Florida Department of Environmental Protection

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Sent Via E-Mail
EDuquette@Triumvirate.com

March 15, 2018

Ms. Emily Duquette
Triumvirate Environmental, Inc.
200 Inner Belt Road
Somerville, Massachusetts 02143-4416

Re: FLD 980 559 728
Triumvirate Environmental, Inc.
10100 Rocket Boulevard
Orlando, Florida 32824-8520

Subject: **Financial Responsibility Compliance for 2018**

Dear Ms. Duquette:

The Department has received the documentation submitted to demonstrate financial responsibility for the above referenced facility. The fifth rider to Lexon Insurance Company financial guarantee bond number 1024295, effective February 7, 2018, indicates an amount of **$169,533** to cover the inflation adjusted closure cost. The corresponding standby trust fund agreement was established on September 2, 2011 between Triumvirate Environmental, as Grantor, and Webster Bank, as Trustee. In addition, the Ironshore Specialty Insurance Company certificate of liability insurance policy number 002615002, effective December 31, 2017, demonstrates the required coverage for sudden accidental occurrences.

Therefore, Triumvirate Environmental of Orlando, Florida is in compliance with the hazardous waste facility financial responsibility requirements of 40 CFR Part 264 Subpart H, as adopted by reference in Rule 62-730.180 of the Florida Administrative Code.

If you have any questions, please contact me at 850-245-8793.

Sincerely,

Edgar Echevarría

Edgar Echevarría
Permitting & Compliance Assistance Program
Division of Waste Management

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for

SECTIONS

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K. CLOSURE

The applicant must provide the following information in accordance with 40 CFR Part 264, Subpart G. [270.14(b)(13)]

I. *Attach the following information to meet the closure performance standard of 40 CFR 264.111. 40 CFR 264.111 requires controlling, minimizing, or eliminating to the extent necessary to protect human health and the environment post-closure escape of hazardous waste, hazardous constituent, leachate, contaminating run-off, or hazardous waste decomposition products to the ground water, surface waters, or to the atmosphere. The closure plan 1264.1121 must include all of the information required in Part H, Sections A through 1 [270. 14(b)(13)] :*

a. *A description of how the applicant will close each hazardous waste management unit at the facility in accordance with 40 CFR 264.111;*

b. *A description of how the applicant will conduct final closure of the facility in accordance with 40 CFR 264.111. The description must identify the maximum extent of the operations during the active life of the facility;*

Items a. and b. above refer to the same requirement: closure performance standard in the 40 CFR 264.111. This part of the application is identified as II.K.1.a/b, and it addresses the requirements contained in both items a. and b. above.

CLOSURE PERFORMANCE

PERMIT APPLICATION SECTION II.K.1.a/b.

This plan is designed to complete closure of the facility to achieve clean closure. A detailed description of how the facility will conduct closure activities to achieve this goal is provided. Closure operations include removal of inventory, decontamination of equipment and structures, and verification that contamination has been removed from equipment, structures, and potentially impacted soils. The plan addresses closure operations for the container storage unit, the consolidation pad/areas, the stabilization equipment and Transfer Waste areas. Information for units and areas that need to be closed include considerations necessary to determine the type and extent of activities required to complete closure. The maximum extent of the operations conducted during the active life of the facility consists of the permitted operations to process the permitted wastes in the units and areas that are to be closed.

The plan for removal of inventory of hazardous waste will be based on the maximum quantity of the wastes permitted for storage in every unit. The inventory removal plan addresses transportation and disposal methods of the waste at off-site facilities, including identification of such facilities and distance considerations.

Methods selected in this plan to decontaminate the waste management units will be designed for maximum reduction of hazardous waste constituents in the structures, and minimum generation of clean up waste. The objective of the decontamination plan for the areas and equipment used to store and treat hazardous waste is to remove contamination, so the areas and equipment can be put to other uses, recycled, or recovered.

