

October 24, 2023

Ms. Megan Henson
Municipal Solid Waste Permits Section, MC 124
Texas Commission on Environmental Quality
Building A, Room 122
12100 Park 35 Circle
Austin, Texas 78753-1808

Re: City of Big Spring/Howard County Big Sandy Draw Landfill
TCEQ MSW Permit No. 2395
Permit Modification for Alternative Daily Cover

Dear Ms. Henson:

On behalf of the City of Big Spring, Parkhill is submitting a Modification to MSW Permit No. 2395. The Modification will allow use of Alternative Daily Cover (ADC) on a permanent basis in accordance with §330.165(d). This Modification requires notification in accordance with §305.70(k)(1).

In accordance with §330.165(d), prior to the submittal of this Modification, the City of Big Spring deployed the ADC materials under separate Temporary Authorizations (TA) to demonstrate the effectiveness of the material. The City submitted status reports to TCEQ to demonstrate the effectiveness of the ADC in accordance with §330.165(d)(2). No problems occurred with the ADC during the TA.

The Scope of this Modification includes:


- Part I
 - Modification to adjacent and potentially affected landowners in accordance with 30 TAC §330.59(c)(3).
 - Modification to include notification mailing labels in accordance with 30 TAC §39.5(b).
- Part IV
 - Modification to include ADC operating plan in accordance with §330.165(d).

Please call me at 806.473.3656 or email me at tkrueger@parkhill.com should you have any questions or require additional information.

Sincerely,

PARKHILL

By


Tyler Krueger, PE
Civil Engineer | Associate

TK/acs
Enclosures

cc: TCEQ Region 7, Midland
Mr. Shane Bowles, City of Big Spring



Texas Commission on Environmental Quality

Waste Permits Division Correspondence

Cover Sheet

Date: 10/24/2023

Facility Name: City of Big Spring/Howard County Big Sandy Draw Landfill

Permit or Registration No.: 2395

Nature of Correspondence:

☒ Initial/New

☐ Response/Revision to TCEQ Tracking No.: _____ (from subject line of TCEQ letter regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
<input type="checkbox"/> New Notice of Intent	<input type="checkbox"/> Alternative Daily Cover Report
<input type="checkbox"/> Notice of Intent Revision	<input type="checkbox"/> Closure Report
<input type="checkbox"/> New Permit (including Subchapter T)	<input type="checkbox"/> Compost Report
<input type="checkbox"/> New Registration (including Subchapter T)	<input type="checkbox"/> Groundwater Alternate Source Demonstration
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Groundwater Corrective Action
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Limited Scope Major Amendment	<input type="checkbox"/> Groundwater Background Evaluation
<input checked="" type="checkbox"/> Notice Modification	<input type="checkbox"/> Landfill Gas Corrective Action
<input type="checkbox"/> Non-Notice Modification	<input type="checkbox"/> Landfill Gas Monitoring
<input type="checkbox"/> Transfer/Name Change Modification	<input type="checkbox"/> Liner Evaluation Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Soil Boring Plan
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Special Waste Request
<input type="checkbox"/> Subchapter T Disturbance Non-Enclosed Structure	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
<input type="checkbox"/> New	<input type="checkbox"/> Annual/Biennial Site Activity Report
<input type="checkbox"/> Renewal	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> Post-Closure Order	<input type="checkbox"/> Closure Certification/Report
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Construction Certification/Report
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> CCR Registration	<input type="checkbox"/> Extension Request
<input type="checkbox"/> CCR Registration Major Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> CCR Registration Minor Amendment	<input type="checkbox"/> Interim Status Change
<input type="checkbox"/> Class 3 Modification	<input type="checkbox"/> Interim Status Closure Plan
<input type="checkbox"/> Class 2 Modification	<input type="checkbox"/> Soil Core Monitoring Report
<input type="checkbox"/> Class 1 ED Modification	<input type="checkbox"/> Treatability Study
<input type="checkbox"/> Class 1 Modification	<input type="checkbox"/> Trial Burn Plan/Result
<input type="checkbox"/> Endorsement	<input type="checkbox"/> Unsaturated Zone Monitoring Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Waste Minimization Report
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Other:
<input type="checkbox"/> 335.6 Notification	
<input type="checkbox"/> Other:	

Parkhill

PERMIT MODIFICATION REQUEST

CITY OF BIG SPRING/HOWARD COUNTY BIG SANDY DRAW

Update Site Operating Plan (SOP)

Parkhill

PERMIT MODIFICATION REQUEST

CITY OF BIG SPRING/HOWARD COUNTY BIG SANDY DRAW

Update Site Operating Plan (SOP)

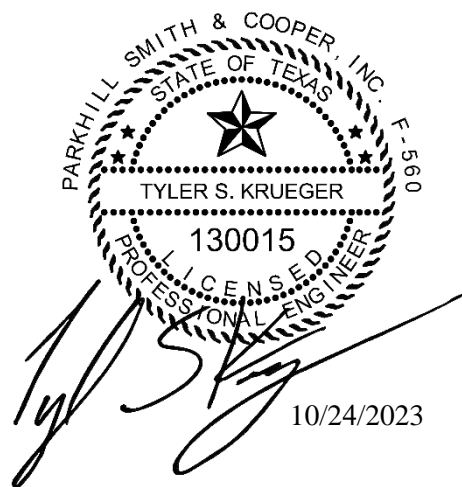


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REQUEST FOR MODIFICATION..... 1

 Purpose 1

 Revisions to Permit Documents 1

EXHIBITS

- EXHIBIT A: TCEQ 20650 FORM
- EXHIBIT B: ORIGINAL COPY
- EXHIBIT C: REVISED COPY
- EXHIBIT D: MARKED COPY

REQUEST FOR MODIFICATION

Purpose

In accordance with 30 TAC §305.70(k)(1), this modification requests to update the Site Operating Plan (SOP) to allow permanent use of Alternative Daily Cover (ADC). The City of Big Spring/Howard County Big Sandy Draw Landfill has completed two 180-day temporary authorization periods which allowed ADC to be deployed onsite in lieu of 6 inches of soil. ADC was deployed onsite, no uncorrectable problems occurred, and the City noted that the ADC was effective during the temporary authorization period. The SOP has been updated to include provisions for use of ADC at the facility. We are also updating Part 1 Attachment B - Adjacent Landownership Map Page I.B-1 based on properties changing ownership.

This Modification does not reduce operational, or safety procedures outlined within the GWSAP.

Revisions to Permit Documents

- Part I - Attachment B - Adjacent Landownership Map Page I.B-1 and Figure 1.2.1 - Land Ownership Map
- Part IV - Site Operating Plan Page 37-37a

EXHIBIT A: TCEQ 20650 FORM



Texas Commission on Environmental Quality

Application Form for Municipal Solid Waste Permit or Registration Modification or Temporary Authorization

Application Tracking Information

Facility Name: _____

Permittee or Registrant Name: _____

MSW Authorization Number: _____

Initial Submission Date: _____

Revision Date: _____

Instructions for completing this form are provided in [form TCEQ-20650-instr](#)¹. If you have questions, contact the Municipal Solid Waste Permits Section by email to mswper@tceq.texas.gov, or by phone at 512-239-2335.

Application Data

1. Submission Type

☐ Initial Submission

☐ Notice of Deficiency (NOD) Response

2. Authorization Type

☐ Permit

☐ Registration

3. Application Type

☐ Modification with Public Notice

☐ Modification without Public Notice

☐ Temporary Authorization (TA)

☐ Modification for Name Change or Transfer

4. Application Fee

Amount

The application fee for a modification or temporary authorization is \$150.

Payment Method

☐ Check

☐ Online through ePay portal www3.tceq.texas.gov/epay/

If paid online, enter ePay Trace Number: _____

¹ www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/20650-instr.pdf

5. Application URL

For modifications that require notice (other than those for arid exempt landfills), provide the URL address of a publicly accessible internet web site where the application and all revisions to the application will be posted:

6. Party Responsible for Mailing Notice

For modifications that require notice, indicate who will be responsible for mailing notice:

☐ Applicant

☐ Agent in Service

☐ Consultant

Contact Name: _____

Title: _____

Email Address: _____

7. Confidential Documents

Does the application contain confidential documents?

☐ Yes ☐ No

If "Yes", reference the confidential documents in the application, but submit the confidential documents as an attachment in a separate binder marked "CONFIDENTIAL."

8. Facility General Information

Facility Name: _____

Contact Name: _____ Title: _____

MSW Authorization Number (if existing): _____

Regulated Entity Reference Number: **RN** _____

Physical or Street Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Latitude (Degrees, Minutes, Seconds): _____

Longitude (Degrees, Minutes, Seconds): _____

9. Facility Types

☐ Type I

☐ Type IV

☐ Type V

☐ Type IAE

☐ Type IVAE

☐ Type VI

10. Description of the Revisions to the Facility

Provide a brief description of revisions to permit or registration conditions and supporting documents referred to by the permit or registration, and a reference to the specific provisions under which the modification or temporary authorization application is being made. Also, provide an explanation of why the modification or temporary authorization is needed:

11. Facility Contact Information

Site Operator (Permittee or Registrant)

Name: _____

Customer Reference Number: **CN**_____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____

Email Address: _____

Texas Secretary of State (SOS) Filing Number: _____

Operator (if different from *Site Operator*)

Name: _____

Customer Reference Number: **CN**_____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____

Email Address: _____

Texas Secretary of State (SOS) Filing Number: _____

Consultant (if applicable)

Firm Name: _____

Consultant Name: _____

Texas Board of Professional Engineers Firm Registration Number: _____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____

Email Address: _____

Agent in Service (required for out-of-state applicants)

Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

12. Ownership Status of the Facility

Is this a modification that changes the legal description, the property owner, or the Site Operator (Permittee or Registrant)?

☐ Yes ☐ No

If the answer is "No", skip this section.

Does the Site Operator (Permittee or Registrant) own all the facility units and all the facility property?

☐ Yes ☐ No

If "No", provide the following information for other owners.

Owner Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

Signature Page

Site Operator or Authorized Signatory

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Shane Bowles Title: Public Works Director

Email Address: sbowles@mybigspring.com

Signature:  Date: 10/26/23

Operator or Principal Executive Officer Designation of Authorized Signatory

To be completed by the operator if the application is signed by an authorized representative for the operator.

I hereby designate _____ as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Operator or Principal Executive Officer Name: _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said Shane Bowles

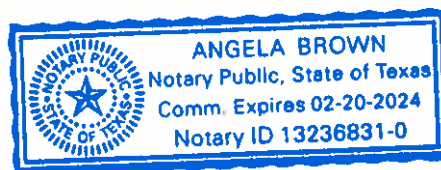
On this 26 day of Oct., 2023

My commission expires on the 20th day of Feb., 2024

Angela Brown

Notary Public in and for

Howard County, Texas



Note: Application Must Bear Signature and Seal of Notary Public

Attachments for Permit or Registration Modification with Public Notice

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 1. Required attachments.

Required Attachments	Attachment Number
Land Ownership Map	
Landowners List	
Marked (Redline/Strikeout) Pages	
Unmarked Revised Pages	

Attachments Table 2. Additional attachments as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
<input type="checkbox"/> TCEQ Core Data Form(s)	
<input type="checkbox"/> Signatory Authority Delegation	
<input type="checkbox"/> Fee Payment Receipt	
<input type="checkbox"/> Confidential Documents	

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number:

582EA000573509

Date:

10/24/2023 10:32 AM

Payment Method:

CC - Authorization 000002461R

ePay Actor:

TYLER KRUEGER

Actor Email:

tkrueger@parkhill.com

IP:

138.199.118.178

TCEQ Amount:

\$150.00

Texas.gov Price:

\$153.63*

* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Payment Contact Information

Name:

TYLER SCOTT KRUEGER

Company:

PARKHILL

Address:

5517 90TH ST, LUBBOCK, TX 79424

Phone:

325-227-0111

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
666649	MSW PERMIT/REGISTRATION/AMEND/MOD/TEMP AUTHORIZATIONS APPLICATION FEE		\$100.00
666650	30 TAC 305.53B MWP NOTIFICATION FEE		\$50.00
		TCEQ Amount:	\$150.00

[ePay Again](#)

[Exit ePay](#)

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

HOWARD COUNTY
PO BOX 1949
BIG SPRING, TX 79721-1949

BJK BS LLC
16983 CR 43
TYLER, TX 75704

SHERRY ANN WHITE
3214 FENN STREET
BIG SPRING, TX 79720

ALON USA REFINING INC
12700 PARK CENTRAL DRIVE
SUITE 1600
DALLAS, TX 75251

BRANDY LEE HUBBARD
6716 E ROBINSON RD
BIG SPRING, TX 79720

EXHIBIT B: ORIGINAL COPY

Permit Application

City Of Big Spring/Howard County

Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395

PART I

SITE AND APPLICANT INFORMATION

Rev. No. 4 - 10.01.2023

Rev No. 3 - 06.19.17

Original Submittal - 12.12.2016

PSC Project # 01030419



PARKHILLSMITH&COOPER

Permit Application

City Of Big Spring/Howard County

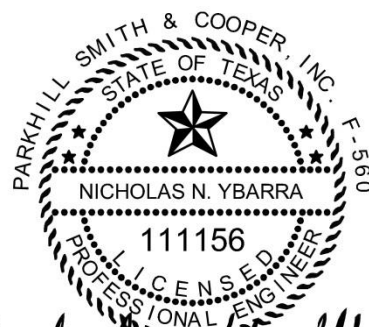
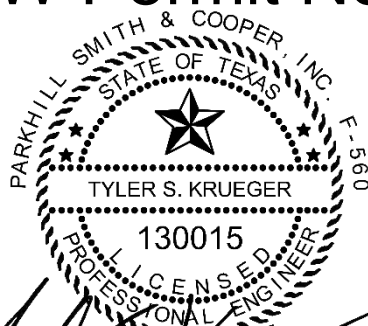
Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395



