

RESOLUTION NO. 2023- 472

A RESOLUTION AWARDING A NEGOTIATED CONTRACT TO CHASE ENVIRONMENTAL GROUP, INC., LENOIR CITY, TN, FOR DECONTAMINATION, REMOVAL AND DISPOSAL OF ABANDONED RADIUM VESSELS, CONTAINERS EQUIPMENT & APPURTENANCES.

WHEREAS, the City of Vineland has heretofore advertised for bids for Decontamination, Removal and Disposal of Abandoned Radium Vessels, Containers Equipment & Appurtenances (COV BID #2023-09), in accordance with specifications on file in the office of the Purchasing Agent; and

WHEREAS, on July 7, 2021, and April 20, 2023, no bids were received in response to said advertisements; and

WHEREAS, in accordance with 40A:11-5(3)(a) the governing body approved Resolution No. 2023-416 authorizing the Purchasing Agent and/or Authorized Water Utility Staff to negotiate and award a contract for the same; and

WHEREAS, the Business Administrator has, under date of October 1, 2023 submitted a written report of said negotiations and it is recommended that a contract for Decontamination, Removal and Disposal of Abandoned Radium Vessels, Containers Equipment & Appurtenances be awarded to Chase Environmental Group, Inc., Lenoir City, TN, in the amount of \$407,415.00; now, therefore

BE IT RESOLVED by the Council of the City of Vineland that (by the affirmative vote of two-thirds of the full membership of the governing body of the City of Vineland) that said negotiated contract for Decontamination, Removal and Disposal of Abandoned Radium Vessels, Containers Equipment & Appurtenances be awarded to Chase Environmental Group, Inc., Lenoir City, TN, in the amount of \$407,415.00 and the Purchasing Agent is hereby authorized and directed to issue a purchase order contract for the same on behalf of the City of Vineland.

BE IT FURTHER RESOLVED, the Chief Financial Officer has certified that the funds for the contract to be awarded herein are available.

Adopted:

President of Council

ATTEST:

City Clerk



October 1, 2023

REPORT TO: THE MAYOR AND COUNCIL

RE: Negotiated Contract Award

Dear Mayor and Members of Council:

Submitted to you herewith for your consideration is our report of the contract negotiations conducted by the Purchasing Agent and Authorized Water Utility Staff for the following:

DECONTAMINATION, REMOVAL AND DISPOSAL OF ABANDONED RADIUM VESSELS, CONTAINERS EQUIPMENT & APPURTENANCES

On two (2) separate occasions, July 7, 2021, and April 20, 2023, no bids were received in response to advertisements. Per Resolution No. 2023-416, the Purchasing Agent and Authorized Water Utility Staff were authorized to conduct negotiations and recommend award of a contract for the above.

It is the recommendation of the Director of Municipal Utilities, which has the concurrence of the Purchasing Agent and the Business Administrator that the negotiated contract be awarded to Chase Environmental Group, Inc., Lenoir City, TN, in the amount of \$407,415.00.

We trust that the above recommendation will receive your favorable consideration and that the recommended resolution will be adopted as presented.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Robert E. Dickenson, Jr.", is written over the typed name.

Robert E. Dickenson, Jr.
Business Administrator

RD/wr





BID EVALUATION FORM

DEPARTMENT Water Utility

Date: 9-15-23

The undersigned recommends that a contract be awarded for the following:

1. Bid Title: Radium Treatment Equipment Removal

2. Amount to be Awarded: \$407,415.00

- Encumber Total Award
- Encumber by Supplemental Release

3. Engineer's Estimate: N/A

4. Amount Budget: \$ 410,000.00

5. Account Number to be Charged: 3-07-55-512-8002-52000--

W313 - \$ 275K
W-400 - 132,415⁰⁰
\$407,415⁰⁰

6. Date Bids Received: 8-8-23

7. Date to be Awarded: 9-26-23

8. Recommended Vendor: Chase Enviornmental

9. Is Recommended Vendor the Apparent Lowest Bidder? Yes No

10. Comments/Special Instructions: - Prior Bids Rejected by Resolution AS incomplete

11. Evaluation Performed by: Water Utility Staff

12. Approved By: *John Lallu*

13. Attached: (Check-Off List)

- Tabulation of Bids Scope of Work + Quotation
- Justification for Vendor Recommendation (if applicable)
- Evaluation Data (if applicable)

