us through a prospectus supplement pursuant to our “shelf” registration statement on Form S-3, which was previously filed with the U.S. Securities and Exchange Commission (the “Commission”) on May 13, 2019 and subsequently declared effective on May 22, 2019 (the “Registration Statement”).

Wellington Shields & Co., LLC (“Wellington”) served as the exclusive placement agent in connection with the Offering, pursuant to a placement agency agreement dated as of September 23, 2021 (the “Placement Agency Agreement”), between us and Wellington. We agreed to pay Wellington a cash fee of 6.00% of the aggregate gross proceeds in the Offering which totaled \$372,000. We also agreed to reimburse Wellington for certain expenses in connection with the Offering in an aggregate amount not to exceed \$50,000. After deducting costs incurred directly in connection with the Offering which were recorded as deduction to equity, net proceeds to us totaled approximately \$5,701,000. As of September 30, 2021, approximately \$22,000 of the \$499,000 in incurred Offering costs were paid.

We plan to use the aggregate net proceeds from the Offering primarily for working capital and general corporate purposes, including for certain facility expansion and upgrades, with the use of such proceeds subject to changes, based on the judgment of management.

The CARES Act

PPP Loan

On April 14, 2020, we entered into a promissory note under the PPP with PNC, our credit facility lender, which had a balance of approximately \$5,318,000 (the “PPP Loan”). The PPP was established under the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”) and is administered by the SBA. The CARES Act was subsequently amended by the Paycheck Protection Program Flexibility Act of 2020 (“Flexibility Act”). Proceeds from the promissory note was used by us for eligible payroll costs, mortgage interest, rent and utility costs as permitted under the Flexibility Act. The annual interest rate on the PPP Loan is 1.0%

On October 5, 2020, we applied for forgiveness on repayment of the PPP Loan as permitted under the Flexibility Act. On July 1, 2021, we were notified by PNC that the entire balance of the PPP Loan of approximately \$5,318,000, along with accrued interest of approximately \$63,000 was forgiven by the SBA, effective June 15, 2021. Accordingly, we recorded the entire forgiven PPP Loan balance, along with accrued interest, totaling approximately \$5,381,000 as “Gain on extinguishment of debt” on our Consolidated Statement of Operations for the second quarter 2021.

Deferral of Employment Tax Deposits

The Flexibility Act provides employers the option to defer the payment of an employer’s share of social security taxes beginning on March 27, 2020 through December 31, 2020, with 50% of the amount of social security taxes deferred to become due on December 31, 2021 with the remaining 50% due on December 31, 2022. We elected to defer such taxes starting in mid-April 2020. At September 30, 2021, we have deferred payment of approximately \$1,252,000 in our share of social security taxes, of which approximately \$626,000 is included in “Other long-term liabilities,” with the remaining balance included in “Accrued expenses” within current liabilities in the Company’s Consolidated Balance Sheets.

Off Balance Sheet Arrangements

From time to time, we are required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At September 30, 2021, the total amount of standby letters of credit outstanding totaled approximately \$3,020,000 and the total amount of bonds outstanding totaled approximately \$50,092,000. We also provide closure and post-closure requirements through a financial assurance policy for certain of our Treatment Segment facilities through AIG. At September 30, 2021, the closure and post-closure requirements for these facilities were approximately \$19,898,000.

Critical Accounting Policies and Estimates

There were no significant changes in our accounting policies or critical accounting estimates that are discussed in our Annual Report on Form 10-K for the year ended December 31, 2020.

Recent Accounting Pronouncements

See “Note 2 – Summary of Significant Accounting Policies” in the “Notes to Consolidated Financial Statements” for the recent accounting pronouncements that have been adopted during the first nine months of 2021, or will be adopted in future periods.

Known Trends and Uncertainties

Significant Customers. Our Treatment and Services Segments have significant relationships with the U.S and Canadian governmental authorities through contracts entered into indirectly as subcontractors for others who are prime contractors or directly as the prime contractor to government authorities. As stated previously, our governmental contracts and subcontracts relating to activities at governmental sites in the United States are generally subject to termination or renegotiation on 30 days' notice at the government's option, and our governmental contracts/task orders with the Canadian government authorities allow the authorities to terminate the contract/task orders at any time for convenience. Our inability to continue under existing material contracts that we have with government authorities (directly or indirectly as a subcontractor) or significant reductions in the level of governmental funding in any given year could have a material adverse impact on our operations and financial condition.

We performed services relating to waste generated by government clients (domestic and foreign (primarily Canadian)), either directly as a prime contractor or indirectly for others as a subcontractor to government entities, representing approximately \$13,244,000 or 83.8% and \$47,267,000 or 85.8% of our total revenues generated during the three and nine months ended September 30, 2021, respectively, as compared to \$28,094,000 or 93.1% and \$70,407,000 or 91.3% of our total revenues generated during the three and nine months ended September 30, 2020, respectively.

COVID-19 Impact. The extent of the impact of the COVID-19 pandemic on our business continues to be uncertain and difficult to predict, as the responses to the pandemic continue to evolve rapidly. We continue to experience delays in waste shipments from certain customers within our Treatment Segment primarily related to the impact of COVID-19. However, we are beginning to see a gradual return in waste receipts from these customers starting in the latter part of the third quarter of 2021. Our Services Segment has been impacted by delays in procurement actions and contract awards resulting primarily from the impact of COVID-19. However, since the end of the second quarter of 2021, we have received a number of new contract awards, including a fixed price contract awarded to us during the third quarter of 2021, with a value of approximately \$40,000,000 for the decommissioning of a navy ship. We expect activities to ramp up on these new projects starting in the fourth quarter of 2021. Within our Treatment and Services Segments, we continue to have bids currently submitted and awaiting awards.

The severity of the impact the COVID-19 pandemic on our business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic, impact from emergence of potential new variants of the virus, potential impact on our workforce from government vaccine mandates, the extent and severity of the impact on our customers, the impact on governmental programs and budgets, inoculation rate of the vaccines, and how quickly and to what extent normal economic and operating conditions resume, all of which are uncertain and cannot be predicted with any accuracy or confidence at this time. Our future results of operations and liquidity could be adversely impacted from the impact of COVID-19, including continued delays in waste shipments and contract awards, and/or occurrence of project work shut downs as well as potential partial/full shutdown of any of our facilities due to COVID-19.

Supply Chain. We use various commercially available materials and supplies which include among other things chemicals, containers/drums and personal protection equipment ("PPE") in our operations. We generally source these items from various suppliers in order to take advantage of competitive pricing.

We also utilize various types of equipment, which include among other things trucks, flatbeds, lab equipment, heavy machineries, in carrying out our business operations. Our equipment may be obtained through direct purchase, rental option or leases. Within our Services Segment, equipment required for projects are often provided by our subcontractors as part of our contract agreement with the subcontractor. Due to some of our specialized waste treatment processes, certain equipment that we utilize are designed and built to our specifications. We rely on various commercially equipment supplier for the construction of these equipment.

Despite the global supply chain issues, we have been able to obtain equipment, materials and supplies without material disruption to our operations or financial impact, however, we continue to monitor our supply chain and any potential price pressure resulting from the impact of COVID-19, among other things.

Environmental Contingencies

We are engaged in the waste management services segment of the pollution control industry. As a participant in the on-site treatment, storage and disposal market and the off-site treatment and services market, we are subject to rigorous federal, state and local regulations. These regulations mandate strict compliance and therefore are a cost and concern to us. Because of their integral role in providing quality environmental services, we make every reasonable attempt to maintain complete compliance with these regulations; however, even with a diligent commitment, we, along with many of our competitors, may be required to pay fines for violations or investigate and potentially remediate our waste management facilities.

We routinely use third party disposal companies, who ultimately destroy or secure landfill residual materials generated at our facilities or at a client's site. In the past, numerous third party disposal sites have improperly managed waste and consequently require remedial action; consequently, any party utilizing these sites may be liable for some or all of the remedial costs. Despite our aggressive compliance and auditing procedures for disposal of wastes, we could further be notified, in the future, that we are a potentially responsible party ("PRP") at a remedial action site, which could have a material adverse effect.

Our subsidiaries where remediation expenditures will be made are at three sites within our discontinued operations. While no assurances can be made that we will be able to do so, we expect to fund the expenses to remediate these sites from funds generated from operations.

At September 30, 2021, we had total accrued environmental remediation liabilities of \$776,000, a decrease of \$78,000 from the December 31, 2020 balance of \$854,000. The decrease represents primarily payments made on remediation projects. At September 30, 2021, \$122,000 of the total accrued environmental liabilities was recorded as current.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

Not applicable

Item 4. Controls and Procedures

(a) *Evaluation of disclosure controls and procedures.*

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports filed with the Securities and Exchange Commission is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and that such information is accumulated and communicated to our management. As of the end of the period covered by this report, we carried out an evaluation with the participation of our Principal Executive Officer and Principal Financial Officer. Based on this recent assessment, our Principal Executive Officer and Principal Financial Officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) were effective as of September 30, 2021

(b) *Changes in internal control over financial reporting.*

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

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

There are no material legal proceedings pending against us and/or our subsidiaries not previously reported by us in Item 3 of our Form 10-K for the year ended December 31, 2020 or in our Form 10-Qs for the periods ended March 31, 2021 and June 30, 2021. Additionally, there has been no other material change in legal proceedings previously disclosed by us in our Form 10-K for the year ended December 31, 2020 and our Form 10-Qs.

Item 1A. Risk Factors

There has been no other material change from the risk factors previously disclosed in our Form 10-K for the year ended December 31, 2020.

Item 6. Exhibits

(a) Exhibits

- 4.1 [Second Amended and Restated Revolving Credit, Term Loan and Security Agreement between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association \(as Lender and as Agent\), dated May 8, 2020, as incorporated by reference from Exhibit 4.1 to the Company's Form 10-Q for the quarter ended March 31, 2020 filed on May 12, 2020.](#)
- 4.2 [First Amendment to Second Amended and Restated Revolving Credit, Term Loan and Security Agreement between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association \(as Lender and as Agent\), dated May 4, 2021, as incorporated by reference from Exhibit 4.1 to the Company's Form 10-Q for the quarter ended March 31, 2021 filed on May 6, 2021.](#)
- 4.3 [Second Amendment to Second Amended and Restated Revolving Credit, Term Loan and Security Agreement between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association \(as Lender and as Agent\), dated August 10, 2021 as incorporated by reference from Exhibit 4.3 to the Company's Form 10-Q for the quarter ended June 30, 2021 filed on August 11, 2021.](#)
- 10.1 [Solicitation, Offer and Award dated September 17, 2021 issued to Perma-Fix Environmental Services, Inc. by Norfolk Naval Shipyard,](#)
- 10.2 [Placement Agency Agreement, dated as of September 23, 2021, by and between the Company and Wellington Shields & Co., LLC., as incorporated by reference from Exhibit 10.1 to the Company's Form 8-K filed on October 4, 2021.](#)
- 10.3 [Form of Subscription Agreement, dated as of September 30, 2021, between the Company and each purchase named in the signature pages of the respective Subscription Agreements, as incorporated by reference from Exhibit 10.2 to the Company's Form 8-K filed on October 4, 2021.](#)
- 10.4 [Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and Chief Executive Officer, dated October 14, 2021, as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K/A filed on October 20, 2021.](#)
- 10.5 [Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and Chief Financial Officer, dated October 14, 2021, as incorporated by reference from Exhibit 99.2 to the Company's Form 8-K/A filed on October 20, 2021.](#)
- 10.6 [Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and EVP of Strategic Initiatives, dated October 14, 2021, as incorporated by reference from Exhibit 99.3 to the Company's Form 8-K/A filed on October 20, 2021.](#)
- 10.7 [Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and EVP of Waste Treatment Operations, dated October 14, 2021, as incorporated by reference from Exhibit 99.4 to the Company's Form 8-K/A filed on October 20, 2021.](#)
- 10.8 [Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and EVP of Nuclear and Technical Services, dated October 14, 2021, as incorporated by reference from Exhibit 99.5 to the Company's Form 8-K/A filed on October 20, 2021.](#)
- 31.1 [Certification by Mark Duff, Chief Executive Officer of the Company pursuant to Rule 13a-14\(a\) or 15d-14\(a\).](#)
- 31.2 [Certification by Ben Naccarato, Chief Financial Officer of the Company pursuant to Rule 13a-14\(a\) or 15d-14\(a\).](#)
- 32.1 [Certification by Mark Duff, Chief Executive Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.](#)
- 32.2 [Certification by Ben Naccarato, Chief Financial Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.](#)
- 101.INS Inline XBRL Instance Document-the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document*
- 101.SCH Inline XBRL Taxonomy Extension Schema Document*
- 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document*
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document*
- 101.LAB Inline XBRL Taxonomy Extension Labels Linkbase Document*
- 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document*
- 104 Cover Page Interactive Data File (formatted as an Inline XBRL document and included in Exhibit 101).

* Pursuant to Rule 406T of Regulation S-T, the Inline Interactive Data File in Exhibit 101 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Section 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purpose of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise are not subject to liability under those sections.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.


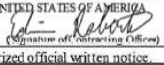
Date: November 12, 2021

PERMA-FIX ENVIRONMENTAL SERVICES

By: /s/ Mark Duff
Mark Duff
President and Chief (Principal) Executive Officer

Date: November 12, 2021

By: /s/ Ben Naccarato
Ben Naccarato
Chief (Principal) Financial Officer

| SOLICITATION, OFFER AND AWARD | | | | 1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) | | RATING DO-A3 | | PAGE OF 1 79 | | | | | | | | | | | | | |
|---|--|--|------|--|---|--|--|---|---------|---------------|------|---------------|------|--|--|--|--|--|--|--|--|
| 2. CONTRACT NO. N4215821P0004 | | 3. SOLICITATION NO. N4215821P0003 | | 4. TYPE OF SOLICITATION [] 1 SEALED BID (IFB) [X] NEGOTIATED (RFP) | | 5. DATE ISSUED 19 Feb 2021 | | 6. REQUISITION PURCHASE NO. N000242/P0401204 | | | | | | | | | | | | | |
| 7. ISSUED BY NORFOLK NAVAL SHIPYARD ATTN: JOEL MASON CIVIL AVAL DRAWING C401, BLDG 65, 2ND FLOOR PORTSMOUTH VA 23704-1022 TEL: 757-396-0332 FAX: 757-396-9866 | | | | 8. ADDRESS OFFER TO (If other than Item 7) See Item 7 | | CODE | | TEL: FAX: | | | | | | | | | | | | | |
| NOTE: In sealed bid solicitations "offer" and "offered" mean "bid" and "bidder". | | | | | | | | | | | | | | | | | | | | | |
| SOLICITATION | | | | | | | | | | | | | | | | | | | | | |
| 9. Sealed offers in original and 1 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in _____ until <u>05:00 PM</u> local time <u>22 Mar 2021</u> (Date) (Date) | | | | | | | | | | | | | | | | | | | | | |
| CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section I, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation. | | | | | | | | | | | | | | | | | | | | | |
| 10. FOR INFORMATION CALL: | | A. NAME JOEL J. MASON | | B. TELEPHONE (Include area code) (NO COLLECT CALLS) 757-396-0332 | | C. E-MAIL ADDRESS joel.mason@navy.mil | | | | | | | | | | | | | | | |
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| OFFER (Must be fully completed by offeror) | | | | | | | | | | | | | | | | | | | | | |
| NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period. | | | | | | | | | | | | | | | | | | | | | |
| 12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule. | | | | | | | | | | | | | | | | | | | | | |
| 13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8) | | | | | | | | | | | | | | | | | | | | | |
| 14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated): | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>AMENDMENT NO.</th> <th>DATE</th> <th>AMENDMENT NO.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | | | | | | | | | | AMENDMENT NO. | DATE | AMENDMENT NO. | DATE | | | | | | | | |
| AMENDMENT NO. | DATE | AMENDMENT NO. | DATE | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |
| 15A. NAME AND ADDRESS OF OFFEROR | | CODE 5P4C0 | | FACILITY | | 16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) MARK DUFF / PRESIDENT AND CEO | | | | | | | | | | | | | | | |
| 15B. TELEPHONE NO (Include area code) (865) 251-2096 | | 15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. | | 17. SIGNATURE  | | 18. OFFER DATE 9-17-21 | | | | | | | | | | | | | | | |
| AWARD (To be completed by Government) | | | | | | | | | | | | | | | | | | | | | |
| 19. ACCEPTED AS TO ITEMS NUMBERED | | 20. AMOUNT \$39,998,911.19 | | 21. ACCOUNTING AND APPROPRIATION See Schedule | | | | | | | | | | | | | | | | | |
| 22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: [] 10 U.S.C. 2384(c) [] 41 U.S.C. 253(c) | | | | 23. SUBMIT INVOICES TO ADDRESS SHOWN IN ITEM (4 copies unless otherwise specified) | | | | | | | | | | | | | | | | | |
| 24. ADMINISTERED BY (If other than Item 7) See Item 7 | | | | CODE | | 25. PAYMENT WILL BE MADE BY DFAS CLEVELAND - NORFOLK ACCOUNTS PAYABLE FOR PAYMENT INQUIRIES CALL 800-766-4571 PO BOX 98622 CLEVELAND OH 44199-0822 | | | | | | | | | | | | | | | |
| 26. NAME OF CONTRACTING OFFICER (Type or print) WOT: _____ FNU: _____ | | | | 27. UNITED STATES OF AMERICA  | | 28. AWARD DATE 9-17-21 | | | | | | | | | | | | | | | |
| IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice. | | | | | | | | | | | | | | | | | | | | | |

Previous Edition is Unusable

33-154

STANDARD FORM 133 (REV. 9-97)
Prescribed by GSA
FAR (48 CFR) 53.214(c)

Section B - Supplies or Services and Prices

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|-------------------|----------|------|-----------------|-----------------|
| 0001 | | 1 | Job | \$39,998,941.49 | \$39,998,941.49 |

EX-MCKEE - Article 520 Release FFP

The contractor shall perform in accordance with the Statement of Work (SOW) contained within Section C and Attachments listed within Section J.

FOB: Destination

MILSTRIP: N0002421RX01204

PURCHASE REQUEST NUMBER: N0002421RX01204 PSC CD: J998

| | |
|---------|-----------------|
| NET AMT | \$39,998,941.49 |
|---------|-----------------|

| | |
|--------------------------|-----------------|
| ACRN AA | \$39,998,941.49 |
| CIN: N0002421RX012040001 | |

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|-------------------|----------|------|------------|--------|
| 0002 | | 1 | Set | | NSP |

DATA FFP

Data for CLINs 0001. The data to be furnished shall be prepared in accordance with the Contracts Data Requirements List (CDRL) DD Form 1423 within Exhibit A of Section J. The cost associated with the required CDRLs shall be included in the cost of the aforementioned CLINs.

FOB: Destination

MILSTRIP: N0002421RX01204

PURCHASE REQUEST NUMBER: N0002421RX01204 PSC CD: J998

| | |
|---------|--------|
| NET AMT | \$0.00 |
|---------|--------|

| |
|--------------------------|
| ACRN AA |
| CIN: N0002421RX012040002 |

CLAUSES INCORPORATED BY FULL TEXT

B-215-H002 REFUNDS (SPARES AND SUPPORT EQUIPMENT) (NAVSEA) (OCT 2018)

(a) In the event that the price of a spare part or item of support equipment delivered under this contract significantly exceeds its intrinsic value, the Contractor agrees to refund the difference. Refunds will not be made to recoup the amount of cost decreases that occur over time due to productivity gains (excluding economic purchase quantity considerations) or changes in market conditions.

(b) For purposes of this requirement, the intrinsic value of an item is defined as follows:

(1) If the item is one which is sold or is substantially similar or functionally equivalent to one that is sold in substantial quantities to the general public, intrinsic value is the established catalog or market price, plus the value of any unique requirements, including delivery terms, inspection, packaging, or labeling.

(2) If there is no comparable item sold in substantial quantities to the general public, intrinsic value is defined as the price an individual would expect to pay for the item based upon an economic purchase quantity as defined in FAR 52.207-4, plus the value of any unique requirements, including delivery terms, inspection, packaging or labeling.

(c) At any time up to two years after delivery of a spare part or item of support equipment, the Contracting Officer may notify the Contractor that based on all information available at the time of the notice, the price of the part or item apparently exceeds its intrinsic value.

(d) If notified in accordance with paragraph (c) above, the Contractor agrees to enter into good faith negotiations with the Government to determine if, and in what amount, the Government is entitled to a refund.

(e) If agreement pursuant to paragraph (d) above cannot be reached, and the Navy's return of the new or unused item to the Contractor is practical, the Navy, subject to the Contractor's agreement, may elect to return the item to the Contractor. Upon return of the item to its original point of Government acceptance, the Contractor shall refund in full the price paid. If no agreement pursuant to paragraph (d) above is reached, and return of the item by the Navy is impractical, the Contracting Officer may, with the approval of the Head of the Contracting Activity, issue a Contracting Officer's final decision on the matter, subject to Contractor appeal as provided in the "Disputes" clause (FAR 52.233-1).

(f) The Contractor shall make refunds, as required under this requirement, in accordance with instructions from the Contracting Officer.

(g) The Contractor shall not be liable for a refund if the Contractor advised the Contracting Officer in a timely manner that the price it would propose for a spare part or item of support equipment exceeded its intrinsic value, and with such advice, specified the estimated proposed price, the estimated intrinsic value and known alternative sources or item, if any, that can meet the requirement.

(h) This requirement does not apply to any spare parts or items of support equipment whose price is determined through adequate price competition. This requirement also does not apply to any spare part or item of support equipment if the Contractor submitted, and certified the currency, accuracy and completeness of, cost or pricing data applicable to the item.

(End of text)

B-227-H001 PROVISIONING TECHNICAL DOCUMENTATION – WITHHOLDING OF PAYMENT (NAVSEA) (OCT 2018)

(b) The PTD is considered to be a part of the “Technical Data” specified to be delivered under this contract for the purposes of the “Technical Data—Withholding of Payment” (DFARS 252.227-7030) clause. The terms and conditions of the clause entitled “Limitation On Withholding of Payments (FAR 52.232-9), if included in this contract, shall not apply to withholding of payment for failure to make timely delivery of the PTD or delivery of deficient PTD.

(End of text)

B-231-H002 WORKSITE TRAVEL COSTS (NAVSEA) (OCT 2018)

(a) The contractor shall not charge, and the Government shall not pay, as an allowable cost under this contract, any manhour costs (whether straight-time or overtime) for contractor personnel or subcontractor personnel traveling to or from worksites, including travel to worksites other than the contractor’s facility for performance of contract work.

(b) Workers being paid under this contract, as prime contractor personnel or subcontractor personnel, will complete a full shift at the worksite, and no compensation will be paid for travel time before or after the shift.

(c) This requirement pertains only to payments for travel time before or after these workers’ regular shifts (commuting costs), and does not apply to legitimate travel costs incurred during normal working hours, provided that those costs are otherwise reasonable, allocable and allowable and approved in writing by the Government. This requirement does not apply to manufacturer’s representatives or Original Equipment Manufacturer (OEM) representatives when specifically required by the Government work specifications.

(d) Additionally, the contractor shall not charge, and the Government shall not pay, any transportation costs under this contract associated with transporting contractor or subcontractor personnel between the contractor’s facility (or subcontractor’s facility), and any other worksite to perform ship repair, maintenance or modernization. Transportation costs include, but are not limited to, bus fare, car fare, train fare, or boat fare, paid by the work force, or paid by the contractor on behalf of the work force.

(End of text)

Section C - Descriptions and Specifications

STATEMENT OF WORK**1 SCOPE**

- 1.1 Contractor shall remove all radioactively contaminated (or potentially radioactively contaminated) equipment and systems on board the Ex-McKee (AS-41). Contractor shall perform a space release (Article 520 Release) on all nuclear spaces aboard the Ex-McKee per NAVSEA 389-0288. This includes removal and proper disposal of material that would be an interference to performing the radiological release of the ship, removal and radwaste of internal RLW tank, providing sampling services, all temporary services, rigging and crane services. Also, in accordance with (IAW) NAVSEA 389-0288 prepare an Article 520 release letter/report to NAVSEA 08 for approval and final disposal of the Ex-McKee.