PART I

10/01/2023
Revision 4 Only

06/19/17

SITE AND APPLICANT INFORMATION

Rev. No. 4 - 10.01.2023

Rev No. 3 - 06.19.17

Original Submittal - 12.12.2016

PSC Project # 01030419



PARKHILL **SMITH** & COOPER

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ATTACHMENTS

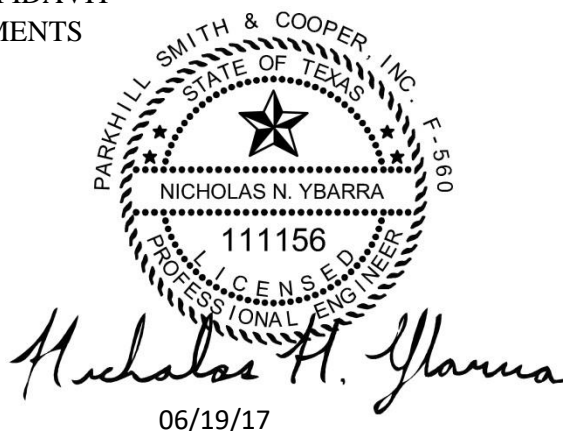
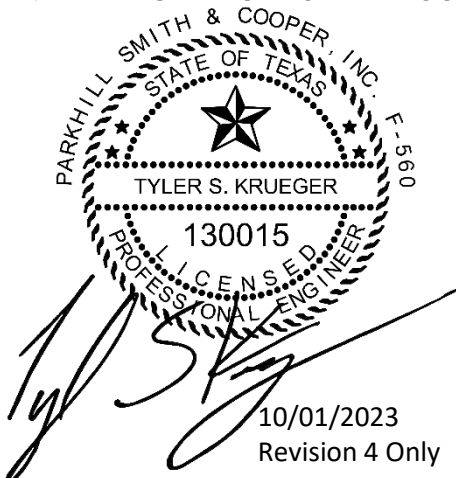
ATTACHMENT A – SITE DRAWINGS

ATTACHMENT B – ADJACENT LANDOWNERSHIP MAP

ATTACHMENT C – METES AND BOUNDS DESCRIPTION

ATTACHMENT D – PROPERTY OWNERSHIP AFFIDAVIT

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ATTACHMENT F – WARRANTY DEED
ATTACHMENT G – EVIDENCE OF COMPETENCY
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FIGURES

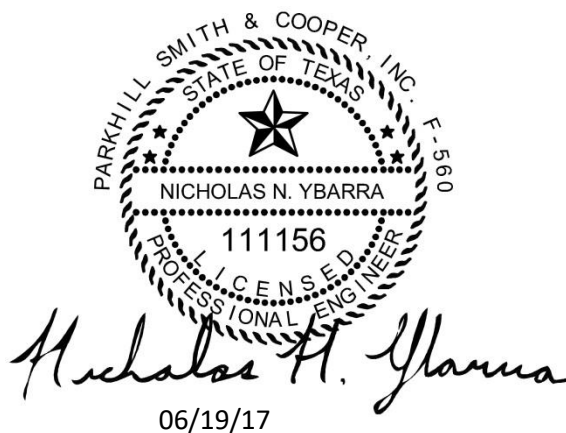
Figure I.1.1	Location Map
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Table I.1.4	Permit Summary
Table I.6.3	Landfill Facility Equipment List



10/01/2023
Revision 4 Only



06/19/17

**ATTACHMENT B
ADJACENT LANDOWNERSHIP MAP**

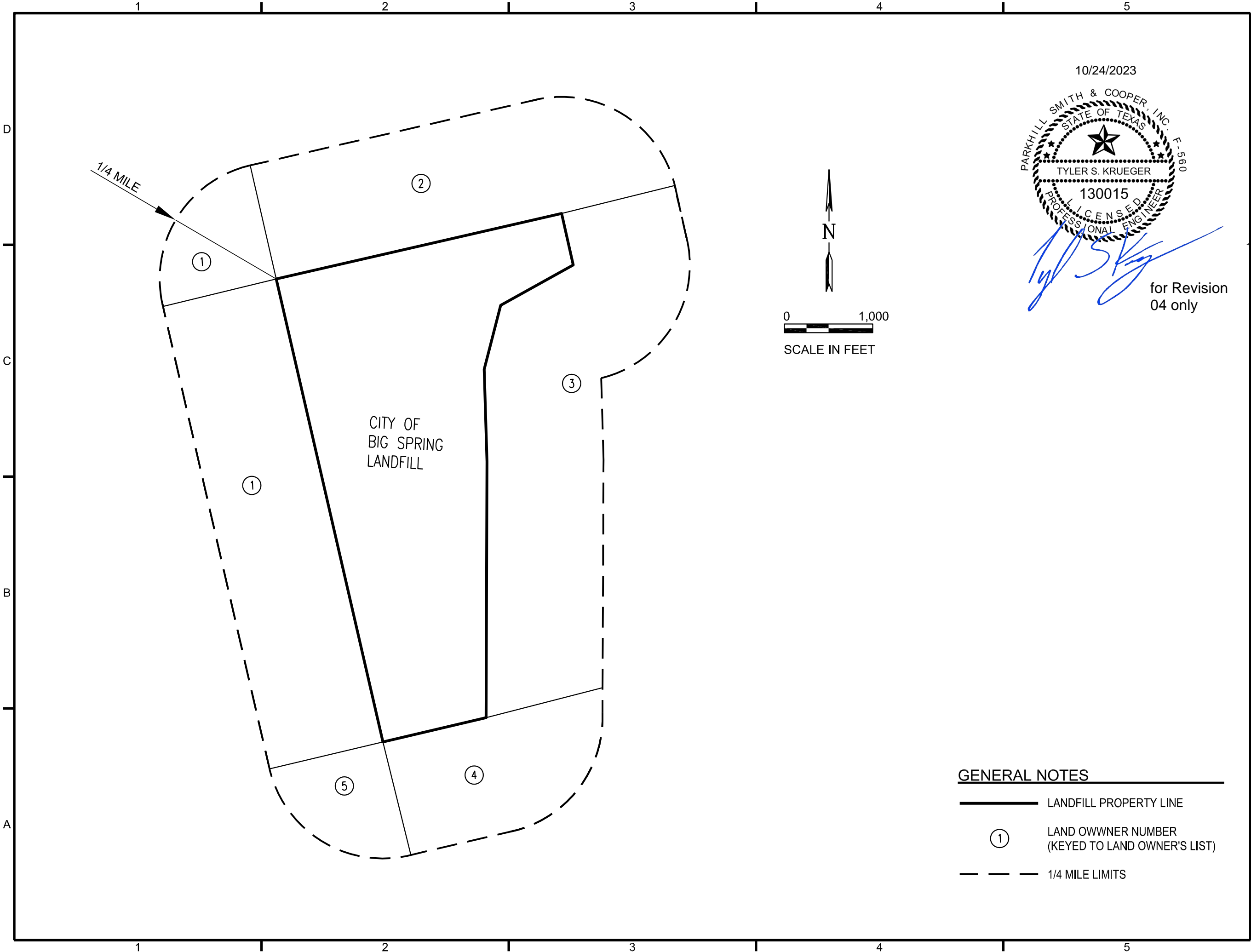
LANDOWNERSHIP - 30 TAC §330.59(c)(3)(A)-(B)

Records of the Howard County Appraisal District were researched to compile the names and addresses of property owners within a quarter-mile. Figure I.2.1 - Land Ownership Map, illustrates the location of surrounding properties. Property owners are identified on the following list, keyed to Figure I.2.1 – Land Ownership Map:

LANDOWNER'S LIST

1. Howard County
PO Box 1949
Big Spring, Texas 79721-1949
2. BJK-BS LLC
16983 CR 43
Tyler, Texas 75704
3. Sherry Ann White
3214 Fenn Street
Big Spring, Texas 79720
4. ALON USA Refining Inc.
12700 Park Central Drive, Suite 1600
Dallas, Texas 75251
5. Brandy Lee Hubbard
6716 E Robinson Road
Big Spring, Texas 79720

FILE NAME: A:\2019\0304\19\03_DSGN\01_DWG\050_CIVIL\02_CONTENT\ADC Mod\I.2.1 - LAND OWNERSHIP MAP - REV 04.dwg LAYOUT NAME: FIG. I.2.1 PRINTED: Tuesday, October 24, 2023 - 9:30am USER: TKrueger



GENERAL NOTES

- LANDFILL PROPERTY LINE
- ① LAND OWWNER NUMBER
(KEYED TO LAND OWNER'S LIST)
- 1/4 MILE LIMITS

10/24/2023

PARKHILL SMITH & COOPER, INC. F-560
STATE OF TEXAS
TYLER S. KRUEGER
130015
LICENSED PROFESSIONAL ENGINEER

[Signature]
for Revision 04 only

PARKHILL SMITH & COOPER

NICHOLAS N. YBARRA
111156
LICENSED PROFESSIONAL ENGINEER
05/07/2017

Nicholas N. Ybarra

FOR PERMITTING PURPOSES ONLY

CITY OF Big Spring TEXAS

MUNICIPAL SOLID WASTE LANDFILL
TCEQ MSW PERMIT NO. 2395

CITY OF BIG SPRING/HOWARD COUNTY
BIG SANDY DRAW LANDFILL

310 NOLAN
BIG SPRING, TEXAS 79720
(432) 264-2400

KEY PLAN

04	10/24/2023	REV 04
02	05/07/2017	NOD #1
NO	DATE	DESCRIPTION

ISSUING OFFICE: EL PASO PROJECT NO: 0340.14

LAND OWNERSHIP MAP

FIG. I.2.1

Permit Application

City Of Big Spring/Howard County

Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395

PART IV

SITE OPERATING PLAN

Rev No. 4 - 10.01.2023

Rev No. 3 – 12.05.19

Rev No. 2 – 05.07.17

Original Submittal 12.12.2016

PSC Project # 01030419



PARKHILL **SMITH** & COOPER

Permit Application

City Of Big Spring/Howard County

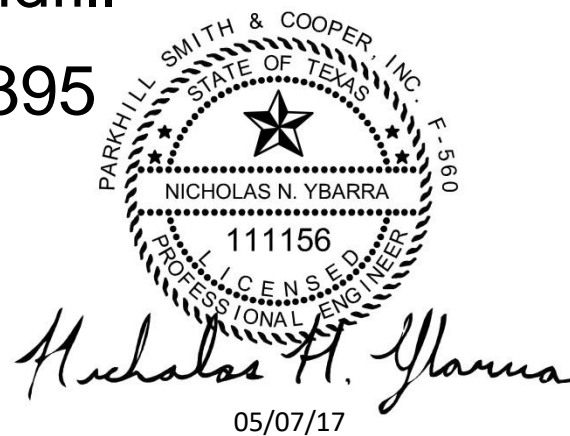
Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395



PART IV

SITE OPERATING PLAN



Rev No. 4 - 10.01.2023

Rev No. 3 – 12.05.19

Rev No. 2 – 05.07.17

Original Submittal – 12.12.2016

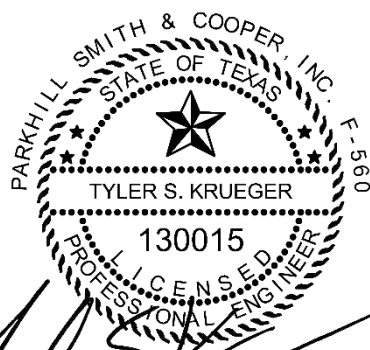
PSC Project # 01030419



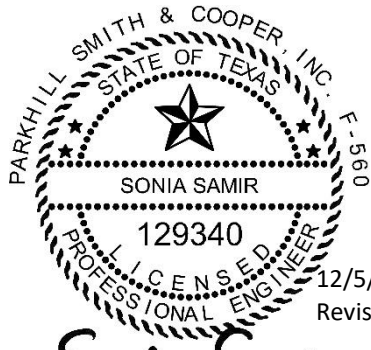
PARKHILL **SMITH** & COOPER

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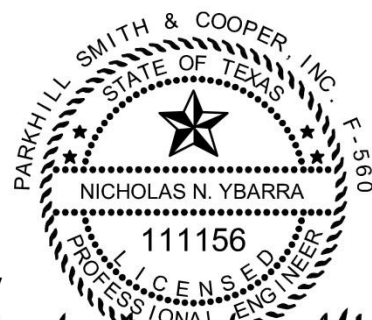
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[Signature]
10/01/2023
Revision 4 Only

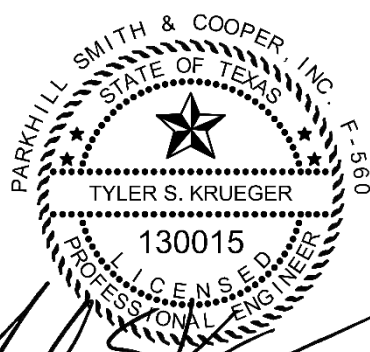


12/5/19
Revision 3 only
Sonia Samir

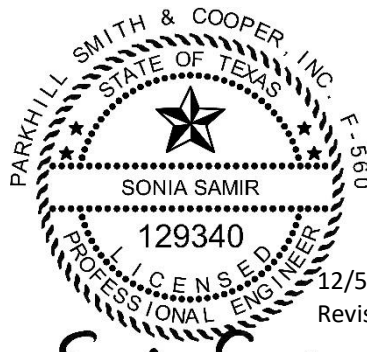


Nicholas N. Ybarra
05/07/17

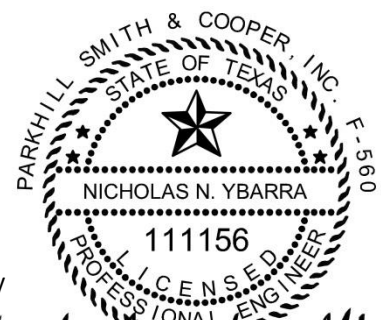
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[Signature]
10/01/2023
Revision 4 Only



12/5/19
Revision 3 only
Sonia Samir



Nicholas N. Ybarra
05/07/17

ATTACHMENTS

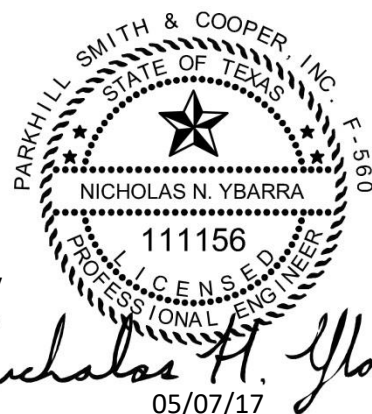
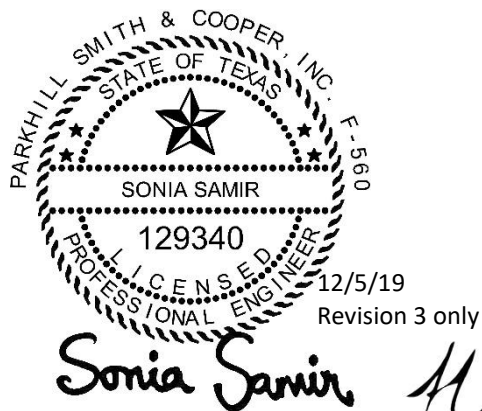
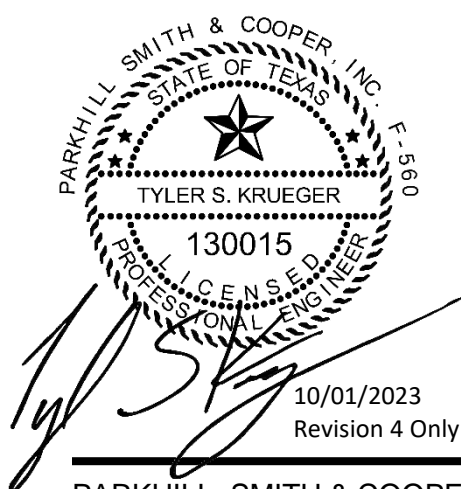
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Table IV.8.1 – FIREFIGHTING DEMONSTRATION
Table IV.9.1 – ACCESS CONTROL
Table IV.12.1 – LANDFILL MARKERS



23.0 LANDFILL COVER - 30 TAC §330.165

23.1 DAILY COVER

Equipment operators will apply ADC cover or 6 inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste, at the end of each operating day to control disease vectors, fires, odors, windblown litter or waste, and scavenging.