Send copies to:
Purchasing Division
Business Administration

PROPOSAL FOR RADIUM TREATMENT EQUIPMENT REMOVAL

City of Vineland
640 E. Wood Street
Vineland, NJ 08362-1508

August 08, 2023

Prepared by:



Chase Environmental Group, Inc.
200 Sam Rayburn Parkway
Lenoir City, TN 37771
(865) 816-6015

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1.0 INTRODUCTION

The City of Vineland, NJ (COV) has two sites located at 330 E. Walnut Road and 2180 Helen Avenue with equipment and soils that are impacted by radioactive radium from a water treatment system. In June 2020, a contractor conducted a radiological survey at both sites. In May 2022, the New Jersey Department of Environmental Protection (NJDEP) performed soil sampling at the 2180 Helen Avenue Site.

At the 330 E. Walnut Road Site, there are three Seavan containers that were previously utilized to store spent radium removal treatment media that are contaminated with Pb-210 from the decay of radon gas that escaped the stored resin packages.

At the 2180 Helen Avenue Site, there are vessels, equipment, and materials stored outside, as well as known locations of contaminated soils. Two polyethylene vessels are known to contain approximately four hundred gallons of residual water.

Chase proposes to radiologically survey and free release as clean scrap miscellaneous piping and equipment that meet the release criteria at the Helen Avenue site. All other materials from both sites will be shipped off-site to Unitech Services, a licensed radioactive waste processing facility, for disposition under the provisions of their Tennessee radioactive materials license. The processor will disassemble, size reduce, and evaluate the most economical disposition option for each item such as radiological survey for release, decontamination and release, or land disposal. This approach allows for dismantlement and decontamination to be performed indoors in a facility with ventilation and containment features designed to control radioactive materials. Shipping all materials off-site provides the following advantages:

- shorter duration of on-site work
- lower occupational safety risk
- no onsite confined space entries
- no onsite hot work or metal cutting.
- lower risk of environmental releases onsite

After removal of all equipment from the sites, Chase will remediate the previously identified contaminated soils at the Helen Avenue Site. Chase will conduct a radiological survey of the potentially impacted grounds to document the radiological conditions of the sites, and to identify other locations that require remediation, if any. If the sites meet the radiological release criteria, the survey will be used as a final status survey (FSS) to document that the site is releasable.

All on-site radiological work will be performed under Chase's Commonwealth of Kentucky radioactive materials license number 201-605-15 utilizing a reciprocal agreement with the NJDEP. Chase will develop a Radiological Work Plan using the applicable guidance provided in NUREG 1757, "Consolidated NMSS Decommissioning

Guidance,” NUREG 1575, “Multi-Agency Radiation Survey and Site Investigation Manual” (MARSSIM), other NRC guidance, and NJDEP regulations. The Plan will provide the approach, methods, and techniques for all radiological activities.

2.0 RADIOLOGICAL RELEASE CRITERIA

The following release criteria are contained in NJAC 7:28-12.8 and apply to the outside grounds:

“Radiation dose standards applicable to remediation of radioactive contamination of all real property:

- (a) Sites shall be remediated so that the incremental radiation dose to any person from any residual radioactive contamination at the site above that due to natural background radionuclide concentration, under either an unrestricted use remedial action, limited restricted use remedial action, or a restricted use remedial action, shall be as specified below:
 1. For the sum of annual external gamma radiation dose (in effective dose equivalent) and intake dose (in committed effective dose equivalent), including the groundwater pathway: 15 millirem (0.15 milliSievert) total annual effective dose equivalent (15 mrem/yr TEDE)
 2. For radon-222: three picocuries per liter (pCi/L) of radon gas (111 Bq/m³).
- (b) Radioactively contaminated ground water shall be remediated to comply with the New Jersey Groundwater Quality Standards rules, N.J.A.C. 7:9C.
- (c) Radioactively contaminated surface water shall be remediated to comply with the New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B-1.14(c)6.”

