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352.377.5822

654-20-09
August 25, 2020
Revised September 18, 2020

**Titan America - Pennsuco Tire Processing Facility
FDEP File No. 0314354-002-WT/WACS No. 100946**

Closing Cost Estimate - August 2020

The purpose of this submittal is to fulfill the requirements of Rule 62-711.500(3) F.A.C., to provide a re-estimate of the annual closing costs for tires at the Titan American Pennsuco tire Processing Facility. Koogler and Associates, Inc. is providing this closing cost estimate for the cost to remove, process, and dispose of the maximum amount of waste tires that is permitted to be stored at the facility at any time.

I hereby confirm that the quantity of waste tires at the site has been verified to be within the quantity limits (maximum of 300 tires) as stipulated in the facility's existing FDEP Permit No. 0314354-002 and that the estimate is based on said permit limits.

Estimated Closing Costs for:

Waste Tire Disposal

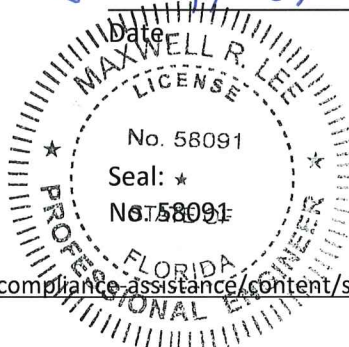
The estimated cost to remove, transport, process, and dispose of the maximum permitted amount of waste tires stored at the facility at any time (30,000 tires/300 tons) is as follows:

| | |
|--|--------------------|
| Load, Transport, Process & Dispose of 300 tons of tires at \$125 per ton = | \$37,500.00 |
| Plus the FDEP annual inflation factor of 1.017 ¹ | = 637.50 |
| TOTAL: | \$38,137.50 |

Professional Engineer Certification:

Signature

Maxwell R. Lee, Ph.D., P.E.
Koogler and Associates, Inc.
PO Box 5127
Gainesville, FL 32627-5127
352-377-5822



RECEIVED

SEP 30 2020

**R.E.R.
POLLUTION REGULATION**

¹ <https://floridadep.gov/waste/permitting-compliance-assistance/content/solid-waste-cost-estimates>



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

[Print Form](#)[Reset Form](#)

DEP Form # 62-701 900(28), F.A.C.
Form Title: Closure Cost Estimating Form
For Solid Waste Facilities
Effective Date: January 6, 2010
Incorporated in Rule 62-701.630(3), F.A.C.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Titan America - Pennsuco Tire Processing Facility WACS ID: 100946
Permit Application or Consent Order No.: _____ Expiration Date: _____
Facility Address: 11000 NW 121 Way
Permittee or Owner/Operator: Titan America, LLC
Mailing Address: 11000 NW 121 Way, Medley, FL 33178

Latitude: 25° 52' 26" Longitude: 80° 22' 20"
Coordinate Method: Degrees/Minutes/Sec Datum: NAD83 (assumed)
Collected by: Unknown Company/Affiliation: N/A

Solid Waste Disposal Units Included in Estimate:

| Phase / Cell | Acres | Date Unit Began Accepting Waste | Active Life of Unit From Date of Initial Receipt of Waste | If active: Remaining life of unit | If closed: Date last waste received | If closed: Official date of closing |
|--------------|-------|--|--|---|--|--|
| N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Total disposal unit acreage included in this estimate: _____ Closure: N/A Long-Term Care: N/A

Facility type: ☐ Class I ☐ Class III ☐ C&D Debris Disposal
(Check all that apply) ☐ Other: N/A

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

- | | | |
|---|--|--|
| <input type="checkbox"/> Letter of Credit* | <input type="checkbox"/> Insurance Certificate | <input type="checkbox"/> Escrow Account |
| <input type="checkbox"/> Performance Bond* | <input type="checkbox"/> Financial Test | <input type="checkbox"/> Form 29 (FA Deferral) |
| <input checked="" type="checkbox"/> Guarantee Bond* | <input type="checkbox"/> Trust Fund Agreement | |

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District
160 Government Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste B200
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pkwy
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 N. Congress Ave., Ste 200
West Palm Beach, FL 33401
561-681-6500

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate adjustment below.