23.2 INTERMEDIATE COVER

Equipment operators will cover all areas that have received waste but will be inactive for longer than 180 days, with intermediate or final cover. Intermediate cover will include 12 inches of earthen material, the top 6 inches of which shall be capable of sustaining native plant growth. Intermediate cover will be seeded or sodded following application to control erosion. This intermediate cover will be graded to prevent ponding of water, and plant growth or other erosion control features will be maintained. Runoff from areas which have received intermediate cover, will not be considered leachate.

23.3 ALTERNATIVE DAILY COVER (ADC) MATERIAL

Alternative Daily Cover (ADC) will be implemented using BioCover™ ADC, a product manufactured by Profile. BioCover™ ADC is a hydro-mulch application comprised of the thermally refined wood fibers, cellulose fibers, and a viscous hydrocolloid tackifier. It will be sprayed over waste at a manufacturer's recommended minimum thickness of 0.25 inches.

BioCover™ ADC has been approved and used at numerous landfills throughout Texas and has demonstrated effectiveness. During one year under a temporary authorization, BioCover™ was effectively applied at the facility. Daily cover logs demonstrated the effectiveness in reducing vectors, fires, odors, and windblown litter and waste. The temporary authorization application of BioCover™ ADC was found to be as effective as 6 inches of clean soil cover.

ADC application is limited to 24 hours, after which waste or 6 inches of clean soil cover will be placed. A manufacturer-compliant sprayer for BioCover™ ADC will be used to apply the hydro-mulch to the working face. BioCover™ ADC will be securely stored in a designated area within the facility's enclosed and insulated metal maintenance building. This facility ensures a controlled environment that is cool and dry, effectively safeguarding the material from potential sources of ignition. The facility will maintain a minimum of two weeks' worth of materials within the storage area. Before being accepted for use within the landfill, the packaging of the material will undergo inspection for any signs of rips or

tears. Facility personnel will reject any material that exhibits defects. Deployment of ADC will adhere to the following procedures:

- Operators must familiarize themselves with the BioCover™ Safety Data Sheet (SDS) provided in Attachment C before using the ADC sprayer.
- The ADC sprayer will only be operated by personnel trained by qualified individuals, which include the sprayer manufacturer or previously trained site personnel.
- BioCover™ ADC will be mixed on-site per the manufacturer's recommendations. This involves adding 50 pounds of BioCover™ ADC per 100 gallons of water. The mixture will be agitated using the equipped agitator and using water from an on-site water well.
- Before application, operators will inspect the working face to ensure no open flame or excessive hot surfaces are present. Firefighting measures will be implemented if required before cover is applied.
- ADC will be sprayed in at least two directions using a sweeping motion to ensure proper coverage over exposed waste.
- Following ADC deployment, landfill staff will visually inspect the covered area to confirm no exposed waste remains. Any uncovered areas will be promptly covered with ADC.

BioCover™ ADC, a non-reactive and non-corrosive product, is comprised of thermally refined wood fibers, cellulose fibers, and a hydrocolloid tackifier. Additional product information and SDS are included in Attachment C. No other pertinent characteristics, features, or factors related to alternative material use are applicable.

ADC application can be conducted under high wind conditions, provided operators adhere to specific guidelines. ADC should be applied in the direction of the prevailing wind or across the wind, avoiding application against the wind. The versatility of BioCover™ ADC equipment allows it to be positioned at various angles relative to the working face, ensuring adaptability to align the sprayer with the prevailing winds during application. BioCover™ ADC effectively secures waste in place, minimizing the risk of windblown litter.

23.4 FINAL COVER

The City of Big Spring will install final cover for the landfill in accordance with the site closure plan and Subchapter K of 30 TAC Chapter 330 (relating to Closure and Post-Closure).

23.5 EROSION OF COVER

Erosion of final or intermediate cover will be repaired within five days of detection by restoring cover material, grading, compacting, and seeding, unless the commission's regional office approves otherwise based on extent of damage requiring more time to repair, or repair is delayed because of weather conditions. Periodic inspections and restorations are required during entire operational life and post-closure maintenance period. An eroded area is considered deep enough to jeopardize final or intermediate cover if it exceeds 4 inches in depth, as measured from the vertical plane from the erosion feature and the 90-degree intersection of this plane with the horizontal slope face or surface.

23.6 COVER INSPECTION RECORD – 30 TAC §330.165(h)

The City of Big Spring will keep a cover application record onsite, readily available for inspection by commission representatives, authorized agents, or employees of local governments having jurisdiction. This record will specify the date cover was accomplished (no exposed waste), how it was accomplished, and last area covered. This applies to daily, intermediate, and ADC. For final cover, this record will specify the area covered, the date cover was applied, and thickness applied that date. Each entry will be certified by the signature of the onsite supervisor that the work was accomplished as stated in the record. Erosion Records will be kept in the cover inspection record as well, and will include dates of detection and completed repairs, as well as any reasons for delays. Daily cover will be inspected daily. Intermediate and final cover will be inspected monthly or within 72 hours of a rainfall event of 0.5 inches or more.

ATTACHMENT C

ALTERNATIVE DAILY COVER DOCUMENTATION



Alternative Daily Cover



Upon application forms a consistent and effective layer between waste and the surrounding environment



Dyed green to confirm coverage rate for efficiency, unlike non-dyed spray-on products



Debris on an open-faced landfill



A polysaccharide tackifier increases the surface bond to debris, including plastic and other slick-surface materials, ultimately lowering blowing debris and trapping odors

An Effective, Cost-Saving Alternative to Soil or Tarps

BioCover™ Alternative Daily Cover (ADC) is hydraulically applied, meets federal regulations, is less expensive than other alternate covers and is easier to apply. Manufactured from Thermally Refined® wood fibers combined with cellulose fiber and a viscous polysaccharide tackifier, BioCover is the superior alternative to soil, mulch or plastic daily covers.

BioCover Advantages:

- Better for the environment—minimizes the accumulated leachate pockets and leachate seeps that are typically caused by continuous daily soil cover practices; designed as 100% biodegradable and non-toxic
- Preserves air space—creates a uniform protective layer that is dramatically thinner than comparably effective soil applications, increasing available space and the functional lifespan of the landfill
- Improves Landfill Gas Management System efficiency—minimizes the number of intermediate impervious layers which increases the capture zone and efficiency of the gas extraction system
- Prevents water infiltration—reduces leachate runoff with excellent absorption properties
- Lowers emissions—conserves fuel, requiring less excavation and transportation equipment needed on the jobsite
- Inhibits scavengers—deters unwanted pests

BioCover™ ADC Technical Data:

BioCover™ meets the ASTM International's standard guide for evaluation and selection of alternative daily covers for sanitary landfills (ASTM 6523-00), assists in the understanding of performance features to determine the extent and degree to which different ADC's are able to "control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment" as intended by United States Environmental Protection Agency regulations.

As with any ADC, the final application cost per square foot will vary depending on the type of waste materials, compaction, moisture content, weather conditions, local regulatory requirements and local environmental issues. However, BioCover is the fastest, provides the best coverage and is the most affordable option on the market today.

COMPOSITION

Thermally Refined® Wood Fiber—51% ± 3%
Cellulose Fiber—27% ± 3%
Polysaccharide Tackifier—10% ± 1%
Moisture Content—12% ± 3%

ADC APPLICATION RATE

BioCover should be used at 1500-2500 pounds per acre (1700-2800 kg/ha).

**1/4" (0.64 cm) ADC NEEDED PER APPLICATION VS
6" (15 cm) COMPACTED SOIL**

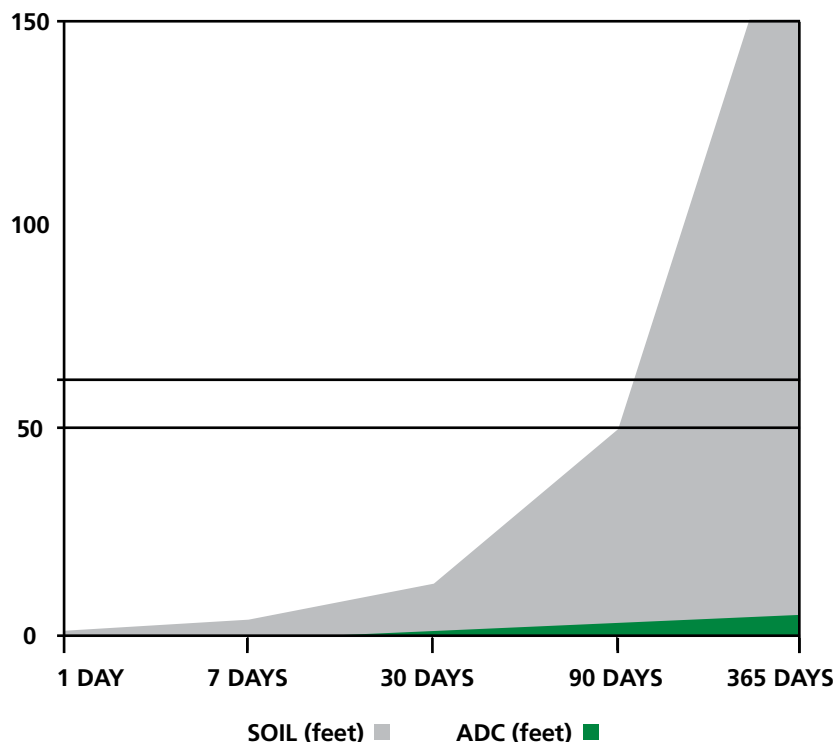


Chart demonstrates amount of landfill space lost over the course of a year with a standard soil application compared to ADC. ADC requires minimal coverage of 1/4-inch (0.64 cm) per application, resulting in greater available landfill space for waste.

PACKAGING

Bales: Net Weight – 50 lb (23 kg)

Pallets: 40 bales/pallet 1 ton (907 kg)/pallet

BIOCOVER PRESERVES LANDFILL CAPACITY

Soil—33 square feet (0.93 m³) of dirt on top of the refuse (when applied at six inches (15 cm) of soil per day)

BioCover—33 inches (0.02 ft³) of material (when applied at 1/4-inch (0.64 cm) per day)



Green Design Engineering™ is a holistic approach that combines agronomic and engineering expertise with advanced technologies to provide cost-effective and earth-friendly solutions. Profile strives to deliver Green Design Engineering across our team of consulting professionals, innovative products and educational resources.



PS³ is a free, comprehensive 24/7 online resource you can use to design a project and select the right products that address both the physical and agronomic needs of your site. It will help you develop holistic, sustainable solutions for cost-effective erosion control, vegetation establishment and subsequent reductions in sediment and other pollutants from leaving disturbed sites. Because good plans start with the soil, PS³ offers free soil testing to ensure this critical step is considered. To access the site, design your project and take advantage of a free soil analysis, visit www.profileps3.com.



For technical information or distribution, please call 800-508-8681. For customer service, call 800-366-1180.

For warranty information, visit profileproducts.com.

750 Lake Cook Road • Suite 440
Buffalo Grove, IL 60089
www.profileproducts.com

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BioCover™ ADC

SDS Number: CON046

Revision Date: 1/1/17

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1 PRODUCT AND COMPANY IDENTIFICATION**Manufacturer**

PROFILE Products, LLC
750 LAKE COOK ROAD
SUITE 440
BUFFALO GROVE, IL 60089

Emergency: Emergency Phone: (800) 424-9300 (ChemTrec)
Contact: ChemTrec Acct #: CCN792719
Phone: (847) 215-1144
Fax: (847) 215-0577
Email: tech@profileproducts.com
Web: www.profileproducts.com

Product Name: BioCover™ ADC
Revision Date: 1/1/17
SDS Number: CON046
CAS Number: Not applicable
Product Use: Alternative Daily Cover for Landfills.

Product Description: Green dyed wood fibers, a proprietary binder mixture and other inert materials.

2 HAZARDS IDENTIFICATION**Classification of the Substance or Mixture**

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

No GHS Classifications Indicated

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **NONE**

no GHS pictograms indicated for this product

GHS Hazard Statements:

no GHS hazards statements indicated

GHS Precautionary Statements:

no GHS precautionary statements indicated

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Inhalation, skin contact, eye contact

Inhalation: Wood may cause sneezing, irritation, and dryness of the nose and throat. Dust may aggravate pre-existing respiratory conditions.

Skin Contact: Wood dust can cause irritation. Skin absorption is not known to occur.

Eye Contact: Wood dust can irritate the eyes.

Ingestion: No reports of human ingestion.

OSHA Classification: Wood dust is a hazardous substance as defined by the Hazard Communication Standard 29CFR 1910.1200

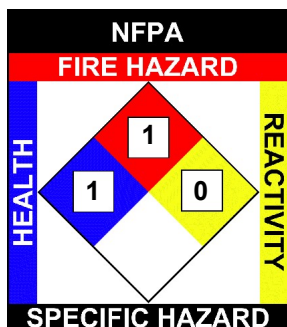
BioCover™ ADC

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NFPA: Health = 1, Fire = 1, Reactivity = 0, Specific Hazard = n/a



3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
0	Proprietary	Hydrocolloidal Based Polysaccharide Tackifier
9000300	Proprietary	Guar Gum

4 FIRST AID MEASURES

Inhalation:	Usually not a problem. Remove to fresh air if respiratory irritation develops, and get medical aid promptly if irritation persists.
Skin Contact:	Usually not a problem. Wash off with running water if irritation is experienced.
Eye Contact:	Open eyelids and flush with water.
Ingestion:	Get medical attention.

5 FIRE FIGHTING MEASURES

Flammability:	Combustible product
Flash Point:	Not applicable
Flash Point Method:	Not applicable
Autoignition Temp:	200-260°C (400-500°F)
Conditions to avoid: In contact with flames or hot surfaces	
Flammable- Extinguish with water; same as a wood fire	

6 ACCIDENTAL RELEASE MEASURES

Scoop up product. Wear goggles and respirator if dust is produced in unventilated areas. Wet product will be slippery.

7 HANDLING AND STORAGE

Handling Precautions:	Clean up areas where dust settles. Minimize blowdown or other practices that generate high airborne dust concentrations.
Storage Requirements:	Store in a cool, dry place. Keep away from sources of ignition.