Before areas are put to other uses, the areas will be evaluated to determine whether the closure performance standards have been satisfied. The evaluation procedures consist of taking samples from a medium representative of the type and extent of contamination in the area that has been decontaminated. Samples will be tested using appropriate analysis methods for the parameters of concern.

Closure performance criteria are as follows:

- Final Rinsewaters: When the facility starts the closure process The State of Florida will be notified and the levels for rinse water will be discussed with The State of Florida at that time.
- Soil: Table II Soil Cleanup Target Levels for Chapter 62-777, F.A.C.,

c. *An estimate of the maximum inventory of wastes ever onsite over the active life of the facility and a detailed description of the methods to be used during partial closures and final closure. The methods include but are not limited to, methods for removing, transporting, treating, or disposing of all the hazardous wastes. Identify the type(s) of the offsite hazardous waste management units the applicant will use, if applicable.*

REMOVAL OF INVENTORY

PERMIT APPLICATION SECTION II.K.1.c.

The plan for removal of waste inventory considers the following factors: identification of the units, waste types, and maximum quantity of each waste type managed in the unit; method of transportation; and treatment for each waste type. The areas involved in the inventory removal plan are the hazardous waste container storage areas.

The container storage units are permitted to store a wide variety of waste types that may be classified into six major groups. These six waste groups stored in these units are identified by the storage group codes Corrosive Liquid (CL), Waste Fuels (HI/WF), Inorganic Wastes (MH), Poison Organic/Inorganic (PH1/2), Flammable Solids/Oxidizers (RI), and Reactives (RX). The relative amounts of each waste group stored at any given time will vary. For the purpose of this closure plan and closure cost estimate, it has been estimated that the existing container storage area will contain the following quantity of 55-gallon drums of each waste group, which is the maximum inventory of total material:

- 72 drums of CL material (3,960 gallons);
- 440 drums of HI/WF material (24,200 gallons);
- 268 drums of MH material (14,740 gallons);
- 16 drums of PH1/2 material (880 gallons);
- 24 drums of RI material (1,320 gallons); and,
- 4 drums of RX material (220 gallons).
- Transfer waste is included in the above inventory

Table II.K.1.c.-1 (SUMMARY OF DATA USED TO ESTIMATE COSTS FOR DISPOSAL OF INVENTORY) contains the waste type, quantity, disposal, and transportation information for the eight waste groups stored in the container storage units. The inventory table includes information regarding the methods of transportation and treatment for waste groups or types. At the closure, containers will be loaded onto transport trucks and disposed of at off-site locations.

The decontamination wastewater waste stream is assigned the waste inventory code DW. The decontamination wastewater results from the steam-washing of structures. It is estimated that this operation will generate wastewater at a rate of 0.6 gallon per square foot of surface area of structure to be decontaminated. The estimated DW volume results from multiplying the total surface area in square feet by the generation rate mentioned above. The classification of the decontamination waste water will be discussed with The State at the time of closure. The structure surface areas for decontamination are listed below.

Consolidation and Stabilization Area (inside Lower Warehouse)	3,583
Transfer Area (outside the building)	1,000
Container Storage Unit	5,488
TOTAL SURFACE AREA FOR DECONTAMINATION	10,071

The inventory table shows the mode of transportation for each waste group of the expected maximum number of drums at the time of closure. The number of trips the transport vehicle needs to make to haul the total inventory amount of a waste type is obtained by dividing the number of drums of the waste by the load size of the transport vehicle (i.e., 86 drums) used to ship the waste off-site. All containers in inventory at closure will be shipped off-site using commercial motor vehicles (CMVs).

d. *A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment systems components, equipment, structures, and soil during partial and final closure. The steps include but are not limited to, procedures for cleaning equipment and removing contaminated soils, method for sampling and testing surrounding soils, and criteria for determining extent of decontamination required to satisfy the closure performance standard;*

This section of the permit application addresses only decontamination of structures in areas where hazardous waste was stored, treated, and consolidated. Sampling and testing of surrounding soils will be addressed in the following section.