☒ (a) Inflation Factor Adjustment

☐ (b) Recalculated or New Cost Estimates

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated: _____

| Latest Department Approved Closing Cost Estimate: | Current Year Inflation Factor, e.g. 1.02 | | Inflation Adjusted Closing Cost Estimate: | |
|--|---|-------|--|-------------|
| \$37,500.00 | x | 1.017 | = | \$38,137.50 |

This adjustment is based on the Department approved long-term care cost estimate dated: _____

| Latest Department Approved Annual Long-Term Care Cost Estimate: | Current Year Inflation Factor, e.g. 1.02 | | Inflation Adjusted Annual Long-Term Care Cost Estimate: | |
|---|---|-------|---|-------|
| _____ | x | _____ | = | _____ |
| Number of Years of Long Term Care Remaining: | | | x | _____ |
| Inflation Adjusted Long-Term Care Cost Estimate: | | | = | _____ |

Signature by: ☒ Owner/Operator

☒ Engineer

(check what applies)


Signature

PO Box 5127

Address

Maxwell R. Lee, Ph.D., P.E.

Name & Title

Gainesville, FL 32627-5127

City, State, Zip Code

9/23/2020

Date

mlee@kooglerassociates.com

E-Mail Address

352-377-5822

Telephone Number

IV. ESTIMATED CLOSING COST (check what applies)☒ **Recalculated Cost Estimate**☐ **New Facility Cost Estimate**

- Notes: 1. Cost estimates for the time period when the extent and manner of landfill operation makes closing most exp
2. Cost estimate must be certified by a professional engineer.
3. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.
4. In some cases, a price quote in support of individual item estimates may be required.

| Description | Unit | Number of Units | Cost / Unit | Total Cost |
|--|-------|--------------------|-------------------------------------|------------|
| 1. Proposed Monitoring Wells (Do not include wells already in existence.) | | | | |
| | EA | _____ | _____ | _____ |
| | | | Subtotal Proposed Monitoring Wells: | _____ |
| 2. Slope and Fill (bedding layer between waste and barrier layer): | | | | |
| Excavation | CY | _____ | _____ | _____ |
| Placement and Spreading | CY | _____ | _____ | _____ |
| Compaction | CY | _____ | _____ | _____ |
| Off-Site Material | CY | _____ | _____ | _____ |
| Delivery | CY | _____ | _____ | _____ |
| | | | Subtotal Slope and Fill: | _____ |
| 3. Cover Material (Barrier Layer): | | | | |
| Off-Site Clay | CY | _____ | _____ | _____ |
| Synthetics - 40 mil | SY | _____ | _____ | _____ |
| Synthetics - GCL | SY | _____ | _____ | _____ |
| Synthetics - Geonet | SY | _____ | _____ | _____ |
| Synthetics - Other (explain) _____ | _____ | _____ | _____ | _____ |
| | | | Subtotal Cover Material: | _____ |
| 4. Top Soil Cover: | | | | |
| Off-Site Material | CY | _____ | _____ | _____ |
| Delivery | CY | _____ | _____ | _____ |
| Spread | CY | _____ | _____ | _____ |
| | | | Subtotal Top Soil Cover: | _____ |
| 5. Vegetative Layer | | | | |
| Sodding | SY | _____ | _____ | _____ |
| Hydroseeding | AC | _____ | _____ | _____ |
| Fertilizer | AC | _____ | _____ | _____ |
| Mulch | AC | _____ | _____ | _____ |
| Other (explain) _____ | _____ | _____ | _____ | _____ |
| | | | Subtotal Vegetative Layer: | _____ |
| 6. Stormwater Control System: | | | | |
| Earthwork | CY | _____ | _____ | _____ |
| Grading | SY | _____ | _____ | _____ |
| Piping | LF | _____ | _____ | _____ |
| Ditches | LF | _____ | _____ | _____ |
| Berms | LF | _____ | _____ | _____ |
| Control Structures | EA | _____ | _____ | _____ |
| Other (explain) _____ | _____ | _____ | _____ | _____ |
| | | | Subtotal Stormwater Control System: | _____ |