BioCover™ ADC

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8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: None required for outdoor mixing and application. Use dust collection system for indoor handling operations.

Personal Protective Equipment: Eye Protection: Wear goggles when emptying bags and during other operations where there is a risk of dust entering the eyes.
Gloves: Leather, plastic or rubber gloves could be worn to minimize skin irritation.
Respirators: When handling methods generate dust at concentrations that exceed occupational exposure limits, wear a NIOSH approved respirator. A fabric respirator or a facepiece respirator with dust cartridges will generally provide adequate protection.
Footwear: The product is slippery when wet. Wear appropriate footwear.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dyed green wood fibers - Pine & mixed hardwoods		
Physical State:	Wood Fibers	Odor:	Mild wood odor
Spec Grav./Density:	Lighter than water		
Vapor Pressure:	N/A		

10 STABILITY AND REACTIVITY

Chemical Stability: Stable product

Conditions to Avoid: Contact with strong acids and oxidizers may generate heat. Product may ignite at temperatures in excess of 200°C (400°F).

Materials to Avoid: Strong acids and oxidizers

Hazardous Polymerization: Will not occur.

11 TOXICOLOGICAL INFORMATION

EFFECTS OF CHRONIC EXPOSURE:

Inhalation: Frequent and repeated exposure to wood dust is associated with an increased risk of developing nasal cancer.

Skin Contact: Although rare, wood dust may cause dermatitis in sensitized people.

Occupational Exposure Limits:

Wood dusts- All other species: ACGIH (2007): TLV-TWA 1 mg/m³ (Inhalable fraction); A4

Particulates Not Otherwise Regulated (PNOR): OSHA: PEL-TWA 15 mg/m³ (Total Dust); 5 mg/m³ (Respirable fraction)

Irritancy: Wood dust is a mild irritant

Sensitization: Some wood dusts may cause allergic skin reactions



BioCover™ ADC

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ECOLOGICAL INFORMATION

Guar Gum (CAS# 9000-30-0) is listed as an inert ingredient permitted for use in nonfood use pesticide products by EPA. It is also classified under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as a minimal risk inert substance (List 4A) meaning that as a pesticide, Guar Gum is considered by the EPA to pose little or no risk to humans or the environment. The US Department of Agriculture (USDA) National Organic Program (NOP) also allows the use of Guar Gum in a variety of applications, but primarily as a pesticide in organic production operations. Finally, Guar Gum is listed on the Generally Recognized as Safe (GRAS) list by the Food and Drug Administration (FDA).

48-hr LC_{50} = >100% for *Daphnia magna* when runoff generated using ASTM D7101 (2"/hr rainfall rate) was tested according to EPA-821-R-02-012.

13

DISPOSAL CONSIDERATIONS

Normally can be disposed of as a wood residue. Ensure disposal is in compliance with local, provincial (state), and federal regulations.

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TRANSPORT INFORMATION



BioCover™ ADC

SDS Number: CON046

Revision Date: 1/1/17

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REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Hydrocolloidal Based Polysaccharide Tackifier (0) [Proprietary]

Guar Gum (9000300) [Proprietary] TSCA

Regulatory CODE Descriptions

TSCA = Toxic Substances Control Act

COMPONENT / (CAS/PERC) / CODES

*Guar gum (9000300 n/a%) TSCA

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List

NRC = Nationally Recognized Carcinogens

OSHA WAC = OSHA Workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

TXAIR = TX Air Contaminants with Health Effects Screening Level

CERCLA = Superfund clean up substance

CSWHS = Clean Water Act Hazardous substances

EHS302 = Extremely Hazardous Substance

EPCRAWPC = EPCRA Water Priority Chemicals

HAP = Hazardous Air Pollutants

NJEHS = NJ Extraordinarily Hazardous Substances

NJHS = NJ Right-to-Know Hazardous Substances

OSHAPSM = OSHA Chemicals Requiring process safety management

SARA313 = SARA 313 Title III Toxic Chemicals

TSCA = Toxic Substances Control Act

16

OTHER INFORMATION**Disclaimer:**

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

EXHIBIT C: REVISED COPY

Permit Application

City Of Big Spring/Howard County

Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395

PART I

SITE AND APPLICANT INFORMATION

Rev. No. 4 - 10.01.2023

Rev No. 3 - 06.19.17

Original Submittal - 12.12.2016

PSC Project # 01030419



PARKHILLSMITH&COOPER

Permit Application

City Of Big Spring/Howard County

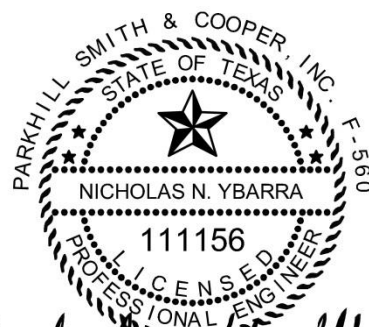
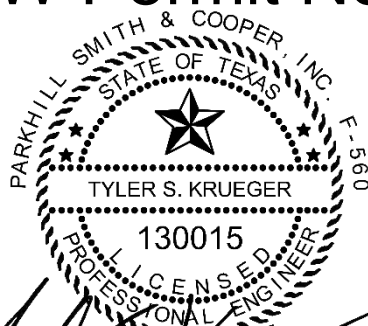
Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395



PART I

10/01/2023
Revision 4 Only

06/19/17

SITE AND APPLICANT INFORMATION

Rev. No. 4 - 10.01.2023

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PARKHILL **SMITH** & COOPER

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ATTACHMENTS

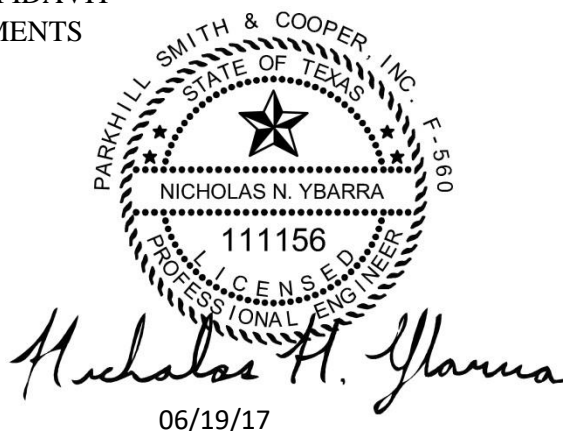
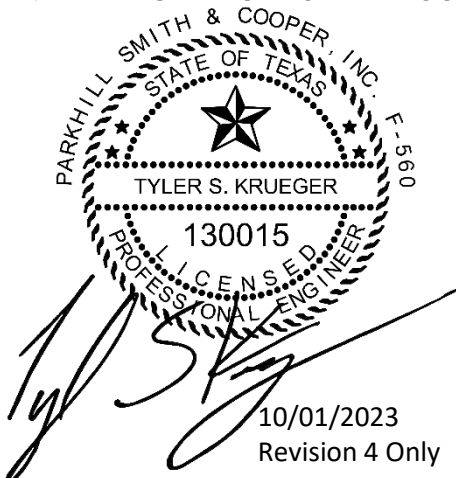
ATTACHMENT A – SITE DRAWINGS

ATTACHMENT B – ADJACENT LANDOWNERSHIP MAP

ATTACHMENT C – METES AND BOUNDS DESCRIPTION

ATTACHMENT D – PROPERTY OWNERSHIP AFFIDAVIT

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ATTACHMENT F – WARRANTY DEED
ATTACHMENT G – EVIDENCE OF COMPETENCY
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FIGURES

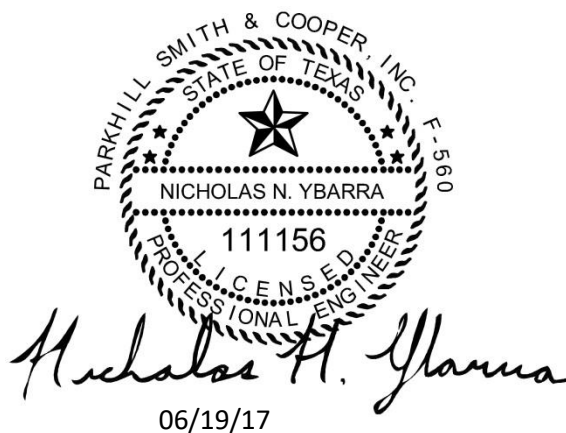
Figure I.1.1	Location Map
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Figure I.1.4	General Topographic Map
Figure I.2.1	Land Ownership Map

TABLES

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Table I.6.3	Landfill Facility Equipment List



10/01/2023
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06/19/17

**ATTACHMENT B
ADJACENT LANDOWNERSHIP MAP**

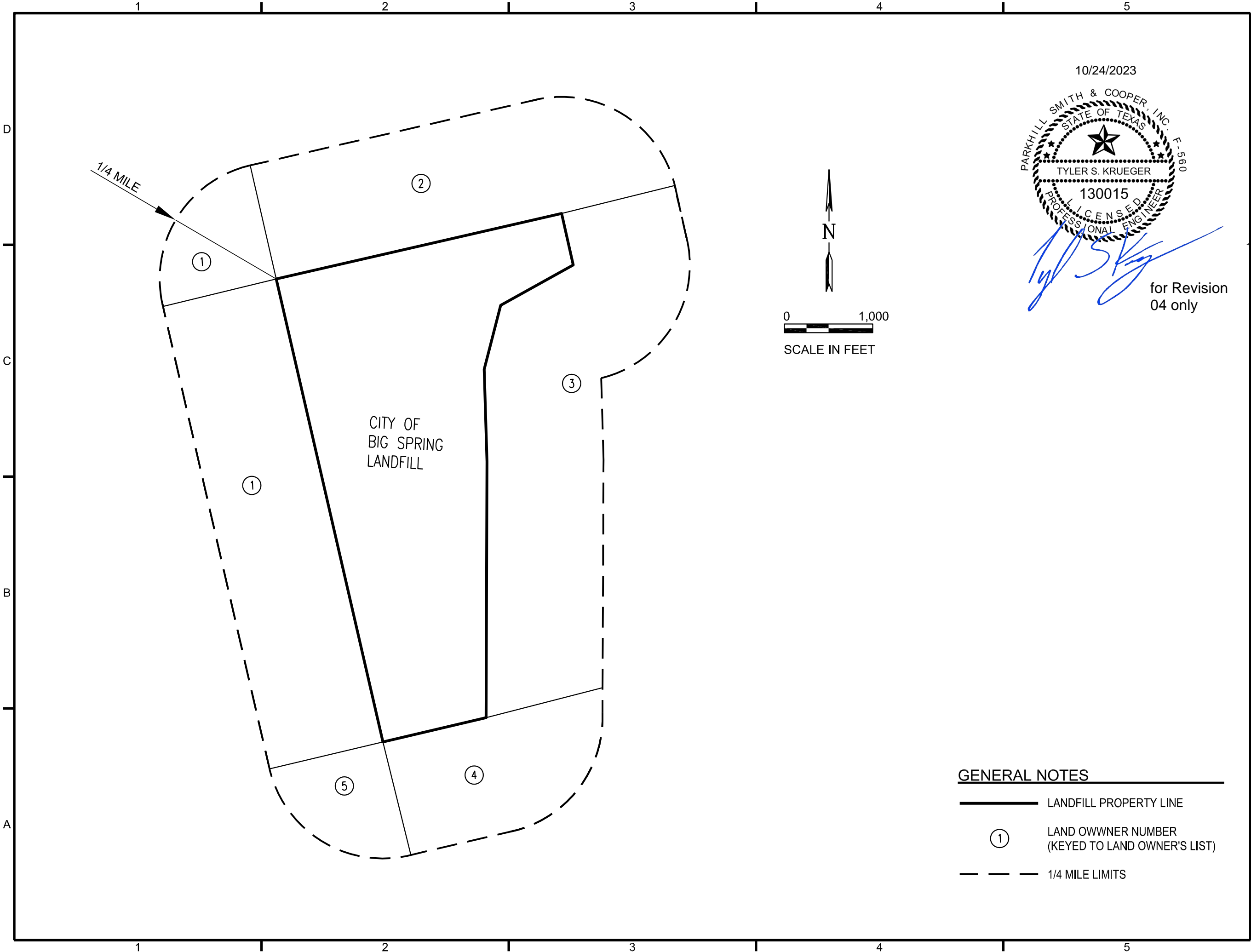
LANDOWNERSHIP - 30 TAC §330.59(c)(3)(A)-(B)

Records of the Howard County Appraisal District were researched to compile the names and addresses of property owners within a quarter-mile. Figure I.2.1 - Land Ownership Map, illustrates the location of surrounding properties. Property owners are identified on the following list, keyed to Figure I.2.1 – Land Ownership Map:

LANDOWNER'S LIST

1. Howard County
PO Box 1949
Big Spring, Texas 79721-1949
2. BJK-BS LLC
16983 CR 43
Tyler, Texas 75704
3. Sherry Ann White
3214 Fenn Street
Big Spring, Texas 79720
4. ALON USA Refining Inc.
12700 Park Central Drive, Suite 1600
Dallas, Texas 75251
5. Brandy Lee Hubbard
6716 E Robinson Road
Big Spring, Texas 79720

FILE NAME: A:\2019\0304\19\03_DSGN\01_DWG\050_CIVIL\02_CONTENT\ADC Mod\I.2.1 - LAND OWNERSHIP MAP - REV 04.dwg LAYOUT NAME: FIG. I.2.1 PRINTED: Tuesday, October 24, 2023 - 9:30am USER: TKrueger