2 Period of Performance -

- 2.1 The contractor shall accomplish all work in accordance with the period of performance specified in Section F.

3 Place of Performance -

- 3.1 The contractor shall provide and utilize all required tooling and equipment to accomplish all work at Norfolk Naval Shipyard (NNSY), pierside, within the Controlled Industrial Area (CIA) with the exception of non-nuclear structural item fabrication.

4 Security Requirements -

- 4.1 The contractor shall ensure all applicable personnel have the proper security clearances for work performance under this contract, as specified in DD Form 254. The contractor shall prepare and submit a complete list of all personnel, with security clearance, who will perform work under this contract. (CDRL A001)
- 4.2 The engineering and planning personnel will be required to hold CONFIDENTIAL security clearance in order to accomplish the planning and technical work documents for performing work. All contractor personnel working inside NNSY shall be a United States citizen. Include this information in the DD254 per Attachment 10.

5 References -

The following documents and their references shall be used in the technical requirements for performing work under this contract. The most current reference revision shall be in effect at the time of award, unless otherwise specified. All work shall be performed in accordance with the drawings, documents and procedures cited below. The revision/change levels of any NAVSEA drawings or document utilized shall be dictated by the most current revision/change unless directed otherwise via NAVSEA approved document for performing work under this Statement of Work (SOW). If the contractor desires to use any drawing or technical instruction outside of these guidelines, cognizant Technical Authority concurrence shall be given in writing prior to using any other reference, via a contractor deficiency reporting process to include resolution. Any document not available to the contractor can be obtained by request via the NNSY Contracting Officer

- 5.1 Code of Federal Regulations (CFR), Title 49
 - 5.2 CFR, Title 10
 - 5.3 Radiological Controls for Shipyards (NAVSEA 389-0288)
 - 5.4 International Standards Organization - ISO 9001; Quality Management Systems-Requirements
 - 5.5 Naval Ship's Technical Manual S9086-CH-STM-030/CH 074, Volume 3; Gas Free Engineering
 - 5.6 Code of Federal Regulations - 29 CFR 1915, Title 29; Occupational Safety and Health Standards for Shipyard Employment
 - 5.7 OPNAVINST 5100.19; Navy Occupational Safety and Health Program for Forces Afloat
 - 5.8 NAVSEA INSTRUCTION 4700.17; Preparation and Submission of Trouble Reports
 - 5.9 NAVSEA INSTRUCTION 5400.95; Waterfront and Technical Authority Policy
 - 5.10 Code of Federal Regulations 40; Protection of Environment
 - 5.11 Code of Federal Regulation 49; Transportation
 - 5.12 Code of Federal Regulations 19; 1910; Occupational Safety and Health Standards
 - 5.13 NAVSEA Standard Item (SI) 009-32; Cleaning and Painting Requirements
 - 5.14 NAVSEA Standard Item (SI) 009-01; General Criteria; accomplish
 - 5.15 NAVSEA Standard Item (SI) 009-02; Environmental Compliance Report for Material Usage; accomplish
 - 5.16 NAVSEA Standard Item (SI) 009-03; Toxic and Hazardous Substance; control
 - 5.17 NAVSEA Standard Item (SI) 009-04; Quality Management System; provide
 - 5.18 NAVSEA Standard Item (SI) 009-05 Temporary Access; accomplish
 - 5.19 NAVSEA Standard Item (SI) 009-07; Confined Space Entry, Certification, Fire Prevention and Housekeeping; accomplish
 - 5.20 NAVSEA Standard Item (SI) 009-08; Shipboard Fire Protection and Fire Prevention; accomplish
 - 5.21 NAVSEA Standard Item (SI) 009-09 Process Control Procedure (PCP); provide and accomplish
 - 5.22 NAVSEA Standard Item (SI) 009-10; Asbestos-Containing Material (ACM); control
 - 5.23 NAVSEA Standard Item (SI) 009-12; Weld, Fabricate, and Inspect; accomplish
 - 5.24 NAVSEA Standard Item (SI) 009-40; contractor Crane, Multi-Purpose Machine and Material Handling Equipment at a Naval Facility; provide
 - 5.25 NAVSEA Standard Item (SI) 009-60; Schedule and Associated Reports for Availabilities Over 9 Weeks in Duration; provide and manage
 - 5.26 NAVSEA Standard Item (SI) 009-65; Polychlorinated Biphenyls (PCBs); control
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- 5.27 NAVSEA Standard Item (SI) 009-70; Confined Space Entry, Certification, Fire Protection, Fire Prevention, and Housekeeping for Unmanned Vessel; accomplish
- 5.28 NAVSEA Standard Item (SI) 009-74; Occupational, Safety and Health Plan; accomplish
- 5.29 NAVSEA Standard Item (SI) 009-100; Ship's Stability; maintain
- 5.30 NAVSEA Standard Item (SI) 009-103; Weight and Moment Change Data; provide
- 5.31 NAVSEA Standard Item (SI) 009-120; Fact Finding and Critique of Unplanned Event; manage
- 5.32 NAVSEA Standard Item (SI) 009-122; Temporary Padeye; install and remove
- 5.33 Local Standard Item 042-26-001; Security Requirements for Work Within Norfolk Naval Shipyard (NNSY); accomplish
- 5.34 Local Standard Item 042-11-001; General Occupational Safety, Health and Environment (OSHE) Requirements for Work Within Norfolk Naval Shipyard; accomplish (PCP)
- 5.35 OSHECM Chapter 250 Hazardous Energy Control
- 5.36 COMNAVREG MIDLANT INSTRUCTION 11262.1B contractor Crane/Weight Handling Equipment Oversight.
- 5.37 Norfolk Naval Shipyard (NNSY) Asset Authorization Submittal Requirements
- 5.38 NAVFAC P-307; Weight Handling Program Management
- 5.39 NAVSEA Instruction 9210.47; Requirements For Mixed Waste And Radioactive Polychlorinated Biphenyl (Pcb) Waste Control
- 5.40 Local Standard Item 042-22-001; General Requirements for Work Within Norfolk Naval Shipyard (NNSY); accomplish
- 5.41 NAVSEA S9213-70-MMA-000; Radiological Controls Manual Decontamination and Decommissioning Supplement
- 5.42 NAVMED P-5055 Radiation Health Protection Manual

6 Quality Management and Assurance -

- 6.1 The contractor shall develop and maintain a Quality Management System (QMS), compliant with reference (5.4), which provide assurances that all contracted work submitted to the Government for acceptance conforms to contract requirements. The contractor's Quality Management System shall be documented and shall be submitted as part of the contract award process. The contractor's Quality Management System shall be approved by NNSY prior to start of performance and shall be subject to periodic audits by NNSY throughout the contract Period of Performance. The contractor shall provide a copy of the Quality Management System, to include any applicable quality manuals, process instructions, and weld/braze procedures via electronic media (email) to the Contracting Officer Representative (COR). The contractor shall notify NNSY Contracting Officer (KO) in writing of any change to the Quality Management System, to include any updates, within one (1) week of change.
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7 **REQUIREMENTS** –

7.1 **NNSY Requirements** -

- 7.1.1 NNSY will provide water, 90 psi tool air, and power to the pierside. 75kVA transformer provides power.
- 7.1.2 NNSY will provide berthing drawing of the AS-41 Ex-McKee per Attachment 3.
- 7.1.3 NNSY will provide initial radiological and waste characterization information to the contractor. The information, which may (but NNSY is not required to) include waste characterization profiles, and radiological surveys, shall be provided in a format acceptable to reference (5.3). This is provided for information purposes only and shall be verified by the contractor. Refer to section 7.5.6.
- 7.1.4 NNSY will support contractor work on 1st and 2nd shift Monday through Saturday, excluding government holidays. Due to overtime considerations, notification to the COR is required to support work outside of normal business hours. Notification shall be received by the close of business on Tuesday of the week prior the week additional support is needed. Support outside of normal business hours shall be evaluated on a case-by-case basis.
- 7.1.5 NNSY will maintain a custodian work force on the AS-41 to include inspections and small work items outside of the contractors work areas.
 - 7.1.5.1 Maintain the fire and flood alarms and alarm system.
 - 7.1.5.2 Monitoring shipyard workers access control.
 - 7.1.5.3 Contractor shall maintain contractor work force access control, including logging personnel on and off the ship. Contractor shall know which employees are on the ship at all times.
- 7.1.6 NNSY will maintain ship security including securing the ship when it is unoccupied.
- 7.1.7 NNSY will provide a technical representative points of contact for interface. See 7.15.

7.2 **General Requirements** - In the performance of the resulting contract, the contractor shall -

- 7.2.1 Perform work in accordance with applicable references identified in section 5. The contractor shall comply with references as cited within this Statement of Work and the current contract modification, unless otherwise authorized by the Government. The effective issue of Government approved documents referenced in the ship specifications or otherwise invoked in this contract, including revisions or amendments, shall be the latest document date prior to contract award that has been accepted by the contractor. The contractor shall promptly notify the government of all revisions identified to the documents referenced in section 5 and identify all cost and schedule impacts. Individual process, system, and component specification upgrades shall be addressed as identified in the Final Work Package. These requests shall be evaluated prior to implementation based on their economy, feasibility and practicality. Implementation shall be in accordance with standard shipyard procedures identified in the Quality Assurance Program Requirements.
-

- 7.2.2 Contractor shall personally notify at least one senior Naval Nuclear Propulsion Program (NNPP) representative, the COR, and the Contracting Officer of any issue related to licenses, permits, agreements, consents, or other legal authorization required to perform work specified herein that would adversely affect the contractor's ability to perform the functions defined in the contract. This notification is required whether or not such documents are identified in this specification. This notification shall be via teleconference within one (1) business day of identification of the issue and shall be followed up in writing within five (5) calendar days. Additionally, contractor shall personally inform at least one senior NNPP representative and the COR prior to initiating any discussion, oral or written, with State, Federal, or local regulators concerning the handling, packaging of NNPP waste. This notification shall occur under all circumstances even if the contractor does not specifically identify that the NNPP is the waste generator. This notification is in addition to, and not in lieu of, the contractor's responsibility to promptly notify the Contracting Officer of any issues that could adversely affect schedule, impact performance or result in non-compliance with the contract. The senior contractor Personnel and senior NNPP representative(s) for this contract shall be designated at time of contract award (and updated as necessary).
- 7.2.3 Contractor shall follow all security requirements of reference (5.33) and Safety, Health, and Environment requirements of reference (5.34).
- 7.2.4 The contractor shall provide to the COR an updated Plan of Action and Milestones (POAM) and schedule for all associated work.
- 7.2.5 The contractor shall submit Fixed and Variable Cost Report (FVCR). (CDRL A008 for FVCR)
- 7.2.6 The contractor shall provide Project Management to participate in the following meetings and conferences -
- 7.2.6.1 The Cost Report meeting. Every 2 weeks beginning at one month before beginning work through completion of contracted work.
 - 7.2.6.2 Weekly Progress meeting. One meeting per week beginning at one month before beginning work through completion of contracted work.
 - 7.2.6.3 Periodic availability review conferences at 25 percent, 50 percent, 75 percent accomplishment of work.
 - 7.2.6.4 Daily Production meetings with C400/COR.
 - 7.2.6.5 Other meetings as required to cover any emergent needs that may develop over the availability.
- 7.2.7 The contractor shall furnish the material, services, and work space/trailers, unless furnished by the Government under express provisions of this contract, necessary for the execution of work.
- 7.2.8 Contractor shall be responsible for removal and preparation for disposal of all radioactively contaminated and potentially radioactively contaminated equipment or systems on board the AS- 41 IAW documents in section 5.
- 7.2.9 Contractor shall be responsible for removal of all equipment, furnishings and structural interference items including tanks, lead shielded piping and shielded decks. Some of this material is considered radioactive material.
- 7.2.10 All material removed from the AS-41 shall have the classification of waste to be determined by the contractor per this SOW and reference (5.3).
- 7.2.11 Contractor shall maintain ship structural integrity and stability as necessary. See Section 7.11.
- 7.2.12 Contractor shall remove and properly prepare for disposal of all lead shielded piping, lead shielded bulkheads and decks from the ship.
-

- 7.2.13 Contractor shall perform all planning for work to remove and properly disposal of all items (including radiological and hazardous waste) as necessary on the AS-41 to include- Engineering Services
Structural Engineering Services
Radiological Services
Project management and Production Services
Lifting and Handling Services
- 7.2.14 Work Items, specifications and other work products shall be completely and thoroughly checked and reviewed by the contractor for technical accuracy and compliance with provisions of technical instructions, specifications and assignments. The Government is the ultimate approval authority for work item specifications provided by the contractor. Data and other work products developed by the contractor for contractor's accomplished work shall be submitted to the COR for review by NNSY for approval before beginning work on the work item submitted. NNSY requires 10 working days for review and approval. The contractor shall report any corrections necessary due to error or omission. No work may proceed without written approval of NNSY.
- 7.2.14.1 All work performed by the contractor shall be in accordance with written and approved (by NNSY) work packages.
- 7.2.15 The contractor shall submit reports as specified in this Statement of Work to the COR and also in accordance with Section J, Exhibit A CDRLs.
- 7.2.16 The contractor shall comply with all laws, ordinances, and regulations of Federal, State, and Local authorities regarding licenses, permits and consents that may be necessary. For any supplies or services provided pursuant to this contract, the contractor shall comply with all applicable laws and regulations, including, but not limited to, the Nuclear Regulatory Commission (NRC), the Environmental Protection Agency (EPA), the Occupational Safety and Health Act (OSHA) and associated regulations, the Department of Transportation (DOT), the Toxic Substances Control Act (TSCA) and associated regulations, radioactive waste compact, and the appropriate Agreement State (as applicable).
- 7.2.17 The contractor shall allow inspections on the AS-41 by (NNPP) Representatives at all reasonable times. Inspections shall include radiological control, safety, and adherence to approved work procedures. All deficiencies documented by this inspections shall be provided to the COR. Inspections may be random.
- 7.2.18 The contractor, shall not take possession, custody, or control of the AS-41, but shall, to the extent legally permissible, assume all risk, risk of loss, and all other incidents of ownership to the AS-41. The contractor shall be liable and responsible to the extent allowed by applicable laws and regulations in any action that may claim damages or compensation in any connection with the AS- 41 after the contractor has started work on the AS-41.
- 7.2.18.1 In the event of a catastrophic accident (such as hull puncture below the waterline) NNSY will provide emergency response and emergency repair of the ship to maintain seaworthiness. Contractor would be liable for ship damage.
- 7.2.19 The contractor shall prepare for disposal all wastes generated from the AS-41 disposal including (but not limited to) radioactive waste, Heavy Metal Bearing Equipment (HMBE) waste (HMBE mainly consists of equipment with lead components inside), and mixed waste. Storage, treatment, and/or packaging of these wastes shall be in accordance with applicable federal, state and local regulations.
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- 7.2.19.1 Hazardous waste, including lead waste and Asbestos waste (radiological and non- radiological), PCB waste (radiological and non-radiological), and non-hazardous regulated waste (any non-radioactive waste generated from a ship that is no longer usable and, due to its hazardous or pollutant properties, requires controlled treatment/disposal), shall be handled, packaged in accordance with references (5.16, 5.22, 5.26, and 5.34).
- 7.2.20 Contractor shall submit a safety plan to NNSY COR for review and approval.
- 7.2.21 Contractor shall provide crane and rigging services for removal of items from ship and for opening and closing of the nuclear trunk hatch as needed during execution. Contractor shall submit crane plans to and have cranes be inspected by Code 700 for approval per reference 5.36.
- 7.2.22 All cuts or modifications to the ships hull or structure shall be per SI 009-05 (IAW) 7.2.11.
- 7.2.23 Welding is per SI 009-12. All weld procedures and welder qualifications shall be approved by NNSY C138.
- 7.2.24 Contractor shall obtain authorization for all electronic devices from NNSY per reference (5.33).
- 7.2.24.1 Contractors are authorized to bring the following privately owned personal electronic devices (PEDs) onto the Shipyard, but not within the CIA or secured spaces - cell phones, cell phones with PDAs embedded (including web access), PDAs (including web access), and Blackberry - type devices and Bluetooth for these devices including hands-free (ear pieces). It is required to leave these devices outside of the CIA and secured spaces.
- 7.2.24.2 Cameras and PEDs (including laptops) with camera, video, remote activation, and/or audio recording capabilities are prohibited on the Shipyard. Camera cell phones are permitted on the shipyard; however they cannot be brought into the CIA or into spaces where NAVSEA business is conducted.
- 7.2.24.3 PEDs brought within Shipyard worksites are subject to random audits. Devices found to contain government information shall be sanitized. The device shall be examined to determine if government information can be removed without destruction. If it is determined that physical destruction is the only method for sanitizing, the device shall be destroyed and the owner shall not be reimbursed for the device.

7.3 General Radiological Requirements

- 7.3.1 Perform all work (IAW) reference (5.3). In all disputes in the interpretation of reference (5.3) NNSY is the final authority.
- 7.3.1.1 Per reference (5.3) the following conditions are considered radiological incidents. If an incident occurs the contractor shall immediately suspend all work and submit a recovery plan to the COR for approval. For convenience, section numbers of reference (5.3) are listed after each incident.
- 7.3.1.2 External radiation exposure in excess of NAVSEA limits. (238.3 and 238.4)
- 7.3.1.3 Internally deposited radioactivity. (406.4)
- 7.3.1.4 Skin Contamination. (517.2)
- 7.3.1.5 Personnel exposed to airborne radioactivity. (404)
-

- 7.3.1.6 Unauthorized radioactive liquid discharge to the environment. (308.2 and 310.3)
 - 7.3.1.7 Loss of radioactive material. (704.3)
 - 7.3.1.8 Spread of radioactive contamination. (517.3 and 517.4)
 - 7.3.1.9 Unmonitored exposure. (234.1.f)
 - 7.3.1.10 Improper control of high radiation areas or exclusion areas. (226.1.g and 226.4.c)
 - 7.3.1.11 Unauthorized disposal of radioactive waste. (including mixed waste and PCB waste). (324.2)
 - 7.3.1.12 Improperly controlled radioactive material. (703.8.b)
 - 7.3.1.13 Dosimetry discrepancy. (231.4.b and 233.3.g)
 - 7.3.1.14 Any instance in which personnel radiation exposure exceeded the control levels. (106.1.a, 106.8.b or 240.8.c)
 - 7.3.2 The contractor shall provide radiological coverage for all contractor radiological work. This includes providing Radiological Control Technicians and supervisors to ensure work is performed in a radiologically safe manner and per all requirements.
 - 7.3.3 Contractor personnel shall be trained to perform radiological work and wear dosimetry per reference (5.3). Training is performed by NNSY.
 - 7.3.4 Contractor personnel shall be entered into NNSY's dosimetry program and subject to the rules and regulations of the program. Personnel shall be required to complete training, pass exams and have a medical examination per reference 5.42.
 - 7.3.5 The contractor shall provide the COR a Point of Contact (POC) listing citing all contractor personnel for Radiological Manager's notification to NNSY RADCON, to include the following - Radiological Control Department, Radiological Waste Management, Radiation Worker Training, and Radioactive Material Control Office. (CDRL A002)
 - 7.3.6 The contractor shall provide copies of approved technical work documents containing radiological controls to NNSY upon request.
 - 7.3.7 Contractor is subject to radiological oversight by NNSY at all times per the Quality Assurance Plan (QASP).
 - 7.3.8 Services are to be performed in a manner that minimizes the generation of radioactive waste and mixed waste. All radioactive waste, and mixed waste shall be handled according to federal, state, and local regulations and shall be prepped for disposal appropriately.
 - 7.3.9 If the contractor encounters water in radiological system the water shall be controlled as follows -
 - 7.3.9.1 If less than 1 pint then use absorbents in the containment and Radwaste. If more than a pint is encountered or expected drain water into a polybottle, provided by NNSY, and turn over to NNSY.
 - 7.3.10 When a problem occurs that has violated or has the potential to violate the limits listed in 7.3.1 the contractor shall stop work and perform a Team Learning Session (TLS). This TLS includes a discussion (and written report) of what happened, what should have happened, what the team learned, and what actions are going to be taken to ensure that the problem shall not happen again. TLS shall include the COR and any technical representatives that the COR deems necessary.
-

- 7.3.10.1 For problems that occur but the COR does not deem significant enough to have violated the limits of 7.3.1 then the COR may only require a written report and not a full meeting.

7.4 Waste Contents/Form -

- 7.4.1 The contractor shall survey and sample all material for radiological and hazardous constituents prior to removal and preparation for disposal.
- 7.4.2 Waste material for disposal shall contain individual radionuclides or combinations of radionuclides listed in Part 61 of reference (5.2). Waste material shall meet the limits of Class A waste as defined by Part 61.55 of reference (5.2).
- 7.4.3 The contractor shall provide services for removal and packaging of components having unique design characteristics and for large components. All waste shall be handled according to Federal, State, and local regulations at NNSY and shall be packaged (IAW) reference (5.3) and NNSY's provided training.

7.5 Requirements for the Acceptance of Radioactive Waste -

- 7.5.1 In the event of a violation concerning any waste previously accepted at the final disposal site, the contractor may be held liable to the extent that its actions or inactions caused the violation, at the discretion of the NNPP, for costs incurred to ensure the proper disposal at the final disposal facility.
- 7.5.2 NNSY shall only accept the following waste with prior approval and special considerations. (Mixed waste and PCB/radioactive waste shall be handled under the Mixed Waste and PCB/radioactive waste section).
1. Heavy metal bearing equipment (HMBE) and elemental lead
 2. Radiological waste with blood.
 3. Polybottles (See 7.3.9)
 4. Aqueous filters.
 5. Biological Radwaste
- 7.5.3 The contractor shall perform handling, segregating and packing of radioactive solid waste (hazardous and non-hazardous). Waste is to be segregated (packed separately) based on waste streams. Mixed waste, hazardous waste, PCB waste and ORW (see 7.5.12 and 7.6.9.5) are to be packaged separately from other types of waste.
- 7.5.4 The contractor shall perform blocking and bracing for items that cannot be packed by hand and provide associated inspections IAW Part 393, reference (5.1). This includes building wooden decks with fire retardant wood for shipping radwaste items.
- 7.5.5 The contractor shall provide disposal information via technical working document or by completing a Waste Evaluation Form prior to generating any waste. Specific characterization information on the contents of each waste item shall be provided to NNSY to support later communications and disposal of the radioactive waste. (CDRL A003)
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- 7.5.6 The contractor shall provide Objective Quality Evidence (OQE) such as radiological surveys of containers, item on-contact levels, determination that radioactive waste is not mixed waste, for radioactive waste items to verify characterization of the waste. This characterization data may be based on either appropriate process knowledge or sample analysis. This data (analysis sheets, surveys, etc.) is to be attached to the container associated with the waste items. Characterization information should be provided prior to turning over custody to NNSY. The following are required to be turned over to NNSY -
- Information used to serialize the container (e.g. serial numbers, tracking, etc.).
 - Container weight (recorded in lbs).
 - All applicable surveys (recorded in mR/hr).
 - Inventory List for each container turned over to NNSY.
 - If required, proof item(s) are blocked and braced satisfactory per reference 5.11.
 - All applicable NNSY documentation (Appendix Ns for ORW waste, TWDs, etc.).
 - Proof of satisfactory closure per manufacturer's closure instructions. (CDRL A003)
 - Percentage full (Only for NNSY provided Sealands, estimated to the nearest plus or minus 5 percent).
- 7.5.7 The contractor shall perform packaging of all radioactive waste to be transferred to NNSY. However, some types of waste need to be segregated (bagged separately). These waste streams include Mixed waste, hazardous waste, PCB waste and ORW (see 7.5.3, 7.5.12 and 7.6.9.5). For uniform radioactive debris of same characterization, debris are to be bagged prior to being packed into container. Debris with potential cut hazards, such as glass, protective bags or sharp edge protection shall be utilized prior to turning over to NNSY.
- 7.5.8 The contractor shall provide the necessary support to permit NNSY to visually inspect any radioactive waste prior to transfer to NNSY. This inspection shall, in some instances, require an open-container inspection of the waste to verify first-hand that no unacceptable materials are included with the radioactive waste and to ensure waste is properly identified and inventoried per work document.
- 7.5.9 Contractor shall provide new or like new containers and/or drums for packing waste. Containers/drums shall not be used as a shipping container; instead, these containers shall be packed into Sealands for shipment. NNSY may provide Sealands to the contractor to pack radioactive waste directly into if the contractor request a Sealand container from NNSY. Shipping containers and conveyances supplied to the NNPP sites shall be either new or refurbished and appear in a like new condition on all interior and exterior sides, including the top and bottom sides. All seals on access panels (i.e., doors and removable tops) shall be new or refurbished to be in a like new condition. Latches, door handles, chains and binders located on or attached to the container shall be in proper working order and be new or in a like new condition. The Sealand shall remain under NNSY custody during all work evolutions. The Sealand shall be used as a shipping container and shall meet the requirements of reference (5.1). The contractor shall not move, lift, or alter the NNSY provided Sealand container. The contractor shall return the Sealand to NNSY in the same state as received once packing is complete.
- 7.5.10 Each container of waste turned over to NNSY shall have a detailed inventory list provided. This inventory shall be a breakdown of the waste in the bag as annotated on the Technical Work Document (TWD) or Waste Evaluation Form. Be specific. Do not use general terms such as debris to describe several waste forms, such as rubber gloves, stainless steel, etc. For debris, package together, ensure it is uniform under the same waste characterization. (CDRL A003)
- 7.5.11 For certain pieces of equipment (i.e. vacuum canisters, chip collectors), the bagging requirements of this section are not applicable. However, an inventory shall still be provided. For heavy or large items where hand packing is not practical, block and brace as necessary.
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7.5.12 Information on NNSY radiological waste streams are as follows -

- a. Common Consumable Material (CCM) - Waste destined for incineration at the Vendor. Common Non-Hazardous Trade Waste.
- b. Standard Radioactive Waste (SRW) - Radioactive waste stream for non-hazardous materials or recyclable metals.
- c. Other Radioactive Waste (ORW) - Radioactive waste stream that consists of items that do not fit into SRW and are not mixed waste or PCB/Radioactive waste. Metal items and other special characterized items that do not fit into the SRM waste stream, Out Of Waste Acceptance Guideline (OOWAG) material which may require pre-approval from Energy Solutions or special curie content evaluation. Examples of ORW are - tanks, elemental lead, aqueous filter, asbestos, etc.