| Description | Unit | Number of Units | Cost / Unit | Total Cost |
|--|-------|-----------------|-------------|------------|
| 7. Passive Gas Control: | | | | |
| Wells | EA | _____ | _____ | _____ |
| Pipe and Fittings | LF | _____ | _____ | _____ |
| Monitoring Probes | EA | _____ | _____ | _____ |
| NSPS/Title V requirements | LS | 1 | \$0.00 | _____ |
| Subtotal Passive Gas Control: | | | | _____ |
| 8. Active Gas Extraction Control: | | | | |
| Traps | EA | _____ | _____ | _____ |
| Sumps | EA | _____ | _____ | _____ |
| Flare Assembly | EA | _____ | _____ | _____ |
| Flame Arrestor | EA | _____ | _____ | _____ |
| Mist Eliminator | EA | _____ | _____ | _____ |
| Flow Meter | EA | _____ | _____ | _____ |
| Blowers | EA | _____ | _____ | _____ |
| Collection System | LF | _____ | _____ | _____ |
| Other (explain) _____ | _____ | _____ | _____ | _____ |
| Subtotal Active Gas Extraction Control: | | | | _____ |
| 9. Security System: | | | | |
| Fencing | LF | _____ | _____ | _____ |
| Gate(s) | EA | _____ | _____ | _____ |
| Sign(s) | EA | _____ | _____ | _____ |
| Subtotal Security System: | | | | _____ |
| 10. Engineering: | | | | |
| Closure Plan Report | LS | 1 | \$0.00 | _____ |
| Certified Engineering Drawings | LS | 1 | \$0.00 | _____ |
| NSPS/Title V Air Permit | LS | 1 | \$0.00 | _____ |
| Final Survey | LS | 1 | \$0.00 | _____ |
| Certification of Closure | LS | 1 | \$0.00 | _____ |
| Other (explain) _____ | _____ | _____ | _____ | _____ |
| Subtotal Engineering: | | | | _____ |

| Description | Hours | Cost / Hour | Hours | Cost / Hour | Total Cost |
|----------------------------------|----------------------------|-------------|--------------------------|-------------|------------|
| 11. Professional Services | | | | | |
| | <u>Contract Management</u> | | <u>Quality Assurance</u> | | |
| P.E. Supervisor | _____ | _____ | _____ | _____ | _____ |
| On-Site Engineer | _____ | _____ | _____ | _____ | _____ |
| Office Engineer | _____ | _____ | _____ | _____ | _____ |
| On-Site Technician | _____ | _____ | _____ | _____ | _____ |
| Other (explain) _____ | _____ | _____ | _____ | _____ | _____ |

| Description | Unit | Number of Units | Cost / Unit | Total Cost |
|---------------------------------|------|-----------------|-------------|------------|
| Quality Assurance Testing | LS | 1 | _____ | _____ |
| Subtotal Professional Services: | | | | _____ |

Subtotal of 1-11 Above: _____

12. Contingency 0 % of Subtotal of 1-11 Above

Subtotal Contingency: _____

Estimated Closing Cost Subtotal: _____

| Description | Total Cost |
|---|-------------|
| 13. Site Specific Costs | |
| Mobilization | _____ |
| Waste Tire Facility | \$38,137.50 |
| Materials Recovery Facility | _____ |
| Special Wastes | _____ |
| Leachate Management System Modification | _____ |
| Other (explain) _____ | _____ |
| _____ | _____ |
| Subtotal Site Specific Costs: | \$38,137.50 |

TOTAL ESTIMATED CLOSING COSTS (\$): \$38,137.50

V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) ☐ 5 Years ☐ 20 Years ☐ 30 Years ☐ Other, ____ Years

Notes: 1. Cost estimates must be certified by a professional engineer.

