Dane County Contract Cover Sheet

Revised 01/2024

Res 280
significant

Dept./Division	AIRPORT/INDUSTRIAL PARK		
Vendor Name	TRC Environmental Corp.	**MUNIS #**	21701
Brief Contract Title/Description	Engineering services related to monitoring and maintaining closed and capped Truax Landfill including gas extration system.		
Contract Term	12/31/2027		
Contract Amount	$210,242.00 ($42,048 average per year)		

Contract # Admin will assign	15287
Type of Contract	
☐	**Dane County Contract**
☐	**Intergovernmental**
☐	**County Lessee**
☐	**County Lessor**
☐	**Purchase of Property**
☐	**Property Sale**
☐	**Grant**
■	**Other**

Department Contact Information	
Name	Adam Ussher
Phone #	608-246-3388
Email	ussher.adam@msnairport.com
Purchasing Officer	

Vendor Contact Information	
Name	Douglas R Genthe
Phone #	608-826-3624
Email	dgenthe@trccompanies.com

Purchasing Authority			
☐	**$13,000 or under – Best Judgment** (1 quote required)		
☐	**Between $13,000 – $44,000 ($0 – $25,000 Public Works)** (3 quotes required)		
■	**Over $44,000 ($25,000 Public Works)** (Formal RFB/RFP required)	**RFB/RFP #**	062-PR
☐	**Bid Waiver – $44,000 or under** ($25,000 or under Public Works)		
☐	**Bid Waiver – Over $44,000** (N/A to Public Works)		
☐	**N/A – Grants, Leases, Intergovernmental, Property Purchase/Sale, Other**		

MUNIS Req.					
Req #		**Org:** airindus	**Obj:** 31375	**Proj:**	**$** 42,048.00
		Org:	**Obj:**	**Proj:**	**$**
Year	2024	**Org:**	**Obj:**	**Proj:**	**$**

Budget Amendment	
☐	A Budget Amendment has been requested via a Funds Transfer or Resolution. Upon addendum approval and budget amendment completion, the department shall update the requisition in MUNIS accordingly.

Resolution Required if contract exceeds $100,000			
☐	Contract does not exceed $100,000		
☐	Contract exceeds $100,000 – resolution required.	**Res #**	280
■	A copy of the Resolution is attached to the contract cover sheet.	**Year**	2023

CONTRACT MODIFICATIONS – Standard Terms and Conditions		
☐ No modifications.	☐ Modifications and reviewed by: Adam Ussher	☐ Non-standard Contract

APPROVAL	
Dept. Head / Authorized Designee	
Ussher, Adam	Digitally signed by Ussher, Adam Date: 2024.01.08 16:48:15 -06'00'

APPROVAL – Contracts Exceeding $100,000	
Director of Administration	**Corporation Counsel**
Greg Brockmeyer	David Gault

APPROVAL – Internal Contract Review – Routed Electronically – Approvals Will Be Attached		
DOA:	**Date In:** 1/8/24 **Date Out:** _____	☒ Controller, Purchasing, Corp Counsel, Risk Management

Goldade, Michelle

From: Goldade, Michelle
Sent: Tuesday, January 9, 2024 11:30 AM
To: Hicklin, Charles; Gault, David; Patten (Purchasing), Peter
Cc: Stavn, Stephanie; Oby, Joe
Subject: Contract #15287
Attachments: Attachments.txt

Tracking:

Recipient	Read	Response
Hicklin, Charles	Read: 1/9/2024 11:40 AM	Approve: 1/9/2024 11:40 AM
Gault, David	Read: 1/9/2024 12:51 PM	Approve: 1/9/2024 12:53 PM
Patten (Purchasing), Peter		Approve: 1/10/2024 4:00 PM
Stavn, Stephanie	Read: 1/9/2024 11:37 AM	
Oby, Joe		

ShareFile Attachments Expires July 7, 2024

15287.pdf 21.7 MB

Download Attachments

Michelle Goldade uses ShareFile to share documents securely.

Please review the contract and indicate using the vote button above if you approve or disapprove of this contract.

Contract #15287
Department: Airport
Vendor: TRC Environmental Corp
Contract Description: Engineering Services related to monitoring & maintaining closed & capped Truax Landfill inc gas extraction system (Res 280)
Contract Term: 1/1/24 – 12/31/27
Contract Amount: $210,242.00

Michelle Goldade
Administrative Manager
Dane County Department of Administration
Room 425, City-County Building
210 Martin Luther King, Jr. Boulevard
Madison, WI 53703
PH: 608/266-4941

2023 RES-280

AWARD OF CONTRACT FOR GAS MONITORING AND INSPECTION/MAINTENANCE SERVICES AT THE TRUAX LANDFILL NEAR DANE COUNTY REGIONAL AIRPORT

Dane County issued 2023-RFP-062-PR for engineering services related to monitoring and maintaining the closed and capped Truax Landfill and the gas extraction system located on the landfill site adjacent to the Dane County Regional Airport. TRC Environmental Corporation was selected as the successful vendor to provide these services through calendar year 2027. The maximum cost of this five year contract is $210,242.

NOW, THEREFORE, BE IT RESOLVED that the Dane County Executive and the Dane County Clerk are authorized to execute on behalf of Dane County a contract with TRC Environmental Corporation to provide gas monitoring and inspection/maintenance services at the Truax Landfill, as set forth above.

DANE COUNTY CONTRACT # 15287

Department:	Dane County Regional Airport
Provider:	TRC Environmental Corporation
Expiration Date:	December 31, 2027
Maximum Cost:	$210,424
Registered Agent (if applicable):	C T Corporation System
Registered Agent Address:	301 S. Bedford St. Suite 1 Madison, Wisconsin 53703

THIS AGREEMENT is between the County of Dane, a Wisconsin quasi-municipal corporation ("COUNTY"), and TRC Environmental Corporation, a Connecticut corporation ("PROVIDER") and is effective on the date it is fully executed by both parties.

RECITALS:

1. COUNTY, whose address is c/o Airport Director, 4000 International Lane, Madison, Wisconsin 53704, desires to purchase services from PROVIDER for the purpose of monitoring and maintaining the Truax Landfill and the landfill gas extraction system located at the Truax Landfill located near the Dane County Regional Airport ("Airport"); and

2. PROVIDER, whose address is 21 Griffin Road North, Windsor, Connecticut 06095, is able and willing to provide such services;

ACCORDINGLY, COUNTY and PROVIDER agree as follows:

I. TERM:

The primary term of this Agreement begins January 1, 2023 and ends on December 31, 2027 ("EXPIRATION DATE"), unless sooner agreed to in writing by the parties. PROVIDER shall complete its obligations under this Agreement no later than the EXPIRATION DATE, except as extended by COUNTY. COUNTY shall not be liable for any services performed by PROVIDER other than during the term of this Agreement. COUNTY shall never pay more than the Maximum Cost as stated above for all services over the term of this Agreement, including any extensions. Upon failure of PROVIDER to complete its obligation set forth herein by the EXPIRATION DATE, COUNTY may invoke the penalties, if any, set forth in this document and its attachments, in addition to any other remedies available.

II. SERVICES:

A. PROVIDER shall provide the services detailed in the bid specifications, if any; the request for proposal ("RFP") and PROVIDER's response to the RFP, if any; and on the attached Schedule A. In the event of a conflict between or among the bid specifications, the RFP or RFP response, or Schedule A or any of them, the terms of Schedule A are controlling to the extent of any conflict.

B. PROVIDER shall perform its obligations under this Agreement with all deliberate speed and in a sound, economical, and efficient manner, in accordance with this Agreement and all laws. In providing services under this Agreement, PROVIDER shall cooperate with the various departments, agencies, employees, and officers of COUNTY.

C. PROVIDER shall secure at its own expense all personnel necessary to carry out PROVIDER's obligations under this Agreement. Such personnel shall not be deemed to be employees of COUNTY nor shall they or any of them have or be deemed to have any direct contractual relationship with COUNTY.

D. No portion of funds under this Agreement may be used to support or advance religious activities.

E. PROVIDER warrants that it has complied with all necessary requirements to do business in the State of Wisconsin and has met all state and federal service standards, certifications, and assurances as expressed by State and Federal law.

F. PROVIDER shall follow public health guidelines to provide safe services and a safe workplace. In addition, by signing this Agreement, PROVIDER acknowledges the contagious nature of COVID-19 and voluntarily assumes the risk that PROVIDER and its staff may be exposed to or infected by COVID-19 when providing services under this Agreement and that such exposure or infection may result in personal injury, illness, permanent disability, and death.

G. PROVIDER further acknowledges that PROVIDER is assuming all of the foregoing risks and accept sole responsibility for any injury to itself and staff, including, but not limited to, personal injury, disability, death, illness, damage, loss, claim, liability, or expense or any kind, that PROVIDER or its staff may experience or incur in connection with providing services. PROVIDER hereby releases, covenants not to sue, discharges, and holds harmless and indemnifies the COUNTY, its employees, agents, and representatives, of and from any and all claims, including all liabilities, claims, actions, damages, costs or expenses of any kind arising out of or relating thereto. Provider understands and agrees that this release includes any claims based on the actions, omissions, or negligence of COUNTY, its employees, agents, and representatives, whether a COVID-19 infection occurs before, during, or after the provision of services under this Agreement.