7.6 Requirements for the Generation and Acceptance of Mixed Waste -

- 7.6.1 Mixed Waste is Waste which is radioactive and which has been determined to be hazardous under RCRA. This includes radiological waste with PCBs.
 - 7.6.2 The contractor shall minimize generation of mixed and/or PCB/radioactive wastes in accordance with reference 5.39.
 - 7.6.3 The contractor shall notify NNSY Code 2380.6 and Code 308 24 hours (during normal NNSY working hours) or 56 hours (during the weekend or holidays) before generation of any mixed and/or PCB/radioactive waste generated requiring transfer to NNSY Central Accumulation Area (CAA).
 - 7.6.4 The contractor shall submit characterization information (see step 7.5.5), the date or expected date of generation, and volume or anticipated volume of waste. (CDRL A003)
 - 7.6.5 The contractor shall provide disposal information via technical work document or completing Waste Evaluation Form and forwarding the form to NNSY Code 2380.6, for review and approval prior to transfer of any mixed and/or PCB/radioactive wastes to NNSY CAA. Specific characterization information on the contents of each waste item shall be provided to NNSY to support later treatment and disposal of the mixed and/or PCB/radioactive waste. (CDRL A003)
 - 7.6.6 The contractor shall provide PCB analysis sheets, chemical analysis sheets, etc. for individual mixed and/or PCB/radioactive waste items to verify characterization of the waste. This characterization data may be based on either appropriate process knowledge or sample analysis. This data (analysis sheets, surveys, etc.) is to be attached to the Appendix A associated with the waste items. Characterization information should be provided prior to the date of generation. (CDRL A003)
 - 7.6.7 The contractor shall package all mixed and/or PCB/radioactive waste to be transferred to NNSY.
 - 7.6.8 The contractor shall provide the necessary support to permit NNSY to visually inspect any mixed and/or PCB/radioactive waste prior to transfer to NNSY. This inspection shall, in some instances, require an open-bag inspection of the waste to verify first-hand that no unacceptable materials are included with the mixed or PCB/radioactive waste and to ensure waste is properly identified and inventoried per TWD or Appendix A. NNSY cannot accept mixed and/or PCB/radioactive waste until an on-site waste inspection has been satisfactorily performed.
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7.6.9 Mixed Waste Acceptance Criteria

7.6.9.1 The following items shall not be packaged with mixed and/or PCB/radioactive waste item -

7.6.9.1.1 Free standing liquids

7.6.9.1.2 Pressurized containers

7.6.9.2 Waste items generated by contractor shall be bagged in non-PVC clear plastic bag. Examples of non-PVC plastics are polyurethane, polyethylene, and polypropylene. The use of other types of packaging materials requires NNSY approval. The weight for bagged mixed and/or PCB/radioactive waste should be kept to a maximum of 35 lbs per bag unless otherwise approved by NNSY Code 2380.6. This does not apply to vacuums or chip collectors.

7.6.9.3 Each package of waste turned over to NNSY shall have a detailed inventory list provided. This inventory shall be a breakdown of the weight percent of each component of the waste in the bag as annotated on the TWD or Waste Evaluation Form. Be specific. Do not use general terms such as debris to describe several waste forms, such as rubber gloves, absorbents, paint chips, etc. An example of a breakdown would be a bag containing 85 percent delicate task tissue wipes, 15 percent cloth diapers. (CDRL A003)

7.6.9.4 For large components and pieces of equipment (i.e. vacuum canisters, chip collectors), the bagging requirements of this section are not applicable. However, an inventory shall still be provided.

7.6.9.5 Approved Waste Streams for Mixed Waste

7.6.9.5.1 Only those mixed waste streams listed below are allowed for storage by NNSY. Each mixed waste stream is identified and the applicable EPA Waste Codes are provided.

7.6.9.5.2 Mixed Waste Requiring Organic/Characteristic Treatment (MW1)
EPA Waste Codes - D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, D027, F002, F003, F005.

7.6.9.5.3 Mixed Waste for Macroencapsulation Treatment (MW2)
EPA Waste Codes - D004, D005, D006, D007, D008, D009, D010, D011
This waste stream consists primarily of lead, leaded alloys, brass and bronze items, cadmium plated equipment and other debris type waste.

Debris means solid material exceeding a 60mm particle size that is intended for disposal and that is - a manufactured object; or plant animal matter; or natural geologic material.

Radioactive Lead Solids (RLS) are another type of hazardous waste that requires treatment via macroencapsulation. Radioactive Lead Solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. There are no size criteria for RLS unlike the 60 mm particle size requirement for hazardous debris. As such, smaller forms of RLS such as lead shot or fines require macroencapsulation prior to disposal.

This waste stream may contain asbestos and/or regulated PCBs that are amenable for direct disposal. No free paint chips is authorized for direct disposal.

- 7.6.9.5.4 Mixed Waste Containing PCBs (MW3)
EPA Waste Codes - D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F002, F003 and F005
This waste stream consists primarily of PCB contaminated debris, items, particulates, and sediments that may contain asbestos. This waste stream shall contain greater than or equal to 50 ppm PCBs.
- 7.6.9.5.5 Process knowledge and/or a representative sample analysis of the waste streams identified above shall be based on the minimum sample analyses as identified below. Any sample analysis performed shall meet the requirements of EPA Test Methods for Evaluating Solid Waste (SW-846) and analyzed for the following constituents per the stated (SW-846) test method. The number of samples for each analysis shall be determined by a contracted organization sampling analysis plan.
- a. Toxicity characteristic leaching procedure (TCLP) (Metals) - Test Method 1311
 - b. Volatile Organic Compound (VOCs) - Test Method 8260
 - c. Semi-Volatile Organic Compound (SVOCs) - Test Method 8270
 - d. PCBs - Test Method 8082
- 7.6.9.5.6 PCB Bulk Product Waste (PCB1)
- PCB bulk product waste is defined in 40 CFR Part 761.3. Examples of PCB bulk product waste may include certain types of cable insulation, thermal insulation, floor tiles, rubber parts, items coated with PCB- containing paint, and PCB-containing paint chips.
- Only radioactive waste with PCB contamination levels greater than or equal to 50 ppm or greater than or equal to 10 ug/100cm² (for loose surface PCB contamination) are acceptable for storage to NNSY as PCB/radioactive waste.

7.7 Radiological Reporting Requirements -

- 7.7.1 The contractor shall provide radiological survey results in a format acceptable per reference (5.3). (CDRL A004)
 - 7.7.2 Asbestos waste and any asbestos containing daughter waste products originating from asbestos waste generated shall be tracked until the waste is turned over to NNSY.
 - 7.7.3 The contractor shall provide a copy of all associated certified TWDs, Work Permits and other work documents upon completion of all work as Objective Quality Evidence (OQE) to the COR.
 - 7.7.4 Contractor shall develop radiological release reports in accordance with reference (5.3) and acceptable to the NNSY Radiological Controls Department. (CDRL A005)
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7.8 Packaging of Materials by the contractor -

- 7.8.1 Material shall be properly packaged, blocked and braced per local, state, federal and DOT regulations.

7.9 Radiological Release Requirements -

- 7.9.1 In addition to the requirements of federal, state and local regulatory authorities and those specific requirements stipulated in applicable licenses, permits, and authorizations, the below stated radiological requirements apply, as indicated.

- 7.9.1.1 The following radiation measuring methods shall be used to determine the various radiation and/or contamination levels. All release levels and limits are per reference (5.3).

- 7.9.1.1.1 Gamma Scintillation surveys shall be performed with IM253 or equivalent. This is a single point survey within a ½ inch of the surface.

- 7.9.1.1.2 Frisk surveys shall be performed with a DT-304/PDR equipped ratemeter or instrument of equal sensitivity, with the probe held within ½ inch of the surface being scanned.

- 7.9.1.1.3 Solid Samples shall be analyzed by isotopic analysis using a shielded well and a High Purity Germanium (HPGe) semiconductor detector for quantitative analysis. The peaks are identified by software and compared against a standard library to determine which radionuclides are present.

- 7.9.1.2 The contractor shall provide copies of radiological surveys to the COR and/or NNPP site, as requested. (CDRL A004)

7.10 Radiological Work Requirements -

- 7.10.1 Attachment 1 lists the status of the radiological grouping of the spaces aboard the AS-41.

- 7.10.2 Attachment 2 lists specific tasks that should be evaluated when executing the contract.

- 7.10.3 Exhaust ventilation ducting upstream of HEPA filters shall not be released and shall be removed and disposed of as radioactive waste.

- 7.10.4 Spaces may contain signs indicating No Bunking – Radiation Areas Nearby. These signs were covered over with tape All radiological signs shall be removed and disposed of appropriately. Signs are not to be released to the public.

- 7.10.5 A waterborne release of the hull for unrestricted use was performed in 2017. This was documented via memo 105/0091 dated 31 May 2017.

- 7.10.6 The contractor shall remove the internal Radioactive Liquid Waste Tank (RLWT) while waterborne Tank is located seven (7) decks below the weather deck.

- 7.10.7 The contractor shall remove all non-asbestos/asbestos insulation on piping in radiological and support areas. Insulation may contain asbestos, sample and test as required for proper removal and disposal of insulation.

- 7.10.8 The contractor shall remove the contaminated laundry equipment. This may require making a hull cut as the equipment may be removed through the hull.
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- 7.10.9 The contractor shall remove a long section of lead shielded piping. Pipe is encased in several inches of lead and travels through several decks and spaces. Rigging and crane services shall be required.
- 7.10.10 The contractor shall open and close tanks/voids as required to remove the RLWT module, which consists of several RLW tanks that shall be removed and properly disposed of.
- 7.10.11 The contractor shall perform radiological release which shall be performed in accordance with Reference 5.3. This includes performing surveys, sampling, taking photographs and developing the final release report. (CDRL A005) For Camera permitting see reference (5.33).
- 7.10.12 The handling of each radiological space (per Attachment 1) is detailed below.
- 7.10.12.1 For spaces identified as Group 4 per Attachment 1 the following shall be performed -
- 7.10.12.1.1 All furnishing, equipment, piping, conduit, cladding, insulation and interferences shall be removed from each space in preparation for release. To the maximum extent possible each space should be cleared until only the walls, floor, and ceiling remain.
- 7.10.12.1.2 Release is performed per the following surveys -
- 7.10.12.1.3 The floor shall be gridded in 4 feet x 4 feet grids. The walls above 12 feet in 6 feet x 6 feet grids and 4 feet x 4 feet grids below 12 feet . The ceiling above 12 feet in 6 feet x 6 feet grids and 4 feet x 4 feet grids below 12 feet.
- 7.10.12.1.4 On 100 percent of all grids perform Direct Frisks which shall verify surface contamination levels are less than 450 pCi/probe for Beta-Gamma.
- 7.10.12.1.5 At the center point of each 4 feet x 4 feet and 6 feet x 6 feet grid perform Gama Scintillation (HV1/PHA Mode).
- 7.10.12.1.6 At the center point of a random 25 percent of the 4 feet x4 feet grids perform Gamma Scintillation (HV2/Gross Mode).
- 7.10.12.1.7 Sampling shall be performed in all grids. Minimum of 1 sample per grid. Samples taken from areas of highest potential and differing materials (if present).
- 7.10.12.1.8 Contractor shall take photograph of every grid.
- 7.10.12.2 Spaces identified as Group 3 the following shall be performed.
- 7.10.12.2.1 All furnishing, equipment, piping, conduit, cladding, insulation and interferences shall be removed from each space in preparation for release. To the maximum extent possible each space should be cleared until only the walls, floor, and ceiling remain.
- 7.10.12.2.2 Release is performed per the following surveys-
- 7.10.12.2.3 The floor shall be gridded in 6 feet x 6 feet grids with one row of 6 feet x 6 feet grids measured from the floor on all walls.
- 7.10.12.2.4 Direct Frisks shall verify surface contamination levels are less than 450 pCi/probe for Beta-Gamma.
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- 7.10.12.2.5 At the center point of each 6 feet x 6 feet grid perform Gamma Scintillation (HV1/PHA Mode). Gamma Scintillation shall have no discernible counts above background levels.
- 7.10.12.2.6 At the center point of a random 25 percent of the 6 feet x 6 feet grids perform Gamma Scintillation (HV2/Gross Mode). Gamma Scintillation shall have no discernible counts above background levels.
- 7.10.12.2.7 Sampling shall be performed in all grids. Minimum of 1 sample per grid. Samples taken from areas of highest potential and differing materials (if present).
- 7.10.12.2.8 Contractor shall take photograph of every grid.
- 7.10.12.3 Spaces identified as Group 2 the following shall be performed.
 - 7.10.12.3.1 All furnishings and equipment that is not part of the ships structure shall be removed. All radiological systems shall be removed.
 - 7.10.12.3.2 For every 10 foot by 10 foot section of floor space (or partial) choose two square areas that measure 3 feet x 3 feet squares should be located in areas with the highest potential for accumulation of NNPP. These two areas shall be 100 percent surveyed for Surface Contamination (Beta-Gamma), and Gamma Scintillation (HV1/PHA Mode).
 - 7.10.12.3.3 Direct Frisks shall verify surface contamination levels are less than 450 pCi/probe for Beta-Gamma. Gamma Scintillation shall have no discernible counts above background levels.
 - 7.10.12.3.4 Contractor shall take photograph of every grid.
 - 7.10.12.3.5 Radiological systems (ventilation and piping) that run through these spaces shall first be removed and disposed of before attempting release.

7.11 Ship Stability

- 7.11.1 In order to execute the removal of material from the ship, a Ship's Stability Plan shall be developed in order to maintain an adequate margin of stability and reserve buoyancy. Plan should evaluate stability condition at start and conclusion of overall work effort as well as during key intermediate times in-between so as to ensure ship's stability, list and trim are not adversely impacted. Evaluation of ship's changing condition during work execution should also consider impact on such items as brows, mooring lines, and temporary services. Care should be taken to compensate for weight removed from the ship by adding compensating weight or ballasting of tank(s) taking into consideration impact on ship's overall stability, list and trim. All weight changes (removals, additions, modifications) that impact the final physical condition of the ship shall be documented in a weight report that provides the following for each item - description; weight in pounds; location in feet relative to distance above baseline (VCG), distance off centerline (TCG), and distance from midship (LCG).
 - 7.11.2 This tasking shall be supported by an experienced Naval Architect that has been involved in the design and working plan development for construction, conversion or modernization of U.S. Naval Ships (does not include maritime ship design). The Naval Architect should have the following engineering and related skills
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- 7.11.2.1 An in-depth understanding of ship's hydrostatic characteristics such as longitudinal center of flotation, moment to trim, longitudinal center of buoyancy, and the effects of these characteristics on drafts, displacement and trim.
- 7.11.2.2 A thorough understanding of ship's stability and the relationship between the transverse metacenter, metacentric height, cross curves of stability, moment to heel and list.
- 7.11.2.3 The ability to read tank capacity curve characteristics including centers of gravity and vertical moment of free surface.
- 7.11.2.4 Proficient in ship terminology and structural characteristics such as camber, sheer, baseline, and general ship construction.
- 7.11.2.5 Ability to develop weight and moment reports based on weights and centers of gravity and to analyze data to determine ship drafts, displacement, and stability.

7.12 Personnel Qualifications

7.12.1 General

- 7.12.1.1 All work under the terms of this contract shall be performed in an efficient and workmanlike manner by personnel who are thoroughly familiar with the type of work being performed. The contractor warrants that employees used on the work shall, on the average, be as efficient as the average employees performing similar duties in the contractor's own organization and shall in all cases meet or exceed the minimum requirements set forth for the respective labor categories.
- 7.12.1.2 The contractor shall be responsible for employing appropriate professionally and technically qualified personnel to perform the tasks outlined herein. The contractor shall have the qualified personnel, organization and administrative control necessary to ensure that the finished products shall conform to each task order. If the Contracting Officer questions the qualifications or competence of any person(s) performing the contract, the burden of proof to sustain the person(s) is (are) qualified as prescribed herein shall be upon the contractor.
- 7.12.1.3 The level of skill, education, and experience of the personnel required to perform this effort shall meet the minimums specified below. Personnel assigned for performance of a task to be ordered under this contract shall meet the minimum qualifications for the respective labor category under which they are charged.

7.12.2 Minimum Qualifications

- 7.12.2.1 Contractor shall demonstrate the ability to provide Key personnel assigned to or utilized by the contractor in the performance of this contract. The Government's desire is for each Key personnel, as a minimum, meet the experience, educational, or other in background requirements below, with-in section 7.12.3, and be fully capable of performing the contemplated functions of the respective labor categories in an efficient, reliable, and professional manner.
 - 7.12.2.2 The Government reserves the right to request the qualifications or competence of any person performing under this contract and the burden of proof to sustain that person is qualified as prescribed herein shall be upon the contractor.
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7.12.2.3 The contractor shall be responsible for employing trained management, technical, and other personnel to perform work outlined. The contractor shall have the personnel, organization, and administrative control necessary to ensure that the services they perform meet all requirements specified in the delivery orders. The work history of each contractor employee shall contain experiences directly related to the tasks and functions they are intended to perform prior to performing services under the contract. Further, these prior work experiences shall be of sufficient variety and duration that the employee is able to effectively and efficiently perform the tasks and functions they shall be assigned.

7.12.2.3.1 Training and qualification requirements apply to any subcontractors in the same manner with no exceptions.

7.12.3 Radiological training and licensing Requirements

7.12.3.1 All contractors performing radiological work shall be trained familiarized, and/or certified per Article 106 of reference (5.3). Certification may include written and/or practical examinations. (CDRL A006)

7.12.3.2 Minimum requirements for passing all examinations is per Article 106 of reference (5.3). Personnel who do not achieve a minimum passing score shall require retraining and reexamination. Personnel who fail multiple examinations and/or have a significant failure (i.e. less than 60 percent) shall be required to be replaced unless a specific request is made for individuals who are deemed difficult to replace. Requests shall be approved by NNSY.

7.12.3.3 Before attending the shipyard provided training contractor employees shall have successfully completed DOE training as follows. Training shall be documented and submitted to the COR and RADCON. All training shall meet the requirements of 10 CFR 835. (CDRL A006)

7.12.3.4 Radiological Control Technicians (RCTs) and Supervisor Radiological Control Technicians (SRCTs) shall be trained per DOE Handbook 1122-2009.

7.12.3.5 All other workers shall be trained per DOE Handbook 1130-2008.

7.12.3.6 Radiation Workers shall be trained per Article 106.1.b of reference (5.3). Radiation workers who shall be handling/packaging radioactive material shall require additional training per Article 106.1.b of the same reference. Training shall include a one man day training course provided by the shipyard.

7.12.3.6.1 Academic Requirements - All personnel in this group shall be graduates of a high school, trade, or industrial school, or correspondence school as a minimum.

7.12.3.6.2 Specialized Experience Requirements (in area of assigned cognizance) Minimum of one (1) years practical experience, at a professional level, in responsible duties, additionally a minimum of one (1) years radiological controls experience involving radiological decommissioning and waste generation.

- 7.12.3.7 Contamination Workers shall be trained per Article 106.1.c of reference (5.3). Additional training needed shall be based on the specific skill-set to be utilized (catch, drape, etc.). Training shall include up to a three man day course provided by NNSY dependent upon the specific additional training needed.
- 7.12.3.7.1 Academic Requirements - All personnel in this group shall be graduates of a high school, trade, or industrial school, or correspondence school as a minimum.
- 7.12.3.7.2 Specialized Experience Requirements (in area of assigned cognizance) - Minimum of three (3) years practical experience, at a professional level, in responsible duties, additionally a minimum of two (2) years radiological controls experience involving radiological decommissioning and waste generation.
- 7.12.3.8 Radiological Control Technicians (RCTs) shall receive familiarization training on Article 106.2.a of Reference 5.3 and Reference 5.41. Training shall include a three man-day course provided by NNSY.
- 7.12.3.8.1 Academic Requirements - All personnel in this group shall be graduates of a high school, trade, or industrial school, or correspondence school where, as a minimum, credits were received in all of the following - algebra, plane geometry, trigonometry, and physics.
- 7.12.3.8.2 Specialized Experience Requirements (in area of assigned cognizance) - Minimum of three (3) years practical radiological experience, at a professional level, in responsible duties, additionally a Minimum of one (1) years radiological controls experience involving radiological release and waste generation.
- 7.12.3.9 Supervisor Radiological Control Technicians (SRCTs) shall receive familiarization training on Article 106.2.a of Reference 5.3 and Reference 5.41. Training shall include a three man-day course provided by NNSY.
- 7.12.3.9.1 Academic Requirements - All personnel in this group shall be graduates of a high school, trade, or industrial school, or correspondence school where, as a minimum, credits were received in all of the following algebra, plane geometry, trigonometry, and physics.
- 7.12.3.9.2 Specialized Experience Requirements (in area of assigned cognizance) - Minimum of five (5) years practical radiological experience, at a professional level, in responsible duties, additionally a Minimum of three (3) years radiological controls experience involving radiological release and waste generation.
- 7.12.3.10 Engineers and others that write the technical work instructions shall be trained per reference (5.3) meeting the requirements or Article 112. Contractors shall provide a detailed training plan for their technical writers or those writers shall attend a two man- day training course provided by the shipyard. (CDRL A006)
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- 7.12.3.10.1 Academic Requirements - Shall have a Professional Engineer's License, (as appropriate to assigned cognizance), or A Bachelor's degree in Engineering (as appropriate to assigned cognizance). A degree in Engineering Technology is not considered equivalent to the required Bachelor of Engineering Degree.
- 7.12.3.10.2 Specialized Experience Requirements (in area of assigned cognizance) -A minimum of five (5) years practical design engineering experience, at a professional level, in responsible engineering duties, additionally a Minimum of three (3) years radiological controls experience involving radiological release, radiological facility decommissioning, and waste generation.
- 7.12.3.11 Naval Architect Academic Requirements - Shall have a Professional Engineer's License, (as appropriate to assigned cognizance), or A Bachelor's degree in Naval Architecture or Engineering (as appropriate to assigned cognizance). A degree in Engineering Technology is not considered equivalent to the required Bachelor of Engineering Degree.
- 7.12.3.11.1 A minimum of five (5) years practical design experience, at a professional level, in responsible duties, including the following which may have been gained concurrently. Minimum of three (3) years progressive design experience (within last five (5) years) involving design, working plan development, construction, modernization, overhaul, conversion, maintenance and repair of a variety of vessels including determining dimensions/hull type, powering requirements, layout, structural and stability analyses, design plans, specifications, hydrostatics, testing, technical reviews of contractor designs and specifications, and feasibility studies.