3.0 SCOPE OF WORK

Chase proposes to provide the qualified staff, on-site and off-site labor, materials and equipment needed to ensure full compliance with the Chase radioactive materials license, NJDEP regulations, NRC guidance documents and industry standard practices. The proposed scope of work consists of the following elements:

- Initiate discussions with NJDEP and COV to confirm the project approach, particularly the establishment of radiological criteria for release.
- Develop a comprehensive Radiological Work Plan for submittal to NJDEP.

- Establish a reciprocal agreement with NJDEP to perform on-site activities under the Chase license.
- Mobilize to the site.
- Seal any openings on Seavan containers at the E. Walnut Road site.
- Load and ship (3) Seavan containers at the E. Walnut Road site for disposal.
- Perform radiological free release surveys on (2) controls panels, (1) platform ladder, and miscellaneous piping at the Helen Avenue site. Items meeting the release criteria will be turned over to COV as clean scrap.
- Prepare equipment and materials at the Helen Avenue site that did not qualify for free release for shipment by placing loose piping inside vessels and sealing all equipment openings.
- Solidify, or pump to a suitable drain approved by COV radioactive materials license, water in the polyethylene vessels at the Helen Avenue Site.
- Size reduce and package polyethylene vessels at the Helen Avenue site.
- Perform soil remediation on previously identified radium contaminated area at the Helen Avenue Site.
- Ship all radioactive waste materials from the Helen Avenue site off-site for disposal.
- Provide COV copies of all shipping papers, transportation permits, manifests processor receipt documentation and certificates of disposal.
- COV to locate and mark utilities and identify any buried structures. Sample depth is expected to be between one and two feet.
- Perform GPS-based gamma scans of potentially impacted outdoor areas and investigate any locations of elevated detector response.
- Collect soil samples at locations based on gamma scan results and at MARSSIM-based grid locations if survey results indicate the site is likely to meet the radiological release criteria.
- Perform total and removable surface activity measurements of potentially impacted outdoor structures (paved areas).
- Based on the survey data develop a Remediation Plan, if required, or prepare a Final Status Report for submittal to NJDEP if the sites meet the radiological release criteria.
- Demobilize personnel, equipment, and materials from the site.

The scope of work will be conducted according to the work breakdown structures described below.

3.1 Pre-Mobilization

Chase visited the sites and collected information important to planning the project. Chase performed physical measurements, determined sealing and packaging requirements, and determined steps necessary to make Seavan containers roadworthy, etc. A subcontracted rigging company accompanied Chase to inspect the sites to determine the site layout and logistics required to load the equipment.

Chase will assist COV in discussions with NJDEP to agree on the project approach. A Radiological Work Plan will be developed using the guidance provided in NUREG 1757, "Consolidated NMSS Decommissioning Guidance", NUREG 1575, "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM), and NJAC 7:28-12, "Remediation Standards for Radioactive Materials." The Plan will provide the approach, methods, and techniques for the radiological decommissioning of impacted areas of the sites.

Chase will prepare the required project plans and procedures, develop job safety analyses, procure equipment and supplies, establish vendor accounts, and ensure all employees are up to date on all necessary training and physicals. After NJDEP approval of the Work Plan, Chase will perform all steps necessary to implement their Kentucky radioactive materials license at the site under a reciprocal agreement with NJDEP.

3.2 Mobilization

Chase will mobilize personnel and equipment to the site. COV will provide Chase an office, equipment staging area, restroom facilities, and parking for a 32-ft equipment trailer and pickup truck or a cargo van.

3.3 Equipment and Soil Removal

For the Walnut Road Site, Chase will prepare the sea van containers for transport. This is expected to consist of patching a few small holes. Chase will subcontract a rigging company to remove the Seavan containers 410626-4G1, 4068600-4310 and 423267-0 and place them onto trucks provided by Chase.

For the Helen Avenue Site, Chase proposes to attempt to radiologically survey and free release the miscellaneous piping, control panels and platform ladder. Any items that do not meet the radiological criteria for free release will be shipped as radioactive waste. The items at the Helen Avenue site are as follows.