III. ASSIGNMENT/TRANSFER:

PROVIDER shall not assign, subcontract, or transfer any interest or obligation in this Agreement, without the prior written consent of COUNTY, including the hiring of independent contract service providers unless otherwise provided herein. Claims for money due or to become due PROVIDER from COUNTY under this Agreement may be assigned to a bank, trust company or other financial institution without such approval if and only if the instrument of assignment contains a provision substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to PROVIDER shall be subject to prior claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the work called for in this Agreement. PROVIDER shall promptly provide notice of any such assignment or transfer to COUNTY. Any unauthorized assignment, subcontract, or transfer is void.

IV. TERMINATION:

A. Failure of PROVIDER to fulfill any of its obligations under this Agreement in a timely manner, or violation by PROVIDER of any of the covenants or stipulations of this Agreement, shall constitute grounds for COUNTY to terminate this Agreement by giving a thirty (30) day written notice to PROVIDER.

B. The following shall constitute grounds for immediate termination:

1. violation by PROVIDER of any law, or failure by PROVIDER to comply with any State and Federal service standards, as expressed by statute, rule, and regulation;

2. failure by PROVIDER to carry licenses or certifications as required by law;

3. failure of PROVIDER to comply with reporting requirements contained in this Agreement; or

4. inability of PROVIDER to perform the work provided for herein.

C. Failure of the Dane County Board of Supervisors or the State or Federal Governments to appropriate sufficient funds to carry out COUNTY's obligations hereunder, shall result in automatic termination of this Agreement as of the date funds are no longer available, without notice.

D. In the event COUNTY terminates this Agreement as provided herein, all finished and unfinished documents, services, papers, data, products, and the like prepared, produced or made by PROVIDER under this Agreement shall at the option of COUNTY become the property of COUNTY, and PROVIDER shall be entitled to receive just and equitable compensation, subject to any penalty, for any satisfactory work completed on such documents, services, papers, data, products or the like. Notwithstanding the above, PROVIDER shall not be relieved of liability to COUNTY for damages sustained by COUNTY by virtue of any breach of this Agreement by PROVIDER, and COUNTY may withhold any payments to PROVIDER for the purpose of offset.

V. PAYMENT:

COUNTY agrees to make such payments for services rendered under this Agreement as and in the manner specified in this Agreement and the attached Schedule B. Notwithstanding any language to the contrary in this Agreement or its attachments, COUNTY shall never be required to pay more than the sum set forth on page 1 of this Agreement under the heading MAXIMUM COST, for all services rendered by PROVIDER under this Agreement.

VI. REPORTS:

PROVIDER agrees to make such reports as are required in the attached schedules.

VII. DELIVERY OF NOTICE:

Notices, bills, invoices, and reports required by this Agreement shall be deemed delivered as of the date of postmark if deposited in a United States mailbox, first class postage attached, addressed to a party's address as set forth above. A party changing its address shall notify the other party in writing within a reasonable time.

VIII. INSURANCE & INDEMNIFICATION:

A. PROVIDER shall indemnify, hold harmless COUNTY, its boards, commissions, agencies, officers, employees, and representatives against any and all liability, loss (including, but not limited to, property damage, bodily injury, and loss of life), damages, costs or expenses which COUNTY, its officers, employees, agencies, boards, commissions, and representatives may sustain, incur or be required to pay by reason of PROVIDER's negligence in furnishing the services or goods required to be provided under this Agreement, provided, however, that the provisions of this paragraph shall not apply to liabilities, losses, charges, costs, or expenses caused by or resulting from the acts or omissions of COUNTY, its agencies, boards, commissions, officers, employees or representatives. Any failure on the part of the PROVIDER to comply with reporting or other provisions of its insurance policies shall not affect this PROVIDER's obligations under this paragraph. COUNTY reserves the right, but not the obligation, to participate in defense without relieving PROVIDER of any obligation under this paragraph. The obligations of PROVIDER under this paragraph shall survive the expiration or termination of this Agreement.

B. PROVIDER shall, at PROVIDER's own expense, obtain and at all times during the term of this Agreement keep in force and effect the insurance coverages, limits, and endorsements listed below. When obtaining required insurance under this Agreement and otherwise, PROVIDER agrees to preserve COUNTY's subrogation rights to the extent such losses are covered by PROVIDER's insurance. Neither these requirements nor the COUNTY's review or acceptance of PROVIDER's certificates of insurance is intended to limit or qualify the liabilities or obligations of the PROVIDER under this Agreement.

1. Commercial General Liability.

PROVIDER agrees to maintain Commercial General Liability insurance at a limit of $1,000,000 per occurrence and $2,000,000 general aggregate. Coverage shall include,

Bodily Injury and Property Damage to Third Parties, Contractual Liability pursuant to standard ISO form CG 00 01, Personal Injury and Advertising Injury Liability, Products/Completed Operations, Premises-Operations, Independent Contractors, and Fire Legal Liability. The policy shall not exclude Explosion, Collapse, and Underground Property Damage Liability Coverage.

2. Professional Liability Insurance.
If PROVIDER renders professional services (such as medical, architectural or engineering services) under this Agreement, then PROVIDER shall provide and maintain two million dollars ($2,000,000.00) per claim and in the aggregate of professional liability insurance. If such policy is a "claims made" policy, all renewals during the life of the Agreement shall include "prior acts coverage" covering at all times all claims made with respect to PROVIDER's work performed under the Agreement. This Professional Liability coverage must be kept in force for a period of three (3) years after Substantial Completion Date of the services.

3. Commercial/Business Automobile Liability Insurance.
If PROVIDER uses any vehicles in the performance of the services covered by this Agreement, PROVIDER shall provide and maintain commercial automobile liability insurance at a limit of $1,000,000 per occurrence. Coverage for commercial automobile liability insurance shall, at a minimum, be at least as broad as Insurance Services Office ("ISO") Commercial General Liability Coverage (Occurrence Form CG 0001) and ISO Business Auto Coverage (Form CA 0001), covering Symbol 1 (any vehicle).

4. Contractor's Pollution Liability
If PROVIDER will be transporting waste or will be disposing of waste or products under this Agreement, then PROVIDER agrees to maintain Contractor's Pollution Liability insurance at a limit of not less than $1,000,000 per claim and in the aggregate for environmental cleanup costs caused by pollution conditions, both sudden and non-sudden arising from PROVIDER'S contracting activities hereunder. This requirement can be satisfied by either a separate contractor's pollution liability policy or through a modification to the Commercial General Liability policy. Evidence of either must be provided.

5. Workers' Compensation.
PROVIDER agrees to maintain Workers Compensation insurance in accordance with the laws of the jurisdiction where the Services are performed.

6. Umbrella or Excess Liability.
PROVIDER may satisfy the minimum liability limits required above for Commercial General Liability and Business Auto Liability under an Umbrella or Excess Liability policy. The Per Occurrence limit of liability under the Umbrella or Excess Liability; and the Annual Aggregate limit shall not be less than the highest "Each Occurrence" limit for the Commercial General Liability and Business Auto Liability ($1,000,000). PROVIDER agrees to list DANE COUNTY as an "Additional Insured" on its Umbrella or Excess Liability policy.

C. Required provisions.

1. Insurer's Requirement
All of the insurance shall be provided through companies having a minimum AM Best's rating of A- VIII to be satisfactory to COUNTY.

2. Additional Insured.
COUNTY, its elected and appointed officials, officers, employees or authorized representatives or volunteers are to be given additional insured status (via ISO endorsement CG 2010 and CG 2037 or insurer's equivalent for general liability coverage) as respects: liability arising out of activities performed by or on behalf of PROVIDER; products and completed operations of PROVIDER; premises occupied or used by PROVIDER; and vehicles owned, leased, hired or borrowed by PROVIDER. The coverage shall contain no special limitations on the scope of protection afforded to COUNTY, its elected and appointed officials, officers, employees or authorized representatives or

volunteers. Except for the workers compensation policy, each insurance policy shall contain a waiver of subrogation endorsement in favor of COUNTY.

3. Provider's Insurance Shall be Primary
For any covered claims related to this Agreement, PROVIDER's insurance afforded the Additional Insureds shall be primary insurance with respect to COUNTY, its elected and appointed officials, officers, employees or authorized representatives or volunteers. Any insurance, self-insurance, or other coverage maintained by COUNTY, its elected and appointed officers, officials, employees or authorized representatives or volunteers shall not contribute to the primary insurance. PROVIDER's general and automobile liability insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability

4. Cancelation Notice
Each insurance policy required by this Agreement shall state, or be endorsed so as to the state, that coverage shall not be canceled by the insurance carrier or the PROVIDER, except after thirty (30) days (ten (10) days for non-payment of premium) prior written notice by U.S. mail has been given to COUNTY.

5. Evidences of Insurance.
Prior to execution of the Agreement, PROVIDER shall file with COUNTY a certificate of insurance (Accord Form 25-S or equivalent) signed by the insurer's representative evidencing the coverage required by this Agreement. Such evidence shall include an additional insured endorsement signed by the insurer's representative.

6. Sub-Contractors.
In the event that PROVIDER employs sub-contractors as part of this Agreement, it shall be the PROVIDER's responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above.

D. The parties do hereby expressly agree that COUNTY, acting at its sole option and through its Risk Manager, may waive any and all requirements contained in this Agreement, such waiver to be in writing only. Such waiver may include or be limited to a reduction in the amount of coverage required above. The extent of waiver shall be determined solely by COUNTY's Risk Manager taking into account the nature of the work and other factors relevant to COUNTY's exposure, if any, under this Agreement.

IX. NO WAIVER BY PAYMENT OR ACCEPTANCE:

In no event shall the making of any payment or acceptance of any service or product required by this Agreement constitute or be construed as a waiver by COUNTY of any breach of the covenants of this Agreement or a waiver of any default of PROVIDER and the making of any such payment or acceptance of any such service or product by COUNTY while any such default or breach shall exist shall in no way impair or prejudice the right of COUNTY with respect to recovery of damages or other remedy as a result of such breach or default.