2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

3. In some cases, a price quote in support of individual item estimates may be required.

All items must be addressed. Attach a detailed explanation for all entries left blank.

| Description | Sampling Frequency (Events / Year) | Number of Wells | (Cost / Well) / Event | Annual Cost |
|--|---------------------------------------|-----------------|-----------------------|-------------|
| 1. Groundwater Monitoring [62-701.510(6), and (8)(a)] | | | | |
| Monthly | 12 | _____ | _____ | _____ |
| Quarterly | 4 | _____ | _____ | _____ |
| Semi-Annually | 2 | _____ | _____ | _____ |
| Annually | 1 | _____ | _____ | _____ |
| Subtotal Groundwater Monitoring: | | | | _____ |
| 2. Surface Water Monitoring [62-701.510(4), and (8)(b)] | | | | |
| Monthly | 12 | _____ | _____ | _____ |
| Quarterly | 4 | _____ | _____ | _____ |
| Semi-Annually | 2 | _____ | _____ | _____ |
| Annually | 1 | _____ | _____ | _____ |
| Subtotal Surface Water Monitoring: | | | | _____ |
| 3. Gas Monitoring [62-701.400(10)] | | | | |
| Monthly | 12 | _____ | _____ | _____ |
| Quarterly | 4 | _____ | _____ | _____ |
| Semi-Annually | 2 | _____ | _____ | _____ |
| Annually | 1 | _____ | _____ | _____ |
| Subtotal Gas Monitoring: | | | | _____ |
| 4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c] | | | | |
| Monthly | 12 | _____ | _____ | _____ |
| Quarterly | 4 | _____ | _____ | _____ |
| Semi-Annually | 2 | _____ | _____ | _____ |
| Annually | 1 | _____ | _____ | _____ |
| Other (explain) _____ | _____ | _____ | _____ | _____ |
| Subtotal Leachate Monitoring: | | | | _____ |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|---|------|------------------------|-------------|-------------|
| 5. Leachate Collection/Treatment Systems Maintenance | | | | |
| <u>Maintenance</u> | | | | |
| Collection Pipes | LF | _____ | _____ | _____ |
| Sumps, Traps | EA | _____ | _____ | _____ |
| Lift Stations | EA | _____ | _____ | _____ |
| Cleaning | LS | 1 | _____ | _____ |
| Tanks | EA | _____ | _____ | _____ |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|--|-------------|---------------------------|--|-------------|
| 5. (continued) | | | | |
| <u>Impoundments</u> | | | | |
| Liner Repair | SY | _____ | _____ | _____ |
| Sludge Removal | CY | _____ | _____ | _____ |
| <u>Aeration Systems</u> | | | | |
| Floating Aerators | EA | _____ | _____ | _____ |
| Spray Aerators | EA | _____ | _____ | _____ |
| <u>Disposal</u> | | | | |
| Off-site (Includes transportation and disposal) | 1000 gallon | _____ | _____ | _____ |
| | | | Subtotal Leachate Collection / Treatment Systems Maintenance: | _____ |
| 6. Groundwater Monitoring Well Maintenance | | | | |
| Monitoring Wells | LF | _____ | _____ | _____ |
| Replacement | EA | _____ | _____ | _____ |
| Abandonment | EA | _____ | _____ | _____ |
| | | | Subtotal Groundwater Monitoring Well Maintenance: | _____ |
| 7. Gas System Maintenance | | | | |
| Piping, Vents | LF | _____ | _____ | _____ |
| Blowers | EA | _____ | _____ | _____ |
| Flaring Units | EA | _____ | _____ | _____ |
| Meters, Valves | EA | _____ | _____ | _____ |
| Compressors | EA | _____ | _____ | _____ |
| Flame Arrestors | EA | _____ | _____ | _____ |
| Operation | LS | 1 | _____ | _____ |
| | | | Subtotal Gas System Maintenance: | _____ |
| 8. Landscape Maintenance | | | | |
| Mowing | AC | _____ | _____ | _____ |
| Fertilizer | AC | _____ | _____ | _____ |
| | | | Subtotal Landscape Maintenance: | _____ |
| 9. Erosion Control and Cover Maintenance | | | | |
| Sodding | SY | _____ | _____ | _____ |
| Regrading | AC | _____ | _____ | _____ |
| Liner Repair | SY | _____ | _____ | _____ |
| Clay | CY | _____ | _____ | _____ |
| | | | Subtotal Erosion Control and Cover Maintenance: | _____ |
| 10. Storm Water Management System Maintenance | | | | |
| Conveyance Maintenance | LS | 1 | _____ | _____ |
| | | | Subtotal Storm Water Management System Maintenance: | _____ |
| 11. Security System Maintenance | | | | |
| Fences | LS | 1 | _____ | _____ |
| Gate(s) | EA | _____ | _____ | _____ |
| Sign(s) | EA | _____ | _____ | _____ |
| | | | Subtotal Security System Maintenance: | _____ |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|--|------|-----------------------------|---|--------------------------------|
| 12. Utilities | LS | 1 | | |
| | | | Subtotal Utilities: | |
| 13. Leachate Collection/Treatment Systems Operation | | | | |
| <u>Operation</u> | | | | |
| P.E. Supervisor | HR | | | |
| On-Site Engineer | HR | | | |
| Office Engineer | HR | | | |
| OnSite Technician | HR | | | |
| Materials | LS | 1 | | |
| | | | Subtotal Leachate Collection/Treatment Systems Operation: | |
| 14. Administrative | | | | |
| P.E. Supervisor | HR | | | |
| On-Site Engineer | HR | | | |
| Office Engineer | HR | | | |
| OnSite Technician | HR | | | |
| Other _____ | | | | |
| | | | Subtotal Administrative: | |
| | | | | Subtotal of 1-14 Above: |
| 15. Contingency | | % of Subtotal of 1-14 Above | | |
| | | | Subtotal Contingency: | |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|--------------------------------|-------|---------------------------|-------------------------------|-------------|
| 16. Site Specific Costs | | | | |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| | | | Subtotal Site Specific Costs: | |