GENERAL NOTES

- LANDFILL PROPERTY LINE
- ① LAND OWWNER NUMBER
(KEYED TO LAND OWNER'S LIST)
- - - 1/4 MILE LIMITS

10/24/2023

PARKHILL SMITH & COOPER, INC. F-560
STATE OF TEXAS
TYLER S. KRUEGER
130015
LICENSED PROFESSIONAL ENGINEER

[Signature]

for Revision 04 only

PSC
PARKHILL SMITH & COOPER

PARKHILL SMITH & COOPER, INC. F-560
STATE OF TEXAS
NICHOLAS N. YBARRA
111156
LICENSED PROFESSIONAL ENGINEER

Nicholas N. Ybarra
05/07/2017

FOR PERMITTING PURPOSES ONLY

CITY OF Big Spring TEXAS

MUNICIPAL SOLID WASTE LANDFILL
TCEQ MSW PERMIT NO. 2395

CITY OF BIG SPRING/HOWARD COUNTY
BIG SANDY DRAW LANDFILL

310 NOLAN
BIG SPRING, TEXAS 79720
(432) 264-2400

KEY PLAN

NO	DATE	DESCRIPTION
04	10/24/2023	REV 04
02	05/07/2017	NOD #1

ISSUING OFFICE: EL PASO PROJECT NO: 0340.14

LAND OWNERSHIP MAP

FIG. I.2.1

Permit Application

City Of Big Spring/Howard County

Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395

PART IV

SITE OPERATING PLAN

Rev No. 4 - 10.01.2023

Rev No. 3 – 12.05.19

Rev No. 2 – 05.07.17

Original Submittal 12.12.2016

PSC Project # 01030419



PARKHILLSMITH&COOPER

Permit Application

City Of Big Spring/Howard County

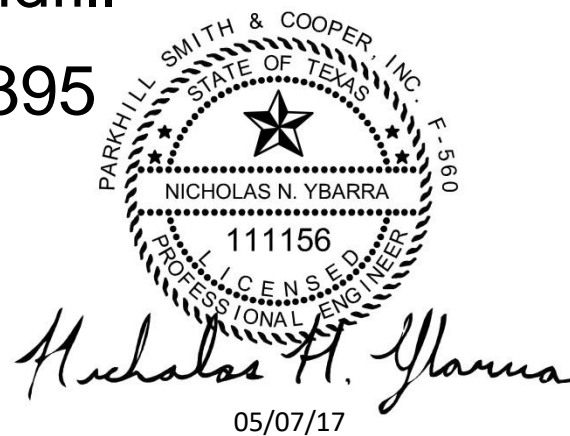
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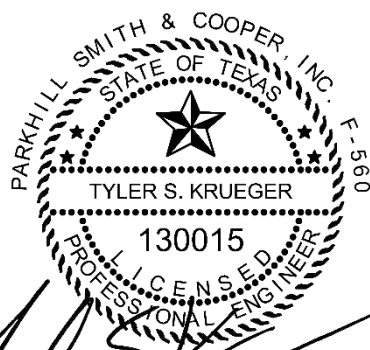
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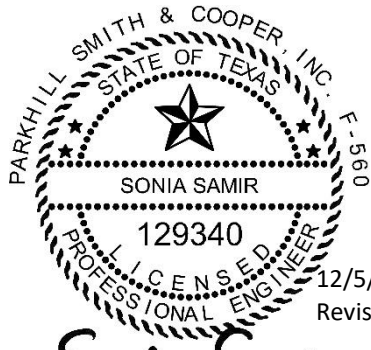
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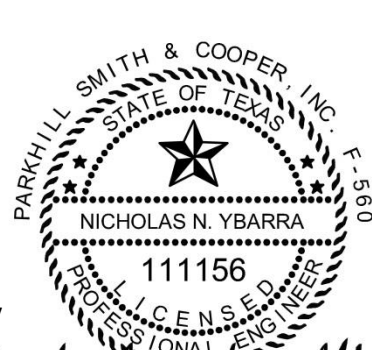
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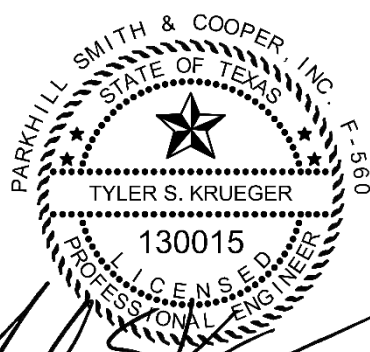


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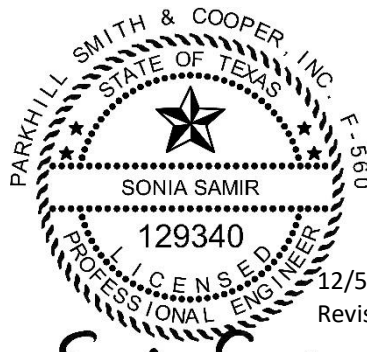


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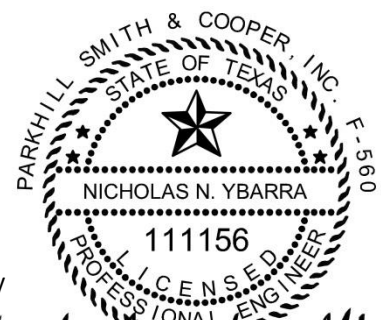
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Sonia Samir



Nicholas N. Ybarra
05/07/17

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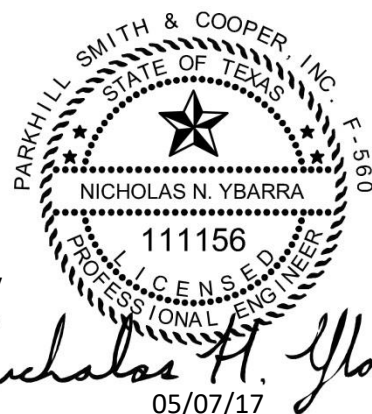
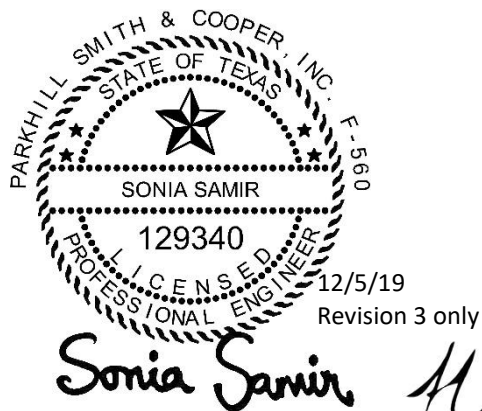
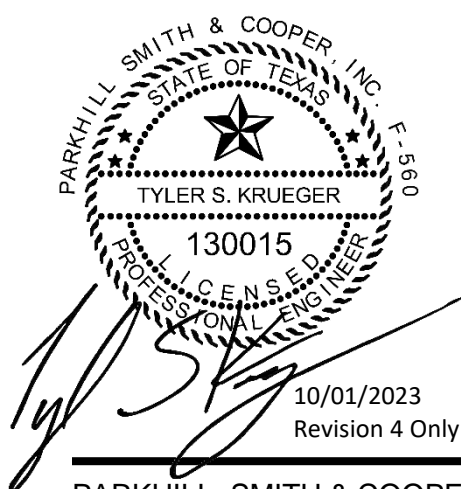
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23.0 LANDFILL COVER - 30 TAC §330.165

23.1 DAILY COVER

Equipment operators will apply ADC cover or 6 inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste, at the end of each operating day to control disease vectors, fires, odors, windblown litter or waste, and scavenging.

23.2 INTERMEDIATE COVER

Equipment operators will cover all areas that have received waste but will be inactive for longer than 180 days, with intermediate or final cover. Intermediate cover will include 12 inches of earthen material, the top 6 inches of which shall be capable of sustaining native plant growth. Intermediate cover will be seeded or sodded following application to control erosion. This intermediate cover will be graded to prevent ponding of water, and plant growth or other erosion control features will be maintained. Runoff from areas which have received intermediate cover, will not be considered leachate.

23.3 ALTERNATIVE DAILY COVER (ADC) MATERIAL

Alternative Daily Cover (ADC) will be implemented using BioCover™ ADC, a product manufactured by Profile. BioCover™ ADC is a hydro-mulch application comprised of the thermally refined wood fibers, cellulose fibers, and a viscous hydrocolloid tackifier. It will be sprayed over waste at a manufacturer's recommended minimum thickness of 0.25 inches.

BioCover™ ADC has been approved and used at numerous landfills throughout Texas and has demonstrated effectiveness. During one year under a temporary authorization, BioCover™ was effectively applied at the facility. Daily cover logs demonstrated the effectiveness in reducing vectors, fires, odors, and windblown litter and waste. The temporary authorization application of BioCover™ ADC was found to be as effective as 6 inches of clean soil cover.

ADC application is limited to 24 hours, after which waste or 6 inches of clean soil cover will be placed. A manufacturer-compliant sprayer for BioCover™ ADC will be used to apply the hydro-mulch to the working face. BioCover™ ADC will be securely stored in a designated area within the facility's enclosed and insulated metal maintenance building. This facility ensures a controlled environment that is cool and dry, effectively safeguarding the material from potential sources of ignition. The facility will maintain a minimum of two weeks' worth of materials within the storage area. Before being accepted for use within the landfill, the packaging of the material will undergo inspection for any signs of rips or

tears. Facility personnel will reject any material that exhibits defects. Deployment of ADC will adhere to the following procedures:

- Operators must familiarize themselves with the BioCover™ Safety Data Sheet (SDS) provided in Attachment C before using the ADC sprayer.
- The ADC sprayer will only be operated by personnel trained by qualified individuals, which include the sprayer manufacturer or previously trained site personnel.
- BioCover™ ADC will be mixed on-site per the manufacturer's recommendations. This involves adding 50 pounds of BioCover™ ADC per 100 gallons of water. The mixture will be agitated using the equipped agitator and using water from an on-site water well.
- Before application, operators will inspect the working face to ensure no open flame or excessive hot surfaces are present. Firefighting measures will be implemented if required before cover is applied.
- ADC will be sprayed in at least two directions using a sweeping motion to ensure proper coverage over exposed waste.
- Following ADC deployment, landfill staff will visually inspect the covered area to confirm no exposed waste remains. Any uncovered areas will be promptly covered with ADC.

BioCover™ ADC, a non-reactive and non-corrosive product, is comprised of thermally refined wood fibers, cellulose fibers, and a hydrocolloid tackifier. Additional product information and SDS are included in Attachment C. No other pertinent characteristics, features, or factors related to alternative material use are applicable.

ADC application can be conducted under high wind conditions, provided operators adhere to specific guidelines. ADC should be applied in the direction of the prevailing wind or across the wind, avoiding application against the wind. The versatility of BioCover™ ADC equipment allows it to be positioned at various angles relative to the working face, ensuring adaptability to align the sprayer with the prevailing winds during application. BioCover™ ADC effectively secures waste in place, minimizing the risk of windblown litter.

23.4 FINAL COVER

The City of Big Spring will install final cover for the landfill in accordance with the site closure plan and Subchapter K of 30 TAC Chapter 330 (relating to Closure and Post-Closure).

23.5 EROSION OF COVER

Erosion of final or intermediate cover will be repaired within five days of detection by restoring cover material, grading, compacting, and seeding, unless the commission's regional office approves otherwise based on extent of damage requiring more time to repair, or repair is delayed because of weather conditions. Periodic inspections and restorations are required during entire operational life and post-closure maintenance period. An eroded area is considered deep enough to jeopardize final or intermediate cover if it exceeds 4 inches in depth, as measured from the vertical plane from the erosion feature and the 90-degree intersection of this plane with the horizontal slope face or surface.

23.6 COVER INSPECTION RECORD – 30 TAC §330.165(h)

The City of Big Spring will keep a cover application record onsite, readily available for inspection by commission representatives, authorized agents, or employees of local governments having jurisdiction. This record will specify the date cover was accomplished (no exposed waste), how it was accomplished, and last area covered. This applies to daily, intermediate, and ADC. For final cover, this record will specify the area covered, the date cover was applied, and thickness applied that date. Each entry will be certified by the signature of the onsite supervisor that the work was accomplished as stated in the record. Erosion Records will be kept in the cover inspection record as well, and will include dates of detection and completed repairs, as well as any reasons for delays. Daily cover will be inspected daily. Intermediate and final cover will be inspected monthly or within 72 hours of a rainfall event of 0.5 inches or more.

ATTACHMENT C

ALTERNATIVE DAILY COVER DOCUMENTATION



Alternative Daily Cover



Upon application forms a consistent and effective layer between waste and the surrounding environment



Dyed green to confirm coverage rate for efficiency, unlike non-dyed spray-on products



Debris on an open-faced landfill



A polysaccharide tackifier increases the surface bond to debris, including plastic and other slick-surface materials, ultimately lowering blowing debris and trapping odors

An Effective, Cost-Saving Alternative to Soil or Tarps

BioCover™ Alternative Daily Cover (ADC) is hydraulically applied, meets federal regulations, is less expensive than other alternate covers and is easier to apply. Manufactured from Thermally Refined® wood fibers combined with cellulose fiber and a viscous polysaccharide tackifier, BioCover is the superior alternative to soil, mulch or plastic daily covers.

BioCover Advantages:

- Better for the environment—minimizes the accumulated leachate pockets and leachate seeps that are typically caused by continuous daily soil cover practices; designed as 100% biodegradable and non-toxic
- Preserves air space—creates a uniform protective layer that is dramatically thinner than comparably effective soil applications, increasing available space and the functional lifespan of the landfill
- Improves Landfill Gas Management System efficiency—minimizes the number of intermediate impervious layers which increases the capture zone and efficiency of the gas extraction system
- Prevents water infiltration—reduces leachate runoff with excellent absorption properties
- Lowers emissions—conserves fuel, requiring less excavation and transportation equipment needed on the jobsite
- Inhibits scavengers—deters unwanted pests

BioCover™ ADC Technical Data:

BioCover™ meets the ASTM International's standard guide for evaluation and selection of alternative daily covers for sanitary landfills (ASTM 6523-00), assists in the understanding of performance features to determine the extent and degree to which different ADC's are able to "control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment" as intended by United States Environmental Protection Agency regulations.

As with any ADC, the final application cost per square foot will vary depending on the type of waste materials, compaction, moisture content, weather conditions, local regulatory requirements and local environmental issues. However, BioCover is the fastest, provides the best coverage and is the most affordable option on the market today.

COMPOSITION

Thermally Refined® Wood Fiber—51% ± 3%
Cellulose Fiber—27% ± 3%
Polysaccharide Tackifier—10% ± 1%
Moisture Content—12% ± 3%

ADC APPLICATION RATE

BioCover should be used at 1500-2500 pounds per acre (1700-2800 kg/ha).

**1/4" (0.64 cm) ADC NEEDED PER APPLICATION VS
6" (15 cm) COMPACTED SOIL**

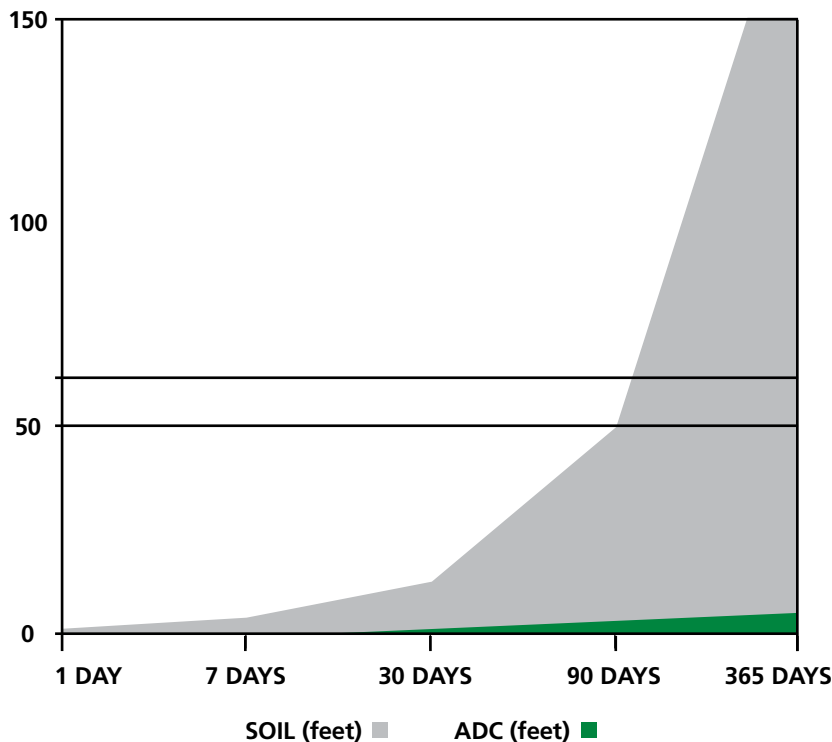


Chart demonstrates amount of landfill space lost over the course of a year with a standard soil application compared to ADC. ADC requires minimal coverage of 1/4-inch (0.64 cm) per application, resulting in greater available landfill space for waste.