X. NON-DISCRIMINATION:

PROVIDER shall not discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs against any person, whether a recipient of services (actual or potential) or an employee or applicant for employment. Such equal opportunity shall include but not be limited to the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). PROVIDER agrees to post in conspicuous places, available to all employees, service recipients, and applicants for employment and services, notices setting forth the provisions of this paragraph. The listing of prohibited bases for discrimination shall not be construed to amend in any fashion state or federal law setting forth additional bases, and exceptions shall be permitted only to the extent allowable in state or federal law.

XI. CIVIL RIGHTS COMPLIANCE:

A. If PROVIDER has 20 or more employees and receives $20,000 in annual contracts with COUNTY, the PROVIDER shall submit to COUNTY a current Civil Rights Compliance Plan (CRC) for Meeting Equal Opportunity Requirements under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title VI and XVI of the Public Service Health Act, the Age Discrimination Act of 1975, the Omnibus Budget Reconciliation Act of 1981, and Americans with Disabilities Act (ADA) of 1990. PROVIDER shall also file an Affirmative Action (AA) Plan with COUNTY in accordance with the requirements of chapter 19 of the Dane County Code of Ordinances. PROVIDER shall submit a copy of its discrimination complaint form with its CRC/AA Plan. The CRC/AA Plan must be submitted prior to the effective date of this Agreement and failure to do so by said date shall constitute grounds for immediate termination of this Agreement by COUNTY. If an approved plan has been received during the previous CALENDAR year, a plan update is acceptable. The plan may cover a two-year period. Providers who have less than twenty employees, but who receive more than $20,000 from the COUNTY in annual contracts, may be required to submit a CRC Action Plan to correct any problems discovered as the result of a complaint investigation or other Civil Rights Compliance monitoring efforts set forth herein below. If PROVIDER submits a CRC/AA Plan to a Department of Workforce Development Division or to a Department of Health and Family Services Division that covers the services purchased by COUNTY, a verification of acceptance by the State of PROVIDER's Plan is sufficient.

B. PROVIDER agrees to comply with the COUNTY's civil rights compliance policies and procedures. PROVIDER agrees to comply with civil rights monitoring reviews performed by the COUNTY, including the examination of records and relevant files maintained by the PROVIDER. PROVIDER agrees to furnish all information and reports required by the COUNTY as they relate to affirmative action and non-discrimination. PROVIDER further agrees to cooperate with COUNTY in developing, implementing, and monitoring corrective action plans that result from any reviews.

C. PROVIDER shall post the Equal Opportunity Policy, the name of PROVIDER's designated Equal Opportunity Coordinator and the discrimination complaint process in conspicuous places available to applicants and clients of services, applicants for employment, and employees. The complaint process will be according to COUNTY's policies and procedures and made available in languages and formats understandable to applicants, clients, and employees. PROVIDER shall supply to COUNTY's Contract Compliance Officer upon request a summary document of all client complaints related to perceived discrimination in service delivery. These documents shall include names of the involved persons, nature of the complaints, and a description of any attempts made to achieve complaint resolution.

D. PROVIDER shall provide copies of all announcements of new employment opportunities to COUNTY's Contract Compliance Officer when such announcements are issued.

E. If PROVIDER is a government entity having its own compliance plan, PROVIDER'S plan shall govern PROVIDER's activities.

XII. COMPLIANCE WITH FAIR LABOR STANDARDS:

A. Reporting of Adverse Findings

During the term of this Agreement, PROVIDER shall report to the County Contract Compliance Officer, within ten (10) days, any allegations to, or findings by the National Labor Relations Board (NLRB) or Wisconsin Employment Relations commission (WERC) that PROVIDER has violated a statute or regulation regarding labor standards or relations. If an investigation by the Contract Compliance Officer results in a final determination that the matter adversely affects PROVIDER'S responsibilities under this Agreement, and which recommends termination, suspension or cancellation of this agreement, the County may take such action.

B. Appeal Process

PROVIDER may appeal any adverse finding by the Contract Compliance Officer as set forth in Dane County Ordinances Sec. 25.08(20)(c) through (e).

C. Notice Requirement
PROVIDER shall post the following statement in a prominent place visible to employees: "As a condition of receiving and maintaining a contract with Dane County, this employer shall comply with federal, state and all other applicable laws prohibiting retaliation for union organizing."

XIII. REQUIRED FEDERAL PROVISIONS

The provisions in this section and Schedule C are included as required by federal law:

A. General Civil Rights Provisions. In all its activities within the scope of its airport program, the Provider agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

The above binds the Provider and subcontractors from the bid solicitation period through the completion of the contract.

B. Compliance with Nondiscrimination Requirements. During the performance of this contract, the Provider, for itself, its assignees, and successors in interest (hereinafter referred to as the "Provider"), agrees as follows:

1. Compliance with Regulations: The Provider (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Nondiscrimination: The Provider, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Provider will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

3. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation made by the Provider for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Provider of the Provider's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

4. Information and Reports: The Provider will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by County or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of Provider is in the exclusive possession of another who fails or refuses to furnish the information, the Provider will so certify to County or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a Provider's noncompliance with the non-discrimination provisions of this contract, County will impose such contract

sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the Provider under the contract until the Provider complies; and/or

b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The Provider will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Provider will take action with respect to any subcontract or procurement as County or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Provider becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Provider may request County to enter into any litigation to protect the interests of County. In addition, the Provider may request the United States to enter into the litigation to protect the interests of the United States.

C. Provisions of 29 CFR part 201. This Agreement and any contracts and subcontracts entered into under authority of this Agreement shall incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers. Provider has full responsibility to monitor compliance with 29 CFR part 201. Provider must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

D. Requirements of 29 CFR Part 1910. This Agreement and any contracts and subcontracts entered into under authority of this Agreement shall incorporate by reference the requirements of 29 CFR Part 1910, the Occupational Safety and Health Act of 1970, with the same force and effect as if given in full text. Provider and any subcontractors performing work under this Agreement shall provide a work environment that is free from recognized hazards that may cause death or serious physical harm to an employee. Provider shall comply with, and monitor the compliance of its subcontractors with, the Occupational Safety and Health Act of 1970, and shall address any claims or disputes that pertain to such Act directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

XIV. CONTROLLING LAW AND VENUE:

It is expressly understood and agreed to by the parties hereto that in the event of any disagreement or controversy between the parties, Wisconsin law shall be controlling. Venue for any legal proceedings shall be in the Dane County Circuit Court.

XV. FINANCIAL INTEREST PROHIBITED:

Under s. 946.13, Wis. Stats. COUNTY employees and officials are prohibited from holding a private pecuniary interest, direct or indirect, in any public contract. By executing this Agreement, each party represents that it has no knowledge of a COUNTY employee or official involved in the making or performance of the Agreement that has a private pecuniary interest therein. It is expressly understood and agreed that any subsequent finding of a violation of s. 946.13, Wis. Stat. may result in this Agreement being voided at the discretion of the COUNTY.

XVI. LIMITATION OF AGREEMENT:

This Agreement is intended to be an agreement solely between the parties hereto and for their benefit only. No part of this Agreement shall be construed to add to, supplement, amend, abridge or repeal existing duties, rights, benefits or privileges of any third party or parties, including but not limited to employees of either of the parties.

XVII. ENTIRE AGREEMENT:

The entire agreement of the parties is contained herein and this Agreement supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that this Agreement shall not be amended in any fashion except in writing, executed by both parties.

XVIII. COUNTERPARTS:

The parties may evidence their agreement to the foregoing upon one or several counterparts of this instrument, which together shall constitute a single instrument.

XIX. CONSTRUCTION:

This Agreement shall not be construed against the drafter.

XX. COPIES VALID:

This Agreement, and any amendment or addendum relating to it, may be executed and transmitted to any other party by legible facsimile reproduction or by scanned legible electronic PDF copy, and utilized in all respects as, an original, wet-inked manually executed document. Further, this Agreement and any amendment or addendum thereto, may be stored and reproduced by each party electronically, photographically, by photocopy or other similar process, and each party may at its option destroy any original document so reproduced. All parties hereto stipulate that any such legible reproduction shall be admissible in evidence as the original itself in any judicial, arbitration or administrative proceeding whether or not the original is in existence and whether or not such reproduction was made by each party in the regular course of business. This term does not apply to the service of notices under this Agreement.

XXI. REGISTERED AGENT:

PROVIDER warrants that it has complied with all necessary requirements to do business in the State of Wisconsin, that the persons executing this Agreement on its behalf are authorized to do so, and, if a corporation, that the name and address of PROVIDER's registered agent is as set forth opposite the heading REGISTERED AGENT on page 1 of this Agreement. PROVIDER shall notify COUNTY immediately, in writing, of any change in its registered agent, his or her address, and PROVIDER's legal status. For a partnership, the term 'registered agent' shall mean a general partner.

XXII. DEBARMENT:

By signing this Contract, PROVIDER attests that it is not debarred from participating in federal procurements. COUNTY reserves the right to cancel this Contract if PROVIDER is presently, or is in the future, on the list of parties excluded from federal procurements.

XXIII. EXECUTION:

A. The parties agree that execution of this document may be made by electronic signatures. The parties may make electronic signatures by typing the name of the authorized signature followed by the words, “electronically signed” or by any other electronic means representing an authorized signature by PROVIDER. PROVIDER shall ensure that only authorized persons may affix electronic signatures to this Agreement and COUNTY may rely that the electronic signature provided by PROVIDER is authentic.