7.13 Required Standard of Workmanship

- 7.13.1 Unless otherwise specifically provided in the contract, the quality of all services rendered hereunder shall conform to the highest standards in the relevant profession, trade or field of endeavor. All services shall be rendered by or supervised directly by individuals fully qualified in the relevant profession, trade or field, and holding any licenses required by law and regulation.
- 7.13.2 For the purpose of the clause, the highest standards shall be the generally prevailing standards in the radioactive decontamination and demolition industry. In the event an industry-recognized authority subsequently issues a generally accepted standard for the industry, contractor's services shall, as a minimum, meet such a standard.

7.14 Prior Written Permission Required for All Subcontracts

- 7.14.1 Any changes in subcontractors, additions of subcontractors, or change in the processes performed by subcontractors shall be approved by the Contracting Officer prior to the change or addition. A contractor's request to change or add subcontractors or subcontracted processes shall include the Technical Capability Information from the solicitation, which is delineated in the 52.215-1 Instructions to Offerors provision of the solicitation, about the subcontractor(s) covered by the request. (CDRL A007)

7.15 Points of Contact (POC)

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CLAUSES INCORPORATED BY REFERENCE

C-211-H019 COMMONALITY AND STANDARDIZATION (NAVSEA) FEB 2019 (FEB 2019)

CLAUSES INCORPORATED BY FULL TEXT

C-202-H001 ADDITIONAL DEFINITIONS–BASIC (NAVSEA) (OCT 2018)

(a) Department - means the Department of the Navy.

(b) Commander, Naval Sea Systems Command - means the Commander of the Naval Sea Systems Command of the Department of the Navy or his duly appointed successor.

(c) References to The Federal Acquisition Regulation (FAR) - All references to the FAR in this contract shall be deemed to also reference the appropriate sections of the Defense FAR Supplement (DFARS), unless clearly indicated otherwise.

(d) National Stock Numbers - Whenever the term Federal Item Identification Number and its acronym FIIN or the term Federal Stock Number and its acronym FSN appear in the contract, order or their cited specifications and standards, the terms and acronyms shall be interpreted as National Item Identification Number (NIIN) and National Stock Number (NSN) respectively which shall be defined as follows:

(1) National Item Identification Number (NIIN). The number assigned to each approved Item Identification under the Federal Cataloging Program. It consists of nine numeric characters, the first two of which are the National Codification Bureau (NCB) Code. The remaining positions consist of a seven digit non-significant number.

(2) National Stock Number (NSN). The National Stock Number (NSN) for an item of supply consists of the applicable four-position Federal Supply Class (FSC) plus the applicable nine-position NIIN assigned to the item of supply.

(End of text)

C-204-H001 USE OF NAVY SUPPORT CONTRACTORS FOR OFFICIAL CONTRACT FILES (NAVSEA) (OCT 2018)

(a) NAVSEA may use a file room management support contractor, hereinafter referred to as “the support contractor”, to manage its file room, in which all official contract files, including the official file supporting this procurement, are retained. These official files may contain information that is considered a trade secret, proprietary, business sensitive or otherwise protected pursuant to law or regulation, hereinafter referred to as “protected information”. File room management services consist of any of the following: secretarial or clerical support; data entry; document reproduction, scanning, imaging, or destruction; operation, management, or maintenance of paper- based or electronic mail rooms, file rooms, or libraries; and supervision in connection with functions listed herein.

(b) The cognizant Contracting Officer will ensure that any NAVSEA contract under which these file room management services are acquired will contain a requirement that:

(1) The support contractor not disclose any information;

(2) Individual employees are to be instructed by the support contractor regarding the sensitivity of the official contract files;

(3) The support contractor performing these services be barred from providing any other supplies and/or services, or competing to do so, to NAVSEA for the period of performance of its contract and for an additional three years thereafter unless otherwise provided by law or regulation; and,

(4) In addition to any other rights the contractor may have, it is a third party beneficiary who has the right of direct action against the support contractor, or any person to whom the support contractor has released or disclosed protected information, for the unauthorized duplication, release, or disclosure of such protected information.

(c) Execution of this contract by the contractor is considered consent to NAVSEA’s permitting access to any information, irrespective of restrictive markings or the nature of the information submitted, by its file room management support contractor for the limited purpose of executing its file room support contract responsibilities.

(d) NAVSEA may, without further notice, enter into contracts with other contractors for these services. Contractors should enter into separate non-disclosure agreements with the file room contractor. Contact the Procuring Contracting Officer for contractor specifics. However, any such agreement will not be considered a prerequisite before information submitted is stored in the file room or otherwise encumber the government.

(End of text)

C-211-H001 ACCESS TO THE VESSEL(S) (NAVSEA) (OCT 2018)

Officers, employees and associates of other prime Contractors with the Government and their subcontractors, shall, as authorized by the Supervisor, have, at all reasonable times, admission to the plant, access to the vessel(s) where and as required, and be permitted, within the plant and on the vessel(s) required, to perform and fulfill their respective obligations to the Government. The Contractor shall make reasonable arrangements with the Government or Contractors of the Government, as shall have been identified and authorized by the Supervisor to be given admission to the plant and access to the vessel(s) for office space, work areas, storage or shop areas, or other facilities and services, necessary for the performance of the respective responsibilities involved, and reasonable to their performance.

(End of text)

C-211-H004 HEAVY WEATHER PLAN (NAVSEA) (OCT 2018)

(a) In order to ensure that Naval vessel(s), material and Government property are protected during destructive weather such as gales, storms, hurricanes, high winds, heavy snow, ice and high water, the Contractor is required to have a written Heavy Weather Plan (HWP) which assigns responsibilities and prescribes actions to be taken on the approach of and during heavy weather conditions as delineated in NAVSEA Standard Item (SI) 009-69 dated 18 November 2016. A copy of Standard Item (SI) 009-69 can be obtained from via the internet by going to: <http://www.navsea.navy.mil/Home/RMC/CNRMC/OurPrograms/SSRAC/NSI/> and selecting the NAVSEA Standard Items (NSI) tab then select the applicable FY standard item link and then select SI 009-69. In accordance with SI 009- 69, the Contractor shall furnish to the cognizant Regional Maintenance Center (RMC), a copy of such HWP, and shall make such changes in the plan as the RMC considers necessary and reasonable to protect and care for vessel(s), material and Government property.

(b) In the event the RMC directs the Contractor to implement the HWP pursuant to SI 009-69 the Contractor may submit to the Contracting Officer a request for reimbursement for costs resulting from such actions together with any documentation that the Contracting Officer may reasonably require. The Government shall reimburse the Contractor for all reasonable, allowable and allocable costs resulting from the Contractor's implementation of the HWP based on such Government direction.

(End of text)

C-211-H005 PLANT PROTECTION (NAVSEA) (OCT 2018)

(a) In accordance with NAVSEA STANDARD ITEM (SI) 009-72, (PERMA-FIX) the Contractor shall develop, maintain, and implement, as necessary, a Plant Protection Plan () which prescribes the actions and procedures and assigns responsibilities for actions to be taken to provide adequate protection of the ship(s) and the materials and equipment to be installed therein. A copy of SI 009-72 can be obtained from the purchasing office representative listed in Section G of the contract or via the internet by going to <http://www.navsea.navy.mil/Home/RMC/CNRMC/OurPrograms/SSRAC/NSI/> and selecting the NAVSEA Standard Items (NSI) tab then select the applicable FY standard item link and then select SI 009-72.

(b) The Contractor shall establish and maintain, for its plant and the work in process under this contract, physical security boundaries and other security measures to provide safeguards against hazards, including unauthorized entry, malicious mischief, theft, espionage, sabotage, and terrorism to U.S. Naval Vessels and their crews, in accordance with SI 009-72 and Attachment A thereto. The Contractor shall also provide reasonable safeguards against vandalism and fire.

(c) The Contractor shall meet the requirements of Force Protection Condition NORMAL (as defined in SI 009-72) at all times. In addition, and in accordance with SI 009-72, the Contractor shall meet the requirements of increased levels of Force Protection as may be required or approved by the Contracting Officer, or when notified by the Supervisor, for the protection of its plant and the work in process under this contract against any threats including terrorism, espionage, sabotage, and enemy action.

(d) At the Supervisor's discretion, the Contractor and the Supervisor shall negotiate a cost rate agreement applicable to each level of increased Force Protection above the NORMAL level. In addition to material costs, the labor cost rates shall be negotiated using the contractor's and the Supervisor's accepted common business practices. The labor and material costs to the Contractor for all safeguards so required or approved shall, to the extent allowable and allocable to this contract, be reimbursed to the Contractor in the same manner as if the Contractor has furnished such safeguards pursuant to a change order issued under the clause of this contract entitled "Changes—Fixed Price" (FAR 52.243-1) or "Changes—Cost-Reimbursement" (FAR 52.243-2), as applicable. Such costs shall not include any allowance on account of overhead expense, except shop overhead charges incident to the construction or installation of such devices or equipment.

(e) Upon payment, in accordance with the Payments provision of this contract, by the Government of the cost to the Contractor for any device or equipment required or approved under paragraph (c) above, title thereto shall vest in the Government, and the Contractor shall comply with the instructions of the Contracting Officer respecting the identification and disposition thereof. No part or item of any such devices or equipment shall be or become a fixture by reason of affixation to any realty not owned by the Government.

(f) The plant protection plan and rate agreements required by this requirement shall be completed and implemented, within sixty (60) days of contract award for new construction and prior to ship arrival for conversion, repair or overhaul.

(End of text)

C-211-H008 QUALIFICATION OF CONTRACTOR NON-DESTRUCTIVE TESTING (NDT) PERSONNEL (NAVSEA) (OCT 2018)

(a) The Contractor and any Non-destructive Testing (NDT) subcontractor shall utilize for the performance of required NDT, only Level I, II and III personnel currently certified in accordance with NAVSEA Technical Publication T9074-AS-GIB-010/271, Revision 1 of 11 September 2014. Documentation pertaining to the qualification and certification of NDT personnel shall be made available to the Contracting Officer for review upon request.

(b) These requirements do not apply with respect to nuclear propulsion plant systems and other matters under the technical cognizance of the Office of Navy Nuclear Propulsion (NAVSEA 08). Because of health and safety considerations, such matters will continue to be handled as directed by NAVSEA 08.

(End of text)

C-211-H011 USE OF POWER GRINDERS AND SAWS (NAVSEA) (OCT 2018)

(a) All portable pneumatic grinders or reciprocating saws that are to be used on reactor plant material or equipment or used within the reactor compartment shall be equipped with safety lock-off devices. In addition, the Contractor agrees that all portable pneumatic grinders or reciprocating saws that it purchases or acquires subsequent to the date of this contract, for use in performance of this contract in Naval workplace areas shall be equipped with safety lock-off devices.

(b) A "safety lock-off device" is any operating control which requires positive action by the operator before the tool can be turned on. The lock-off device shall automatically and positively lock the throttle in the off position when the throttle is released. Two consecutive operations by the same hand shall be required first to disengage the lock-off device and then to turn on the throttle. The lock-off device shall be integral with the tool, shall not adversely affect the safety or operating characteristics of the tool, and shall not be easily removable.

(c) Devices, such as a "dead man control" or "quick-disconnect", which do not automatically and positively lock the throttle in the off position when the throttle is released, are not safety lock-off devices.

(End of text)

C-211-H016 SPECIFICATIONS AND STANDARDS (NAVSEA) (OCT 2018)

(a) Definitions.

(i) A “zero-tier reference” is a specification, standard, or drawing that is cited in the contract (including its attachments).

(ii) A “first-tier reference” is either: (1) a specification, standard, or drawing cited in a zero-tier reference, or (2) a specification cited in a first-tier drawing.

(b) Requirements. All zero-tier and first-tier references, as defined above, are mandatory for use. All lower tier references shall be used for guidance only unless specifically identified below.

None

(End of text)

C-211-H017 UPDATING SPECIFICATIONS AND STANDARDS (NAVSEA) (DEC 2018)

The contractor may request that this contract be updated to include the current version of the applicable specification or standard if the update does not affect the form, fit or function of any deliverable item or increase the cost/price of the item to the Government. The contractor should submit update requests to the Procuring Contracting Officer with copies to the Administrative Contracting Officer and cognizant program office representative for approval. The contractor shall perform the contract in accordance with the existing specifications and standards until notified of approval/disapproval of its request to update by the Procuring Contracting Officer. Any approved alternate specifications or standards will be incorporated into the contract.

(End of text)

C-211-H018 APPROVAL BY THE GOVERNMENT (NAVSEA) (JAN 2019)

Approval by the Government as required under this contract and applicable specifications shall not relieve the Contractor of its obligation to comply with the specifications and with all other requirements of the contract, nor shall it impose upon the Government any liability it would not have had in the absence of such approval.

(End of text)

C-211-H020 PROTECTION OF THE VESSEL (NAVSEA) (MAR 2019)

(a) The Contractor shall exercise reasonable care, as agreed upon with the Supervisor, to protect the vessel from fire, and shall maintain a system of inspection over the activities of its welders, burners, riveters, painters, pipe fitters, and similar workers, and of its subcontractors, particularly where such activities are undertaken in the vicinity of the vessel’s magazines, fuel oil tanks, or store rooms containing inflammable materials. All ammunition, fuel oil, motor fuels, and cleaning fluids shall have been off-loaded and the tanks cleaned, except as may be mutually agreed upon between the Contractor and the Supervisor prior to work on the vessel by the Contractor. Fire hose lines shall be maintained by the Contractor ready for immediate use on the vessel at all times while the vessel is berthed alongside the Contractor’s pier or in dry dock. All tanks under alteration or repair shall be cleaned, washed, and steamed out or otherwise made safe to the extent necessary, and the Contractor shall furnish the vessel’s Gas Free Officer and the Supervisor with a “Gas Chemists’ Certificate” before any hot work is done. The Contractor shall maintain a fire watch aboard the vessel in areas where the Contractor is working. All other fire watches aboard the vessel shall be the responsibility of the Government.

(b) Except as otherwise provided in contractually invoked technical specifications or NAVSEA furnished directives, while the vessel is at the Contractor's plant and when the temperature becomes as low as thirty-five degrees Fahrenheit, the Contractor shall assist the Government when requested in keeping all pipe-lines, fixtures, traps, tanks, and other receptacles on the vessel drained to avoid damage from freezing, or if this is not practicable, the vessel shall be kept heated to prevent such damage. The vessel's stern tube and propeller hubs shall be protected by the Contractor from frost damage by applied heat through the use of a salamander or other proper means.

(c) The work shall, whenever practicable, be performed in such manner as not to interfere with the work performed by military personnel attached to the vessel, and provisions shall be made so that personnel assigned shall have access to the vessel at all times, it being understood that such personnel will not unduly interfere with the work of the Contractor's workmen.

(d) The Contractor shall at all times keep the site of the work on the vessel free from accumulation of waste material or rubbish caused by its employees, or the work performed by the Contractor in accordance with this contract, and at the completion of such work shall remove all rubbish from and about the site of the work, and shall leave the work in its immediate vicinity "broom clean", unless more exactly specified by the Supervisor.

(End of Text)

C-215-H002 CONTRACTOR PROPOSAL (NAVSEA) (OCT 2018)

(a) Performance of this contract by the Contractor shall be conducted and performed in accordance with the detailed obligations to which the Contractor committed itself in Proposal EX-MCKEE - Article 520 Release dated 22 March 2021 in response to Solicitation No. N4215821R0003.

(b) The technical volume(s) of the Contractor's proposal is(are) hereby incorporated by reference and made subject to the "Order of Precedence" (FAR 52.215-8) clause of this contract. Under the "Order of Precedence" clause, the technical volume(s) of the Contractor's proposal referenced herein is (are) hereby designated as item (f) of the clause, following "the specifications" in the order of precedence.

(End of text)

C-217-H005 GROWTH AND NEW WORK (NAVSEA) (JAN 2019)

(a) The Contractor is required to notify the Contracting Officer via email regarding growth and new work within 30 days of discovery:

(1) of any apparent errors or omissions in the contract (SF 33, specifications, drawings, etc.); and,

(2) of any/all conflicts between the contract package and actual conditions observed during ship check(s) and/or contract execution.

(b) Growth work is synonymous with over and above work, which is described in DFARS 252.217-7028, Over and Above Work and it provides the process for adjudication.

(c) New work is distinguished from over and above work and is outside the scope of the competitively procured requirement. New work will be approved in accordance with FAR Part 6 and associated policies and procedures.

(d) The Government will NOT negotiate modifications to increase the contract price to address errors or omissions to the contract package which were reasonably apparent to the contractor prior to proposal submission.

(End of Text)

C-222-H001 ACCESS TO THE VESSELS BY NON-U.S. CITIZENS (NAVSEA) (APR 2019)

(a) No person not known to be a U.S. citizen shall be eligible for access to naval vessels, work sites and adjacent areas when said vessels are under construction, conversion, overhaul, or repair, except upon a finding by COMNAVSEA or his designated representative that such access should be permitted in the best interest of the United States. The Contractor shall establish procedures to comply with this requirement and NAVSEAINST 5510.2D.

(b) If the Contractor desires to employ non-U.S. citizens in the performance of work under this contract or agreement that requires access as specified in paragraph (a) of this requirement, approval must be obtained prior to access for each contract or agreement where such access is required. To request such approval for non-U.S. citizens of friendly countries, the Contractor shall submit to the cognizant Contract Administration Office (CAO), an Access Control Plan (ACP) which shall contain as a minimum, the following information:

(1) Badge or Pass oriented identification, access, and movement control system for non-U.S. citizen employees with the badge or pass to be worn or displayed on outer garments at all times while on the Contractor's facilities and when performing work aboard ship.

(i) Badges must be of such design and appearance that permits easy recognition to facilitate quick and positive identification.

(ii) Access authorization and limitations for the bearer must be clearly established and in accordance with applicable security regulations and instructions.

(iii) A control system, which provides rigid accountability procedures for handling lost, damaged, forgotten or no longer required badges, must be established.

(iv) A badge or pass check must be performed at all points of entry to the Contractor's facilities or by a site supervisor for work performed on vessels outside the Contractor's plant.

(2) Contractor's plan for ascertaining citizenship and for screening employees for security risk.

(3) Data reflecting the number, nationality, and positions held by non-U.S. citizen employees, including procedures to update data as non-U.S. citizen employee data changes, and pass to cognizant CAO.

(4) Contractor's plan for ensuring subcontractor compliance with the provisions of the Contractor's ACP.

(5) These conditions and controls are intended to serve as guidelines representing the minimum requirements of an acceptable ACP. They are not meant to restrict the Contractor in any way from imposing additional controls necessary to tailor these requirements to a specific facility.

(c) To request approval for non-U.S. citizens of hostile and/or communist-controlled countries (listed in Department of Defense Industrial Security Manual, DOD 5220.22-M or available from cognizant CAO), Contractor shall include in the ACP the following employee data: name, place of birth, citizenship (if different from place of birth), date of entry to U.S., extenuating circumstances (if any) concerning immigration to U.S., number of years employed by Contractor, position, and stated intent concerning U.S. citizenship. COMNAVSEA or his designated representative will make individual determinations for desirability of access for the above group. Approval of ACP's for access of non-U.S. citizens of friendly countries will not be delayed for approval of non-U.S. citizens of hostile communist-controlled countries. Until approval is received, Contractor must deny access to vessels for employees who are non-U.S. citizens of hostile and/or communist-controlled countries.

(d) The Contractor shall fully comply with approved ACPs. Noncompliance by the Contractor or subcontractor serves to cancel any authorization previously granted, in which case the Contractor shall be precluded from the continued use of non-U.S. citizens on this contract or agreement until such time as the compliance with an approved ACP is demonstrated and upon a determination by the CAO that the Government's interests are protected. Further, the Government reserves the right to cancel previously granted authority when such cancellation is determined to be in the Government's best interest. Use of non-U.S. citizens, without an approved ACP or when a previous authorization has been canceled, will be considered a violation of security regulations. Upon confirmation by the CAO of such violation, this contract, agreement or any job order issued under this agreement may be terminated or default in accordance with the clause entitled "Default (Fixed-Price Supply and Service)" (FAR 52.249-8), "Default (Fixed-Price Research and Development)" (FAR 52.249-9) or "Termination (Cost Reimbursement)" (FAR 52.249-6), as applicable.

(e) Prime Contractors have full responsibility for the proper administration of the approved ACP for all work performed under this contract or agreement, regardless of the location of the vessel, and must ensure compliance by all subcontractors, technical representatives and other persons granted access to U.S. Navy vessels, adjacent areas, and work sites.

(f) In the event the Contractor does not intend to employ non-U.S. citizens in the performance of the work under this contract, but has non-U.S. citizen employees, such employees must be precluded from access to the vessel and its work site and those shops where work on the vessel's equipment is being performed. The ACP must spell out how non-U.S. citizens are excluded from access to contract work areas.

(g) The same restriction as in paragraph (f) above applies to other non-U.S. citizens who have access to the Contractor's facilities (e.g., for accomplishing facility improvements, from foreign crewed vessels within its facility, etc.) except that, with respect to access to the vessel and worksite, the restrictions shall not apply to uniformed U.S. Navy personnel who are non-U.S. citizens and who are either assigned to the ship or require access to the ship to perform their duties.

(End of text)

C-223-H002 SAFETY, HEALTH AND FIRE REQUIREMENTS FOR SHIP REPAIR (NAVSEA) (JAN 2019)

(a) Attention of the Contractor is directed to the Occupational Safety and Health Act of 1970 (29 USC 651-678), and to the Safety and Health Regulations for Ship Repairing (29 CFR 1915), promulgated under Public Law 85-742, amending Section 41 of the Longshoremen's and Harbor Workers' Compensation Act (33 USC 941), and adopted by the Department of Labor as occupational safety or health standards under Section 6(a) of the Occupational Safety and Health Act of 1970 (See 29 CFR 1910.13). These regulations apply to all ship repair and related work, as defined in the regulations performed under this contract on the navigable waters of the United States including any dry dock and marine railway. Nothing contained in this contract shall be construed as relieving the Contractor from any obligations which it may have for compliance with the aforesaid regulations.

(b) SAFETY INSPECTOR/FIRE MARSHAL: In addition to the safety standards provided in the specifications, the contractor is responsible for providing an experienced Safety Inspector/Fire Marshal who will accomplish daily inspections of the Contractor's entire work area on the ship, together with the Contracting Office's Safety Representative. This Inspector or Fire Marshal shall not be one of the Contractor's supervisors or superintendents normally assigned to the ship and shall be identified in the contractor's approved Safety Plan.

(c) PERSONAL PROTECTIVE EQUIPMENT: Whenever work is performed aboard U.S. Naval Ships or vessels at piers or dry docks of a Naval Shipyard or Naval Station, Contractor employees (including management personnel) shall have and use at all times the following personal protective equipment:

(1) Protective hard hats that meet the following specifications:

(i) Protective helmets purchased after July 5, 1994 shall comply with ANSI Z89.1-1986, "American National Standard for Personnel Protection-Protective Headwear for Industrial Workers-Requirements," or shall be demonstrated by the Contractor to be equally effective.