- Large Vessels 1 thru 8
- Small Vessels 9 and 10
- (2) Polyethylene Tanks with approximately 400 gallons of residual water
- Miscellaneous Piping
- (1) Platform Ladder

- (2) Control Panels
- Contaminated Soil

The liquid in the polyethylene tanks will be solidified or pumped to a drain approved by COV radioactive materials license, and the polyethylene tanks will be sized reduced and packaged into appropriate waste packaging. The contaminated soils identified by NJDEP samples VINE-05, VINE-06, collected from the adjacent residence; and VINE-01, VINE-02, VINE-03, and VINE-08, collected at the corner of COV owned property next to the doghouse and chicken coop will be remediated. The vessels will have the openings sealed and the lids bolted. Chase proposes to ship the vessels, remediated soil, polyethylene tanks, solidified water if necessary, and any items that did not qualify for free release to the processing or disposal facility licensed to accept the items. Chase will subcontract a rigging company to remove the skids and waste packages and place them onto trucks provided by Chase.

At the processing facility in Tennessee, the processor will dismantle, sort and segregate equipment to achieve the most economical disposition, potential disposition options are:

- Bulk Survey for Release (BSFR) disposal at a Tennessee landfill.
- Decontaminate and BSFR disposal at a Tennessee landfill.
- Dispose at a licensed/permitted disposal site.

Chase will provide COV copies of all shipping papers, transportation permits, manifests processor receipt documentation and certificates of disposal.

3.4 Final Status Surveys

Once all radiologically contaminated equipment, components, and previously identified soils have been removed from the sites, Chase will perform radiological surveys of the sites to meet the data quality objectives of the FSS. If the sites meet the release criteria, the survey will be used as the FSS. If further site remediation is required based on the scan survey results, then the survey will be used to determine the remediation required to release the site and the FSS will be completed after remediation.

The FSS protocol will be developed using the guidance provided in NUREG 1757, "Consolidated NMSS Decommissioning Guidance" and NUREG 1575, "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM), NJDEP Field Sampling Procedures Manual Chapter 12, and N.J.A.C. 7:28-12. FSSs will be designed to implement the protocols and guidance provided in MARSSIM to demonstrate compliance with the release criteria.

The survey protocol for outside grounds will consist of gamma scans with a GPS-based 2" x 2" sodium iodide gamma scintillation detector. The results of the scans will be used to determine locations for soil samples to be analyzed by gamma spectroscopy at an off-site laboratory. Outdoor hard surfaces such as asphalt and concrete will also be surveyed for

surface contamination with gas flow proportional detectors. A background reference area with similar features will be surveyed to provide a basis for comparison to naturally occurring radioactivity in the environment.

3.4.1 Instrumentation

Laboratory and portable field instruments will be calibrated at least annually with National Institute of Standards and Technology (NIST) traceable sources, where feasible, and to radiation emission types and energies that will provide detection capabilities similar to the nuclides of concern. Functional checks will be performed at least daily when in use and compared with the acceptance range for instrument and site conditions.

The instrumentation used for radiological surveys is summarized in the tables below.

Table 3-1: Instrumentation Specifications

Detector Model	Detector Type	Detector Area (cm ²)	Meter Model	Window Thickness (mg/cm ²)	Typical Total Efficiency
Ludlum 43-37 Floor Monitor	Gas Flow Proportional	584	Ludlum 2241-3	0.8	10.6%
Ludlum 43-10-1	Phoswich	N/A	Ludlum 2929	0.4	23% Tc-99 35% Th-230
Ludlum 44-10	2" x 2" Sodium Iodide	N/A	Ludlum 2241	N/A	N/A

Table 3-2: Typical Instrument Operating Parameters and Sensitivities

Measurement Type	Detector Model	Scan Rate (in/s)	Count Time (s)	Bkg. Time (s)	Bkg. (cpm)	MDC (dpm/100cm ²)
Alpha + Beta Surface Scans	Ludlum 43-37	3.3	N/A	60	950	600
Alpha + Beta Total Surface Activity	Ludlum 43-37	N/A	6	60	950	594
Alpha Removable Activity	Ludlum 2929	N/A	18	60	1	48
Gamma Scans	Ludlum 44-10	0.5 m/s	N/A	60	10,000	Qualitative

3.4.2 Gamma Scan Surveys

Chase will perform GPS-correlated gamma surveys of outside grounds to determine the existing radiological conditions of the sites and the background reference area. Collection of GPS position-correlated data is contingent upon the availability of a GPS signal. Should GPS not be available, the areas will require measurements on a grid system.