B. This Agreement has no effect until signed by both parties. The submission of this Agreement to PROVIDER for examination does not constitute an offer. PROVIDER warrants that the persons executing this Agreement on its behalf are authorized to do so.

IN WITNESS WHEREOF, COUNTY and PROVIDER, by their respective authorized agents, have caused this Agreement and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

FOR PROVIDER:

Douglas R. Genthe Digitally signed by Douglas R. Genthe
Date: 2023.11.30 12:55:21-06'00'

_____ _____
Douglas R. Genthe, PE, BC.GE Date
TRC Vice President, Geo-Environmental Engineering

* * *

FOR COUNTY:

_____ _____
Joseph T. Parisi Date
Dane County Executive

_____ _____
Scott McDonell Date
Dane County Clerk

SCHEDULE A
Scope of Services

Provider shall provide the following engineering services:

(1) Unless otherwise expressly provided in this Schedule A, Provider shall provide services with respect to operations, maintenance, monitoring, analysis, record keeping, and reporting as specified and required of Dane County in the following exhibits attached to this Schedule A:

(a) EXHIBIT 1. State of Wisconsin Department of Natural Resources document entitled Plan Modification To Reduce Groundwater And Gas Probe Monitoring Requirements At The Dane County Truax Landfill (#03306) FID 113183620, dated October 15, 2007. **NOTE:** (i) The services described in the foregoing Plan Modification document at Paragraphs 1, 2, and 3 in the section captioned Conditional Plan Approval have been intentionally struck and are not applicable, and (ii) Table 1, also attached to the foregoing Plan Modification document, has been intentionally struck and is not applicable. **NOTE ALSO:** Exhibits 5 and 6 below modify the requirements set forth in Exhibit 1.

(b) EXHIBIT 2. Document entitled Appendix E, Landfill Gas Management System Operating Plan, dated February 1999.

(c) EXHIBIT 3. Map entitled Landfill Gas Extraction System, dated July 2014, showing system components referenced in other exhibits.

(d) EXHIBIT.4 Map entitled Groundwater Monitoring Locations. dated July 2014.

(e) EXHIBIT 5. Expedited Plan Modification, Reduction in Data Reporting, Dane County Truax Landfill, WDNR License No. 3306, dated and submitted to WDNR on April 23, 2012. WDNR approval letter for the Expedited Plan Modification Request dated May 31, 2012.

(f) EXHIBIT 6. WDNR letter entitled Conditional Construction Documentation Approval and Plan of Operation Approval Modification for Environmental Monitoring Program, Dane County Truax Landfill, License # 3306 dated July 13, 2020.

(2) Notwithstanding any requirement to the contrary contained in the above referenced exhibits, Provider is not required to monitor or analyze groundwater at the landfill site. Groundwater data will be provided to Provider by others for inclusion in reports prepared by Provider as required under the foregoing exhibits.

(3) Notwithstanding any requirement to the contrary contained in the above referenced exhibits, Provider is not required to analyze gas for VOC scan.

(4) Notwithstanding any requirement to the contrary contained in the above referenced exhibits, Provider is not required to provide gas condensate sampling and analysis. Data derived from gas condensate analysis will be provided to Provider by others for inclusion in reports prepared by Provider as required under the foregoing exhibits.

(5) In addition to the services specified in the attached exhibits, Provider shall provide the following services:

(a) Lubricate blower bearings per manufacturer's recommendations.
(b) Inspect flare semiannually and clean ultra violet sensor as necessary.
(c) Inspect extraction wells, extraction trenches, and valves monthly for evidence of integrity failure.
(d) Inspect the condensate lift station and condensate levels monthly.
(e) Inspect and clean condensate management system annually.

(f) Perform gas extraction valve adjustments as necessary to minimize lateral subsurface gas migration.

(g) Troubleshoot, adjust and restart the blower/flare system per the attached exhibits.

(h) Monitor and report with respect to gas extraction wells N-4 and N-5 in the same manner that the attached exhibits specify as to gas extraction wells N-1, N-2, and N-3.

(i) Record barometric pressure, air temperature, and barometric trend during all monitoring events required hereunder.

(j) Report results of inspections and monitoring activities performed under this section (5) to the Dane County Regional Airport.

(k) Monitor and report with respect to gas extraction well W-16 (as shown on attached Exhibit 3) in the same manner that that the attached exhibits specify as to gas extraction wells W-1 through W-15.

(l) Respond to restart the flare, as specified under the attached exhibits, within twenty four (24) hours of notice of flame failure.

(6) Provider shall on an annual basis, by January 1 of each year under the term of the Purchase of Services Agreement, prepare and submit to the Dane County Regional Airport an itemized projected budget estimate for operation, repair and maintenance tasks at the Truax Landfill that need to be performed during next calendar year and are not included within the foregoing scope of services.

(7) Provider shall prepare and submit in an appropriate and timely manner all reports, plans, records, and documentation referred to in the above identified Exhibit 1 and Exhibit 2, as such may be modified under the plan modification requests and approvals attached as Exhibits 5 and 6. All submittals required under this Agreement shall be in a format that is acceptable to the recipient agency and shall contain all data and documentation required by said agency(s).

(8) Provider shall provide to the Dane County Regional Airport copies of all reports, plans, records, and documentation submitted to any governmental agency on behalf of the Airport or Dane County.

Exhibit 1

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PLAN MODIFICATION TO REDUCE GROUNDWATER AND GAS PROBE MONITORING REQUIREMENTS AT THE DANE COUNTY TRUAX LANDFILL (#3306) FID 113183620

FINDINGS OF FACT

The Department of Natural Resources ("Department") finds that:

1. Dane County ("County") owns the Truax Landfill, a closed solid waste disposal facility located in the NE ¼ of Section 31, T8N, R10E, City of Madison, Dane County, Wisconsin.

2. In 1972, the Department issued the City of Madison License #0306 for the Truax Landfill. In 1973, ownership of the landfill was transferred from the City of Madison to Dane County.

3. The facility is a non-approved facility under s. 289.01(24), Stats. Prior to 1990, the Department had not approved any plans for the landfill. In 1990, the Department assigned license number #3306 to the landfill and a facility identification number (FID #113183620).

4. The Department received a "*Plan Modification Request to Reduce Groundwater and Gas Probe Monitoring Requirements*" on August 20, 2007. The Plan Modification review fee was received September 10, 2007.

5. The Department received an "*Addendum to the* [August 20, 2007] *Plan Modification Request to Reduce Groundwater and Gas Probe Monitoring Requirements*" on October 9, 2007.

6. In drafting this plan modification request, the Department considered the following documents and information:

   a) A report entitled "Year 2004 Annual O&M Progress Report Truax Landfill (License #3306), submitted by RMT, Inc. and dated January 20, 2005.

   b) A February 5, 2002 submittal from RMT, Inc. entitled "Addendum to Plan Modification for Environmental Monitoring Dane County Truax Landfill (Lic. #03306)."

   c) A January 30, 2002 submittal from RMT, Inc. entitled "Evaluation of Information on 3 abandoned Kaufmann Wells (113, 128, 140) at Truax Landfill."

   d) A report entitled Environmental Monitoring Plan Modification; Dane County Truax Landfill: June, 2001, submitted by RMT, Inc. on behalf of Dane County, and received by the Department on July 6, 2001.

   e) A report entitled "Dane County Truax Landfill Groundwater Monitoring for Pesticides", submitted by RMT, Inc. and dated August 9, 2000.

   f) A conditional plan approval, dated November 18, 1999, for environmental monitoring for the Dane County Truax landfill #3306, sent by the Department to Mr. Mike Kirchner,

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PLAN MODIFICATION TO REDUCE GROUNDWATER AND GAS PROBE MONITORING REQUIREMENTS
AT THE
DANE COUNTY TRUAX LANDFILL (#3306)
FID 113183620

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   f) A conditional plan approval, dated November 18, 1999, for environmental monitoring for the Dane County Truax landfill #3306, sent by the Department to Mr. Mike Kirchner,

Dane County Regional Airport.

g) An April 29, 1999 conditional plan approval, sent by the Department to Mr. Mike Kirchner, Dane County Regional Airport, approving Construction Documentation for the Final Cover and Gas Extraction System for the Truax Landfill Lic. #3306

h) A November 26, 1997 grant of exemption issued by the Department to Mr. Thomas B. Sanford of Affiliated Commercial Companies, and to Mr. Mike Kirchner of Dane County, for construction of a portion of a golf course on the Dane County Truax landfill.

i) A June 2, 1993 report entitled "Truax Landfill Environmental Contamination Assessment Report" with subsequent addenda, submitted by Dames & Moore on behalf of Dane County and the City of Madison.

j) The Department's approval, correspondence, and plan files for the Dane County Truax landfill (Lic. #03306, FID #1133183620).

k) Groundwater quality and landfill gas monitoring information in Department files and the Groundwater Environmental Monitoring System (GEMS) database for the Dane County Truax landfill (Lic. #03306, FID #113183620).