(ii) Protective helmets purchased before July 5, 1994 shall comply with ANSI Standard "American National Standard Safety requirements for Industrial Head Protection," Z89.1-1969, or shall be demonstrated by the employer to be equally effective. [Ref. 29 CFR 1910.135 Head Protection]

(2) Approved type Plano or prescription glasses meeting the following specifications:

(i) Protective eye and face devices purchased after July 5, 1994 shall comply with ANSI standard Z87.1- 1989, "American National Standard Practice for Occupational and Educational Eye and Face Protection", or shall be demonstrated by the employer to be equally effective.

(ii) Protective eye and face devices purchased before July 5, 1994 shall comply with ANSI "USA standard for Occupational and Educational Eye and Face Protection", Z87.1-1968, or shall be demonstrated by the employer to be equally effective. [Ref. 29 CFR 1910.133 Protective eye and face devices.]

(3) Safety toe shoes, with built-in protective toe box that meet the following specifications:

(i) Protective footwear purchased after July 5, 1994 shall comply with ANSI Standard Z41-1991, "American National Standard for Personal Protection-Protective Footwear", or shall be demonstrated by the employer to be equally effective.

(ii) Protective footwear purchased before July 5, 1994 shall comply with the ANSI standard "USA Standard for Men's Safety Toe Footwear", Z41.1 1967, or shall be demonstrated by the employer to be equally effective [Ref. 29 CFR 1910.136 Protective eye and face devices.]

(End of text)

C-223-H004 MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE (NAVSEA) (MAR 2019)

(a) General

(1) The Contractor shall comply with the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 10 U.S.C. 7311 and all other applicable Federal, State and local laws, codes, ordinances and regulations for the management and disposal of hazardous waste.

(2) Nothing contained in this special contract requirement shall relieve the Contractor from complying with applicable Federal, State, and local Laws, codes, ordinances, and regulations, including obtaining licenses and permits, giving notices and submitting reports, in connection with hazardous waste management and disposal in the performance of this contract. Nothing contained herein shall serve to alter either party's liability or responsibility under CERCLA.

(3) Materials contained in ship systems are not waste until after removal from the system.

(b) Identification of Hazardous Wastes - of this contract identifies the types and amounts of hazardous wastes that are required to be removed by the Contractor, or that are expected to be generated, during the performance of work under this contract.

(c) Generator Identification Numbers

(1) Documentation related to hazardous waste generated solely by the physical actions of ship's force or Navy employees on board the vessel shall only bear a generator identification number issued to the Navy pursuant to applicable law.

(2) Documentation related to hazardous waste generated solely by the physical actions of Contractor personnel shall only bear a generator identification number issued to the Contractor pursuant to applicable law. Regardless of the presence of other materials in or on the shipboard systems or structures which may have qualified a waste stream as hazardous, where the Contractor performs work on a system or structure using materials (whether or not the use of such materials was specified by the Navy) which by themselves would cause the waste from such work to be a hazardous waste, documentation related to such waste shall only bear a generator identification number issued to the Contractor.

(3) Documentation related to hazardous waste generated by the combined physical actions of Navy and Contractor personnel shall bear a generator identification number issued to the Contractor pursuant to applicable law and shall also cite in the remarks block a generator identification number issued to the Navy pursuant to applicable law.

(4) Notwithstanding paragraphs (c)(1) - (c)(3) above, hazardous wastes are considered to be co-generated in cases where: (a) the Contractor merely drains a system and such drainage creates hazardous waste or (b) the Contractor performs work on a system or structure using materials which by themselves would not cause the waste from such work to be hazardous waste but such work nonetheless creates a hazardous waste. Documentation related to such co-generated waste shall bear a generator identification number in accordance with the provisions of paragraph (c)(3) above.

(5) In the event of a failure by the parties to agree to the assignment of a generator identification number to any hazardous waste as set forth in paragraphs (c)(1) through (c)(4) above, the Government may direct which party or parties shall provide generator identification numbers for the waste and such number(s) shall be used on all required documentation. Any disagreement with this direction shall be a dispute within the meaning of clause of this contract entitled "Disputes" (FAR 52.233-1). However, the Contractor shall not stop any work but shall continue with performance of all work under this contract as specified in the "DISPUTES" clause.

(6) Hazardous Waste Manifests - For wastes described in (c)(2), (c)(3), and (c)(4) above (and (c)(5) as applicable), the Contractor shall sign the generator certification on the Uniform Hazardous Waste Manifest whenever use of the Manifest is required for disposal. The Contractor shall obtain _____ concurrence with the categorization of wastes under paragraphs (c)(3) and (c)(4) above before completion of the manifest. Manifests prepared pursuant to paragraph (c)(1) above shall be presented to the _____ for completion after the hazardous waste has been identified.

(7) For purposes of paragraphs (c)(2) and (3) herein, if the Contractor, while performing work at a Government facility, cannot obtain a separate generator identification number from the State in which the availability will be performed, the Contractor shall notify _____ within 3 business days of receipt of written notification by the State. After obtaining _____ approval, the Contractor shall use the Navy site generator identification number and insert in the remarks block the contractor generator identification number issued for the site where his main facilities are located. For purposes of paragraph (c)(1) herein, if the work is being performed at a contractor facility and the Government cannot obtain a separate generator identification number for the State, the Government shall use the Contractor site generator identification number and shall cite in the remarks block a Navy generator identification number. In both instances described above, the Contractor shall prepare the Uniform Hazardous Waste Manifest described in paragraph (c)(6) above and present it to _____ for completion.

(End of Text)

C-223-N001 RADIOLOGICAL INDOCTRINATION, POSTINGS AND INSTRUCTIONS (NAVSEA) (OCT 2018)

(a) All Contractor employees performing work within the _____ must view a radiological video. Contractor employees who are expected to be on site for greater than thirty (30) calendar days must attend a one-half hour indoctrination briefing. The Contractor employee shall attend the briefing prior to being issued a permanent badge. The indoctrination briefing will provide radiological fundamentals and information on radiological postings and controls.

(b) Any contractor employee who disregards, alters, moves or otherwise tampers with a radiological posting, or who disobeys a radiological instruction, shall not be allowed to continue working on site.

(End of text)

C-223-W002 ON-SITE SAFETY REQUIREMENTS (NAVSEA) (OCT 2018)

(a) The contractor shall ensure that each contractor employee reads any necessary safety documents within 30 days of commencing performance at any Government facility. Required safety documents can be obtained from the respective safety office. Contractors shall notify the Safety office points of contact below to report completion of the required training via email. The email shall include the contractor employee's name, work site, and contract number.

(b) It is expected that contractor employees will have received training from their employer on hazards associated with the areas in which they will be working and know what to do in order to protect themselves. Contractors are required to adhere to the requirements of 29 CFR 1910, 29 CFR 1926 and applicable state and local requirements while in Government spaces. The contractor shall ensure that all on-site contractor work at the Government facility is in accordance with any local safety instructions as provided via the COR. The contractor shall report all work-related injuries/illnesses that occurred while working at the Government site to the COR.

(c) Contractors whose employees perform work within Government spaces in excess of 1000 hours per calendar quarter during a calendar year shall submit the data elements on OSHA Form 300A, Summary of Work Related Injuries and Illnesses, for those employees to the safety office, via the COR by 15 January for the previous calendar year, even if no work related injuries or illnesses occurred. If a contractor's injury/illness rates are above the Bureau of Labor Statistics industry standards, a safety assessment may be performed by the Safety Office to determine if any administrative or engineering controls can be utilized to prevent further injuries/illnesses, or if any additional Personal Protective Equipment or training will be required.

(d) Any contractor employee exhibiting unsafe behavior may be removed from the Government site. Such removal shall not relieve the contractor from meeting its contractual obligations and shall not be considered an excusable delay as defined in FAR 52.249-14.

(e) The Safety Office points of contacts are as follows:

Charles McClaugherty, Code 300
Phone - 757-613-5655
Email - Charles.V.Mcclaughel@navy.mil

(End of text)

C-227-H004 TRANSMISSION ABROAD OF EQUIPMENT OR TECHNICAL DATA RELATING TO THE NUCLEAR PROPULSION OF NAVAL SHIPS (NAVSEA) (OCT 2018)

(a) The supplies specified to be delivered under this contract relate to the nuclear propulsion of naval ships.

(b) Equipment and technical data defined as Naval Nuclear Propulsion Information (NNPI) under OPNAVINST N9210.3 of 7 June 2010 shall not be disclosed to foreign nationals or immigrant aliens.

(c) For other than equipment and technical data defined as NNPI in paragraph (b) above, except with the prior written consent of the Contracting Officer, or his designated representative, the Contractor shall not, at any time during or after the performance of this contract, transmit or authorize the transmittal of any equipment or technical data, as defined in paragraph (d) below, (1) outside the United States, or (2) irrespective of location, (i) to any foreign national, not working on this contract or any subcontract hereunder (ii) to any foreign organization (including foreign subsidiaries and affiliates of the Contractor), (iii) to any foreign Government, or (iv) to any international organization.

(d) As used in this requirement, the following terms shall have the following definitions:

(1) "United States" means the States, the District of Columbia, Puerto Rico, American Samoa, the Virgin Islands, Guam, and any areas subject to the complete sovereignty of the United States;

(2) "equipment" means all supplies of the kind specified to be delivered under this contract, all component parts thereof, and all models of such supplies and component parts; but "equipment" does not include standard commercial supplies and component parts, and models thereof;

(3) "technical data" means all professional, scientific, or technical information and data produced or prepared for the performance of this contract, or on or for the operation, maintenance, evaluation, or testing of any contract item, whether or not the information and data were specified to be delivered under this contract including, without limitation, all writings, sound recordings, pictorial reproductions, and drawings or other graphical representations; but "technical data" does not include such information and data on standard commercial supplies and component parts to the extent that the information and data do not relate to the use, operation, maintenance, evaluation and testing of such supplies and component parts in or in connection with any item, or component parts thereof, specified to be delivered under this contract.

(e) The Contractor agrees to insert in all subcontracts under this contract provisions which shall conform substantially to the language of this requirement, including this paragraph (e).

(f) Notwithstanding any other provisions of this requirement, this requirement shall not apply (1) where the transmittal or authorization for the transmittal of equipment or technical data is to be made pursuant to a contract or agreement to which the United States is a party; and (2) where the transmittal is to be of equipment or technical data which the Contracting Officer, or his designated representative, has declared in writing to the Contractor to be thereafter exempt from this requirement.

(End of text)

C-227-H004 TRANSMISSION ABROAD OF EQUIPMENT OR TECHNICAL DATA RELATING TO THE NUCLEAR PROPULSION OF NAVAL SHIPS (NAVSEA) (OCT 2018)

(a) The supplies specified to be delivered under this contract relate to the nuclear propulsion of naval ships.

(b) Equipment and technical data defined as Naval Nuclear Propulsion Information (NNPI) under OPNAVINST N9210.3 of 7 June 2010 shall not be disclosed to foreign nationals or immigrant aliens.

(c) For other than equipment and technical data defined as NNPI in paragraph (b) above, except with the prior written consent of the Contracting Officer, or his designated representative, the Contractor shall not, at any time during or after the performance of this contract, transmit or authorize the transmittal of any equipment or technical data, as defined in paragraph (d) below, (1) outside the United States, or (2) irrespective of location, (i) to any foreign national, not working on this contract or any subcontract hereunder (ii) to any foreign organization (including foreign subsidiaries and affiliates of the Contractor), (iii) to any foreign Government, or (iv) to any international organization.

(d) As used in this requirement, the following terms shall have the following definitions:

(1) "United States" means the States, the District of Columbia, Puerto Rico, American Samoa, the Virgin Islands, Guam, and any areas subject to the complete sovereignty of the United States;

(2) "equipment" means all supplies of the kind specified to be delivered under this contract, all component parts thereof, and all models of such supplies and component parts; but "equipment" does not include standard commercial supplies and component parts, and models thereof;

(3) "technical data" means all professional, scientific, or technical information and data produced or prepared for the performance of this contract, or on or for the operation, maintenance, evaluation, or testing of any contract item, whether or not the information and data were specified to be delivered under this contract including, without limitation, all writings, sound recordings, pictorial reproductions, and drawings or other graphical representations; but "technical data" does not include such information and data on standard commercial supplies and component parts to the extent that the information and data do not relate to the use, operation, maintenance, evaluation and testing of such supplies and component parts in or in connection with any item, or component parts thereof, specified to be delivered under this contract.

(e) The Contractor agrees to insert in all subcontracts under this contract provisions which shall conform substantially to the language of this requirement, including this paragraph (e).

(f) Notwithstanding any other provisions of this requirement, this requirement shall not apply (1) where the transmittal or authorization for the transmittal of equipment or technical data is to be made pursuant to a contract or agreement to which the United States is a party; and (2) where the transmittal is to be of equipment or technical data which the Contracting Officer, or his designated representative, has declared in writing to the Contractor to be thereafter exempt from this requirement.

(End of text)

C-227-H005 UNLIMITED RIGHTS IN TECHNICAL DATA-NUCLEAR PROPULSION PLANT SYSTEMS (NAVSEA) (OCT 2018)

(a) Pursuant to subparagraph (b)(1) of the clauses entitled "Rights In Technical Data—Noncommercial Items" (DFARS 252.227-7013) and "Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation" (DFARS 252.227-7014), it is agreed that all technical data pertaining to nuclear propulsion plant systems under the technical cognizance of the Navy Nuclear Propulsion Directorate, Naval Sea Systems Command (NAVSEA 08), which is specified to be delivered pursuant to this contract, shall be delivered with unlimited rights, provided, however, that nothing in the clause shall be deemed to require any subcontractor of any tier under this contract to deliver or furnish with unlimited rights any technical data which it is entitled to deliver with other than unlimited rights pursuant to said "Rights In Technical Data—Noncommercial Items" Or "Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation" clauses.

(b) It is further agreed that promptly after delivery of the vessel, or after any termination of all work under this contract, the Contractor shall submit a letter report to the Navy Nuclear Propulsion Directorate, Naval Sea Systems Command (NAVSEA 08) listing and providing a brief description of all items of technical data pertaining to the reactor plant(s) of the vessel(s) developed or prepared under this contract which were not specified to be delivered pursuant to this contract. The Contractor shall furnish in the Contractor's format and at the cost of reproduction, with unlimited rights, copies of items of technical data so reported or which should have been reported, as the Government may require in writing from time to time and at any time. However, nothing in this requirement shall require the Contractor to retain any item of such technical data beyond the period provided for in this contract, including the specifications, and other documents incorporated by reference, applicable to the item or type of technical data involved.

(End of text)

C-227-H006 DATA REQUIREMENTS (NAVSEA) (OCT 2018)

The data to be furnished hereunder shall be prepared in accordance with the Contract Data Requirements List, DD Form 1423, Exhibit(s) A, attached hereto.

(End of Text)

C-227-H009 ACCESS TO DATA OR COMPUTER SOFTWARE WITH RESTRICTIVE MARKINGS (NAVSEA) (JAN 2019)

(a) Performance under this contract may require that the Contractor have access to technical data, computer software, or other sensitive data of another party that contains restrictive markings. If access to such data or software is required or to be provided, the Contractor shall enter into a written agreement with such party prior to gaining access to such data or software. The agreement shall address, at a minimum, (1) access to, and use of, the restrictively marked data or software exclusively for the purposes of performance of the work required by this contract, and (2) safeguards to protect such data or software from unauthorized use or disclosure for so long as the data or software remains properly restrictively marked. In addition, the agreement shall not impose any limitation upon the Government or its employees with respect to such data or software. A copy of the executed agreement shall be provided to the Contracting Officer. The Government may unilaterally modify the contract to list those third parties with which the Contractor has agreement(s).

(b) The Contractor agrees to: (1) indoctrinate its personnel who will have access to the data or software as to the restrictions under which access is granted; (2) not disclose the data or software to another party or other Contractor personnel except as authorized by the Contracting Officer; (3) not engage in any other action, venture, or employment wherein this information will be used, other than under this contract, in any manner inconsistent with this requirement; (4) not disclose the data or software to any other party, including, but not limited to, joint venturer, affiliate, successor, or assign of the Contractor; and (5) reproduce the restrictive stamp, marking, or legend on each use of the data or software whether in whole or in part.

(c) These restrictions on use and disclosure of the data and software also apply to information received from the Government through any means to which the Contractor has access in the performance of this contract that contains restrictive markings.

(d) The Contractor agrees that it will promptly notify the Contracting Officer of any attempt to gain access to any information with restrictive markings. Such notification shall include the name and organization of the individual, company, or Government representative seeking access to such information.

(e) The Contractor shall include this requirement in subcontracts of any tier which involve access to information covered by paragraph (a), substituting "subcontractor" for "Contractor" where appropriate.

(f) Compliance with this requirement is a material requirement of this contract.

(End of text)

C-228-H001 INDEMNIFICATION FOR ACCESS TO VESSEL (NAVSEA) (DEC 2018)

Notwithstanding any provision in the “Access to Vessel” clause (DFARS 252.217- 7011), or any other clause of the contract, the Contractor agrees to allow officers, employees, and associates of the Government, or other prime contractors with the Government and their subcontractors, and officers, employees, and associates of offerors on other contemplated work, admission to the Contractor’s facilities and access to the vessel without any further request for indemnification from any party, which has not been previously included in the contract price.

(End of text)

C-228-H002 MINIMUM INSURANCE REQUIREMENTS (NAVSEA) (JAN 2019)

(a) In accordance with the clause(s) of this contract entitled “Insurance—Work On a Government Installation” (FAR 52.228-5) and “Liability and Insurance” (DFARS 252.217-7012), as applicable, the Contractor shall procure and maintain insurance, of at least the kinds and minimum amounts set forth below:

(i) Workers’ compensation and employer’s liability coverage shall be at least \$100,000, except as provided in FAR 28.307-2(a), if applicable

(ii) Bodily injury liability insurance coverage shall be written on the comprehensive form of policy of at least \$500,000 per occurrence.

(iii) Automobile liability policies covering automobiles operated in the United States shall provide coverage of at least \$200,000 per person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

(b) To be approved by the Contracting Officer, insurance certificates must include the following cancellation policy statement: Prior to cancellation or material change in coverage, the contractor shall give 30 days written notice to the Contracting Officer.

(c) Physical work cannot begin until the insurance certificate has been approved by the Contracting Officer. Failure to provide an acceptable insurance certificate will not remove the contractor’s responsibility to meet the delivery requirements outlined in Section F and FAR 52.211-11, Liquidated Damages – Supplies, Services, or Research and Development, if applicable.

(End of text)

C-237-H002 SUBSTITUTION OF KEY PERSONNEL (NAVSEA) (OCT 2018)

(a) The Contractor agrees that a partial basis for award of this contract is the list of key personnel proposed. Accordingly, the Contractor agrees to assign to this contract those key persons whose resumes were submitted with the proposal necessary to fulfill the requirements of the contract. No substitution shall be made without prior notification to and concurrence of the Contracting Officer in accordance with this requirement. Substitution shall include, but not be limited to, subdividing hours of any key personnel and assigning or allocating those hours to another individual not approved as key personnel.

(b) All proposed substitutes shall have qualifications equal to or higher than the qualifications of the person to be replaced. The Contracting Officer shall be notified in writing of any proposed substitution at least forty-five (45) days, or ninety (90) days if a security clearance is to be obtained, in advance of the proposed substitution. Such notification shall include: (1) an explanation of the circumstances necessitating the substitution; (2) a complete resume of the proposed substitute; (3) an explanation as to why the proposed substitute is considered to have equal or better qualifications than the person being replaced; (4) payroll record of the proposed replacement; and (5) any other information requested by the Contracting Officer to enable him/her to judge whether or not the Contractor is maintaining the same high quality of personnel that provided the partial basis for award.

(c) Key personnel are identified in an attachment in Section J.

(End of text)

C-242-H001 EXPEDITING CONTRACT CLOSEOUT (NAVSEA) (OCT 2018)

(a) As part of the negotiated fixed price or total estimated amount of this contract, both the Government and the Contractor have agreed to waive any entitlement that otherwise might accrue to either party in any residual dollar amount of \$1,000 or less at the time of final contract closeout. The term "residual dollar amount" shall include all money that would otherwise be owed to either party at the end of the contract, except that, amounts connected in any way with taxation, allegations of fraud and/or antitrust violations shall be excluded. For purposes of determining residual dollar amounts, offsets of money owed by one party against money that would otherwise be paid by that party may be considered to the extent permitted by law.

(b) This agreement to waive entitlement to residual dollar amounts has been considered by both parties. It is agreed that the administrative costs for either party associated with collecting such small dollar amounts could exceed the amount to be recovered.

(End of text)

C-242-H003 TECHNICAL INSTRUCTIONS (NAVSEA) (OCT 2018)

(a) Performance of the work hereunder may be subject to written technical instructions signed by the Contracting Officer and the Contracting Officer's Representative specified in Section G of this contract. As used herein, technical instructions are defined to include the following:

(1) Directions to the Contractor which suggest pursuit of certain lines of inquiry, shift work emphasis, fill in details or otherwise serve to accomplish the contractual statement of work.

(2) Guidelines to the Contractor which assist in the interpretation of drawings, specifications or technical portions of work description.

(b) Technical instructions must be within the general scope of work stated in the contract. Technical instructions may not be used to: (1) assign additional work under the contract; (2) direct a change as defined in the "CHANGES" clause of this contract; (3) increase or decrease the contract price or estimated contract amount (including fee), as applicable, the level of effort, or the time required for contract performance; or (4) change any of the terms, conditions or specifications of the contract.

(c) If, in the opinion of the Contractor, any technical instruction calls for effort outside the scope of the contract or is inconsistent with this requirement, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after the receipt of any such instruction. The Contractor shall not proceed with the work affected by the technical instruction unless and until the Contractor is notified by the Contracting Officer that the technical instruction is within the scope of this contract.

(d) Nothing in the foregoing paragraph shall be construed to excuse the Contractor from performing that portion of the contractual work statement which is not affected by the disputed technical instruction.

(End of text)

C-244-H001 SUBCONTRACTING OF NUCLEAR ENGINEERING EFFORT (NAVSEA) (OCT 2018)

(a) The Contractor and the Navy intend that all nuclear engineering effort under this contract be performed by employees of the Contractor or persons under the supervision of employees of the Contractor at the Contractor's facilities or at any alternate site. If, however, the Contractor considers that subcontracting some nuclear engineering effort, which will not be under the supervision of employees of the Contractor at the Contractor's facilities or at any alternate site, is necessary to meet the Contractor's contractual requirements, then notwithstanding and in addition to any other requirement of this contract, the Contractor shall submit a written request for technical approval to the Navy Nuclear Propulsion Directorate (NAVSEA 08). The request to subcontract nuclear engineering effort shall state the reasons why the subcontracting is necessary, why the effort cannot be performed by the Contractor's personnel or persons under the supervision of employees of the Contractor at the Contractor's facilities or at any alternate site, the expected number of man/hours, cost and nature of the subcontracted effort, period of performance, and the name and qualifications of the vendor to perform the subcontracted effort. NAVSEA 08 shall approve or disapprove the request in writing. The Contractor agrees not to subcontract any nuclear engineering effort which will not be under the supervision of employees of the Contractor at the Contractor's facilities or at any alternate site without obtaining the express written technical approval of NAVSEA 08.

(b) For the purpose of this requirement, the term "nuclear engineering effort" includes engineering, drafting, and related technical support effort under NAVSEA 08 technical cognizance.

(End of text)

C-244-H002 SUBCONTRACTORS/CONSULTANTS (NAVSEA) (OCT 2018)

Notwithstanding FAR 52.244-2(d) and in addition to the information required by FAR 52.244-2(e) of the contract, the contractor shall include the following information in requests to add subcontractors or consultants during performance, regardless of subcontract type or pricing arrangement:

- (1) Impact on subcontracting goals,
- (2) Impact on providing support at the contracted value,
- (3) IF SEAPORT TASK ORDER - The results of negotiations to incorporate fee rate caps no higher than the lower of (i) SeaPort-e fee rate caps for the prime contractor, or in the case where the proposed subcontractor is also a SeaPort-e prime, (ii) fee rate caps that are no higher than the subcontractor's prime SeaPort-e contract.