ANNUAL LONG-TERM CARE COST (\$ / YEAR): _____

Number of Years of Long-Term Care: _____

TOTAL LONG-TERM CARE COST (\$): _____

VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.



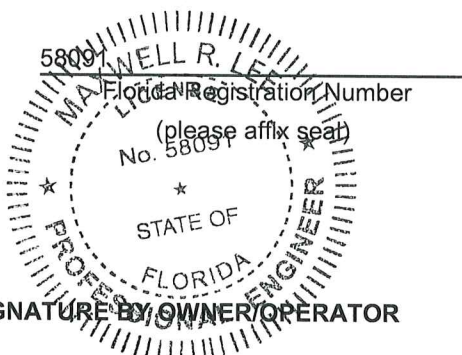
Signature

Maxwell R. Lee, Ph.D., P.E.

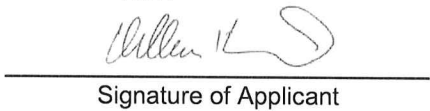
Name and Title (please type)

9/23/2020

Date



VII. SIGNATURE BY OWNER/OPERATOR



Signature of Applicant

William Kissel, Sr. Env. Manager

Name and Title (please type)

wkissel@titanamerica.com

E-Mail address (if available)

PO Box 5127

Mailing Address

Gainesville, FL 32627-5127

City, State, Zip Code

mlee@kooglerassociates.com

E-Mail address (if available)

Telephone Number

455 Fairway Drive Suite 200

Mailing Address

Deerfield Beach, FL 33441

City, State, Zip Code

954-425-4210

Telephone Number