CLOSURE DESCRIPTION

PERMIT APPLICATION SECTION II.K.1.d.

This part of the permit application describes in detail the procedures to be used for decontaminating the structures used to process hazardous wastes at the facility. These procedures were developed for conducting final closure. This plan will be modified as affected by changes in equipment and structures and changes in waste inventory, decontamination procedures, methods for verification of decontamination, and closure schedule and cost estimate, if any.

These procedures were developed to close structures in three facility areas. These areas are the container storage unit, including the transfer waste area, and the consolidation/stabilization area inside the lower warehouse. The method used to decontaminate structures is pressure cleaning with steam. The factors involved in making the decision to use steam cleaning over other methods are the ability steam has to dislodge residues with pressure, to evaporate organics with temperature, and the minimal generation of condensate.

Procedures describing the steps that will be followed to remove inventory and decontaminate every area are included below.

CONTAINER STORAGE UNIT

Transfer waste that is not stored in trucks will be stored in the container storage unit. Containers holding hazardous waste will be segregated into groups based on recommended treatment methods, following the waste classification system of Table II.K.1.c.-1. All waste inventories in drums will be loaded in trucks and shipped off-site at the time of closure. The labor required to load a van trailer to capacity with drums is expected to not exceed 4 man-hours. The maximum man-hours required to load the worst-case drum inventory at closure into van trucks = 824 drums 86 drums/truck x 4 man-hours/truck = 39 man-hours.

The container storage unit has a floor surface area of 5,488 square feet. The floor surface area was calculated as follows: $[(1,116/12) \times (720/12)\ ft^2 - [(36/12) \times (368/12)]\ ft^2 = (93 \times 60)\ ft^2 - (3 \times 30.66)\ ft^2 = (5,580 - 91.98)\ ft^2 = 5,488\ ft^2$. At the time of closure The State will be notified and the levels for rinse water will be discussed at that time.

CONSOLIDATION/STABILIZATION AREAS

The locations where consolidation operations are conducted are in the lower warehouse. The areas that will be decontaminated by steam cleaning consist of approximately 3,583 square feet in the lower warehouse. Final rinseate samples will be taken as discussed earlier.

e. A detailed description of other activities necessary during the closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including but not limited to, ground water monitoring, leachate collection, and run-on and run-off control; and

VERIFICATION OF DECONTAMINATION
PERMIT APPLICATION SECTION II.K.1.e.

Previous sections of the application have referred to removal of inventory and decontamination of structures. Inventory removal eliminates the possibility of eventual contamination to the site from leaking containers left after the facility has been closed.

The closure operations will result in a number of waste streams that will be disposed of as hazardous waste. Decontamination waters generated from steam cleaning the container storage area, transfer waste areas and consolidation/stabilization areas will be properly characterized and managed at the time of closure

Container storage areas, as well as consolidation/stabilization areas, will be decontaminated by cleaning the surface of the floor with steam pressure until residues and removable stains disappear. Final rinseate samples will be taken as discussed earlier. The engineer certifying the closure operation will inspect the floors and parking (stabilization) areas and evaluate final rinseate analytical data.

The Triumvirate Environmental Services, Inc. facility has been designed and planned in accordance with environmental regulations enacted with the intent of preventing environmental contamination from hazardous waste storage and treatment operations. Storage and treatment operations conducted at the facility are not expected to result in contamination of the site. Soils beneath the process and operation areas should be free of man-made or leachable hazardous waste constituents. To verify that no contamination remains at the site after closure of the facility additional testing may be conducted: If a crack in the concrete is observed a sample may be taken at that location. Samples should be taken from the bottom of the concrete within the fill material from under the foundation. The contaminants of concern will depend on the waste material types handled in the areas where soils are to be sampled.