5. The Department considers the following facts to be significant in drafting this plan modification approval:

a) The Truax landfill does not have an engineered liner or leachate collection system, and contains approximately 1,000,000 cubic yards of municipal solid waste.

b) In 1999, an improved landfill cap was completed on the landfill and improvements made to the landfill grades. The cap consists of a two-foot clay barrier layer and a two-foot rooting zone.

c) In the March 1994 Environmental Contamination Assessment (ECA) report, Dames & Moore, Inc. documented exceedances of chapter NR 140, Wis. Adm. Code enforcement and preventive action limits at monitoring wells near the Truax landfill. Analytical results for samples collected at the landfill between January 1, 1994, and November 2001, indicate that groundwater continues to exceed ch. NR 140, Wis. Adm. Code Preventive Action Limits at many on-site monitoring wells.

d) City of Madison Municipal Well UW-7 is located approximately ½ mile from the Truax landfill.

e) Part of the Bridges Golf Course has been constructed on top of the Truax landfill above the rooting zone and barrier layers of the landfill cap. The June 2001, Environmental Monitoring Plan Modification request prepared by RMT, Inc., lists the fertilizers and pesticides used on the Bridges Golf Course in years 2000 and 2001.

6. Based on information submitted by RMT, MW-113 was destroyed during landfill cap construction, and MW-128 and MW-140 were destroyed during construction of the golf course. It is the Department's belief that monitoring wells MW-113, MW-128, and MW-140 have not been properly abandoned.

7. The approval conditions listed below supersede all previous approval conditions of previous plan modification approvals for groundwater and gas probe monitoring the landfill.

8. The conditional plan approval set forth below is needed to continue to evaluate the impact of the Truax landfill on local groundwater, soil and air quality, and to assure compliance with the applicable portions and standards of chs. NR 500-538, 140 and 141, Wis. Adm. Code.

CONCLUSIONS OF LAW

The Department concludes that:

1. The Department has authority under s. 289.31(7), Stats. to impose monitoring requirements for a nonapproved facility, as defined under s. 289.01(24), Stats.

2. The Department has authority under ch. 289, Stats. to modify a plan approval if the modification would not inhibit compliance with applicable portions of NR 500-538, Wis. Adm. Code.

3. The Department has authority under ch. 289, Stats. to approve a plan of operation modification with special conditions if the conditions are needed to ensure compliance with chs. NR 500-538, Wis. Adm. Code .

4. The conditions of approval set forth below are needed to assure compliance with s. NR 140, Wis. Adm. Code, and applicable portions of NR 500-538, Wis. Adm. Code.

5. In accordance with the foregoing, the Department has authority under ch. 289, Stats. to issue the following conditional approval modifying a plan approval.

CONDITIONAL PLAN APPROVAL

The Department hereby approves the long-term monitoring plan for the Dane County Truax Landfill, subject to the following conditions and the applicable requirements of chapters NR 500-538, and chapters NR 140 and 141, Wis. Adm. Code:

~~Groundwater monitoring~~

~~1. Dane County shall monitor groundwater as detailed in Table 1, attached.~~

~~2. Dane County shall submit the data described in Table 1 to the Department as required in NR 507.26, including both hard copy and electronic copy of the data in a format suitable for incorporation into the Groundwater Environmental Monitoring System (GEMS).~~

~~3. Dane County shall properly abandon wells MW-6, MW-8, MW-9, and TG-1 per the requirements of NR141.25.~~

Monitoring of Gas Systems

4. Dane County shall monitor landfill gas, the gas extraction system, and gas condensate as detailed in Tables 2 and 3, attached.

5. Dane County shall submit the data described in Table 2 to the Department in hard copy along with the quarterly maintenance log for the blower/flare system, in addition to the electronic reporting required in Table 2. If the Department approves a written request, this additional hard

copy reporting can be stopped.

The Department reserves the right to require the submittal of additional information and to modify this approval at any time, if in the Department's opinion, modifications are necessary. Unless specifically noted, the conditions of this approval do not supersede or replace any previous conditions of approval for this facility.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

Dated: OCT 15 2007

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Gene Mitchell, P.E.
Waste and Materials Management Team Supervisor
South Central Region

Tom Bennwitz, P.E.
Waste and Materials Management Engineer
South Central Region

James Kralick, P.G.
Waste and Materials Management Hydrogeologist
South Central Region

Attachments: Table 1: Groundwater Monitoring Schedule for Landfill Lic. #3306
Table 2: Gas Monitoring Schedule for Landfill Lic. #3306
Table 3: Gas Condensate Monitoring for Landfill Lic. #3306

TABLE 2: GAS MONITORING SCHEDULE FOR LICENSE #3306
Dane County Truax Landfill
October 15, 2007

Sampling Point (DNR ID)	Frequency	Parameters
Gas Probes: GP-1SR (502) GP-1D (503) GP-2S (505) GP-2D (507) GP-3S (509) GP-3D (511) GP-10 (523) GP-12 (527) GP-17 (537) GP-18 (539) GP-19W (541) GP-19E North (543) GP-19E South (551) GP-30 (555)	**Once Monthly** (reported electronically semi-annually March, September)	85547 Methane Gas, volume percent 85550 Oxygen Gas, volume percent 46389 Soil Gas Pressure
Gas Extraction Wells: (vertical system) N-1 (641) N-2 (643) N-3 (645) W-1 (611) W-2 (613) W-3 (617) W-4 (619) W-5 (621) W-6 (623) W-7 (627) W-8 (629) W-9 (631) W-10 (633) W-11 (635) W-12 (637) W-13 (639) W-14 (615) W-15 (625) S-1 (651) S-2 (653) S-3 (655) S-4 (657)	**Monthly** (reported electronically semi-annually March, September)	85547 Methane Gas, volume percent 85550 Oxygen Gas, volume percent 46385 Well-side pressure (inches water) 46388 Gas Temperature (Deg F) 46386 Flow rate (ft^3/min) 46387 Valve setting (% open)

TABLE 2: GAS MONITORING SCHEDULE FOR LICENSE #3306
Dane County Truax Landfill
October 15, 2007

Gas Probes: GP-4 (513) GP-5 (515) GP-7 (519) GP-8R (522) GP-11 (525) GP-13 (529) GP-14 (531) GP-15 (533) GP-16 (535) GP-20 East (547) GP-20 West (549) GP-21 East (551) GP-21 West (553)	**Gas Probes are to be left in place, but monitoring is suspended until further notice.**	
Gas Extraction Valves (horizontal system): TR-1 (700) TR-2 (702) TR-3 (704) TR-4 (706) TR-5 (708) TR-6 (710) TR-8 (712) TR-9 (714) TR10 (716) TR-11 (718) TR-12 (720) TR-13 (722)	**Monthly** (reported electronically semi-annually March, September)	85547 Methane Gas, volume percent 85550 Oxygen Gas, volume percent 46385 Well-side Pressure (inches water) 46387 Valve setting (% open)
Blower Inlets: Vertical system inlet (760) Horizontal system inlet (762)	**Twice Monthly** (reported electronically semi-annually March, September)	46385 Pressure (inches water) 46386 Flow rate (ft^3/min)
Blower Outlet: Blower outlet (764)	**Twice monthly:** (reported electronically semi-annually March, September)	85547 Methane Gas, volume percent 85550 Oxygen Gas, volume percent 46385 Pressure (inches water) 46386 Flow rate (ft^3/min)
Site Conditions: ID Number (900)	Recorded at each gas monitoring event (reported electronically semi-annually March, September)	00025 Barometric pressure 00011 Temperature, Air 46381 Pressure trend, barometric Ground conditions, report annually in the Operations and Maintenance report

TABLE 3: GAS CONDENSATE MONITORING FOR LICENSE #3306 Dane County Truax Landfill October 15, 2007		
Sampling Point (DNR ID)	**Frequency**	**Parameters**
Gas Condensate: Lift station (770)	Annually (September)	00310 BOD_5 00094 Field Conductivity @25 ° C 00400 Field pH 00410 Total Alkalinity 01027 Total Cadmium 00940 Chloride 01032 Total Chromium 00340 COD, Unfiltered 00951 Total Fluoride 00900 Total Hardness 74010 Total Iron 01051 Total Lead 01055 Total Manganese 71900 Total Mercury 00610 Total Ammonia Nitrogen 00625 Total Kjeldahl Nitrogen 00929 Total Sodium 00945 Total Sulfate 00150 Total Suspended Solids VOCs (EPA Method 8260B) Base Neutral/Acid Extractable compounds (EPA Method 8270)
	Monthly (Report annually)	Report gas condensate liquid level and operational status of the wet well lift station in the annual Operations and Maintenance report.

Exhibit 2

APPENDIX E
LANDFILL GAS MANAGEMENT SYSTEM
OPERATING PLAN

TRUAX LANDFILL GAS SYSTEM

February 1999

Table of Contents

Exhibit 2

List of Attachments

Landfill Gas Management System Operating Plan Monitoring Schedule Summary

Trench and Well Monitoring Ports

- Monitor frequently for the first two weeks of operation.
- Monitor monthly after system shakedown period for percent methane, percent oxygen, pressure, and temperature.
- Monitor if oxygen at blower increases above 3.0 percent.

Condensate Sump Pump

- Visually inspect warning lights twice monthly.
- Visually inspect the liquid level and pump operation monthly.
- Analyze condensate for pH, COD, TSS, and conductivity quarterly.
- Analyze condensate for priority pollutants annually.

Flare[1]

- Visually inspect windscreen at pilot outlet semiannually.
- Follow manufacturer's recommendations.

Blower and Related Equipment

Blower

- Monitor flow rate, pressure, percent methane, and percent oxygen twice monthly.
- Inspect blower wheel for foreign material or excessive wear annually.
- Visually inspect drive unit per manufacturer's recommendation.
- Visually inspect blower unit for excessive vibration monthly.

Gas Flow Valves

- Record position during trench and well monitoring.

---

1 Refer to the manufacturer's detailed maintenance instructions supplied at time of installation.

Exhibit 2

- Operate gas valves through full range of motion semiannually.

Note: Refer to attachment E-2 for monitoring forms.