The surveyor will scan the surface using a 2" x 2" sodium iodide gamma scintillation detector to measure and record ambient gamma radiation levels. The surveyor will systematically travel over accessible areas with the detector held within four inches from the surface and the instrument's audio function active. In general, the surveyor will walk at a rate of one meter/second or less along transect lines that are separated by no more than one meter.

Outdoor GPS position-correlated survey results will be color coded and superimposed on an aerial photo of the property and provided in the final status report (FSR). An example is included below that presents the data recorded during a gamma scan performed on the roof of a manufacturing facility. The map shows clear trends that can be used to investigate contaminant migration paths.

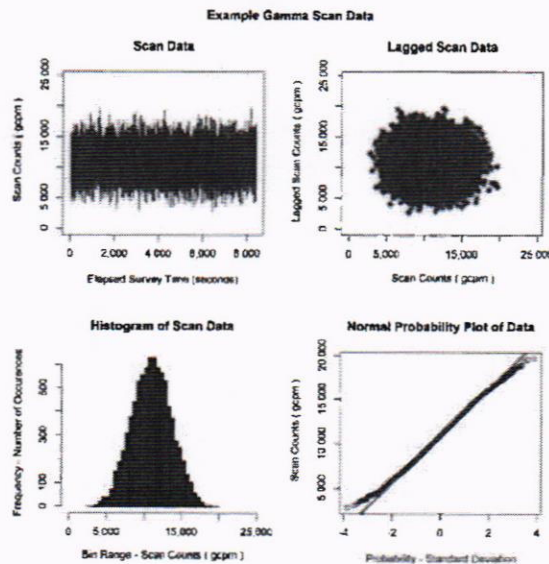


Logged data will also be downloaded and processed to perform data analyses and reporting. Reporting includes graphical (4-plot) presentation of scan data as well as summary statistics functions. The 4-Plot is described in the NIST e-Handbook of Statistical Methods. (<http://www.itl.nist.gov/div898/handbook/index.htm>)

A 4-plot consists of the following:

- A run **sequence plot** presents logged data in chronological order, providing a time history of the survey data.
- A **lag plot** checks whether a data set or time series is random or not. Random data should not exhibit any identifiable structure in the lag plot. Non-random structure in the lag plot indicates that the underlying data are not random.
- A **histogram plot** graphically summarizes the distribution of a univariate data set, showing center (i.e., the location) of the data, spread (i.e., the scale) of the data, skewness of the data, presence of outliers, and presence of multiple modes.
- A **probability plot** is a goodness-of-fit test used to verify the distributional model. The normal probability plot is a graphical technique for assessing whether or not a data set is approximately normally distributed. The data are plotted against a theoretical normal distribution in such a way that the points should form an approximate straight line. Departures from this straight line indicate departures from normality.

An example 4-plot is presented below:



3.4.3 Soil Sampling

GPS survey results will be used to design a soil sampling scheme. Because the number of samples is uncertain, soil sample analytical (gamma spectroscopy) is assumed at sixty samples total for both sites and the background reference area.

Sample Collection

After verifying that COV identified and marked underground utilities, Chase will collect soil samples using a core sampler coupled with a rotary hammer or hand auger. Samples will be collected to a maximum depth of two feet or refusal of the sampler to advance. Acetate sleeves will be used to line the core sampler and collect the sample.

Where practical, sample locations will be based on MARSSIM protocols in a triangular grid pattern. A triangular grid pattern provides slightly better statistical performance than a square grid pattern regarding the elevated measurement comparison.

Chain of Custody and Sample Management

Samples sent off-site for analysis will use an approved Chain of Custody Procedure. The sample chain-of-custody maintains the integrity of the sample; that is, there is an accurate record of sample collection, transport, analysis, and disposal. This ensures that samples are neither lost nor tampered with, and that the sample analyzed in the laboratory is actually and verifiably the sample taken from a specific location in the field.

Sample Analysis

Sample analysis will be performed at Teledyne Brown Engineering (TBE) in Knoxville, TN on standard turnaround times. TBE is a NJDEP-approved lab for gamma spectroscopy. Samples will be sealed for a minimum of 21 days to allow for the ingrowth of radium progeny and then counted for radioactivity by gamma spectroscopy analysis.