Figure II K 1 shows the planned sampling locations for the contamination assessment program to be conducted under this plan. The sampling locations may vary depending on the conditions at closure. Crack in the concrete, in the transfer area, will also be sampled. The sampling locations have been selected representing the areas where waste materials are stored or treated in the facility. A sample will be obtained from each area to be submitted to the laboratory. For clean closure discrete samples must be taken, and if the samples are composited for volatiles, they must be composited in the lab. Samples will be taken for metals and SVOCs. Table II.K.1.e.-1 indicates the contaminants of concern for each area of Figure II K 1. The analytical methods that will be used for testing the corresponding samples are also shown. Clean closure levels will conform to standards in effect at the time of closure.

Sampling and analytical data will be done in accordance with Florida DEP SOP's and quality manuals which can be found online at http://www.dep.state.fl.us/labs/library/lab_sops.htm

A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure.

CLOSURE SCHEDULE

PERMIT APPLICATION SECTION ILK.1.f.

The date of final closure of the facility is not anticipated at least until the year 2025. However, in the event circumstances require closure of any of the equipment or structures described in previous sections, closure in accordance with the provisions of this plan may occur at an earlier date. Also, if new equipment or structures are used for the storage or treatment of hazardous waste, this plan will be revised to include the new facility features in compliance with the regulations. The amendment of the closure plan will be requested through a permit modification to be submitted at least 60 days prior to a proposed change, or no later than 60 days after an unexpected change.

The Florida Department of Environmental Protection (DEP) will be notified at least 30 days prior to the last receipt of hazardous waste (40 CFR 264 subpart G). The closure schedule allows for all hazardous waste to be properly disposed of within 90 days, and all closure activities will be completed within a period of 180 days from the time after receiving the final volume of hazardous waste at the facility. A certification of closure completed by an independent, qualified, registered, professional engineer will be submitted to the DEP within 60 days of the completion of final closure. The table below outlines the schedule for closure of the facility.

ACTIVITY	DURATION (days)	CUMULATIVE TIME (days)
- Final receipt of wastes	0	0
- Removal of waste inventory	30	30
- Decontamination of structures	90	120
- Soil sampling and testing	30	150
- Completion of closure	30	180
- P.E. certification of final closure completion	60	240

For facilities that use trust funds to establish financial assurance under 264.143 or 264.145 and that are expected to close prior to the expiration of the operation permit, an estimate of the expected year of final closure.

The response to the question posed in the above item is that the Triumvirate Environmental Services, Inc. facility uses closure insurance to establish financial assurance for closure and does not plan to close prior to expiration of the permit. This section is utilized to address requirements that have not been included in previous sections of the application but that must be addressed in a closure plan. Included here is a closure cost estimate, which was requested previously in the part of the application that addresses financial responsibility information. The closure cost estimate was deferred for discussion to this section.

A detailed listing of the costs estimated to close the entire facility is presented in tables II.K.1.g.1a through II.K.1.g.6a.

CLOSURE COST ESTIMATES

PERMIT APPLICATION SECTION II.K.1.g.

The costs to close the facility have been estimated for five major groups of expenses: disposal, transportation, labor, sampling and testing, and engineering. The largest portions of the closure costs are the disposal and transportation of the waste inventory. The labor required to decontaminate structures and to perform other closure activities is included in the closure costs. Sampling and testing of soils and engineering services necessary to comply with the regulations represent a small fraction of the costs for closing the facility. A discussion of data and methods used to estimate cost for each expense group is as follows.

DISPOSAL

The cost estimate for disposal presented here uses data from the waste inventory table (Table II.K.1.c.-1) in section II.K.1.c. to obtain types and quantities of wastes that are to be disposed of during facility closure. The table also shows the treatment method for each waste type. A quote letter/actual invoices have been obtained from off-site facilities for treatment and disposal of each waste type in the inventory. These documents are included at the end of this section. A summary of the waste types, codes, and quantities provided in the waste inventory table, along with information on the off-site facility name and unit disposal costs obtained from the documentation is provided below.