PACKAGING

Bales: Net Weight – 50 lb (23 kg)

Pallets: 40 bales/pallet 1 ton (907 kg)/pallet

BIOCOVER PRESERVES LANDFILL CAPACITY

Soil—33 square feet (0.93 m³) of dirt on top of the refuse (when applied at six inches (15 cm) of soil per day)

BioCover—33 inches (0.02 ft³) of material (when applied at 1/4-inch (0.64 cm) per day)



Green Design Engineering™ is a holistic approach that combines agronomic and engineering expertise with advanced technologies to provide cost-effective and earth-friendly solutions. Profile strives to deliver Green Design Engineering across our team of consulting professionals, innovative products and educational resources.



PS³ is a free, comprehensive 24/7 online resource you can use to design a project and select the right products that address both the physical and agronomic needs of your site. It will help you develop holistic, sustainable solutions for cost-effective erosion control, vegetation establishment and subsequent reductions in sediment and other pollutants from leaving disturbed sites. Because good plans start with the soil, PS³ offers free soil testing to ensure this critical step is considered. To access the site, design your project and take advantage of a free soil analysis, visit www.profileps3.com.



For technical information or distribution, please call 800-508-8681. For customer service, call 800-366-1180.

For warranty information, visit profileproducts.com.

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www.profileproducts.com

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BioCover™ ADC

SDS Number: CON046

Revision Date: 1/1/17

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1 PRODUCT AND COMPANY IDENTIFICATION**Manufacturer**

PROFILE Products, LLC
750 LAKE COOK ROAD
SUITE 440
BUFFALO GROVE, IL 60089

Emergency: Emergency Phone: (800) 424-9300 (ChemTrec)
Contact: ChemTrec Acct #: CCN792719
Phone: (847) 215-1144
Fax: (847) 215-0577
Email: tech@profileproducts.com
Web: www.profileproducts.com

Product Name: BioCover™ ADC
Revision Date: 1/1/17
SDS Number: CON046
CAS Number: Not applicable
Product Use: Alternative Daily Cover for Landfills.

Product Description: Green dyed wood fibers, a proprietary binder mixture and other inert materials.

2 HAZARDS IDENTIFICATION**Classification of the Substance or Mixture**

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

No GHS Classifications Indicated

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **NONE**

no GHS pictograms indicated for this product

GHS Hazard Statements:

no GHS hazards statements indicated

GHS Precautionary Statements:

no GHS precautionary statements indicated

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Inhalation, skin contact, eye contact

Inhalation: Wood may cause sneezing, irritation, and dryness of the nose and throat. Dust may aggravate pre-existing respiratory conditions.

Skin Contact: Wood dust can cause irritation. Skin absorption is not known to occur.

Eye Contact: Wood dust can irritate the eyes.

Ingestion: No reports of human ingestion.

OSHA Classification: Wood dust is a hazardous substance as defined by the Hazard Communication Standard 29CFR 1910.1200

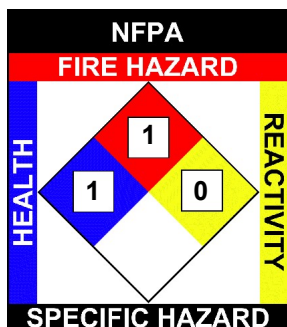
BioCover™ ADC

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NFPA: Health = 1, Fire = 1, Reactivity = 0, Specific Hazard = n/a



3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
0	Proprietary	Hydrocolloidal Based Polysaccharide Tackifier
9000300	Proprietary	Guar Gum

4 FIRST AID MEASURES

Inhalation: Usually not a problem. Remove to fresh air if respiratory irritation develops, and get medical aid promptly if irritation persists.

Skin Contact: Usually not a problem. Wash off with running water if irritation is experienced.

Eye Contact: Open eyelids and flush with water.

Ingestion: Get medical attention.

5 FIRE FIGHTING MEASURES

Flammability: Combustible product

Flash Point: Not applicable

Flash Point Method: Not applicable

Autoignition Temp: 200-260°C (400-500°F)

Conditions to avoid: In contact with flames or hot surfaces

Flammable- Extinguish with water; same as a wood fire

6 ACCIDENTAL RELEASE MEASURES

Scoop up product. Wear goggles and respirator if dust is produced in unventilated areas. Wet product will be slippery.

7 HANDLING AND STORAGE

Handling Precautions: Clean up areas where dust settles. Minimize blowdown or other practices that generate high airborne dust concentrations.

Storage Requirements: Store in a cool, dry place. Keep away from sources of ignition.

BioCover™ ADC

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8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: None required for outdoor mixing and application. Use dust collection system for indoor handling operations.

Personal Protective Equipment: Eye Protection: Wear goggles when emptying bags and during other operations where there is a risk of dust entering the eyes.
Gloves: Leather, plastic or rubber gloves could be worn to minimize skin irritation.
Respirators: When handling methods generate dust at concentrations that exceed occupational exposure limits, wear a NIOSH approved respirator. A fabric respirator or a facepiece respirator with dust cartridges will generally provide adequate protection.
Footwear: The product is slippery when wet. Wear appropriate footwear.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dyed green wood fibers - Pine & mixed hardwoods		
Physical State:	Wood Fibers	Odor:	Mild wood odor
Spec Grav./Density:	Lighter than water		
Vapor Pressure:	N/A		

10 STABILITY AND REACTIVITY

Chemical Stability: Stable product

Conditions to Avoid: Contact with strong acids and oxidizers may generate heat. Product may ignite at temperatures in excess of 200°C (400°F).

Materials to Avoid: Strong acids and oxidizers

Hazardous Polymerization: Will not occur.

11 TOXICOLOGICAL INFORMATION

EFFECTS OF CHRONIC EXPOSURE:

Inhalation: Frequent and repeated exposure to wood dust is associated with an increased risk of developing nasal cancer.
Skin Contact: Although rare, wood dust may cause dermatitis in sensitized people.

Occupational Exposure Limits:

Wood dusts- All other species: ACGIH (2007): TLV-TWA 1 mg/m³ (Inhalable fraction); A4

Particulates Not Otherwise Regulated (PNOR): OSHA: PEL-TWA 15 mg/m³ (Total Dust); 5 mg/m³ (Respirable fraction)

Irritancy: Wood dust is a mild irritant
Sensitization: Some wood dusts may cause allergic skin reactions



BioCover™ ADC

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ECOLOGICAL INFORMATION

Guar Gum (CAS# 9000-30-0) is listed as an inert ingredient permitted for use in nonfood use pesticide products by EPA. It is also classified under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as a minimal risk inert substance (List 4A) meaning that as a pesticide, Guar Gum is considered by the EPA to pose little or no risk to humans or the environment. The US Department of Agriculture (USDA) National Organic Program (NOP) also allows the use of Guar Gum in a variety of applications, but primarily as a pesticide in organic production operations. Finally, Guar Gum is listed on the Generally Recognized as Safe (GRAS) list by the Food and Drug Administration (FDA).

48-hr LC_{50} = >100% for *Daphnia magna* when runoff generated using ASTM D7101 (2"/hr rainfall rate) was tested according to EPA-821-R-02-012.

13

DISPOSAL CONSIDERATIONS

Normally can be disposed of as a wood residue. Ensure disposal is in compliance with local, provincial (state), and federal regulations.

14

TRANSPORT INFORMATION



BioCover™ ADC

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REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Hydrocolloidal Based Polysaccharide Tackifier (0) [Proprietary]

Guar Gum (9000300) [Proprietary] TSCA

Regulatory CODE Descriptions

TSCA = Toxic Substances Control Act

COMPONENT / (CAS/PERC) / CODES

*Guar gum (9000300 n/a%) TSCA

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List

NRC = Nationally Recognized Carcinogens

OSHA WAC = OSHA Workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

TXAIR = TX Air Contaminants with Health Effects Screening Level

CERCLA = Superfund clean up substance

CSWHS = Clean Water Act Hazardous substances

EHS302 = Extremely Hazardous Substance

EPCRAWPC = EPCRA Water Priority Chemicals

HAP = Hazardous Air Pollutants

NJEHS = NJ Extraordinarily Hazardous Substances

NJHS = NJ Right-to-Know Hazardous Substances

OSHAPSM = OSHA Chemicals Requiring process safety management

SARA313 = SARA 313 Title III Toxic Chemicals

TSCA = Toxic Substances Control Act

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OTHER INFORMATION**Disclaimer:**

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

EXHIBIT D: MARKED COPY

Permit Application

City Of Big Spring/Howard County

Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395

PART I

SITE AND APPLICANT INFORMATION

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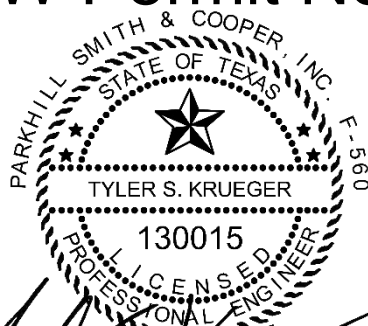
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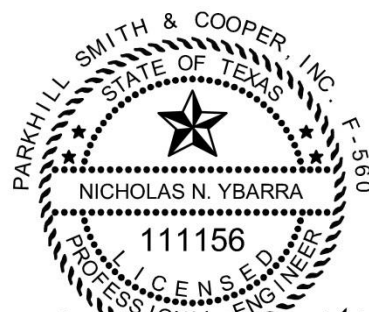
Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395



[Signature of Tyler S. Krueger]

10/01/2023
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[Signature of Nicholas N. Ybarra]

06/19/17

PART I

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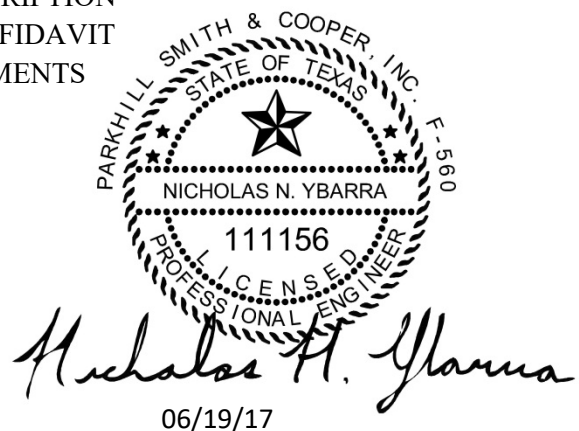
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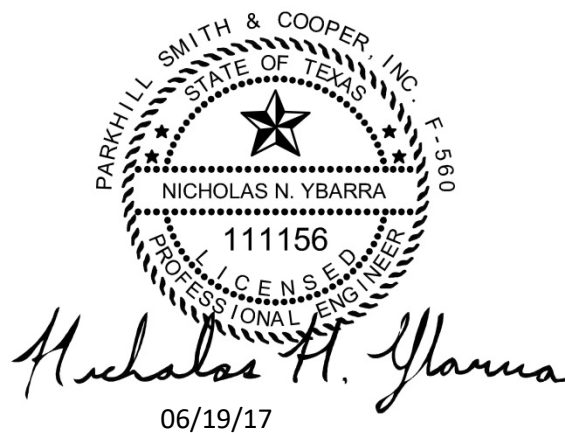
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ATTACHMENT H – APPOINTMENTS
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Figure I.2.1	Land Ownership Map

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**ATTACHMENT B
ADJACENT LANDOWNERSHIP MAP**

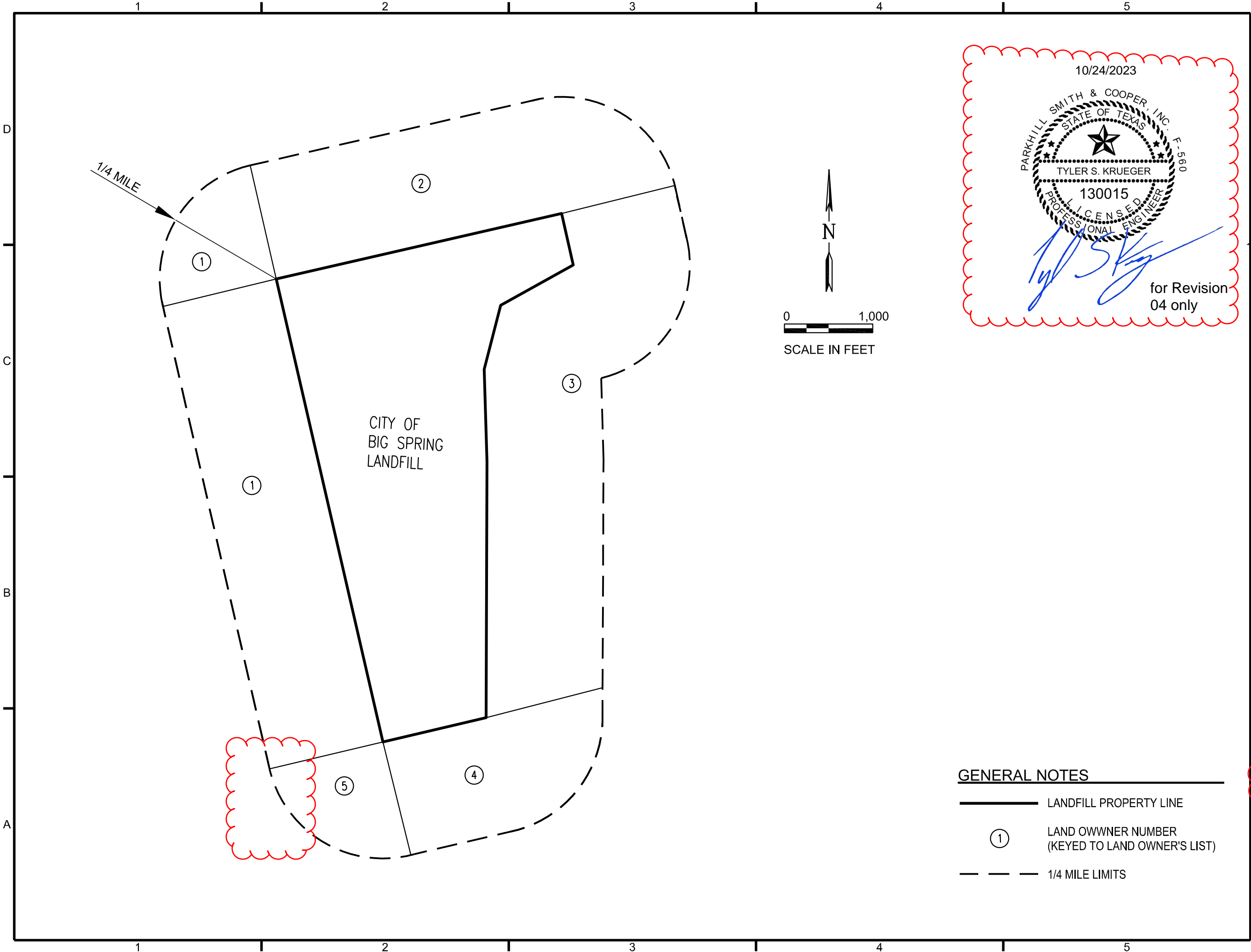
LANDOWNERSHIP - 30 TAC §330.59(c)(3)(A)-(B)