3.4.4 Outdoor Structure Surveys

Chase will perform alpha + beta surface contamination measurements on potentially impacted asphalt and concrete surfaces. Surveys will be conducted by performing the appropriate combination of scan surveys, total activity measurements and removable activity measurements.

Surface Scan Surveys

Alpha + beta scan surveys will be conducted by moving the gas flow proportional detector probe at a distance of about 1/8 inch from the surface at the prescribed scan rate and listening for an increase in the audible response. Any increase in the audible count rate will be investigated.

Total Surface Activity Measurements

Static measurements for total surface activity will be performed by conducting a timed count on the surface to be measured. Static measurements will be used for survey unit statistical analyses and to determine compliance with release criteria. The number and location of static measurements will be determined by MARSSIM protocols.

Removable Contamination Measurements

Removable contamination measurements (smears) will be collected at each static measurement location. Removable contamination measurements will be collected by wiping an area of approximately 100 cm² using paper discs and counting for radioactivity.

3.5 Additional Remediation (if Required)

If one or both sites does not meet the release criteria after receiving soil sample results from the laboratory, Chase will design a remediation plan and provide a proposal to COV. Remediation would be conducted by removing contaminated soils and/or structures and shipping to a processing or disposal facility licensed to accept the material.

3.6 Demobilization

Upon completion of on-site work, Chase will ship equipment and supplies, and demobilize personnel. The Chase Project Manager will walk down the jobsite with a COV representative at the conclusion of work to ensure the sites are left in an acceptable condition.

3.7 Final Status Report

At the completion of FSS, a FSR will be developed. The content specified in NUREG-1757 will be included as applicable. The report will be reviewed for technical content by Chase personnel and an independent technical person prior submitting to COV and ultimately to the NJDEP. The report will describe all project activities, provide the results of all measurements, summarize survey data, provide an analysis of the data, and present conclusions.

4.0 ASSUMPTIONS

Cost and schedule estimates are based on the following assumptions:

- On-site activities will be performed under the Chase State of Kentucky mobile decommissioning license utilizing a reciprocal agreement with the NJDEP.
- The radionuclides of interest at the site are Ra-226, Ra-228, and Pb-210.
- The previously identified soil contamination area at the Helen Avenue site will not require more than four cubic feet (4.0 ft³) of remediation to a maximum depth of one foot that can be performed by utilizing shovels.
- COV will obtain written permission from the property owner to access the neighboring property to remediate, survey and sample contaminated soils, and provide a copy of the access agreement to Chase. COV will arrange to move the chicken coop and doghouse from the neighboring property to allow access for soil remediation and survey.
- COV will remove interference to allow free and clear access to perform the scope of work, including removing the plows and pallets in front of the single Seavan container,

- The vegetation around the skids, polyethylene tanks, discarded piping, and the fence line around the skid area, and any interfering tree branches over the vessels, will be cleared by COV prior to Chase mobilization.
- Other than known locations of contaminated soils, soils and outdoor structures meet the release criteria (no additional remediation will be required). If one or both sites do not meet the release criteria Chase will design a remediation plan and provide a proposal to perform remediation to COV.
- COV will provide Chase an office, equipment staging area, restroom facilities, parking for a 32-ft equipment trailer, and parking for a company pickup truck.
- COV will provide unescorted access to Chase employees for ten-hour workdays.
- COV will identify a suitable background reference area that is not impacted by radioactive materials.
- COV will provide 120V, 20A electrical service.
- Chase is not responsible for weather delays.
- Seavan containers require minimal preparation to make roadworthy (e.g., patch a few small holes).
- Large vessel skids are 15,000 lbs. each.
- The small vessel skid is 10,000 lbs.
- Polyethylene tanks are 1,500 lbs. each.
- The tare weights of the Seavan containers are as stenciled on the doors.
- Chase is not responsible for any damages to asphalt, curbs, landscaping, etc. caused by the crane.
- **DAMAGE TO EXISTING MAN-MADE OBJECTS** - It shall be the responsibility of COV or duly authorized representative to disclose the presence and accurate location of all hidden or obscure man-made objects relative to our work. This includes subsurface utilities and drains delineated throughout the property. Chase field personnel are trained to recognize clearly identifiable stakes or markings in the field, and without special written instructions, to initiate work within a reasonable distance of each designated location. If Chase is cautioned, advised, or given data in writing that reveals the presence or potential presence of underground or over-ground obstructions, such as utilities, Chase will give special instructions to its field personnel. As evidenced by COV's acceptance of this proposal, COV agrees to indemnify and save harmless Chase from all claims, suits, losses, personal injuries, death and property liability resulting from unusual subsurface conditions or damages to subsurface structures, owned by COV or third parties, occurring in the performance of the proposed services, whose presence and exact locations were not revealed to Chase in writing, and to reimburse Chase for expenses in connection with any such claims or suits, including reasonable attorney's fees.
- No hazardous or biological materials will be encountered during the scope of work.