Table II.K.1.c.-1 - SUMMARY OF DATA USED TO ESTIMATE COSTS FOR DISPOSAL OF INVENTORY

WASTE TYPES	PROCESS CODE	QUANTITY	FACILITY NAME	EXHIBIT	$/55 gal drum
Corrosive Liquid	CL	3,960 Gal	AES Environmental, LLC Calvert City, KY	II.K.1.g.-1	$64.00
Waste Fuels	HI/WF	24,200 Gal	AES Environmental, LLC Calvert City, KY	II.K.1.g.-2	$37.00
Inorganic Waste	MH	14,740 Gal	Stablex Canada AES Environmental, LLC Calvert City, KY	II.k.1.g.-1	$75.00
Poison/Organic	PH1	440 Gal	Calvert City, KY Grafton, OH	II.K.1.g.-3	$308.00
Poison/Inorganic	PH2	440 Gal	Ross Incineration Services Grafton, OH	II.K.1.g.-3	$308.00
Flammable Solids	RI	660 Gal	AES Environmental, LLC Calvert City, KY	II.K.1.g.-3	$74.00
Oxidizers	RI	660 Gal	Stablex Canada Blainville, QC	II.K.1.g.-1	$241.00
Reactives	RX	220 Gal	Ross Incineration Services Grafton, OH	II.K.1.g.-4	$493.00

The closure cost estimate for the disposal of the waste inventory from all storage units at the facility is shown in Table II.K.1.g.-1.

TRANSPORTATION

The cost of transportation was estimated based on actual invoices for waste shipments made from Triumvirate Environmental Services, Inc. These invoices are included in Exhibit II.K.1.g.-6. The table shown below summarizes transportation cost data.

SUMMARY OF DATA USED TO ESTIMATE COST OF TRANSPORTATION

FACILITY	DESTINATION	WASTE TYPE	# OF 55-GAL DRUMS	# OF TRIPS	COST/TRIP
AES Environmental LLC.	Calvert City, KY	Corrosives	72	10	$2,295.00
		Flammable Solids	12		
		Waste Fuels	440		
Stablex Canada	Blainville, CA	Inorganics	268	4	$3,238.00
		Oxidizers	12		
Ross Incineration Services	Grafton, OH	Poison - Organics	8	1	$2,175.00
		Reactives	4		
		Poison - Inorganics	8		

Table II.K.1.g.-2a shows the cost estimate for the transportation of the waste inventory described previously in this section.

LABOR

Labor cost estimates for activities related to the decontamination of structures during facility closure are presented in Table II.K.1.g.-3a. The cost estimates were calculated from labor rates based on cost per man-hour and cost per square foot. The man-hour rate is for activities identified in Section II.K.1.d of this application. The man-hours assigned to certain closure operations in Section II.K.1.d. are used in Table II.K.1.g.-3a to estimate the cost of labor required to complete such activities.

A labor rate of $45/hr and work rate of 0.0041 hr/ft^2 were obtained from EPA's CostPro software program for the decontamination of floors. Cost of labor per square foot = $45/hour x 0.0041 hour/f1^2 = $0.1845/ft^2. In addition to the labor costs discussed above, the cost for renting a steam cleaner for four days is included in the estimate. These cost figures are reflected in Table II.K.1.g.-3a.

SAMPLING AND TESTING

The costs of sampling and testing soils at the facility site are confined to the operations of obtaining the samples and to the laboratory charges for performing the testing on the samples. The labor rate for boring through concrete of $60.42 was derived from EPA's CostPro software. It was conservatively assumed that boring and collecting a soil sample would take one hour per sample. The same labor rate was used for the collection of the final rinsate sample from the container storage area and the consolidation/stabilization areas. Sample collection time for final rinseate sampling was assigned 0.5 hr/sample. A price quote has been obtained from Sun Labs, which shows the analytical cost for soils and final rinsates using the analytical methods specified in section II.K.1.e. This quote from Sun Labs is included in Exhibit II.K.1.g.-6. A cost estimate of the sampling and testing operations is presented in Table II.K.1.g.-4a.