Exhibit 2

Section 1
Introduction

1.1 Gas Extraction System Overview

The gas extraction system for the landfill includes 22 vertical gas extraction wells and 13 horizontal gas extraction trenches (trench sections). The wells and horizontal trenches are connected to a single-looped header pipe. Valves for the vertical extraction wells are located within manholes. Valve actuators for the horizontal extraction trench valves are located within riser pipes. All valves for the vertical and horizontal systems are adjustable from final grade.

The gas flow from both the trenches and vertical wells is conveyed to the blower/flare station after passing condensate driplegs located just west of the blower/flare station.

1.2 Purpose

The purpose of this report is to provide a comprehensive guide for the operation and maintenance (O&M) of the gas management system. This O&M Plan has been prepared to provide a usable document through the operating life of the gas extraction system.

Note: Application of the information presented in this report requires a certain level of experience and training which this manual is not intended to provide.

Exhibit 2

Section 2
General Safety Precautions for Landfills

This section highlights some of the hazards associated with landfill gas and typical safety precautions often used. It is not intended to be a comprehensive safety guide nor an authoritative guide to means and methods. Personnel performing operation and maintenance activities shall have appropriate training and experience in landfill gas safety, shall be responsible for the means and methods employed, and shall be responsible for their own health and safety.

Landfill gas (LFG) is typically composed of approximately 50 percent methane and 50 percent carbon dioxide. Methane is explosive when present in air at concentrations of 5 to 15 percent by volume, and combustible above concentrations of 15 percent by volume in the presence of air and an ignition source. This characteristic is extremely important when considering construction or maintenance on or near a municipal solid waste landfill.

LFG containing methane can collect at or in locations such as driplegs, valve boxes, sumps, and enclosed structures on or near buried waste. The collection system piping, above ground and below ground, may likely contain LFG whether or not the blowers are operating. When working in areas where the presence of LFG is suspected, the operator should use detection instrumentation, and avoid making a flame or spark (ignition source) available to combustible gas. Smoking shall not be permitted on the landfill or at the Blower Station. Operating personnel should use intrinsically safe flashlights or mirrors, never matches or lighters, to assist in visual inspection.

When making repairs, the operator should isolate the repair area from LFG by closing appropriate valves, plugging the pipes, and/or shutting down portions of the system. Portions of the header pipe can also be purged of LFG by closing wellhead valves and disconnecting one or more flex hose connections. After the flex hoses are disconnected, operating the blower in the manual mode will draw atmospheric air through the system and purge the landfill gas.

The "Guidelines for Protection of Construction Workers," located in Attachment E.1, should be followed where applicable for the type of repair work involved. Workers should remain alert to other nearby maintenance and construction activities that could damage the gas control system.

Section 3
Gas Extraction System Operation and Maintenance Plan

3.1 Operating Approach

The goal of operating the gas management system is to prevent off-site migration of LFG by extracting enough gas out of a well or horizontal trench section so that the zone of influence around neighboring wells or horizontal trench legs overlap without drawing atmospheric air through the cover of the landfill. Air intrusion occurs when the zone of influence extends above the landfill surface or into open phases of the landfill. This is influenced primarily by the integrity of the final cover. The final cover installed at the Truax Landfill should minimize the potential for air intrusion.

LFG is usually warm and saturated with moisture when it is in the landfill. As it enters the gas management system, the LFG cools and liquid condenses on the walls of the pipe. This condensate is primarily water, but there may be trace amounts of other compounds present. The gas extraction well system is designed so that condensate will travel to low points in the pipe network. There, it is conveyed from the gas extraction system to condensate driplegs where it either gravity drains to a condensate pumping station (which discharges to the City of Madison sanitary sewer system) or gravity drains directly into the City of Madison sanitary sewer system. Within the perforated pipe/trench system, condensate is allowed to drain back into the landfill.

The gas extraction system utilizes common negative pressure barometric driplegs to keep vacuum pressure within the main header and extraction well/trench components. Accumulated liquids in the driplegs serve as a barometric seal.

Settlement will occur throughout the life of the landfill. Differential settlement, where one part of the landfill settles at a different rate than another, is common and is due to the varying composition, moisture, compaction, and depth of the refuse. Periodically, throughout the life of the gas extraction system, differential settlement may restrict condensate flow within the piping and cause a blockage. At that time, the settled portion of the piping or blockage must be located and repaired by restoring adequate pipe slopes to allow for drainage of condensate.

3.2 System Description

3.2.1 Vertical Gas Extraction Wells

The vertical gas extraction wells are constructed of 8-inch-diameter PVC pipe placed in approximately 36-inch-diameter boreholes, with the annular space around the perforated portion of the pipe consisting of a washed stone pack. The wells are installed to within approximately 5 to 10-feet of the base of the closed landfill.

Each wellhead assembly is within a manhole and includes a flexible connection to a 10-inch-diameter PVC gas header pipe to allow for differential settlement. A butterfly valve is provided at each well for controlling the gas flow rate. A valve extension which reaches to the valves from the landfill surface is used for adjustments. Manholes should not be entered by personnel unless they have been trained properly for confined space entry. Monitoring ports are extended through the manhole cover on each well for gas sampling.

3.2.2 Horizontal Gas Extraction Trenches

Horizontal gas extraction trenches consist of a 3-inch perforated HDPE pipe wrapped with a geotextile and placed within a trench backfilled with granular material and located a minimum of 5 feet below the surface of the waste. Each extraction trench is connected to the 6-inch-diameter HDPE header pipe. Vacuum and gas flow within the extraction trench is controlled by a butterfly valve at the connection of the perforated pipe and header pipe. A riser is located at each valve to allow for operation of the valve with an extension. Two monitoring hoses extend through the riser and are labeled "HEADER" and "TRENCH." The hose labeled "HEADER" is connected to a port on the header side of the control valve. The hose labeled "TRENCH" is located on the trench side of the control valve.

3.2.3 Gas Header System

The gas header system conveys the LFG from the extraction wells and trenches to the blower building. The 6-inch- and 10-inch-diameter header pipes are connected on the south side of the landfill by a butterfly valve to regulate the vacuum between the extraction wells and trenches.

3.2.4 Dripleg Assemblies

The condensate produced by the cooling of the saturated gas mixture in the header system is removed from the piping by dripleg assemblies placed along the western

Exhibit 2

portion 10-inch-diameter header system and at the blower house. The 10-inch-diameter header pipe slopes to drain condensate to the dripleg vault. A dripleg is located along the west side of the landfill and at the blower house. The west side dripleg discharges to a pumping station which then discharges to the City of Madison sanitary sewer system. Condensate from either the 6-inch– or 10-inch-diameter header pipes enters the dripleg vault near the blower house gravity-drains through a 6-inch-diameter pipe where it discharges into the City of Madison sanitary sewer system. The condensate drain pipe in the dripleg vaults are constructed with a 90° bend that extends a PVC pipe to the landfill surface, where the pipe end is plugged with a threaded cap. This surface access point provides cleanout access for the condensate drain pipe.

3.2.5 Condensate Pumping Station

The condensate manhole which is located between and west of gas extraction wells W8 and W9 consists of a reinforced precast concrete manhole. A submersible pump is provided to pump the accumulated liquid into a condensate conveyance pipe which discharges to the City of Madison sanitary sewer system. A dedicated control panel is located at the pumping station to control operation.

The condensate sump is controlled automatically by float switches which turn the pump on and off as liquid levels rise and fall. Additional float switches are provided at elevations above the pump-on switch and below the pump-off switch to provide redundancy. Visual alarms will be activated if liquid levels activate the redundant floats.

3.2.6 Monitoring

Provisions for monitoring LFG composition, and pressure throughout the LFG extraction system have been made at the wellheads, trench risers and selected locations in the gas header system. The wellheads within the manholes are fitted with hoses that extend through the manhole cover to monitor gas composition and pressure within each well. Butterfly valves are provided on each vertical extraction well and horizontal trench to adjust individual gas well or horizontal trench leg flow rates and pressure.

The total and separate flow rates from both the extraction trenches and wells can be determined with the flow meters provided at the blower house. The status of the flare can be monitored by observing the flare control panel. The indicator light is on when enough heat is present at the top of the flare to activate either the thermocouple at the pilot or on the main burner. A separate indicator light is activated when insufficient heat is present at the top of the flare.

Exhibit 2

3.2.7 LFG Flaring System

The flare is operated on a fuel source consisting of LFG and air. The pilot fuel source consists of bottled LP gas. The flaring system also includes ancillary piping, valves, controls, and safety equipment. For additional information on the flare system, refer to the manufacturer's Operation and Maintenance Manual in Attachment E.3.

3.3 Operation

3.3.1 Blower Operating Mode

Blower A and Blower B may be operated individually (i.e., the system can be operated with a single blower while the second blower is off-line for maintenance or normal off-line rotation), or in parallel. The blower operation mode will be dependent on gas flow achieved, the associated vacuum requirements, and the results of off-site gas probe monitoring. Normal operating conditions are expected to consist of one blower running at a time.

3.3.2 Startup

Startup of the gas management system will be necessary when the system has been shut down for an extended period of time. When the system is initially restarted, the wells will require a period of time to stabilize while the stored gas is depleted. Do not adjust wells during this stabilization period if the system had been operating satisfactorily prior to shutdown.

Before system startup, it is critical to check the level of condensate in the condensate driplegs. The condensate in the driplegs has to be at a depth to overcome the vacuum of the system. If the condensate is not at or above this depth, water is required to be added.

Detailed startup procedures are included in Attachment E.3. However, the following abbreviated procedures can be used for routine startup activities.