(End of text)

C-245-H003 FACILITIES TO BE GOVERNMENT FURNISHED—ALTERNATE I (NAVSEA) (MAR 2019)

(a) The price and delivery schedule set forth in this contract contemplate the rent-free use of the facilities identified in paragraph (b) below. If the Government limits or terminates the Contractor's rent-free use of said facilities, and such action affects the ability of the Contractor to perform this contract in accordance with its terms and conditions, then an equitable adjustment in the price or delivery schedule or both, shall be made pursuant to the clause entitled "Changes—Fixed Price" (FAR 52.243-1) or "Changes—Cost-Reimbursement" (FAR 52.243-2), as applicable, provided; however, that if the limitation or termination is due to failure by the Contractor to perform its obligations under this contract, the Contractor shall be entitled only to such adjustment as the Contracting Officer determines to be appropriate under the circumstances.

(b) The Contractor is authorized to use the facilities described below upon the prior written approval of the cognizant Contract Administration Office, which shall determine that such facilities are required to carry out the work provided for by this contract. Immediately upon receipt of each item of approved facilities, the Contractor shall notify the cognizant Contract Administration Office of the receipt of such facilities owned by the Government, which shall be made a part of the plant account assigned to the Contractor at that location.

DESCRIPTION AND IDENTITY OF FACILITIES

(c) In the event there is in existence a facilities management contract effective at the same plant or general location, the facilities provided hereunder shall be made subject to all the terms and conditions of the facilities management contract.

(End of text)

C-245-H005 INFORMATION AND DATA FURNISHED BY THE GOVERNMENT—ALTERNATE I (NAVSEA) (MAY 2019)

(a) Contract Specifications, Drawings and Data. The Government will furnish, if not included as an attachment to the contract, any unique contract specifications or other design or alteration data cited or referenced in Section C.

(b) Government Furnished Information (GFI). GFI is defined as that information essential for the installation, test, operation, and interface support of all Government Furnished Material identified in an attachment in Section J. The Government shall furnish only the GFI identified in an attachment in Section J. The GFI furnished to the contractor need not be in any particular format. Further, the Government reserves the right to revise the listing of GFI as follows:

(1) The Contracting Officer may at any time by written order:

- (i) delete, supersede, or revise, in whole or in part, data identified in an attachment in Section J; or
- (ii) add items of data or information to the attachment identified in Section J; or
- (iii) establish or revise due dates for items of data or information in the attachment identified in Section J.

(2) If any action taken by the Contracting Officer pursuant to subparagraph (1) immediately above causes an increase or decrease in the costs of, or the time required for, performance of any part of the work under this contract, the contractor may be entitled to an equitable adjustment in the contract amount and delivery schedule in accordance with the procedures provided for in the "CHANGES" clause of this contract.

(c) Except for the Government information and data specified by paragraphs (a) and (b) above, the Government will not be obligated to furnish the Contractor any specification, standard, drawing, technical documentation, or other publication, notwithstanding anything to the contrary in the contract specifications, the GFI identified in an attachment in Section J, the clause of this contract entitled "Government Property" (FAR 52.245-1) or "Government Property Installation Operation Services" (FAR 52.245-2), as applicable, or any other term or condition of this contract. Such referenced documentation may be obtained:

(1) From the ASSIST database via the internet at <https://assist.dla.mil/online/start/>; or

(2) By submitting a request to the

Department of Defense Single Stock Point (DoDSSP)

Building 4, Section D

700 Robbins Avenue
Philadelphia, Pennsylvania 19111-5094
Telephone (215) 697-6396
Facsimile (215) 697-9398.

Commercial specifications and standards, which may be referenced in the contract specification or any sub-tier specification or standard, are not available from Government sources and should be obtained from the publishers.

(End of text)

C-245-H006 ADDITIONAL REQUIREMENTS RELATING TO GOVERNMENT PROPERTY (NAVSEA) (OCT 2018)

(a) For purposes of paragraph (h) of the clause entitled "Government Property" (FAR 52.245-1) in addition to those items of property defined in that clause as Government Property, the following shall also be included within the definition of Government Property:

- (1) the vessel;
- (2) the equipment on the vessel;
- (3) movable stores;
- (4) cargo; and
- (5) other material on the vessel

(b) For purposes of paragraph (b) of the clause entitled "Government Property", notwithstanding any other requirement of this contract, the following shall not be considered Government Property:

- (1) the vessel;
- (2) the equipment on the vessel;
- (3) movable stores; and
- (4) other material on the vessel

(End of text)

C-245-H010 GOVERNMENT SURPLUS PROPERTY (NAVSEA) (JAN 2019)

No former Government surplus property or residual inventory resulting from terminated Government contracts shall be furnished under this contract unless such property is approved in writing by the contracting officer. The Contractor agrees that all such property shall comply in all respects with the specifications contained herein.

(End of text)

C-245-H012 RENT-FREE USE OF GOVERNMENT PROPERTY (NAVSEA) (JAN 2019)

The Contractor may use on a rent-free, non-interference basis, as necessary for the performance of this contract, the Government property accountable under Contract N4215821C0004. The Contractor is responsible for scheduling the use of all property covered by the above referenced contract(s) and the Government shall not be responsible for conflicts, delays, or disruptions to any work performed by the Contractor due to use of any or all of such property under this contract or any other contracts under which use of such property is authorized.

(End of text)

C-246-H002 GOVERNMENT USE OF CONTRACTOR'S INSPECTION EQUIPMENT (NAVSEA) (OCT 2018)

The contractor's gages, measuring, and testing devices shall be made available to the Government when required to determine contractor conformance with contract requirements. If conditions warrant, the contractor's personnel shall be made available for operation of such devices and for verification of their accuracy and condition.

(End of text)

C-247-H001 PERMITS AND RESPONSIBILITIES (NAVSEA) (DEC 2018)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits for complying with any applicable Federal, State, and Municipal laws, codes, and regulations for shipping and transportation including, but not limited to, any movement over public highways of overweight/over dimensional materials.

(End of text)

Section D - Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

D-211-H001 PACKAGING OF DATA (NAVSEA) (OCT 2018)

Data to be delivered by Integrated Digital Environment (IDE) or other electronic media shall be as specified in the contract.

All unclassified data to be shipped shall be prepared for shipment in accordance with best commercial practice.

Classified reports, data, and documentation shall be prepared for shipment in accordance with National Industrial Security Program Operating Manual (NISPOM), DOD 5220.22-M dated 28 February 2006 incorporating Change 2 dated 18 May 2016.

(End of text)

D-211-H002 MARKING OF REPORTS (NAVSEA) (OCT 2018)

All reports delivered by the Contractor to the Government under this contract shall prominently show on the cover of the report:

(1) name and business address of the Contractor

(2) contract number

(3) sponsor:

Joel Mason

(Name of Individual Sponsor)

Contracts Code 400

(Name of Requiring Activity)

Portsmouth, Virginia 23709

(City and State)

(End of text)

D-211-H004 IDENTIFICATION MARKING OF PARTS—BASIC (NAVSEA) (OCT 2018)

For all parts not subject to the marking requirements in DFARS 252.211-7003 – Item Unique Identification and Valuation, marking shall be accomplished in accordance with the following:

(1) Parts shall be marked in accordance with generally accepted commercial practice.

(2) In cases where parts are so small as not to permit identification marking as provided above, such parts shall be appropriately coded so as to permit ready identification.

(End of text)

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE

Supplies/services will be inspected/accepted at:

| <u>CLIN</u> | <u>INSPECT AT</u> | <u>INSPECT BY</u> | <u>ACCEPT AT</u> | <u>ACCEPT BY</u> |
|-------------|-------------------|-------------------|------------------|------------------|
| 0001 | Destination | Government | Destination | Government |
| 0002 | Destination | Government | Destination | Government |

CLAUSES INCORPORATED BY REFERENCE

| | | |
|-----------|--|----------|
| 52.246-2 | Inspection Of Supplies—Fixed Price | AUG 1996 |
| 52.246-4 | Inspection Of Services—Fixed Price | AUG 1996 |
| 52.246-11 | Higher-Level Contract Quality Requirement | DEC 2014 |
| 52.246-13 | Inspection—Dismantling, Demolition, or Removal of Improvements | AUG 1996 |
| 52.246-16 | Responsibility For Supplies | APR 1984 |

CLAUSES INCORPORATED BY FULL TEXT

E-246-H013 INSPECTION AND ACCEPTANCE OF DATA (NAVSEA) (OCT 2018)

Inspection and acceptance of all data shall be as specified on the attached Contract Data Requirements List(s), DD Form 1423.

(End of text)

E-246-H016 INSPECTION AND ACCEPTANCE OF F.O.B. DESTINATION DELIVERIES (NAVSEA) (OCT 2018)

Items 0001 - 0001 - Inspection and acceptance shall be made at destination by a representative of the Government.

(End of text)

E-246-H020 QUALITY MANAGEMENT SYSTEM REQUIREMENTS (NAVSEA) (OCT 2018)

The Contractor shall provide and maintain a quality management system that, as a minimum, adheres to the requirements of ASQ/ANSI/ISO 9001:2015 “Quality Management Systems – Requirements” and supplemental requirements imposed by this contract. The quality management system procedures, planning, and all other documentation and data that comprise the quality management system shall be made available to the Government for review. Existing quality documents that meet the requirements of this contract may continue to be used. The Government may perform any necessary inspections, verifications, and evaluations to ascertain conformance to requirements and the adequacy of the implementing procedures. The Contractor shall flow down such standards, as applicable, to lower-tier subcontractors under instances covered in FAR 52.246-11(b) or at the direction of the Contracting Officer. The Government reserves the right to disapprove the quality management system or portions thereof when it fails to meet the contractual requirements.

(End of text)

E-246-H021 COST DATA FOR QUALITY MANAGEMENT SYSTEM (NAVSEA) (JAN 2019)

The contractor shall maintain and use cost data as a management element of the Quality Management System. The specific cost data to be maintained and used will be determined by the contractor. The data shall, on request, be identified and made available for on-site review by the Contracting Officer or designated Government representative.

(End of text)

E-246-H022 INSPECTION AND TEST RECORDS (NAVSEA) (JAN 2019)

Inspection and test records shall, as a minimum, indicate the nature of the observations, number of observations made, and the number and type of deficiencies found. Data included in inspection and test records shall be complete and accurate, and shall be used for trend analysis and to assess corrective action and effectiveness. The data shall, on request, be identified and made available for on-site review by the Contracting Officer or designated Government representative.

(End of text)

E-246-W002 CERTIFICATE OF COMPLIANCE (NAVSEA) (OCT 2018)

(a) A certification of material shall be provided by the Contractor, one (1) copy to accompany the shipment (in the packing list envelope) and (1) copy mailed to arrive at time of receipt of the shipment. Mark all certificates to the attention of Code 00Q.

(b) The certificate shall state compliance of material with drawing specification and contract/order requirements. The certificate shall as a minimum state the company name, contract/order number, drawing or specification number, and date. The certificate shall state, above the signature of a legally authorized representative of the company, the following:

This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

(c) Failure to provide certification at the time of shipment may result in material being rejected and returned at the contractor's expense.

(d) The certificate shall read as follows:

I certify that on _____ [insert date], the _____ [insert Contractor's name] furnished the supplies called for by the Order/Contract No. _____ via _____ [Carrier] on _____ [identify the bill of lading or shipping document] in accordance with all applicable requirements. I further certify that the supplies or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification (part number), and are in the quantity shown on this document.

Date of Execution: _____

Signature: _____

Typed Name: _____

Title: _____

(End of text)

E-246-W003 INSPECTION STANDARDS (NAVSEA) (OCT 2018)

Acceptance inspection of lots or batches will be in accordance with American National Standard ANSI/ASQ Z1.4-2003. Unless otherwise specified, attributes, which if defective would prohibit or reduce the usability of the product for its intended purpose, will be inspected at an acceptable quality level (AQL) of 1.0. Attributes which do not materially reduce the usability of the product will be inspected at an AQL of 2.5. Any attributes classified as critical on the technical documentation will be inspected on each unit of product submitted. The right is reserved to reject any unit of product found nonconforming during inspection whether that unit of product forms a part of a sample or not, and whether the lot or batch as a whole is accepted or rejected.

(End of text)

Section F - Deliveries or Performance

DELIVERIES OR PERFORMANCE

| <u>CLIN</u> | <u>DELIVERY DATE</u> | <u>QUANTITY</u> | <u>SHIP TO ADDRESS</u> | <u>DODAAC / CAGE</u> |
|-------------|------------------------------------|-----------------|--|----------------------|
| 0001 | Delivery Date (RDD) 19-SEP-2023 | N/A | Norfolk Naval Shipyard FOB: Destination | N42158 |
| 0002 | POP 20-SEP-2021 TO 19-SEP-2023 | N/A | Norfolk Naval Shipyard | N42158 |

CLAUSES INCORPORATED BY REFERENCE

| | | |
|-----------|--------------------------|----------|
| 52.242-15 | Stop-Work Order | AUG 1989 |
| 52.242-17 | Government Delay Of Work | APR 1984 |
| 52.247-34 | F.O.B. Destination | NOV 1991 |

CLAUSES INCORPORATED BY FULL TEXT

F-247-H001 DELIVERY OF DATA (NAVSEA) (OCT 2018)

All data to be furnished under this contract shall be delivered prepaid to the destination(s) and at the time(s) specified on the Contract Data Requirements List(s), DD Form 1423.

(End of Text)

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 1711804 8H2G 257 V7200 0 050120 2D 000000
 COST CODE: A00006230252
 AMOUNT: \$39,998,941.49

| ACRN | CLIN/SLIN | CIN | AMOUNT |
|------|-----------|---------------------|-----------------|
| AA | 0001 | N0002421RX012040001 | \$39,998,941.49 |
| | 0002 | N0002421RX012040002 | \$0.00 |

CLAUSES INCORPORATED BY REFERENCE

252.204-7006 Billing Instructions OCT 2005

CLAUSES INCORPORATED BY FULL TEXT

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (DEC 2018)

(a) Definitions. As used in this clause—

“Department of Defense Activity Address Code (DoDAAC)” is a six position code that uniquely identifies a unit, activity, or organization.

“Document type” means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

“Local processing office (LPO)” is the office responsible for payment certification when payment certification is done external to the entitlement system.

“Payment request” and “receiving report” are defined in the clause at 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(b) Electronic invoicing. The WAWF system provides the method to electronically process vendor payment requests and receiving reports, as authorized by Defense Federal Acquisition Regulation Supplement (DFARS) 252.232- 7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor shall—

(1) Have a designated electronic business point of contact in the System for Award Management at <https://www.sam.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this web site.

(d) WAWF training. The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the “Web Based Training” link on the WAWF home page at <https://wawf.eb.mil/>.

(e) WAWF methods of document submission. Document submissions may be via web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) WAWF payment instructions. The Contractor shall use the following information when submitting payment requests and receiving reports in WAWF for this contract or task or delivery order:

(1) Document type. The Contractor shall submit payment requests using the following document type(s):

(i) For cost-type line items, including labor-hour or time-and-materials, submit a cost voucher.

(ii) For fixed price line items—

(A) That require shipment of a deliverable, submit the invoice and receiving report specified by the Contracting Officer.

RECEIVING REPORT

(B) For services that do not require shipment of a deliverable, submit either the Invoice 2in1, which meets the requirements for the invoice and receiving report, or the applicable invoice and receiving report, as specified by the Contracting Officer.

NOT APPLICABLE

(Contracting Officer: Insert either “Invoice 2in1” or the applicable invoice and receiving report document type(s) for fixed price line items for services.)

(iii) For customary progress payments based on costs incurred, submit a progress payment request.

(iv) For performance based payments, submit a performance based payment request.

(v) For commercial item financing, submit a commercial item financing request.

(2) Fast Pay requests are only permitted when Federal Acquisition Regulation (FAR) 52.213-1 is included in the contract.

[Note: The Contractor may use a WAWF “combo” document type to create some combinations of invoice and receiving report in one step.]

(3) Document routing. The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table*

| <i>Field Name in WAWF</i> | <i>Data to be entered in WAWF</i> |
|---------------------------|-----------------------------------|
| Pay Official DoDAAC | N68732 |
| Issue By DoDAAC | N00024 |
| Admin DoDAAC** | N42158 |
| Inspect By DoDAAC | N42158 |
| Ship To Code | N42158 |
| Ship From Code | |
| Mark For Code | N4215821C0004 |
| Service Approver (DoDAAC) | |
| Service Acceptor (DoDAAC) | N42158 |
| Accept at Other DoDAAC | |
| LPO DoDAAC | N42158 |
| DCAA Auditor DoDAAC | |
| Other DoDAAC(s) | 050120 |

(*Contracting Officer: Insert applicable DoDAAC information. If multiple ship to/acceptance locations apply, insert “See Schedule” or “Not applicable.”)

(**Contracting Officer: If the contract provides for progress payments or performance-based payments, insert the DoDAAC for the contract administration office assigned the functions under FAR 42.302(a)(13).)

(4) Payment request. The Contractor shall ensure a payment request includes documentation appropriate to the type of payment request in accordance with the payment clause, contract financing clause, or Federal Acquisition Regulation 52.216-7, Allowable Cost and Payment, as applicable.

(5) Receiving report. The Contractor shall ensure a receiving report meets the requirements of DFARS Appendix F.

(g) WAWF point of contact.

Jennifer Perry, jennifer.perry1@navy.mil 757 396-3121

(1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity’s WAWF point of contact.

Vendor Pay Email: NNSY_VENDOR_PAY@NAVY.MIL

(2) Contact the WAWF helpdesk at 866-618-5988, Email: [disa.global.servicedesk.mbx.ed- ticketrequests@mail.mil](mailto:disa.global.servicedesk.mbx.ed-ticketrequests@mail.mil) if assistance is needed.

(End of clause)

G-232-H002 PAYMENT INSTRUCTIONS AND CONTRACT TYPE SUMMARY FOR PAYMENT OFFICE (NAVSEA) (JUN 2018)

(a) The following table of payment office allocation methods applies to the extent indicated.

| For Government Use Only | | | | | |
|--|--|--------|---------|--------------|---|
| Contract/Order Payment Clause | Type of Payment Request | Supply | Service | Construction | Payment Office Allocation Method |
| 52.212-4 (Alt I), Contract Terms and Conditions— Commercial Items 52.216-7, Allowable Cost and Payment 52.232-7, Payments under Time-and-Materials and Labor-Hour Contracts | Cost Voucher | X | X | N/A | Line item specific proration. If there is more than one ACRN within a deliverable line or deliverable subline item, the funds will be allocated in the same proportion as the amount of funding currently unliquidated for each ACRN on the deliverable line or deliverable subline item for which payment is requested. |
| 52.232-1, Payments | Navy Shipbuilding Invoice (Fixed Price) | X | N/A | N/A | Line Item specific by fiscal year. If there is more than one ACRN within a deliverable line or deliverable subline item, the funds will be allocated using the oldest funds. In the event of a deliverable line or deliverable subline item with two ACRNs with the same fiscal year, those amounts will be prorated to the available unliquidated funds for that year. |
| 52.232-1, Payments; 52.232-2, Payments under Fixed-Price Research and Development Contracts; 52.232-3, Payments under Personal Services Contracts; 52.232-4, Payments under Transportation Contracts and Transportation-Related Services Contracts; and 52.232-6, Payments under Communication Service Contracts with Common Carriers | Invoice | X | X | N/A | Line Item Specific proration. If there is more than one ACRN within a deliverable line or deliverable subline item, the funds will be allocated in the same proportion as the amount of funding currently unliquidated for each ACRN on the deliverable line or deliverable subline item for which payment is requested. |

| Contract/Order Payment Clause | Type of Payment Request | Supply | Service | Construction | Payment Office Allocation Method |
|--|---------------------------------|--------|---------|--------------|---|
| 52.232-5, Payments Under Fixed- Price Construction Contracts | Construction Payment Invoice | N/A | N/A | X | Line Item specific by fiscal year. If there is more than one ACRN within a deliverable line or deliverable subline item, the funds will be allocated using the oldest funds. In the event of a deliverable line or deliverable subline item with two ACRNs with the same fiscal year, those amounts will be prorated to the available unliquidated funds for that year. |
| 52.232-16, Progress Payments | Progress Payment* | X | X | N/A | Contract-wide proration. Funds shall be allocated in the same proportion as the amount of funding currently unliquidated for each ACRN. Progress Payments are considered contract level financing, and the "contract price" shall reflect the fixed price portion of the contract per FAR 32.501-3. |
| 52.232-29, Terms for Financing of Purchases of Commercial Items; 52.232-30, Installment Payments for Commercial Items | Commercial Item Financing* | X | X | N/A | Specified in approved payment. The contracting officer shall specify the amount to be paid and the account(s) to be charged for each payment approval in accordance with FAR 32.207(b)(2) and 32.1007(b)(2). |
| 52.232-32, Performance- Based Payments | Performance- Based Payments* | X | X | N/A | Specified in approved payment. The contracting officer shall specify the amount to be paid and the account(s) to be charged for each payment approval in accordance with FAR 32.207(b)(2) and 32.1007(b)(2). |
| 252.232-7002, Progress Payments for Foreign Military Sales Acquisitions | Progress Payment* | X | X | N/A | Allocate costs among line items and countries in a manner acceptable to the Administrative Contracting Officer. |

*Liquidation of Financing Payments. Liquidation will be applied by the payment office against those ACRNs which are identified by the payment instructions for the delivery payment and in keeping with the liquidation provision of the applicable contract financing clause (i.e., progress payment, performance-based payment, or commercial item financing).

(b) This procurement contains the following contract type(s):

| Item | Type* |
|------------|-------|
| 0001, 0002 | FP |

*CR – Cost-Reimbursement
FP – Fixed Price

(End of text)

G-232-H005 SUPPLEMENTAL INSTRUCTIONS REGARDING INVOICING (NAVSEA) (JAN 2019)

(a) For other than firm fixed priced contract line item numbers (CLINs), the Contractor agrees to segregate costs incurred under this contract/task order (TO), as applicable, at the lowest level of performance, either at the sub line item number (SLIN) or CLIN level, rather than at the total contract/TO level, and to submit invoices reflecting costs incurred at that level. Supporting documentation in Wide Area Workflow (WAWF) for invoices shall include summaries of work charged during the period covered as well as overall cumulative summaries by individual labor categories, rates, and hours (both straight time and overtime) invoiced; as well as, a cost breakdown of other direct costs (ODCs), materials, and travel, by technical instruction (TI), SLIN, or CLIN level. For other than firm fixed price subcontracts, subcontractors are also required to provide labor categories, rates, and hours (both straight time and overtime) invoiced; as well as, a cost breakdown of ODCs, materials, and travel invoiced. Supporting documentation may be encrypted before submission to the prime contractor for WAWF invoice submittal. Subcontractors may email encryption code information directly to the Contracting Officer and Contracting Officer Representative (COR). Should the subcontractor lack encryption capability, the subcontractor may also email detailed supporting cost information directly to the Contracting Officer and COR; or other method as agreed to by the Contracting Officer.

(b) Contractors submitting payment requests and receiving reports to WAWF using either Electronic Data Interchange (EDI) or Secure File Transfer Protocol (SFTP) shall separately send an email notification to the COR and Contracting Officer on the same date they submit the invoice in WAWF. No payments shall be due if the contractor does not provide the COR and Contracting Officer email notification as required herein.

(End of text)

G-232-W001 PROMPT PAYMENT (FAR 52.232-25) REVISED CONSTRUCTIVE ACCEPTANCE PERIOD (NAVSEA) (OCT 2018)

In accordance with FAR 32.904(b)(1)(ii)(B)(4), the Contracting Officer has determined that more than seven days are needed for constructive acceptance. Contractors are hereby advised that the constructive acceptance period established in paragraph (a) (5) (i) of FAR clause 52.232-25, Prompt Payment is revised to *[fill-in number of days]* in lieu of 7 working days.

(End of text)

G-242-H001 GOVERNMENT CONTRACT ADMINISTRATION POINTS-OF-CONTACT AND RESPONSIBILITIES (NAVSEA) (OCT 2018)

(a) The Government reserves the right to administratively substitute any of the points of contact listed below at any time.