ENGINEERING

An independent, registered professional engineer will inspect the closure operations at certain intervals during the process to ensure that it meets the performance standards specified in this plan and requirements of the permit. A number of man-hours have been estimated for the engineer to review the plan at the beginning of the process, conduct three four-hour inspections at the site, and prepare the certification of closure at the end of the operations. Table II.K.1.g.-5a discloses the time periods that have been assigned to every task the engineer has to complete, as well as the cost of professional services per hour.
Table II.K.1.g.-6a contains a summary of the estimated costs for disposal, transportation, labor, sampling and testing, and engineering. A ten percent charge has been added to the sum of all costs to cover the cost of having a third party to manage and supervise the facility closure operations described in this plan. An additional ten percent has been added to cover potential contingencies.

Table II.K.1.e.-1
SOIL SAMPLING LOCATIONS AND ANALYSIS METHODS

SAMPLING AREA NAME	SAMPLE LOCATIONS	CONTAINMENTS OF CONCERN	ANALYSIS METHOD
South Container Storage Unit And Outside the Loading Dock	SC 1,2,3,4	Semi-Volatile Organics Volatile Organic Compounds	8270D 5030
		Leachable RCRA Metals	6010C
East-Container Storage Unit	EC 1 & 2	Semi-Volatile Organics	8270D
		Leachable RCRA Metals Volatile Organic Compounds	6010C 5030
Northeast Container Storage	NC 1 - 4	Non-Halogenated Volatile Organics	8260
		Semi-Volatile Organics	8270D
		Leachable RCRA Metals Volatile Organic Compounds	6010C 5030
Consolidation/Stabilization Area (inside North Building)	CA 1 3 -	Semi-Volatile Organics	8270D
		Leachable RCRA Metals Volatile Organic Compounds	6010C 5030
Consolidation/Stabilization Area (outside North Building)	SB 1 - 4	Semi-Volatile Organics	8270D
		Leachable RCRA Metals Volatile Organic Compounds	6010C 5030

TOTAL SOIL SAMPLE LOCATIONS 15
TOTAL COMPOSITE SAMPLES 5

Table II.K.1.g.-1a

Table II.K.1.g.-la			Total Cost
A. CLOSURE COST ESTIMATE FOR DISPOSAL OF INVENTORY			
1. Container Storage Unit	**Unit Cost**	**Quantity**	**Total**
a. Corrosive Liquids- 55gal CL	$ 64.00	72	$ 4,320.00
b. Waste Fuels- 55gal HI/WF	$ 37.00	440	$ 16,280.00
c. Inorganic Waste- 55gal MH	$ 75.00	268	$ 20,100.00
d. Poison-Organic Waste- 55gal PH1	$ 308.00	8	$ 2,464.00
e. Poison-Inorganic Waste- 55gal PH2	$ 308.00	8	$ 2,464.00
f. Oxidizers-55gal RI	$ 241.00	12	$ 2,892.00
g. Flammable Solids-55gal RI	$ 95.00	12	$ 1,140.00
h. Reactives- 55gal RX	$ 493.00	4	$ 1,972.00
Disposal Cost for the Container Storage Unit			**$ 51,600.00**

Table II.k.1.g.2a

Table II.K.1.g.-2a			
B. Closure Cost Estimate for Transportation of Inventory			
90 Drums per Trip			
		Quantity	
1. AES Environmental, LLC.			
Corrosive Liquids		72	
Waste Fuel		440	
Flammable Solids		12	
	Total Drums	524	
	Trips	10	
	Trip Cost	$ 2,295.00	
Total Transportation Cost		$ 22,950.00	
2. Stablex Canada			
Inorganics		268	
Oxidizers		12	
	Total Drums	280	
	Trips	4	
	Trip Cost	$ 3,238.00	
Total Transportation Cost		$ 12,952.00	
3. Ross Incineration Services			
Poisons		16	
Reactives		4	
	Total Drums	20	
	Trips	1	
	Trip Cost	$ 2,175.00	
Total Transportation Cost		$ 2,175.00	
Total Cost for Transportation Inventory			**$ 38,077**