System Startup

If both blowers have been shut down, the entire system will need to be restarted. The steps discussed below should be followed.

If system shut down is due to an alarm condition, the corresponding alarm light will be activated on the control panel. Prior to restarting the system, the condition should be investigated and rectified, if possible. If an alarm light is activated, the flare will remain

Exhibit 2

locked out until it is manually reset. Push the reset button prior to initiating system startup. Select the blower or blowers (blower A and/or blower B) which are to be operated by turning the selected blower switch(es) to the "on" position.

To start the flare, turn the operation mode switch to "Auto." The controller will then automatically start the system proceeding through the following logic sequence:

1. The pilot gas solenoid valve and pilot igniter timer will be activated.
2. The pilot will ignite and raise the thermocouple temperature to the blower-on set point.
3. At the blower-on set point, the controller will start the blower(s) and open the automated landfill gas header valve.
4. The pilot will ignite the landfill gas and raise the thermocouple temperature to the pilot-off set point.
5. At the pilot-off set point, the controller will shut off the pilot gas solenoid valve and activate the ultraviolet scanner.
6. The flare will continue to operate until the supply of combustible landfill gas is interrupted to the point that the flame extinguishes.

3.3.3 Balancing

Whenever any part of the gas extraction system is shut down for more than 1 week, the entire system may need to be re-balanced. Changes in one part of the system will likely affect the rest of the wells. Careful monitoring is extremely important in operating a dynamic gas extraction system. To balance the system, the following steps should be taken:

- Adjust the wellheads to pre-shutdown settings, if they have been adjusted after shutdown.
- Start the blower following the system startup procedures listed in Subsection 3.3.2.
- Compare the measured pressure at each well and trench leg to a previously stabilized pressure, and adjust accordingly. If more or less vacuum is needed at a well or trench leg, adjust the well or trench leg valve to provide additional or reduced vacuum to the trench leg or well.
- Adjust each well/trench leg down the branch going away from the blower house to its previously stabilized pressure. Then, proceed back toward the blower house, readjusting each well/trench leg on that branch. This way, each well/trench leg is adjusted twice, except for the well/trench leg at the end.
- Monitor the header gas at the blower house for pressure, oxygen, and methane. If an oxygen concentration of more than 3.0 percent is present,

Exhibit 2

then monitor each vertical well and horizontal trench leg individually until each well/trench leg introducing oxygen is found. At each well/trench leg where oxygen is detected, check the well's/trench leg's integrity. Proceed to close the valve to reduce the well/trench leg vacuum approximately 1- to 2-inches water column (wc) from the previously stabilized vacuum pressure (make more positive). Recheck the well/trench leg for oxygen and pressure in approximately 24 hours. Repeat until oxygen is eliminated.

3.3.4 Monitoring

Periodically, the entire system must be monitored to maintain proper operation. Monitoring should only be performed by trained personnel and with the proper equipment (refer to Attachment E.2 for monitoring data sheets).

System Monitoring

The capability to monitor the system as a whole is provided by monitoring ports in the blower building. The methane, carbon dioxide, oxygen content, and pressure from the well field can be monitored throughout the system. Gas flow can be monitored in the header within the blower house. To monitor the entire system, perform the following steps within the blower house:

- Measure and record the methane, carbon dioxide, and oxygen content from the gas header pipes within the blower house.
- Measure and record the header gas flow rate.
- Measure and record the header gas temperature.
- Measure and record the header gas pressure.
- If the oxygen content is greater than or equal to 3.0 percent, proceed with branch monitoring.

Extraction Well and Trench Leg Monitoring

To monitor the individual extraction wells and trench legs, perform the following steps:

- From above the manholes (for the vertical wells), visually inspect the wells for loose bolts, hose clamps, pipe connections, cracks, etc. If leaks in the system are present, a hissing sound may be present.
- Attach the 0- to 10-inch water column (wc) Magnehelic pressure gauge to the hose which extends from the well or trench leg riser. Record the respective well/trench leg and header vacuum. In periods of cold weather, ice may form in the inside of the header pipe or hose preventing pressure monitoring.

Exhibit 2

- Use the sampling hose to also monitor the methane, carbon dioxide, and oxygen content.

3.3.5 Shutdown

The entire system or parts of the system should only need to be shut down when maintenance is required. It is important to recognize that gas will continue to be produced in the landfill after shutting down the gas extraction system.

System Shutdown

In the case where the blowers or flare must be shut down for maintenance or repair, the entire system may need to be shut down. To shut down the entire system, perform the following tasks:

- Push the emergency stop button in the control panel.
- Close the valves where the 6-inch- and 10-inch-diameter header lines enter the blower building.

Partial System Shutdown

In cases when maintenance is taking place over limited area of the landfill or if a single portion of the header is being maintained, it is more convenient to shut down the whole branch rather than a number of wells. In order to shutdown the wells or trench legs, proceed with the following steps:

- Close the valve within the blower house at the 6-inch- or 10-inch-diameter header connecting valve necessary to isolate the portion of the system to be shut down.
- Close the valve connecting the 6-inch- and 10-inch-diameter header lines located near extraction well S4.

Well and Trench Leg Shutdown

There will be times when an individual well or trench leg will need maintenance and must be disconnected from the rest of the gas extraction system. In order to shutdown an individual well or trench leg, close the gate valve located at the wellhead or trench riser.

3.4 Maintenance Requirements

Periodic maintenance is required for the gas management system to keep it running smoothly and efficiently. The gas management system is dependent on the integrity of the landfill cover

Exhibit 2

to prevent air infiltration. Additionally, because refuse in the landfill is continually decomposing, problems due to settlement may be a common maintenance item.

3.4.1 Maintenance Schedule

Gas Extraction Wells

Monthly

- Inspect wells for loose bolts; cracks in pipes; air leaks in pipes; broken valve handles; evidence of differential settlement, such as stretching of the flex hose; or other evidence of integrity failure.

Valves

Semiannually

- Operate the valves throughout the entire range of motion of the valve and set back to the original position.

Driplegs and Condensate Transfer Pipes

Annually

- Clean out the driplegs and pipes (*e.g.*, flush out sediment build-up).

Blower System[2]

Annually

- Inspect the blower wheel for foreign matter or excessive wear.

Twice Monthly

- Visually inspect the drive unit.
- Visually inspect the blower unit for excessive vibration.

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[2] Refer to Attachment E.3 for manufacturer's blower maintenance and lubrication instructions.

Exhibit 2

Flare[3]

Annually

- Inspect and clean the flame arrestor.

Semiannually

- Visually inspect the windscreen at the pilot outlet, and clean the filter assembly at the pilot gas venturi. Inspect the sparker at the top of the flare.

Gas Header System

The gas header pipe is not expected to require cleaning. However, during routine maintenance, if the gas system appears to be operating with widely fluctuating pressures/flows, the header alignment will be checked for excessive settlement, which may indicate that a portion of the header pipe has "watered out."

3.4.2 Troubleshooting

At times, the gas extraction system will react to a situation which was not previously recognized. This leaves the operator trying to determine the cause of the reaction along with finding a remedy for the situation. This section is included to provide a rationale for determining the cause of the situation. The most important tools in troubleshooting are the monitoring instruments. Therefore, the first thing to do when trouble arises is to check to see if all of the monitoring instruments are operating properly. After checking instrument operation and calibration, re-check all of the parameters to make sure that a number was not misread or that the situation has not rectified itself. Check the operation of the system first before spending a lot of time determining exactly what is happening.

- Verify equipment integrity
- Verify monitoring data
- Follow the outline presented below

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[3] Refer to Attachment E.4 for maintenance instructions.

Exhibit 2

SYMPTOM	INVESTIGATION/PROCEDURE
Loss of flow at blower	▪ Readjust valves within the blower house ▪ Check wells for frozen conditions. ▪ Check for fluctuating pressures within the header pipe (may be a liquid blockage).
Fluctuating pressure	▪ Check upstream and downstream for large pressure change to indicate location of liquid blockage. ▪ Check driplegs for solids build-up and adequate liquid levels. ▪ Check surface of landfill for areas of pronounced differential settlement which may have caused a liquid blockage. ▪ Check for reduced liquid flow at the sumps. ▪ Remove manhole covers to listen for liquid splashing, and determine if liquid is in the header.
Sudden increase in vacuum	▪ For vertical wells check for frozen conditions around valve and flex hose. ▪ Reduce valve setting and check for vacuum recovery. ▪ Check for change in pressure and flow within the header pipes. ▪ Readjust well/trench leg vacuum.
Sudden decrease in vacuum in a well	▪ Readjust well/trench leg vacuum.

Exhibit 2

SYMPTOM	INVESTIGATION/PROCEDURE
Oxygen greater than 3 percent at blower	▪ Check monitoring instrument (hoses, battery, calibration). ▪ Check oxygen at wells and trench legs. ▪ Check that all monitoring port valves are closed. ▪ Check to see if flex hoses are all attached at vertical wells. ▪ Check that all monitoring ports on gas wells/trench legs are closed. ▪ Check driplegs for air leaks or loss of liquid seal.
Oxygen greater than 3 percent at well/trench leg	▪ Check monitoring instrument (hoses, battery, calibration). ▪ Check integrity of well/trench leg (monitoring ports, hoses, flanges, valves, etc.). ▪ Check for likely areas for air intrusion in soil (cracks, ruts, holes). ▪ Reduce vacuum on well/trench leg (*e.g.*, by 30 percent).

3.5 Records and Reporting

This section describes the facility records that will be kept, and the mechanisms and schedules for reporting, records retention, emergency reporting procedures, and progress reports related to the operation and maintenance of the landfill gas management system.