Records of the Howard County Appraisal District were researched to compile the names and addresses of property owners within a quarter-mile. Figure I.2.1 - Land Ownership Map, illustrates the location of surrounding properties. Property owners are identified on the following list, keyed to Figure I.2.1 – Land Ownership Map:

LANDOWNER'S LIST

1. Howard County
PO Box 1949
Big Spring, Texas 79721-1949
2. ~~Atkinson H L (Bunky)~~BJK-BS LLC
~~4202 Old Colorado City Highway~~16983 CR 43
~~Big Spring, Texas 79720-0356~~Tyler, Texas 75704
3. ~~Ronald White~~Sherry Ann White
3214 Fenn Street
Big Spring, Texas 79720
4. ALON USA Refining Inc.
12700 Park Central Drive, Suite 1600
Dallas, Texas 75251
5. ~~Patricia June Henry~~Brandy Lee Hubbard
~~705 Hosley Drive~~6716 E Robinson Road
~~Noble, Oklahoma 73068~~Big Spring, Texas 79720
6. ~~John Gensert~~
~~1000 Darby Lane, Apt 103~~
~~New Iberia, Louisiana 70562~~

FILE NAME: A:\2019\0304\19\03_DSGN\01_DWG\050_CIVIL\02_CONTENT\ADC Mod\I.2.1 - LAND OWNERSHIP MAP - REV 04.dwg LAYOUT NAME: FIG. I.2.1 PRINTED: Tuesday, October 24, 2023 - 9:30am USER: TKrueger



GENERAL NOTES

- LANDFILL PROPERTY LINE
- ① LAND OWWNER NUMBER (KEYED TO LAND OWNER'S LIST)
- - - 1/4 MILE LIMITS



PARKHILL SMITH & COOPER



Nicholas N. Ybarra
05/07/2017

FOR PERMITTING PURPOSES ONLY



CITY OF Big Spring TEXAS

MUNICIPAL SOLID WASTE LANDFILL
TCEQ MSW PERMIT NO. 2395

CITY OF BIG SPRING/HOWARD COUNTY
BIG SANDY DRAW LANDFILL

310 NOLAN
BIG SPRING, TEXAS 79720
(432) 264-2400

KEY PLAN

NO.	DATE	DESCRIPTION
04	10/24/2023	REV 04
02	05/07/2017	NOB #1

ISSUING OFFICE: EL PASO PROJECT NO: 0340.14

LAND OWNERSHIP MAP

FIG. I.2.1

Permit Application

City Of Big Spring/Howard County

Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395

PART IV

SITE OPERATING PLAN

Rev No. 4 - 10.01.2023

Rev No. 3 – 12.05.19

Rev No. 2 – 05.07.17

Original Submittal 12.12.2016

PSC Project # 01030419



PARKHILLSMITH&COOPER

Permit Application

City Of Big Spring/Howard County

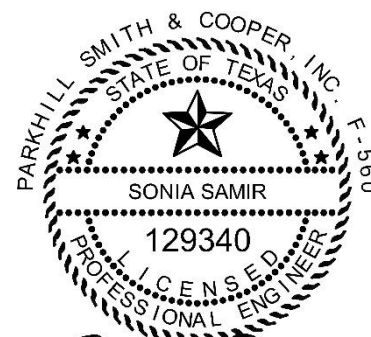
Big Sandy Draw Landfill

Big Spring, Texas

Howard County, Texas

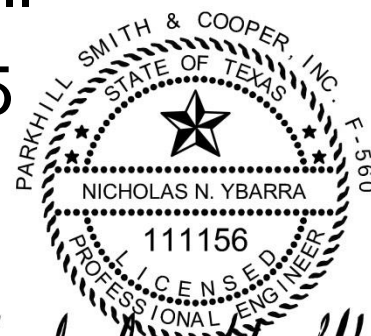
Municipal Solid Waste Landfill

TCEQ MSW Permit No. 2395



Sonia Samir

12/5/19
Revision 3 only

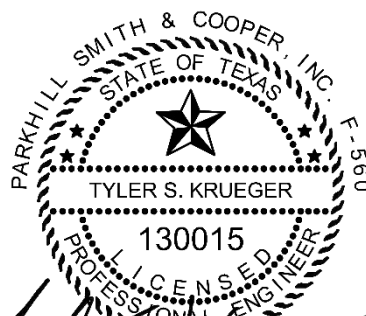


Nicholas N. Ybarra

05/07/17

PART IV

SITE OPERATING PLAN



Tyler S. Krueger

10/01/2023
Revision 4 Only

Rev No. 4 - 10.01.2023

Rev No. 3 – 12.05.19

Rev No. 2 – 05.07.17

Original Submittal – 12.12.2016

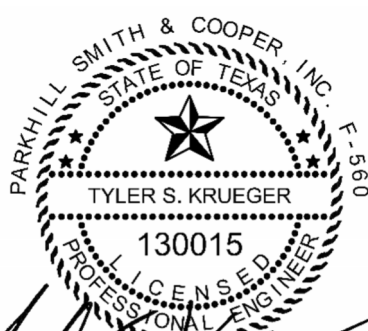
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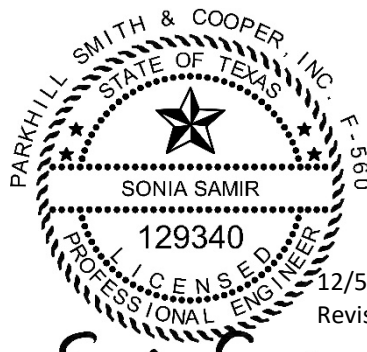
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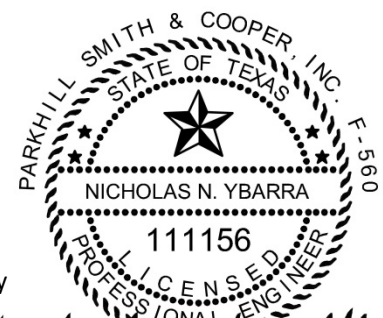
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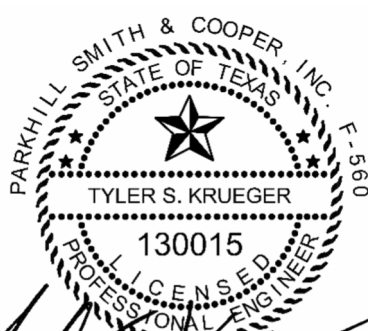


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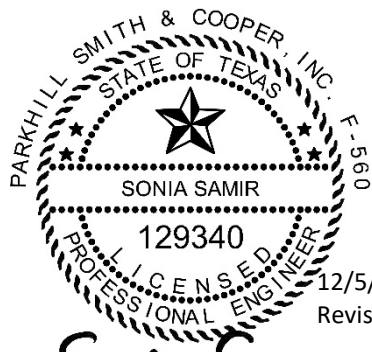
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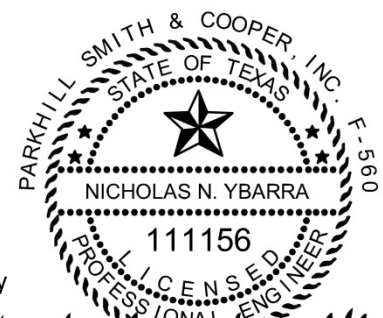
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29.0 PUBLIC DROP-OFF AREAIV-48

ATTACHMENTS

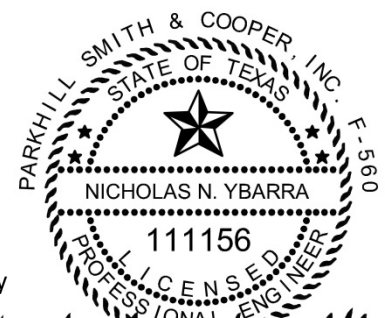
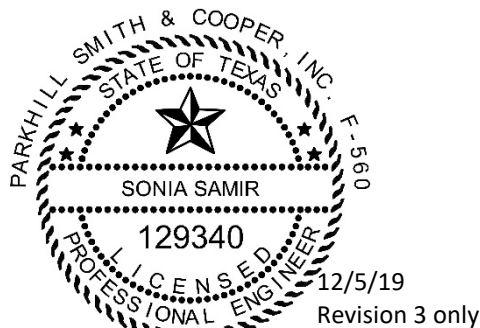
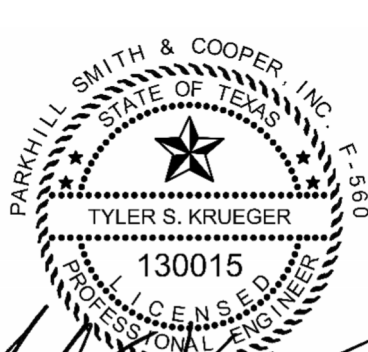
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23.0 LANDFILL COVER - 30 TAC §330.165

23.1 DAILY COVER

Equipment operators will apply ADC cover or 6 inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste, at the end of each operating day to control disease vectors, fires, odors, windblown litter or waste, and scavenging.

23.2 INTERMEDIATE COVER

Equipment operators will cover all areas that have received waste but will be inactive for longer than 180 days, with intermediate or final cover. Intermediate cover will include 12 inches of earthen material, the top 6 inches of which shall be capable of sustaining native plant growth. Intermediate cover will be seeded or sodded following application to control erosion. This intermediate cover will be graded to prevent ponding of water, and plant growth or other erosion control features will be maintained. Runoff from areas which have received intermediate cover, will not be considered leachate.

23.3 ALTERNATIVE DAILY COVER (ADC) MATERIAL

Alternative Daily Cover (ADC) will be implemented using BioCover™ ADC, a product manufactured by Profile. BioCover™ ADC is a hydro-mulch application comprised of the thermally refined wood fibers, cellulose fibers, and a viscous hydrocolloid tackifier. It will be sprayed over waste at a manufacturer's recommended minimum thickness of 0.25 inches.

BioCover™ ADC has been approved and used at numerous landfills throughout Texas and has demonstrated effectiveness. During one year under a temporary authorization, BioCover™ was effectively applied at the facility. Daily cover logs demonstrated the effectiveness in reducing vectors, fires, odors, and windblown litter and waste. The temporary authorization application of BioCover™ ADC was found to be as effective as 6 inches of clean soil cover.

ADC application is limited to 24 hours, after which waste or 6 inches of clean soil cover will be placed. A manufacturer-compliant sprayer for BioCover™ ADC will be used to apply the hydro-mulch to the working face. BioCover™ ADC will be securely stored in a designated area within the facility's enclosed and insulated metal maintenance building. This facility ensures a controlled environment that is cool and dry, effectively safeguarding the material from potential sources of ignition. The facility will maintain a minimum of two weeks' worth of materials within the storage area. Before being accepted for use within the landfill, the packaging of the material will undergo inspection for any signs of rips or

tears. Facility personnel will reject any material that exhibits defects. Deployment of ADC will adhere to the following procedures:

- Operators must familiarize themselves with the BioCover™ Safety Data Sheet (SDS) provided in Attachment C before using the ADC sprayer.
- The ADC sprayer will only be operated by personnel trained by qualified individuals, which include the sprayer manufacturer or previously trained site personnel.
- BioCover™ ADC will be mixed on-site per the manufacturer's recommendations. This involves adding 50 pounds of BioCover™ ADC per 100 gallons of water. The mixture will be agitated using the equipped agitator and using water from an on-site water well.
- Before application, operators will inspect the working face to ensure no open flame or excessive hot surfaces are present. Firefighting measures will be implemented if required before cover is applied.
- ADC will be sprayed in at least two directions using a sweeping motion to ensure proper coverage over exposed waste.
- Following ADC deployment, landfill staff will visually inspect the covered area to confirm no exposed waste remains. Any uncovered areas will be promptly covered with ADC.

BioCover™ ADC, a non-reactive and non-corrosive product, is comprised of thermally refined wood fibers, cellulose fibers, and a hydrocolloid tackifier. Additional product information and SDS are included in Attachment C. No other pertinent characteristics, features, or factors related to alternative material use are applicable.

ADC application can be conducted under high wind conditions, provided operators adhere to specific guidelines. ASC should be applied in the direction of the prevailing wind or across the wind, avoiding application against the wind. The versatility of BioCover™ ADC equipment allows it to be positioned at various angles relative to the working face, ensuring adaptability to align the sprayer with the prevailing winds during application. BioCover™ ADC effectively secures waste in place, minimizing the risk of windblown litter.

~~No ACD is currently proposed; however, this site may request to use ADC. ADC may only be allowed by a temporary authorization in accordance with 30 TAC §305.70(m), followed by a major amendment or a modification in accordance with 30 TAC §305.70(k)(1). An ADC operating plan will be included in the request for temporary authorization or in the site development plan that includes:~~

- ~~A. Description and minimum thickness of alternative material to be used;~~
- ~~B. Effect on vectors, fires, odors, and windblown litter and waste;~~
- ~~C. Application and operational methods to be utilized at site when using this alternative material;~~
- ~~D. Chemical analysis of material and/or Material Safety Data Sheet(s) for alternative material; and~~
- ~~E. Any other pertinent characteristic, feature, or other factors related to the use of this alternative material.~~

~~An ADC status report will be submitted on a two-month basis to the Executive Director during the temporary authorization period describing effectiveness of alternative material, any problems that may have occurred, and corrective actions required as a result of such problems. If no unresolved problems have occurred within the temporary authorization period, status reports may no longer be required.~~

~~ADC will not be allowed when the landfill is closed longer than 24 hours, unless Executive Director approves an alternative length of time.~~

23.4 FINAL COVER

The City of Big Spring will install final cover for the landfill in accordance with the site closure plan and Subchapter K of 30 TAC Chapter 330 (relating to Closure and Post-Closure).