Table II.K.1.g.-3a - C. CLOSURE COST ESTIMATE OF LABOR FOR DECONTAMINATION AND DISPOSAL

Container Storage Unit	Unit Cost	Quantity	Total Cost
Labor for loading wastes for transportation in man-hrs: Cost of labor per man-hr:	45	$43.00	1,935.00
Cost of loading wastes for transportation Area of structure to be decontaminated in sq. ft.: Cost of labor per sq. ft.: Cost of decontamination of structures:	$0.19	5488.00	$1,043.00
Consolidation/Stabilization Area (inside North Building) Area of structure to be decontaminated in sq. ft.: Cost of labor per sq. ft.: Cost of decontamination of structure	$0.19	3583.00	$681.00
Consolidation/Stabilization Area (west of North Building) a. Area of structure to be decontaminated in sq. ft.: Cost of labor per sq. ft.: Cost of decontamination of structure:	$0.19	1000.00	$190.00
Steam Cleaner Rental Number of days for using the cleaner: Cost of renting the cleaner per day: Cost of steam cleaner rental:	$255.00	1.00	$255.00
TOTAL COST FOR DECONTAMINATION OF STRUCTURES:			**$2,169.00**

Table II.K.1.g.-4a

D. CLOSURE COST ESTIMATE FOR SAMPLING AND ANALYSIS

Container Storage Unit	Unit Cost	Quantity	Total Cost
		Unit Cost Quantity	Total Cost
1. Soil Sampling: Number of borings for sampling of soils: Cost per boring:	$63.00	15.00	$945.00
2. Soil Testing:			
a. Number of soil tests using analysis method 8270: Cost per test: Cost of soil test using analysis method 8270	$262.00	15.00	$3,930.00
b. Number of soil test using analysis method 8260: Cost per test: Cost of soil test using analysis method 8260:	$100.00	1.00	$100.00
c. Number of soil test using analysis method 1311/6010: Cost per test: Cost of soil test using analysis method 1311/6010:	$131.00	5.00	$655.00
Total Cost for Sampling and Analysis of Soils:			**$5,630.00**

FINAL RINSEATE SAMPLES:

		Number Samples	Hours Required	Rate per Hour	Analytical Cost/Sample	Total
1	**Sample Collection**	3	1.5	64.00		$96.00
2	**Rinsate Analysis**	3			393.00	$1,179.00
	Total Rinsate & Analysis Cost					**$1,275.00**

Table II.K.1.2.-5a

E.CLOSURE COST ESTIMATE FOR ENGINEER

Time to review closure plan in hrs:	4	
Time to inspect closure operations in hrs:	12	
Time to prepare certification of closure in	4	
Professional services in hrs:	20	
Cost of professional service per hr:	$ 79.00	
$ Cost of engineer certifications:		**1,580.00**

Table II.K.1.g.-6a

Summary of Closure Cost Estimates

A. Disposal of Inventory	$51,600.00
B. Transportation of Inventory	$38,077.00
C. Decontamination of Structures	$2,169.00
D. Sampling and Testing of Soils and Final Rinsates	$6,905.00
E. Engineer Certification:	$1,580.00
10% for Management and Supervision	$10,000.00
10% for Contingencies	$10,000.00
Total Closure Cost Estimate	**$120,331.00**

[1]The current Closure Fund maintained by Triumvirate Environmental Services, Inc. is $169,533.00. This amount will be the base Closure Fund for the facility for 2018 and will be adjusted for inflation as required for subsequent years. The difference between this amount and $120,331.00 represents additional contingency funds maintained by Triumvirate.

[1] Annual increases will be calculated using the most current Implicit Price Deflator figure.