- Soil samples for gamma spectroscopy analysis on standard turnaround times will be required for FSS.
- There will be no hazardous materials or chemical analysis of soils required for release or disposal.
- Restoration performed by Chase will consist of filling sample holes with Bentonite. COV is responsible for backfilling any locations of soil remediation.
- There are no federal, state, or local travel restrictions and/or isolation/testing or other COVID-related requirements to access the site to perform the scope of work.
- There are no costs included for bonding.

5.0 SCHEDULE

Upon receipt of a purchase order, Chase will begin preparation work and schedule a mutually agreeable date to mobilize to the site. On-site equipment removal and grounds survey activities are expected to take three days. Laboratory analysis will take approximately 30 days. The final report will be submitted approximately two weeks after receipt of all data.

6.0 PRICING

Scope items that can be accurately determined are proposed on a fixed-price basis. Some of the scope items cannot be accurately determined prior to performing work; therefore, those items are proposed on a unit rate basis as described below.

Fixed Price Services

Chase proposes to complete Licensing, Planning, Mobilization, Demobilization, Transportation, and Final Status Report for a firm-fixed price of **\$51,536** based on the breakdown below.

Pre-Mobilization (Licensing, Planning and Preparation)	\$16,030
Site Walkdown	\$9,325
Mobilization	\$11,076
Waste Packaging and Solidification Media for Water	\$2,040
Demobilization	\$7,435
Final Status Report	\$5,450

Unit Rate Services

Chase proposes to complete On-Site Activities, Subcontracted Rigging Services, Soil Sample Analysis, and Waste Packaging and Disposal on a unit rate basis according to the rates below.

Daily On-Site Rate (Includes Crane).....	\$13,448.00/per day
Waste Packaging for Polyethylene Tanks.....	\$552.00/each
Lift Plan (As Required by COV).....	\$180.00/each
Soil Sample Analysis (Standard Turnaround Time).....	\$125.00/each
Transportation (Six Trucks).....	\$54,814.00 ¹
Waste Disposal (Bulk Survey for Release).....	\$1.01/lb.
Waste Disposal (Decontamination and Bulk Survey for Release)...	\$1.90/lb.
Waste Disposal (Licensed/Permitted Disposal)	\$2.59/lb.

Total Project Estimated Costs

To provide COV with a reasonable range of potential outcomes, Chase has estimated the total project cost for three scenarios. The scenarios assume nine lift plans, three days onsite, sixty soil samples for analysis, five waste packages for polyethylene tanks, six trucks for waste transportation, and ninety-six thousand two hundred forty pounds (96,240lbs.) of waste.

Scenario 1: All equipment will be disposed by BSFR	\$255,837.00
Scenario 2: All equipment will be decontaminated and disposed of by BSFR.	\$341,250.00
Scenario 3: All equipment will be disposed by Licensed/Permitted Disposal	\$407,415.00

Project not to exceed \$407,415.00

7.0 TERMS

This proposal is valid for 60 days. Payment is due upon receipt of our invoice. If payment is not received within 30 days from the invoice date, Client agrees to pay a finance charge on the principal amount of the past due account of one and one-half percent per month plus any applicable collection fees including attorney and expert charges. If one and one-half percent per month exceeds the maximum allowed by law, the charge shall automatically be reduced to the maximum legally allowable.

¹ Fuel prices are projected to be very volatile going forward. Waste transportation costs are determined using current fuel pricing; if fuel prices are significantly different at the time of shipment, transportation pricing may be adjusted using the National Average Diesel Fuel Index, published by the Energy Information Administration of the U.S. Department of Energy (DOE).