23.5 EROSION OF COVER

Erosion of final or intermediate cover will be repaired within five days of detection by restoring cover material, grading, compacting, and seeding, unless the commission's regional office approves otherwise based on extent of damage requiring more time to repair, or repair is delayed because of weather conditions. Periodic inspections and restorations are required during entire operational life and post-closure maintenance period. An eroded area is considered deep enough to jeopardize final or intermediate cover if it exceeds 4 inches in depth, as measured from the vertical plane from the erosion feature and the 90-degree intersection of this plane with the horizontal slope face or surface.

23.6 COVER INSPECTION RECORD – 30 TAC §330.165(h)

The City of Big Spring will keep a cover application record onsite, readily available for inspection by commission representatives, authorized agents, or employees of local governments having jurisdiction. This record will specify the date cover was accomplished (no exposed waste), how it was accomplished, and last area covered. This applies to daily, intermediate, and ADC. For final cover, this record will specify the area covered, the date cover was applied, and thickness applied that date. Each entry will be certified by the signature of the onsite supervisor that the work was accomplished as stated in the record. Erosion Records will be kept in the cover inspection record as well, and will include dates of detection and completed repairs, as well as any reasons for delays. Daily cover will be inspected daily. Intermediate and final cover will be inspected monthly or within 72 hours of a rainfall event of 0.5 inches or more.

**ATTACHMENT C
ALTERNATIVE DAILY COVER DOCUMENTATION**



Alternative Daily Cover



Upon application forms a consistent and effective layer between waste and the surrounding environment



Dyed green to confirm coverage rate for efficiency, unlike non-dyed spray-on products



Debris on an open-faced landfill



A polysaccharide tackifier increases the surface bond to debris, including plastic and other slick-surface materials, ultimately lowering blowing debris and trapping odors

An Effective, Cost-Saving Alternative to Soil or Tarps

BioCover™ Alternative Daily Cover (ADC) is hydraulically applied, meets federal regulations, is less expensive than other alternate covers and is easier to apply. Manufactured from Thermally Refined® wood fibers combined with cellulose fiber and a viscous polysaccharide tackifier, BioCover is the superior alternative to soil, mulch or plastic daily covers.

BioCover Advantages:

- Better for the environment—minimizes the accumulated leachate pockets and leachate seeps that are typically caused by continuous daily soil cover practices; designed as 100% biodegradable and non-toxic
- Preserves air space—creates a uniform protective layer that is dramatically thinner than comparably effective soil applications, increasing available space and the functional lifespan of the landfill
- Improves Landfill Gas Management System efficiency—minimizes the number of intermediate impervious layers which increases the capture zone and efficiency of the gas extraction system
- Prevents water infiltration—reduces leachate runoff with excellent absorption properties
- Lowers emissions—conserves fuel, requiring less excavation and transportation equipment needed on the jobsite
- Inhibits scavengers—deters unwanted pests

BioCover™ ADC Technical Data:

BioCover™ meets the ASTM International's standard guide for evaluation and selection of alternative daily covers for sanitary landfills (ASTM 6523-00), assists in the understanding of performance features to determine the extent and degree to which different ADC's are able to "control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment" as intended by United States Environmental Protection Agency regulations.

As with any ADC, the final application cost per square foot will vary depending on the type of waste materials, compaction, moisture content, weather conditions, local regulatory requirements and local environmental issues. However, BioCover is the fastest, provides the best coverage and is the most affordable option on the market today.

COMPOSITION

Thermally Refined® Wood Fiber—51% ± 3%

Cellulose Fiber—27% ± 3%

Polysaccharide Tackifier—10% ± 1%

Moisture Content—12% ± 3%

ADC APPLICATION RATE

BioCover should be used at 1500-2500 pounds per acre (1700-2800 kg/ha).

**1/4" (0.64 cm) ADC NEEDED PER APPLICATION VS
6" (15 cm) COMPACTED SOIL**

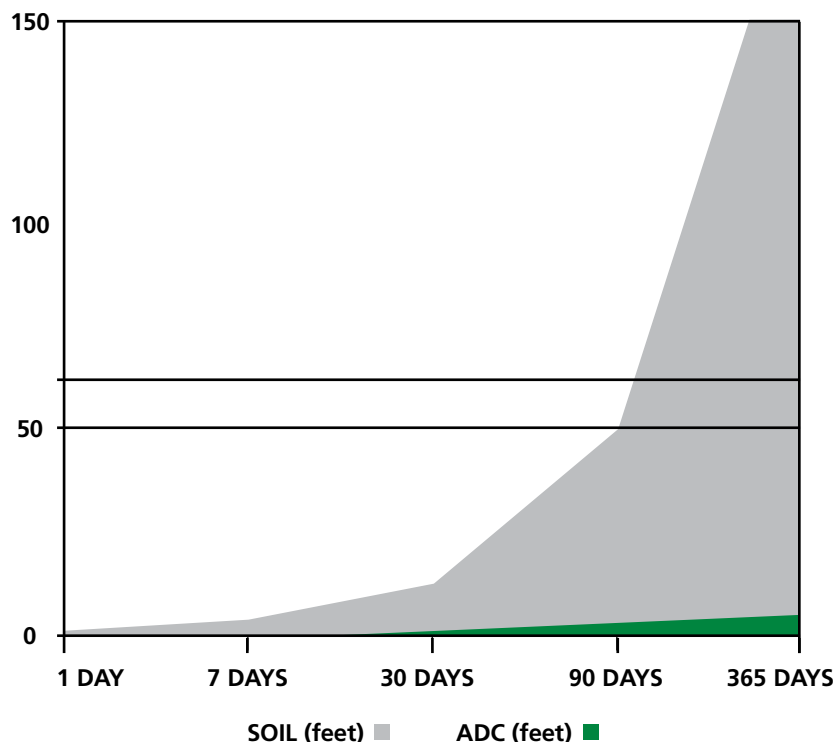


Chart demonstrates amount of landfill space lost over the course of a year with a standard soil application compared to ADC. ADC requires minimal coverage of 1/4-inch (0.64 cm) per application, resulting in greater available landfill space for waste.

PACKAGING

Bales: Net Weight – 50 lb (23 kg)

Pallets: 40 bales/pallet 1 ton (907 kg)/pallet

BIOCOVER PRESERVES LANDFILL CAPACITY

Soil—33 square feet (0.93 m³) of dirt on top of the refuse (when applied at six inches (15 cm) of soil per day)

BioCover—33 inches (0.02 ft³) of material (when applied at 1/4-inch (0.64 cm) per day)



Green Design Engineering™ is a holistic approach that combines agronomic and engineering expertise with advanced technologies to provide cost-effective and earth-friendly solutions. Profile strives to deliver Green Design Engineering across our team of consulting professionals, innovative products and educational resources.



PS³ is a free, comprehensive 24/7 online resource you can use to design a project and select the right products that address both the physical and agronomic needs of your site. It will help you develop holistic, sustainable solutions for cost-effective erosion control, vegetation establishment and subsequent reductions in sediment and other pollutants from leaving disturbed sites. Because good plans start with the soil, PS³ offers free soil testing to ensure this critical step is considered. To access the site, design your project and take advantage of a free soil analysis, visit www.profileps3.com.



For technical information or distribution, please call 800-508-8681. For customer service, call 800-366-1180.

For warranty information, visit profileproducts.com.

750 Lake Cook Road • Suite 440
Buffalo Grove, IL 60089
www.profileproducts.com

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BioCover™ ADC

SDS Number: CON046

Revision Date: 1/1/17

Page 1 of 5

1 PRODUCT AND COMPANY IDENTIFICATION**Manufacturer**

PROFILE Products, LLC
750 LAKE COOK ROAD
SUITE 440
BUFFALO GROVE, IL 60089

Emergency: Emergency Phone: (800) 424-9300 (ChemTrec)
Contact: ChemTrec Acct #: CCN792719
Phone: (847) 215-1144
Fax: (847) 215-0577
Email: tech@profileproducts.com
Web: www.profileproducts.com

Product Name: BioCover™ ADC
Revision Date: 1/1/17
SDS Number: CON046
CAS Number: Not applicable
Product Use: Alternative Daily Cover for Landfills.

Product Description: Green dyed wood fibers, a proprietary binder mixture and other inert materials.

2 HAZARDS IDENTIFICATION**Classification of the Substance or Mixture**

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

No GHS Classifications Indicated

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **NONE**

no GHS pictograms indicated for this product

GHS Hazard Statements:

no GHS hazards statements indicated

GHS Precautionary Statements:

no GHS precautionary statements indicated

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Inhalation, skin contact, eye contact

Inhalation: Wood may cause sneezing, irritation, and dryness of the nose and throat. Dust may aggravate pre-existing respiratory conditions.

Skin Contact: Wood dust can cause irritation. Skin absorption is not known to occur.

Eye Contact: Wood dust can irritate the eyes.

Ingestion: No reports of human ingestion.

OSHA Classification: Wood dust is a hazardous substance as defined by the Hazard Communication Standard 29CFR 1910.1200

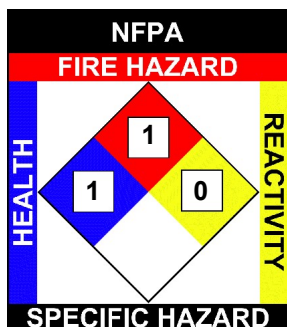
BioCover™ ADC

SDS Number: CON046

Revision Date: 1/1/17

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NFPA: Health = 1, Fire = 1, Reactivity = 0, Specific Hazard = n/a



3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
0	Proprietary	Hydrocolloidal Based Polysaccharide Tackifier
9000300	Proprietary	Guar Gum

4 FIRST AID MEASURES

Inhalation: Usually not a problem. Remove to fresh air if respiratory irritation develops, and get medical aid promptly if irritation persists.

Skin Contact: Usually not a problem. Wash off with running water if irritation is experienced.

Eye Contact: Open eyelids and flush with water.

Ingestion: Get medical attention.

5 FIRE FIGHTING MEASURES

Flammability: Combustible product

Flash Point: Not applicable

Flash Point Method: Not applicable

Autoignition Temp: 200-260°C (400-500°F)

Conditions to avoid: In contact with flames or hot surfaces

Flammable- Extinguish with water; same as a wood fire

6 ACCIDENTAL RELEASE MEASURES

Scoop up product. Wear goggles and respirator if dust is produced in unventilated areas. Wet product will be slippery.

7 HANDLING AND STORAGE

Handling Precautions: Clean up areas where dust settles. Minimize blowdown or other practices that generate high airborne dust concentrations.

Storage Requirements: Store in a cool, dry place. Keep away from sources of ignition.

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8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: None required for outdoor mixing and application. Use dust collection system for indoor handling operations.

Personal Protective Equipment: Eye Protection: Wear goggles when emptying bags and during other operations where there is a risk of dust entering the eyes.
Gloves: Leather, plastic or rubber gloves could be worn to minimize skin irritation.
Respirators: When handling methods generate dust at concentrations that exceed occupational exposure limits, wear a NIOSH approved respirator. A fabric respirator or a facepiece respirator with dust cartridges will generally provide adequate protection.
Footwear: The product is slippery when wet. Wear appropriate footwear.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dyed green wood fibers - Pine & mixed hardwoods		
Physical State:	Wood Fibers	Odor:	Mild wood odor
Spec Grav./Density:	Lighter than water		
Vapor Pressure:	N/A		

10 STABILITY AND REACTIVITY

Chemical Stability: Stable product

Conditions to Avoid: Contact with strong acids and oxidizers may generate heat. Product may ignite at temperatures in excess of 200°C (400°F).

Materials to Avoid: Strong acids and oxidizers

Hazardous Polymerization: Will not occur.

11 TOXICOLOGICAL INFORMATION

EFFECTS OF CHRONIC EXPOSURE:

Inhalation: Frequent and repeated exposure to wood dust is associated with an increased risk of developing nasal cancer.

Skin Contact: Although rare, wood dust may cause dermatitis in sensitized people.

Occupational Exposure Limits:

Wood dusts- All other species: ACGIH (2007): TLV-TWA 1 mg/m³ (Inhalable fraction); A4

Particulates Not Otherwise Regulated (PNOR): OSHA: PEL-TWA 15 mg/m³ (Total Dust); 5 mg/m³ (Respirable fraction)

Irritancy: Wood dust is a mild irritant

Sensitization: Some wood dusts may cause allergic skin reactions



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ECOLOGICAL INFORMATION

Guar Gum (CAS# 9000-30-0) is listed as an inert ingredient permitted for use in nonfood use pesticide products by EPA. It is also classified under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as a minimal risk inert substance (List 4A) meaning that as a pesticide, Guar Gum is considered by the EPA to pose little or no risk to humans or the environment. The US Department of Agriculture (USDA) National Organic Program (NOP) also allows the use of Guar Gum in a variety of applications, but primarily as a pesticide in organic production operations. Finally, Guar Gum is listed on the Generally Recognized as Safe (GRAS) list by the Food and Drug Administration (FDA).

48-hr LC_{50} = >100% for *Daphnia magna* when runoff generated using ASTM D7101 (2"/hr rainfall rate) was tested according to EPA-821-R-02-012.

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DISPOSAL CONSIDERATIONS

Normally can be disposed of as a wood residue. Ensure disposal is in compliance with local, provincial (state), and federal regulations.

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TRANSPORT INFORMATION



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REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Hydrocolloidal Based Polysaccharide Tackifier (0) [Proprietary]

Guar Gum (9000300) [Proprietary] TSCA

Regulatory CODE Descriptions

TSCA = Toxic Substances Control Act

COMPONENT / (CAS/PERC) / CODES

*Guar gum (9000300 n/a%) TSCA

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List

NRC = Nationally Recognized Carcinogens

OSHA WAC = OSHA Workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

TXAIR = TX Air Contaminants with Health Effects Screening Level

CERCLA = Superfund clean up substance

CSWHS = Clean Water Act Hazardous substances

EHS302 = Extremely Hazardous Substance

EPCRAWPC = EPCRA Water Priority Chemicals

HAP = Hazardous Air Pollutants

NJEHS = NJ Extraordinarily Hazardous Substances

NJHS = NJ Right-to-Know Hazardous Substances

OSHAPSM = OSHA Chemicals Requiring process safety management

SARA313 = SARA 313 Title III Toxic Chemicals

TSCA = Toxic Substances Control Act

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OTHER INFORMATION**Disclaimer:**

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).