(b) The contracting officer is the only person authorized to change this contract or orders issued thereunder. The Contractor shall not comply with any order, direction or request of Government personnel - that would constitute a change - unless it is issued in writing and signed by the Contracting Officer or is pursuant to specific authority otherwise included as part of this contract. If, in the opinion of the contractor, an effort outside the existing scope of this contract is requested, the contractor shall promptly comply with the Notification of Changes clause of this contract.

(c) The points of contact are as follows:

(i) The Procuring Contracting Officer (PCO) is:

Name: Denise A. Sturdifan

Address:

Building 65, 2nd Floor, Room 201

Portsmouth, Virginia 23709-5000

Phone: (757) 396- 0589; FAX: (757) 396- 9866

E-mail: denise.a.sturdifan@navy.mil

(ii) The Contract Specialist is:

Name: Rebekah Riggins

Address:

Building 65, 2nd Floor, Room 201

Portsmouth, Virginia 23709-5000

Phone: (757) 406-5526; FAX: (757) 396- 9866

E-mail: rebekah.riggins@navy.mil

(iii) The Administrative Contracting Officer (ACO) is:

Name: Joel J. Mason

Address:

Building 65, 2nd Floor, Room 201

Portsmouth, Virginia 23709-5000

Phone: (757) 396-1459; FAX: (757) 396- 9866

E-mail: joel.mason@navy.mil

(d) The Contracting Officer's Representative (COR) is the contracting officer's appointed representative for technical matters. The COR is not a contracting officer and does not have the authority to direct the accomplishment of effort which is beyond the scope of the contract or to otherwise change any contract requirements. An informational copy of the COR appointment letter, which provides a delineation of COR authority and responsibilities, will be provided upon award of this contract.

The Contracting Officer's Representative (COR) is:

Name: Robert "Bob" Marchant

Address:

C440 Waterfront Operations Portsmouth, Virginia 23709

Phone: (757) 800- 5454; FAX: (Area Code) xxx- [xxxx]

E-mail: robert.w.marchant@navy.mil

(e) The Alternate Contracting Officer's Representative (ACOR) is responsible for COR responsibilities and functions in the event that the COR is unavailable due to leave, illness, or other official business. The ACOR is appointed by the contracting officer; a copy of the ACOR appointment will be provided upon award of this contract.

The Alternate Contracting Officer's Representative (ACOR) is:

Name: Mark Anderson

Address:

C440 Waterfront Operations

Portsmouth, Virginia 23709

Phone: (757) 846- 1473; FAX: (Area Code) xxx- [xxxx]

E-mail: mark.c.anderson1@navy.mil

(f) The Technical Point of Contact (TPOC) is the contracting officer's representative for technical matters when a COR is not appointed. The TPOC is responsible for technical issues of contract administration, such as providing all items of Government Furnished Information (GFI), Government Furnished Material (GFM) and Government Furnished Equipment (GFE) if specified in the contract as well as the inspection and acceptance of all contract deliverables.

The Technical Point of Contact (TPOC) is:

Not Applicable Name: [*]

Address:

[*City, State, Zip]

Phone: (Area Code) xxx- [xxxx]; FAX: (Area Code) xxx- [xxxx]

E-mail: [*]

(g) The Alternate Technical Point of Contact (ATPOC) is responsible for TPOC responsibilities and functions in the event that the TPOC is unavailable due to leave, illness, or other official business.

The Alternate Technical Point of Contact (ATPOC) is:

Not Applicable Name: [*]

Address:

[*City, State, Zip]

Phone: (Area Code) xxx- [xxxx]; FAX: (Area Code) xxx- [xxxx]

E-mail: [*]

(h) The Ombudsman will review complaints from the contractors and ensure that all contractors are afforded a fair opportunity to be considered, consistent with the procedures in the contract.

The Ombudsman is: Not Applicable

Name: [*]

Address:

[*Street]

[*City, State, Zip]

Phone: (Area Code) xxx- [xxxx];

E-mail: [*]

(i) The Authorized Ordering Person(s) for Per-Call Maintenance is responsible for issuing and maintaining records for any per-call orders for remedial maintenance placed under this contract. No per-call order shall be placed outside the scope of this contract and the cumulative total of all orders shall not be in excess of any not-to-exceed amount specified in the contract. Per-call orders shall not, in any way, modify any terms and conditions of the contract.

(j) The Authorized Ordering Person(s) for Per-Call Maintenance is: Not Applicable

Name: [*]

Address:

[*Street]

[*City, State, Zip]

Phone: (Area Code) xxx- [xxxx];

E-mail: [*]

(k) The Contractor's point of contact for performance under this contract is:

Name: Andrew Lombardo

Title: Executive Vice President Nuclear Services Address: 315 9th St. 2nd Floor

New Brighton, PA 15066 Phone: (724) 728-3960

Cell: (724) 312-8935

E-mail: alombardo@perma-fix.com

(End of text)

G-242-H002 HOURS OF OPERATION AND HOLIDAY SCHEDULE (NAVSEA) (OCT 2018)

(a) The policy of this activity is to schedule periods of reduced operations or shutdown during holiday periods. Deliveries will not be accepted on Saturdays, Sundays or Holidays except as specifically requested by the [insert activity name]. All goods or services attempted to be delivered on a Saturday, Sunday or Holiday without specific instructions from the Contracting Officer or his duly appointed representative will be returned to the contractor at the contractor's expense with no cost or liability to the U.S. Government.

(b) The federal Government observes the following holidays:

HOLIDAYS*

- New Year's Day
- Martin Luther King's Birthday
- Presidential Inauguration Day (Washington DC metro area only)
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

* Except for the Presidential Inauguration Day, if the actual date falls on a Saturday, the holiday will be observed the preceding Friday. If the holiday falls on a Sunday, the observance shall be on the following Monday.

The actual date of observance for each of the above holidays, for a specific calendar year, may be obtained from the OPM website at OPM.GOV or by using the following direct link: <https://www.opm.gov/policy-data-oversight/snow-dismissal-procedures/federal-holidays/#url>.

(c) Delayed Opening, Early Dismissal and Closure of Government Facilities. When a Government facility has a delayed opening, is closed or Federal employees are dismissed early (due to severe weather, security threat, security exercise, or a facility related problem) that prevents personnel from working, onsite contractor personnel regularly assigned to work at that facility shall follow the same reporting and/or departure directions given to Government personnel. The contractor shall not direct charge to the contract for such time off, but shall follow parent company policies regarding taking leave (administrative or other). Non-essential contractor personnel, who are not required to remain at or report to the facility, shall follow their parent company policy regarding whether they should go/stay home or report to another company facility. Subsequent to an early dismissal, delayed opening, or during periods of inclement weather, onsite contractors should monitor the OPM website as well as radio and television announcements before departing for work to determine if the facility is closed or operating on a delayed arrival basis.

(d) When Federal employees are excused from work due to a holiday or a special event (that is unrelated to severe weather, a security threat, or a facility related problem), on site contractors shall continue working established work hours or take leave in accordance with parent company policy. Those contractor employees who take leave shall not direct charge the non-working hours to the contract. Contractors are responsible for predetermining and disclosing their charging practices for early dismissal, delayed openings, or closings in accordance with the FAR, applicable cost accounting standards, and the company's established policy and procedures. Contractors shall follow their disclosed charging practices during the contract period of performance, and shall not follow any verbal directions to the contrary. The Contracting Officer will make the determination of cost allowability for time lost due to facility closure in accordance with FAR, applicable Cost Accounting Standards, and the Contractor's established accounting policy and procedures.

(e) If you intend to visit the Contracts Office, it is advised that you call for an appointment at least 24 hours in advance.

(f) The hours of operation are as follows:

| AREA | FROM | TO |
|--------------------|----------|----------|
| Contracts Code 400 | 08:00 AM | 05:00 PM |

(g) All deliveries to the Receiving Officer, Building 65, 2nd Floor, Room 201, shall be made Monday through Friday from 08:00 AM to 5:00 PM, local time. Deliveries will not be accepted after 5:00 PM [*Negotiator enter closing hour of operation*]. No deliveries will be accepted on federal government holidays.

(End of text)

G-242-W001 CONTRACT ADMINISTRATION FUNCTIONS (NAVSEA) (OCT 2018)

(a) In accordance with FAR 42.302(a) all functions listed are delegated to the ACO except the following items to be retained by the PCO:

[_____ *List specific functions that will be retained by the PCO*]

(b) In accordance with FAR 42.302(b), the following additional functions are delegated to the ACO:

[_____ *List any additional functions that will be delegated to the ACO*]

(End of text)

Section H - Special Contract Requirements

CLAUSES INCORPORATED BY FULL TEXT

H-209-H004 ORGANIZATIONAL CONFLICT OF INTEREST (NAVSEA) (DEC 2018)

(a) "Organizational Conflict of Interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage. "Person" as used herein includes Corporations, Partnerships, Joint Ventures, and other business enterprises.

(b) The Contractor warrants that to the best of its knowledge and belief, and except as otherwise set forth in the contract, the Contractor does not have any organizational conflict of interest(s) as defined in paragraph (a).

(c) It is recognized that the effort to be performed by the Contractor under this contract may create a potential organizational conflict of interest on the instant contract or on a future acquisition. In order to avoid this potential conflict of interest, and at the same time to avoid prejudicing the best interest of the Government, the right of the Contractor to participate in future procurement of equipment or services that are the subject of any work under this contract shall be limited as described below in accordance with the requirements of FAR 9.5.

(d) The contractor agrees that it shall not release, disclose, or use in any way that would permit or result in disclosure to any party outside the Government:

(1) any information provided to the Contractor by the Government during or as a result of performance of this contract. Such information includes, but is not limited to, information submitted to the Government on a confidential basis by other persons. Further, the prohibition against release of Government provided information extends to cover such information whether or not in its original form, e.g., where the information has been included in Contractor generated work or where it is discernible from materials incorporating or based upon such information. This prohibition shall not expire after a given period of time.

(2) any information generated or derived during or as a result of performance of this contract. This prohibition shall expire after a period of three years after completion of performance of this contract.

(e) The prohibitions contained in subparagraphs (d)(1) and (d)(2) shall apply with equal force to any affiliate of the Contractor, any subcontractor, consultant, or employee of the Contractor, any joint venture involving the Contractor, any entity into or with which it may merge or affiliate, or any successor or assign of the Contractor. The terms of paragraph (g) of this Special Contract Requirement relating to notification shall apply to any release of information in contravention of this paragraph (d).

(f) The Contractor further agrees that, during the performance of this contract and for a period of three years after completion of performance of this contract, the Contractor, any affiliate of the Contractor, any subcontractor, consultant, or employee of the Contractor, any joint venture involving the Contractor, any entity into or with which it may subsequently merge or affiliate, or any other successor or assign of the Contractor, shall not furnish to the United States Government, either as a prime contractor or as a subcontractor, or as a consultant to a prime contractor or subcontractor, any system, component or services which is the subject of the work to be performed under this contract. This exclusion does not apply to any recompetition for those systems, components or services furnished pursuant to this contract. As provided in FAR 9.505-2, if the Government procures the system, component, or services on the basis of work statements growing out of the effort performed under this contract, from a source other than the contractor, subcontractor, affiliate, or assign of either, during the course of performance of this contract or before the three year period following completion of this contract has lapsed, the Contractor may, with the authorization of the cognizant Contracting Officer, participate in a subsequent procurement for the same system, component, or service. In other words, the Contractor may be authorized to compete for procurement(s) for systems, components or services subsequent to an intervening procurement.

(g) The Contractor agrees that, if after award, it discovers an actual or potential organizational conflict of interest, it shall make immediate and full disclosure in writing to the Contracting Officer. The notification shall include a description of the actual or potential organizational conflict of interest, a description of the action which the Contractor has taken or proposes to take to avoid, mitigate, or neutralize the conflict, and any other relevant information that would assist the Contracting Officer in making a determination on this matter. Notwithstanding this notification, the Government may terminate the contract for the convenience of the Government if determined to be in the best interest of the Government.

(h) Notwithstanding paragraph (g) above, if the Contractor was aware, or should have been aware, of an organizational conflict of interest prior to the award of this contract or becomes, or should become, aware of an organizational conflict of interest after award of this contract and does not make an immediate and full disclosure in writing to the Contracting Officer, the Government may terminate this contract for default.

(i) If the Contractor takes any action prohibited by this requirement or fails to take action required by this requirement, the Government may terminate this contract for default.

(j) The Contracting Officer's decision as to the existence or nonexistence of an actual or potential organizational conflict of interest shall be final.

(k) Nothing in this requirement is intended to prohibit or preclude the Contractor from marketing or selling to the United States Government its product lines in existence on the effective date of this contract; nor, shall this requirement preclude the Contractor from participating in any research and development or delivering any design development model or prototype of any such equipment. Additionally, sale of catalog or standard commercial items are exempt from this requirement.

(l) The Contractor shall promptly notify the Contracting Officer, in writing, if it has been tasked to evaluate or advise the Government concerning its own products or activities or those of a competitor in order to ensure proper safeguards exist to guarantee objectivity and to protect the Government's interest.

(m) The Contractor shall include this requirement in subcontracts of any tier which involve access to information or situations/conditions covered by the preceding paragraphs, substituting "subcontractor" for "contractor" where appropriate.

(n) The rights and remedies described herein shall not be exclusive and are in addition to other rights and remedies provided by law or elsewhere included in this contract.

(o) Compliance with this requirement is a material requirement of this contract.

(End of text)

H-246-H001 CALIBRATION SYSTEM REQUIREMENTS (NAVSEA) (DEC 2018)

(a) Definitions:

(1) Test, Measurement, and Diagnostic Equipment (TMDE). Includes all devices used to measure, calibrate, gage, test, inspect, diagnose, or otherwise examine materials, supplies, and equipment to quantitatively or qualitatively determine compliance with specifications and tolerances, engineering drawings, technical orders, technical manuals, or use requirements and instructions.

(2) Calibration Standard. A measuring instrument or artifact used as a reference to establish and maintain the accuracy of other measuring instruments or artifacts. Calibration standards may be used to calibrate other standards of lesser accuracy or to calibrate test and measurement equipment directly.

(3) Calibration. The comparison of a measurement system or device of unverified accuracy with a measurement system of known and greater accuracy to detect deviation of the unverified measurement system from required performance specifications (of the unverified measurement system or device) and to quantify all measured values to applicable units of the international system of units.

(4) Calibration Service Providers. Commercial calibration activities and other government agencies that provide calibration services to the Navy and Marine Corps as a major line of business.

(5) Commercial Service Providers. Suppliers of Navy test, measurement, and diagnostic equipment, including original equipment manufacturers, who may calibrate their own products but are not engaged in calibration as a major line of business, and other commercial laboratories that provide low volume, model specific, or unique parameter calibration services.

(6) Measurement Traceability. The property of a measurement result that can be related to a national or international measurement standard through a documented, unbroken chain of calibrations, each with a stated measurement uncertainty. Individual measurement results must be traced through an unbroken chain of calibrations to accepted references, such as: U.S. national standards such as, the U.S. Naval Observatory, ratio and consensus standards, natural physical constants, or the national standards of other countries correlated with U.S. national standards as held or directed by National Institute of Standards and Technology and Department of Defense (DoD) approved sources.

(7) The End of Period Measurement Reliability. The probability that all the applicable measurement quantities of a test, measurement, and diagnostic equipment are within tolerance at the end of the calibration interval assigned to the given test, measurement, and diagnostic equipment.

(8) Calibration Interval. The periodicity between calibrations that is assigned to achieve Navy end of period measurement reliability objectives for test, measurement, and diagnostic equipment.

(9) The Probability of False Acceptance. The probability that a test used to verify that a measurement quantity is within specified tolerances results in an incorrect acceptance decision.

(10) The Probability of False Rejection. The probability that a test used to verify that a measurement quantity is within specified tolerances results in an incorrect rejection decision.

(11) The Test Uncertainty Ratio (TUR). The ratio of the difference between the upper and lower tolerance limits for a measurement quantity subject to calibration, to the difference between the upper and lower 95 percent uncertainty limits for the measurement process used for calibration.

(b) Test, measurement, and diagnostic equipment and automatic test systems are used to monitor and test systems, equipment, devices, and the environmental conditions under which these systems and personnel operate. The accuracy of Navy and Contractor test, measurement, and diagnostic equipment and automatic test systems used for quantitative and qualitative measurements are ensured through measurement traceability. The Contractor is required to ensure that all test, measurement and diagnostic equipment used for quantitative or qualitative measurements is maintained and calibrated in accordance with U.S. national standards ANSI/NC SL Z540.3 Requirements for the Calibration of Measuring and Test Equipment, dated 3 Aug 2006 or ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories (2nd Edition), dated 15 May 2005 or the national standards of other countries correlated with U.S. national standards held by the National Institute of Standards and Technology and designated as an approved source by the Department of the Navy METCAL Executive Agent.

(c) Calibration certification to Navy standard NAVSEA 04-4734B, Navy and Marine Corps Calibration Laboratory Audit/Certification Manual, 1 Dec 2006, is acceptable in place of ANSI/NC SL Z540.3 and ISO/IEC 17025 accreditations. ANSI/NC SL Z540.3 and ISO/IEC 17025 accreditations must be performed by an U.S. headquartered accreditation body that is a signatory of the Navy Calibration Cooperative Agreement. Calibration accreditation must include the parameters required to execute the calibration at appropriate ranges and tolerances. A calibration certificate meeting the requirements of ISO/IEC 17025, ANSI/NC SL Z540.3, or NAVSEA 04-4734B must be provided with the returned calibrated unit. The calibration certificate must be evaluated to confirm that the calibration was performed within the laboratory's accreditation scope or to confirm NAVSEA certification. Calibration intervals that deviate from NAVSEA OD 45845, Metrology Requirements List (METRL), shall reflect TMDE end of period reliability greater than 72%. TMDE reliability data shall be provided upon request. TURs shall be greater than 4:1 or ensure a probability of false acceptance of 2% or less and a probability of false rejections of 15% or less. Calibration procedures and methods used by the contractor shall be provided to the Government upon request.

(d) All calibrations supporting this contract shall meet the requirements of OPNAVINST 3960.16. If the Contractor subcontracts or outsources the initial or reoccurring calibration of test, measurement, and diagnostic equipment, the respective calibration laboratory must also meet the requirements of paragraphs (b) and (c).

(e) Calibration service providers and commercial service providers, and all of their employees, who supply or calibrate Navy test, measurement, and diagnostic equipment, shall be certified or accredited to the requirements of the NAVSEA manual or the ISO or ANSI specifications cited in paragraphs (b) and (c).

(End of text)

Section I - Contract Clauses

52.204-24

52.204-24 Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment. Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment (Aug 2019)

(a) Definitions. As used in this provision—

“Covered telecommunications equipment or services”, “Critical technology”, and “Substantial or essential component” have the meanings provided in clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) Prohibition. Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. Contractors are not prohibited from providing—

(1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(c) Representation. The Offeror represents that—

It ☐ will, ☐ will not provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation.

(d) Disclosures. If the Offeror has responded affirmatively to the representation in paragraph (c) of this provision, the Offeror shall provide the following information as part of the offer

(1) All covered telecommunications equipment and services offered (include brand; model number, such as original equipment manufacturer (OEM) number, manufacturer part number, or wholesaler number; and item description, as applicable);

(2) Explanation of the proposed use of covered telecommunications equipment and services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b) of this provision;

(3) For services, the entity providing the covered telecommunications services (include entity name, unique entity identifier, and Commercial and Government Entity (CAGE) code, if known); and

(4) For equipment, the entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known).

CLAUSES INCORPORATED BY REFERENCE

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| 52.202-1 | Definitions | NOV 2013 |
| 52.203-3 | Gratuities | APR 1984 |
| 52.203-5 | Covenant Against Contingent Fees | MAY 2014 |
| 52.203-6 | Restrictions On Subcontractor Sales To The Government | SEP 2006 |
| 52.203-7 | Anti-Kickback Procedures | MAY 2014 |

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| 52.203-8 | Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity | MAY 2014 |
| 52.203-10 | Price Or Fee Adjustment For Illegal Or Improper Activity | MAY 2014 |
| 52.203-12 | Limitation On Payments To Influence Certain Federal Transactions | OCT 2010 |
| 52.203-13 | Contractor Code of Business Ethics and Conduct | OCT 2015 |
| 52.203-17 | Contractor Employee Whistleblower Rights and Requirement To Inform Employees of Whistleblower Rights | APR 2014 |
| 52.203-19 | Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements | JAN 2017 |
| 52.204-2 | Security Requirements | AUG 1996 |
| 52.204-4 | Printed or Copied Double-Sided on Postconsumer Fiber Content Paper | MAY 2011 |
| 52.204-9 | Personal Identity Verification of Contractor Personnel | JAN 2011 |
| 52.204-10 | Reporting Executive Compensation and First-Tier Subcontract Awards | OCT 2018 |
| 52.204-13 | System for Award Management Maintenance | OCT 2018 |
| 52.204-19 | Incorporation by Reference of Representations and Certifications. | DEC 2014 |
| 52.204-23 | Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities. | JUL 2018 |
| 52.209-6 | Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment | OCT 2015 |
| 52.209-9 | Updates of Publicly Available Information Regarding Responsibility Matters | OCT 2018 |
| 52.209-10 | Prohibition on Contracting With Inverted Domestic Corporations | NOV 2015 |
| 52.215-8 | Order of Precedence—Uniform Contract Format | OCT 1997 |
| 52.219-9 | Small Business Subcontracting Plan | JUN 2020 |
| 52.219-16 | Liquidated Damages-Subcontracting Plan | JAN 1999 |
| 52.219-28 | Post-Award Small Business Program Rerepresentation | JUL 2013 |
| 52.222-21 | Prohibition Of Segregated Facilities | APR 2015 |
| 52.222-26 | Equal Opportunity | SEP 2016 |
| 52.222-36 | Equal Opportunity for Workers with Disabilities | JUL 2014 |
| 52.222-50 | Combating Trafficking in Persons | JAN 2019 |
| 52.222-54 | Employment Eligibility Verification | OCT 2015 |
| 52.222-62 | Paid Sick Leave Under Executive Order 13706 | JAN 2017 |
| 52.223-5 | Pollution Prevention and Right-to-Know Information | MAY 2011 |
| 52.223-6 | Drug-Free Workplace | MAY 2001 |
| 52.225-13 | Restrictions on Certain Foreign Purchases | JUN 2008 |
| 52.228-7 | Insurance—Liability To Third Persons | MAR 1996 |
| 52.232-17 | Interest | MAY 2014 |
| 52.232-18 | Availability Of Funds | APR 1984 |
| 52.232-25 Alt I | Prompt Payment (Jan 2017) Alternate I | FEB 2002 |
| 52.232-33 | Payment by Electronic Funds Transfer—System for Award Management | OCT 2018 |
| 52.232-39 | Unenforceability of Unauthorized Obligations | JUN 2013 |
| 52.232-40 | Providing Accelerated Payments to Small Business Subcontractors | DEC 2013 |
| 52.233-1 | Disputes | MAY 2014 |
| 52.233-3 Alt I | Protest After Award (Aug 1996) - Alternate I | JUN 1985 |
| 52.233-4 | Applicable Law for Breach of Contract Claim | OCT 2004 |

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| 52.237-2 | Protection Of Government Buildings, Equipment, And Vegetation | APR 1984 |
| 52.242-5 | Payments to Small Business Subcontractors | JAN 2017 |
| 52.242-13 | Bankruptcy | JUL 1995 |
| 52.243-4 | Changes | JUN 2007 |
| 52.244-2 | Subcontracts | OCT 2010 |
| 52.244-5 | Competition In Subcontracting | DEC 1996 |
| 52.244-6 | Subcontracts for Commercial Items | JAN 2019 |
| 52.246-23 | Limitation Of Liability | FEB 1997 |
| 52.246-24 | Limitation Of Liability—High-Value Items | FEB 1997 |
| 52.246-25 | Limitation Of Liability—Services | FEB 1997 |
| 52.249-3 | Termination for Convenience of the Government (Dismantling, Demolition, or Removal of Improvements) | APR 2012 |
| 52.249-8 | Default (Fixed-Price Supply & Service) | APR 1984 |
| 52.249-14 | Excusable Delays | APR 1984 |
| 52.253-1 | Computer Generated Forms | JAN 1991 |
| 252.201-7000 | Contracting Officer's Representative | DEC 1991 |
| 252.203-7000 | Requirements Relating to Compensation of Former DoD Officials | SEP 2011 |
| 252.203-7001 | Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies | DEC 2008 |
| 252.203-7002 | Requirement to Inform Employees of Whistleblower Rights | SEP 2013 |
| 252.203-7003 | Agency Office of the Inspector General | DEC 2012 |
| 252.204-7000 | Disclosure Of Information | OCT 2016 |
| 252.204-7003 | Control Of Government Personnel Work Product | APR 1992 |
| 252.204-7005 | Oral Attestation of Security Responsibilities | NOV 2001 |
| 252.204-7009 | Limitations on the Use or Disclosure of Third-Party Contractor Reported Cyber Incident Information | OCT 2016 |
| 252.204-7010 | Requirement for Contractor to Notify DoD if the Contractor's Activities are Subject to Reporting Under the U.S.-International Atomic Energy Agency Additional Protocol | JAN 2009 |
| 252.204-7012 | Safeguarding Covered Defense Information and Cyber Incident Reporting | OCT 2016 |
| 252.204-7015 | Notice of Authorized Disclosure of Information for Litigation Support | MAY 2016 |
| 252.205-7000 | Provision Of Information To Cooperative Agreement Holders | DEC 1991 |
| 252.209-7004 | Subcontracting With Firms That Are Owned or Controlled By The Government of a Country that is a State Sponsor of Terrorism | MAY 2019 |
| 252.211-7005 | Substitutions for Military or Federal Specifications and Standards | NOV 2005 |
| 252.217-7003 | Changes | DEC 1991 |
| 252.217-7005 | Inspection and Manner of Doing Work | JUL 2009 |
| 252.217-7006 | Title | DEC 1991 |
| 252.217-7028 | Over And Above Work | DEC 1991 |
| 252.219-7003 | Small Business Subcontracting Plan (DOD Contracts) | DEC 2018 |
| 252.222-7006 | Restrictions on the Use of Mandatory Arbitration Agreements | DEC 2010 |
| 252.223-7001 | Hazard Warning Labels | DEC 1991 |
| 252.223-7004 | Drug Free Work Force | SEP 1988 |
| 252.223-7006 | Prohibition On Storage, Treatment, and Disposal of Toxic or Hazardous Materials | SEP 2014 |
| 252.223-7008 | Prohibition of Hexavalent Chromium | JUN 2013 |
| 252.225-7004 | Report of Intended Performance Outside the United States and Canada—Submission after Award | OCT 2015 |
| 252.225-7048 | Export-Controlled Items | JUN 2013 |

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| 252.227-7025 | Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends | MAY 2013 |
| 252.227-7037 | Validation of Restrictive Markings on Technical Data | SEP 2016 |
| 252.231-7000 | Supplemental Cost Principles | DEC 1991 |
| 252.232-7003 | Electronic Submission of Payment Requests and Receiving Reports | DEC 2018 |
| 252.232-7010 | Levies on Contract Payments | DEC 2006 |
| 252.232-7017 | Accelerating Payments to Small Business Subcontractors—Prohibition on Fees and Consideration | APR 2020 |
| 252.247-7023 | Transportation of Supplies by Sea | FEB 2019 |

CLAUSES INCORPORATED BY FULL TEXT

52.204-21 BASIC SAFEGUARDING OF COVERED CONTRACTOR INFORMATION SYSTEMS (JUN 2016)

(a) Definitions. As used in this clause—

Covered contractor information system means an information system that is owned or operated by a contractor that processes, stores, or transmits Federal contract information.

Federal contract information means information, not intended for public release, that is provided by or generated for the Government under a contract to develop or deliver a product or service to the Government, but not including information provided by the Government to the public (such as on public Web sites) or simple transactional information, such as necessary to process payments.

Information means any communication or representation of knowledge such as facts, data, or opinions, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual (Committee on National Security Systems Instruction (CNSSI) 4009).

Information system means a discrete set of information resources organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information (44 U.S.C. 3502).

Safeguarding means measures or controls that are prescribed to protect information systems.

(b) Safeguarding requirements and procedures.

(1) The Contractor shall apply the following basic safeguarding requirements and procedures to protect covered contractor information systems. Requirements and procedures for basic safeguarding of covered contractor information systems shall include, at a minimum, the following security controls:

(i) Limit information system access to authorized users, processes acting on behalf of authorized users, or devices (including other information systems).

(ii) Limit information system access to the types of transactions and functions that authorized users are permitted to execute.

(iii) Verify and control/limit connections to and use of external information systems.

(iv) Control information posted or processed on publicly accessible information systems.

(v) Identify information system users, processes acting on behalf of users, or devices.

- (vi) Authenticate (or verify) the identities of those users, processes, or devices, as a prerequisite to allowing access to organizational information systems.
- (vii) Sanitize or destroy information system media containing Federal Contract Information before disposal or release for reuse.
- (viii) Limit physical access to organizational information systems, equipment, and the respective operating environments to authorized individuals.
- (ix) Escort visitors and monitor visitor activity; maintain audit logs of physical access; and control and manage physical access devices.
- (x) Monitor, control, and protect organizational communications (i.e., information transmitted or received by organizational information systems) at the external boundaries and key internal boundaries of the information systems.
- (xi) Implement subnetworks for publicly accessible system components that are physically or logically separated from internal networks.
- (xii) Identify, report, and correct information and information system flaws in a timely manner.
- (xiii) Provide protection from malicious code at appropriate locations within organizational information systems.
- (xiv) Update malicious code protection mechanisms when new releases are available.
- (xv) Perform periodic scans of the information system and real-time scans of files from external sources as files are downloaded, opened, or executed.

(2) Other requirements. This clause does not relieve the Contractor of any other specific safeguarding requirements specified by Federal agencies and departments relating to covered contractor information systems generally or other Federal safeguarding requirements for controlled unclassified information (CUI) as established by Executive Order 13556.

(c) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (c), in subcontracts under this contract (including subcontracts for the acquisition of commercial items, other than commercially available off-the-shelf items), in which the subcontractor may have Federal contract information residing in or transiting through its information system.

(End of clause)

52.204-25 PROHIBITION ON CONTRACTING FOR CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT (AUG 2020)

(a) Definitions. As used in this clause—

Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

Covered foreign country means The People's Republic of China.

Covered telecommunications equipment or services means—

- (1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);
- (2) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);
- (3) Telecommunications or video surveillance services provided by such entities or using such equipment; or
- (4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Critical technology means—

- (1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;
- (2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled—
 - (i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or
 - (ii) For reasons relating to regional stability or surreptitious listening;
- (3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);
- (4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);
- (5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or
- (6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

Reasonable inquiry means an inquiry designed to uncover any information in the entity's possession about the identity of the producer or provider of covered telecommunications equipment or services used by the entity that excludes the need to include an internal or third-party audit.

Roaming means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

Substantial or essential component means any component necessary for the proper function or performance of a piece of equipment, system, or service.

(b) Prohibition.

(1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract, or extending or renewing a contract, with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract.

(c) Exceptions. This clause does not prohibit contractors from providing—

(1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(d) Reporting requirement.

(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract are established procedures for reporting the information; in the case of the Department of Defense, the Contractor shall report to the website at <https://dibnet.dod.mil>. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at <https://dibnet.dod.mil>.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause:

(i) Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (e) and excluding paragraph (b)(2), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial items.

(End of clause)

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within two (2) days provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least five (5) days (60 days unless a different number of days is inserted) before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 24 months.

(End of clause)

52.223-18 ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING (AUG 2011)

(a) Definitions. As used in this clause— Driving—

(1) Means operating a motor vehicle on an active roadway with the motor running, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise.

(2) Does not include operating a motor vehicle with or without the motor running when one has pulled over to the side of, or off, an active roadway and has halted in a location where one can safely remain stationary.

Text messaging means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. The term does not include glancing at or listening to a navigational device that is secured in a commercially designed holder affixed to the vehicle, provided that the destination and route are programmed into the device either before driving or while stopped in a location off the roadway where it is safe and legal to park.

(b) This clause implements Executive Order 13513, Federal Leadership on Reducing Text Messaging while Driving, dated October 1, 2009.

(c) The Contractor is encouraged to—

(1) Adopt and enforce policies that ban text messaging while driving—

(i) Company-owned or -rented vehicles or Government-owned vehicles; or

(ii) Privately-owned vehicles when on official Government business or when performing any work for or on behalf of the Government.

(2) Conduct initiatives in a manner commensurate with the size of the business, such as—

(i) Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and

(ii) Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

(d) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (d), in all subcontracts that exceed the micro-purchase threshold.

(End of clause)

52.232-16 PROGRESS PAYMENTS (JUN 2020)

The Government will make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts of \$2,500 or more approved by the Contracting Officer, under the following conditions:

(a) Computation of amounts.

(1) Unless the Contractor requests a smaller amount, the Government will compute each progress payment as 80 percent of the Contractor's total costs incurred under this contract whether or not actually paid, plus financing payments to subcontractors (see paragraph (j) of this clause), less the sum of all previous progress payments made by the Government under this contract. The Contracting Officer will consider cost of money that would be allowable under Federal Acquisition Regulation (FAR) 31.205-10 as an incurred cost for progress payment purposes.

(2) The amount of financing and other payments for supplies and services purchased directly for the contract are limited to the amounts that have been paid by cash, check, or other forms of payment, or that are determined due and will be paid to subcontractors—

(i) In accordance with the terms and conditions of a subcontract or invoice; and

(ii) Ordinarily within 30 days of the submission of the Contractor's payment request to the Government.

(3) The Government will exclude accrued costs of Contractor contributions under employee pension plans until actually paid unless—

(i) The Contractor's practice is to make contributions to the retirement fund quarterly or more frequently; and

(ii) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contribution remaining unpaid shall be excluded from the Contractor's total costs for progress payments until paid).

(4) The Contractor shall not include the following in total costs for progress payment purposes in paragraph (a)(1) of this clause:

- (i) Costs that are not reasonable, allocable to this contract, and consistent with sound and generally accepted accounting principles and practices.
- (ii) Costs incurred by subcontractors or suppliers.
- (iii) Costs ordinarily capitalized and subject to depreciation or amortization except for the properly depreciated or amortized portion of such costs.
- (iv) Payments made or amounts payable to subcontractors or suppliers, except for —

(A) Completed work, including partial deliveries, to which the Contractor has acquired title; and

(B) Work under cost-reimbursement or time-and-material subcontracts to which the Contractor has acquired title.

(5) The amount of unliquidated progress payments may exceed neither (i) the progress payments made against incomplete work (including allowable unliquidated progress payments to subcontractors) nor

(ii) the value, for progress payment purposes, of the incomplete work. Incomplete work shall be considered to be the supplies and services required by this contract, for which delivery and invoicing by the Contractor and acceptance by the Government are incomplete.

(6) The total amount of progress payments shall not exceed 80 percent of the total contract price.

(7) If a progress payment or the unliquidated progress payments exceed the amounts permitted by subparagraphs (a)(4) or (a)(5) of this clause, the Contractor shall repay the amount of such excess to the Government on demand.

(8) Notwithstanding any other terms of the contract, the Contractor agrees not to request progress payments in dollar amounts of less than \$2,500. The Contracting Officer may make exceptions.

(9) The costs applicable to items delivered, invoiced, and accepted shall not include costs in excess of the contract price of the items.

(b) Liquidation. Except as provided in the Termination for Convenience of the Government clause, all progress payments shall be liquidated by deducting from any payment under this contract, other than advance or progress payments, the unliquidated progress payments, or 80 percent of the amount invoiced, whichever is less. The Contractor shall repay to the Government any amounts required by a retroactive price reduction, after computing liquidations and payments on past invoices at the reduced prices and adjusting the unliquidated progress payments accordingly. The Government reserves the right to unilaterally change from the ordinary liquidation rate to an alternate rate when deemed appropriate for proper contract financing.

(c) Reduction or suspension. The Contracting Officer may reduce or suspend progress payments, increase the rate of liquidation, or take a combination of these actions, after finding on substantial evidence any of the following conditions:

(1) The Contractor failed to comply with any material requirement of this contract (which includes paragraphs (f) and (g) of this clause).

(2) Performance of this contract is endangered by the Contractor's —

(i) Failure to make progress or

(ii) Unsatisfactory financial condition.

(3) Inventory allocated to this contract substantially exceeds reasonable requirements.

(4) The Contractor is delinquent in payment of the costs of performing this contract in the ordinary course of business.

(5) The fair value of the undelivered work is less than the amount of unliquidated progress payments for that work.

(6) The Contractor is realizing less profit than that reflected in the establishment of any alternate liquidation rate in paragraph (b) of this clause, and that rate is less than the progress payment rate stated in subparagraph (a)(1) of this clause.

(d) Title.

(1) Title to the property described in this paragraph (d) shall vest in the Government. Vestiture shall be immediately upon the date of this contract, for property acquired or produced before that date. Otherwise, vestiture shall occur when the property is or should have been allocable or properly chargeable to this contract.

(2) "Property," as used in this clause, includes all of the below-described items acquired or produced by the Contractor that are or should be allocable or properly chargeable to this contract under sound and generally accepted accounting principles and practices.

(i) Parts, materials, inventories, and work in process;

(ii) Special tooling and special test equipment to which the Government is to acquire title;

(iii) Nondurable (i.e., noncapital) tools, jigs, dies, fixtures, molds, patterns, taps, gauges, test equipment, and other similar manufacturing aids, title to which would not be obtained as special tooling under paragraph (d) (2)(ii) of this clause; and

(iv) Drawings and technical data, to the extent the Contractor or subcontractors are required to deliver them to the Government by other clauses of this contract.

(3) Although title to property is in the Government under this clause, other applicable clauses of this contract; e.g., the termination clauses, shall determine the handling and disposition of the property.

(4) The Contractor may sell any scrap resulting from production under this contract without requesting the Contracting Officer's approval, but the proceeds shall be credited against the costs of performance.

(5) To acquire for its own use or dispose of property to which title is vested in the Government under this clause, the Contractor must obtain the Contracting Officer's advance approval of the action and the terms. The Contractor shall

(i) exclude the allocable costs of the property from the costs of contract performance, and (ii) repay to the Government any amount of unliquidated progress payments allocable to the property. Repayment may be by cash or credit memorandum.

(6) When the Contractor completes all of the obligations under this contract, including liquidation of all progress payments, title shall vest in the Contractor for all property (or the proceeds thereof) not—

(i) Delivered to, and accepted by, the Government under this contract; or

(ii) Incorporated in supplies delivered to, and accepted by, the Government under this contract and to which title is vested in the Government under this clause.

(7) The terms of this contract concerning liability for Government-furnished property shall not apply to property to which the Government acquired title solely under this clause.

(e) Risk of loss. Before delivery to and acceptance by the Government, the Contractor shall bear the risk of loss for property, the title to which vests in the Government under this clause, except to the extent the Government expressly assumes the risk. The Contractor shall repay the Government an amount equal to the unliquidated progress payments that are based on costs allocable to property that is lost (see 45.101).

(f) Control of costs and property. The Contractor shall maintain an accounting system and controls adequate for the proper administration of this clause.

(g) Reports, forms, and access to records. (1) The Contractor shall promptly furnish reports, certificates, financial statements, and other pertinent information (including estimates to complete) reasonably requested by the Contracting Officer for the administration of this clause. Also, the Contractor shall give the Government reasonable opportunity to examine and verify the Contractor's books, records, and accounts.

(2) The Contractor shall furnish estimates to complete that have been developed or updated within six months of the date of the progress payment request. The estimates to complete shall represent the Contractor's best estimate of total costs to complete all remaining contract work required under the contract. The estimates shall include sufficient detail to permit Government verification.

(3) Each Contractor request for progress payment shall:

(i) Be submitted on Standard Form 1443, Contractor's Request for Progress Payment, or the electronic equivalent as required by agency regulations, in accordance with the form instructions and the contract terms; and

(ii) Include any additional supporting documentation requested by the Contracting Officer.

(h) Special terms regarding default. If this contract is terminated under the Default clause, (i) the Contractor shall, on demand, repay to the Government the amount of unliquidated progress payments and (ii) title shall vest in the Contractor, on full liquidation of progress payments, for all property for which the Government elects not to require delivery under the Default clause. The Government shall be liable for no payment except as provided by the Default clause.

(i) Reservations of rights.

(1) No payment or vesting of title under this clause shall —

(i) Excuse the Contractor from performance of obligations under this contract or

(ii) Constitute a waiver of any of the rights or remedies of the parties under the contract.

(2) The Government's rights and remedies under this clause

(i) Shall not be exclusive but rather shall be in addition to any other rights and remedies provided by law or this contract and

(ii) Shall not be affected by delayed, partial, or omitted exercise of any right, remedy, power, or privilege, nor shall such exercise or any single exercise preclude or impair any further exercise under this clause or the exercise of any other right, power, or privilege of the Government.

(j) Financing payments to subcontractors. The financing payments to subcontractors mentioned in paragraphs (a)(1) and (a)(2) of this clause shall be all financing payments to subcontractors or divisions, if the following conditions are met:

(1) The amounts included are limited to—

(i) The unliquidated remainder of financing payments made; plus

(ii) Any unpaid subcontractor requests for financing payments.

(2) The subcontract or interdivisional order is expected to involve a minimum of approximately 6 months between the beginning of work and the first delivery; or, if the subcontractor is a small business concern, 4 months.

(3) If the financing payments are in the form of progress payments, the terms of the subcontract or interdivisional order concerning progress payments—

(i) Are substantially similar to the terms of this clause for any subcontractor that is a large business concern, or this clause with its Alternate I for any subcontractor that is a small business concern;

(ii) Are at least as favorable to the Government as the terms of this clause;

(iii) Are not more favorable to the subcontractor or division than the terms of this clause are to the Contractor;

(iv) Are in conformance with the requirements of FAR 32.504(e); and

(v) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if—

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(4) If the financing payments are in the form of performance-based payments, the terms of the subcontract or interdivisional order concerning payments—

(i) Are substantially similar to the Performance-Based Payments clause at FAR 52.232-32 and meet the criteria for, and definition of, performance-based payments in FAR Part 32;

(ii) Are in conformance with the requirements of FAR 32.504(f); and

(iii) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if—

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(5) If the financing payments are in the form of commercial item financing payments, the terms of the subcontract or interdivisional order concerning payments—

(i) Are constructed in accordance with FAR 32.206(c) and included in a subcontract for a commercial item purchase that meets the definition and standards for acquisition of commercial items in FAR Parts 2 and 12;

(ii) Are in conformance with the requirements of FAR 32.504(g); and

(iii) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if—

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(6) If financing is in the form of progress payments, the progress payment rate in the subcontract is the customary rate used by the contracting agency, depending on whether the subcontractor is or is not a small business concern.

(7) Concerning any proceeds received by the Government for property to which title has vested in the Government under the subcontract terms, the parties agree that the proceeds shall be applied to reducing any unliquidated financing payments by the Government to the Contractor under this contract.

(8) If no unliquidated financing payments to the Contractor remain, but there are unliquidated financing payments that the Contractor has made to any subcontractor, the Contractor shall be subrogated to all the rights the Government obtained through the terms required by this clause to be in any subcontract, as if all such rights had been assigned and transferred to the Contractor.

(9) To facilitate small business participation in subcontracting under this contract, the Contractor shall provide financing payments to small business concerns, in conformity with the standards for customary contract financing payments stated in Subpart 32.113. The Contractor shall not consider the need for such financing payments as a handicap or adverse factor in the award of subcontracts.

(k) Limitations on undefinitized contract actions. Notwithstanding any other progress payment provisions in this contract, progress payments may not exceed 80 percent of costs incurred on work accomplished under undefinitized contract actions. A “contract action” is any action resulting in a contract, as defined in Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes. This limitation shall apply to the costs incurred, as computed in accordance with paragraph (a) of this clause, and shall remain in effect until the contract action is definitized. Costs incurred which are subject to this limitation shall be segregated on Contractor progress payment requests and invoices from those costs eligible for higher progress payment rates. For purposes of progress payment liquidation, as described in paragraph (b) of this clause, progress payments for undefinitized contract actions shall be liquidated at 80 percent of the amount invoiced for work performed under the undefinitized contract action as long as the contract action remains undefinitized. The amount of unliquidated progress payments for undefinitized contract actions shall not exceed 80 percent of the maximum liability of the Government under the undefinitized contract action or such lower limit specified elsewhere in the contract. Separate limits may be specified for separate actions.

(l) Due date. The designated payment office will make progress payments on the (Contracting Officer

insert date as prescribed by agency head; if not prescribed, insert “30th”) day after the designated billing office receives a proper progress payment request. In the event that the Government requires an audit or other review of a specific progress payment request to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the specified due date. Progress payments are considered contract financing and are not subject to the interest penalty provisions of the Prompt Payment Act.

(m) Progress payments under indefinite—delivery contracts. The Contractor shall account for and submit progress payment requests under individual orders as if the order constituted a separate contract, unless otherwise specified in this contract.

(End of clause)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

ACQUISITION.GOV

(End of clause)

52.252-4 ALTERATIONS IN CONTRACT (APR 1984)

Portions of this contract are altered as follows:

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of “(DEVIATION)” after the date of the clause.

(b) The use in this solicitation or contract of any insert regulation name (48 CFR) clause with an authorized deviation is indicated by the addition of “(DEVIATION)” after the name of the regulation.

(End of clause)

Section J - List of Documents, Exhibits and Other Attachments

LIST OF ATTACHMENTS

| <u>Documentation Date</u> | <u>Title</u> | <u>Revision Date</u> |
|---------------------------|---|----------------------|
| Attachment 1 | AS41 Spaces | |
| Attachment 2 | Task List | |
| Attachment 3 | Final Berth Location | |
| Attachment 4 | Reserved | |
| Attachment 5 | Staffing Plan without Cost/Price | |
| Attachment 6 | Staffing Plan with Cost/Price | |
| Attachment 7 | Past Performance Questionnaire | |
| Attachment 8 | Past Performance Information Form | |
| Attachment 9 | Contractor Performance Customer Input Sheet Questionnaire | |
| Attachment 10 | DD254 | |
| Attachment 11 | QASP | |
| Exhibit A | CDRLs | |

EXHIBIT 31.1

CERTIFICATIONS

I, Mark Duff, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Perma-Fix Environmental Services, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 12, 2021

/s/ Mark Duff

Mark Duff

Chief Executive Officer, President, and Principal Executive Officer

CERTIFICATIONS

I, Ben Naccarato, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Perma-Fix Environmental Services, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 12, 2021

/s/ Ben Naccarato

Ben Naccarato
Executive Vice President, Chief Financial Officer and Principal Financial Officer

EXHIBIT 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Perma-Fix Environmental Services, Inc. ("PESI") on Form 10-Q for the quarter ended September 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Form 10-Q"), I, Mark Duff, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Form 10-Q fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §78m or §78o(d)); and
- (2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 12, 2021

/s/ Mark Duff

Mark Duff
Chief Executive Officer, President and
Principal Executive Officer

This certification is furnished to the Securities and Exchange Commission solely for purpose of 18 U.S.C. §1350 subject to the knowledge standard contained therein, and not for any other purpose.

EXHIBIT 32.2

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Perma-Fix Environmental Services, Inc. ("PESI") on Form 10-Q for the quarter ended September 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Form 10-Q"), I, Ben Naccarato, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Form 10-Q fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §78m or §78o(d)); and
- (2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 12, 2021

/s/ Ben Naccarato

Ben Naccarato

Executive Vice President, Chief Financial Officer and
Principal Financial Officer

This certification is furnished to the Securities and Exchange Commission solely for purpose of 18 U.S.C. §1350 subject to the knowledge standard contained therein, and not for any other purpose.