3.5.1 Inspection Reports

Landfill gas extraction system monitoring is described in Subsection 3.3.4. Copies of the monitoring reports (or data summaries) will be included in the O&M Progress Reports described in Subsection 3.5.4.

Exhibit 2

3.5.2 Maintenance Records

A summary of major maintenance activities performed on the gas extraction system (i.e., blower, header line clean-out, blockage repair, etc.) will be maintained and submitted with O&M Progress Reports.

3.5.3 Reporting Emergencies

Verbal notification will be provided to the WDNR as soon as possible in the event of any emergencies that would threaten human health or the environment (e.g., concentrations of gas migration greater than 25 percent of the LEL near occupied structures). Immediate notification does not apply to physical injury accidents unrelated to environmental concerns at the site.

The initial notification shall include an explanation of the nature and extent of the incident, any interim response actions taken or planned, and a description of the actions required to obtain additional information, if needed. Within 30 days of any such incident, a written report describing the above information and documentation of the cleanup or response remedy will be submitted to the WDNR. The report shall also discuss the need for design, monitoring, or maintenance changes, if necessary to prevent a recurrence of the incident.

3.5.4 O&M Progress Reports

Following construction, Annual O&M Progress Reports will be submitted to the WDNR. The reports will include a narrative describing O&M activities during the reporting period highlighting any problems encountered and the status of response actions. Progress reports will include summaries of project changes, WDNR correspondence, and personnel changes during the reporting period.

Specific information to be included within the O&M Progress Report are inspection reports, summaries of major gas extraction system maintenance activities, summaries of final cover care and maintenance activities, and facility monitoring data. The report will include an evaluation of the effectiveness of the gas extraction system and the final cover. A description of the projected work for the next reporting period will also be provided.

3.5.5 Records Retention

Facility records will be maintained by the Dane County Regional Airport.

Exhibit 2

ATTACHMENT E.1

GUIDELINES FOR PROTECTION OF CONSTRUCTION WORKERS

NOTE: These guidelines were taken from "A Compilation of Landfill Gas Laboratory and Field Practices and Procedures," prepared by SWANA Landfill Gas Division, Health and Safety Task Force, August 1991. These guidelines are general in nature and do not include site-specific safety information. Site-specific safety procedures must be followed in accordance with any site safety plans that may be in effect.

GUIDELINES FOR PROTECTION OF CONSTRUCTION WORKERS

Any person performing construction or maintenance activities on or within 1,000-feet of a refuse-filled area should be aware of the existence of, or the potential for, the development of hazardous conditions. One-thousand-feet is used by some authorities as the maximum distance LFG will migrate through soil through underground conduits or where surface conditions interfere with normal venting through soil cover.

The hazard may be one or more of the following:

- Fires may start spontaneously or from exposed and/or decomposing refuse.
- Fires and explosions may occur if a spark is provided in the presence of LFG.
- LFG may cause an oxygen deficiency in underground trenches, vaults, conduits, and structures.
- Hydrogen sulfide, a highly toxic and flammable gas, may be present.
- Caving of trenches and excavations may occur over or in refuse fills.

Specific site conditions will determine what measures should be taken to protect the health and safety of the workers and the public. Some typical safety precautions for persons working in areas over and near decomposing refuse follow. These recommended precautions are not to be considered the only precautions necessary and are not a substitute for being alert, informed, and responsible. These precautions apply in addition to those safety requirements of agencies having jurisdiction.

The safety recommendations are given in two categories: (a) general safety procedures when working in the vicinity of the refuse landfill, and (b) safety procedures when working on refuse-filled areas.

General Safety Procedures

1. Workers should be advised of the presence of LFG resulting from the decomposition of refuse buried at or near the job site, and precautions should be taken to ensure the safety of workers and the public.
2. A person trained in the use of gas instruments and safety equipment should be designated as Safety Monitor. The Safety Monitor should be present at all times with appropriate instruments to test for oxygen deficiency and for the presence of methane or hydrogen sulfide gas. A Gastech Gas Detector, or similar unit, should be available for this purpose. The Safety Monitor should periodically test the excavation areas, utility vault, structure, etc., for safe working conditions and should ensure that appropriate safety equipment is available at the site.
3. Workers should not be allowed to work alone at any time in an excavation. Work parties of at least two should be mandatory, with one worker located outside of possible gas effects.
4. Workers should not be permitted to enter excavations where there is an oxygen deficiency or a combustible mixture of methane.
5. No welding should be permitted in trenches, enclosed areas, or over refuse-filled areas unless performed over ground mats or in areas of the site approved by the Safety Monitor.
6. As construction progresses, all valves and conduit openings should be closed as soon as installed to prevent the migration of gases through the pipeline system.
7. Smoking should be prohibited in or near open excavations and in the vicinity of pipe-laying activities.
8. No excavation or drilled hole greater than 2-feet deep should be left unattended or open overnight unless it is securely covered in a manner acceptable to the regulatory agency having jurisdiction.
9. Utility access manholes should be entered with extreme caution. Applicable Confined Space Entry Procedures must be followed. Sparks can occur from metal manhole covers and rings. The air in a manhole or enclosed space should be tested with a detector before entering. Positive ventilation is an excellent procedure to follow when working in any underground structure.
10. Fire extinguishers with a rating of at least A, B, and C should be available.

Safety Procedures When Working on Refuse Landfills

1. Workers should be cautioned regarding the potential unstable soil and refuse material and the strong possibility of caving during drilling operations and in open excavations. Anyone working near the edge of drilling or deep excavations should be secured with a safety belt, harness, or short rope to permit rescue in the event of a worker falling into an excavation.
2. In the event hydrogen sulfide (H_2S) odor is smelled or if H_2S gas is present in sufficient quantity to trigger the H_2S alarm on the gas detector, all persons should be evacuated from the area immediately.
3. Electric motors used in refuse excavation areas should be explosion proof.
4. The use of explosives should not be permitted.
5. Inhalation of LFG should be avoided. Such gases (or oxygen-deficient air) may cause nausea and dizziness.
6. Workers should not leave open wells or excavations unattended.
7. Stockpile soil adjacent to operations in areas of exposed refuse for firefighting purposes. Soil is probably the most effective means of extinguishing landfill fires.
8. Workers should avoid contact with exposed refuse as much as possible. Irritants or hazardous materials may be present.
9. Smoking shall be prohibited on the landfill site.
10. A Health and Safety plan addressing planned activities should be prepared and understood by all personnel working on the site.

ATTACHMENT E.2

MONITORING DATA SHEETS

FORM 1

BLOWER AND FLARE STATION GAS MONITORING
TRUAX LANDFILL

Date: _____

Temperature: _____ °F

Atmospheric Barometric Pressure: _____ in. Hg R/F

Weather Conditions: _____

Ground Conditions: _____

Gas/O_2 Meter Model: _____

Gas/O_2 Meter Serial No.: _____

Date Last Calibrated: _____

Gas Temperature: _____ °F

Gas Flow: _____ cfm

Visually Inspect Level in Condensate MH: _____

Were Condensate MH Warning Lights Checked?: _____

Date Monthly Monitoring is Required: _____

Dates Annual and Semiannual Inspections/Maintenance are Required

_____ / _____

(Annual) (Semiannual)

Location	Pressure	% CH_4	% O_2	% CO_2	Flow	Valve Settings/ Adjustments
Blower House						
Trench Header						
Well Header						
Combined Header						

Extraction Wells	Pressure	% CH_4	% O_2	% CO_2	Valve Settings/ Adjustments
N1					
N2					
N3					
W1					
W2					
W14					
W3					
W4					
W5					
W6					
W15					
W7					
W8					
W9					

Extraction Wells	Pressure	% CH_4	% O_2	% CO_2	Valve Settings/ Adjustments
W10					
W11					
W12					
W13					
S1					
S2					
S3					
S4					

Extraction Trenches*		Pressure	% CH_4	% O_2	% CO_2	Valve Settings/ Adjustments
R1	H					
	T					
R2	H					
	T					
R3	H					
	T					
R4	H					
	T					
R5	H					
	T					
R6	H					
	T					
R8	H					
	T					
R9	H					
	T					
R10	H					
	T					
R11	H					
	T					
R12	H					
	T					
R13	H					
	T					

H = Header Monitoring Hose
T = Extraction Pipe/Trench Monitoring Hose

ATTACHMENT E.3

BLOWER AND FLARE INFORMATION

Waste Gas Flare
CANDLE FLARE
Purpose and Operation

A. PURPOSE

This system has been designed and constructed to dispose of waste landfill gas by means of controlled combustion. During this disposal, the temperature is controlled to ensure efficient removal of pollutants, preventing their release into the atmosphere.

The major components of the system have the basic functions as follows.

1. MAIN CONTROL PANEL

The main control panel houses the components that control the operation of the flare and provides the signaling capability to other areas as to the status of the flare operation.

2. TEMPERATURE MONITOR (IF USED)

The temperature controller controls the operating temperature of the flare by regulating the operation of the cooling dampers.

3 TEMPERATURE RECORDER

The temperature recorder isolated in the main control panel. Its function is to provide a printed record of the temperature inside of the flare stack and landfill gas flow rate into the flare while it is in operation. The recorder also acts as the high temperature alarm instrument and condensate injection system minimum temperature limit.

4. COOLING AIR DAMPERS

The cooling air dampers operate upon command from the temperature controller to regulate the amount of cooling and combustion air allowed into the flare to maintain the proper operating temperature.

5. FLAME SAFEGUARD SYSTEM

The flame safeguard system consists of the flame safeguard control in conjunction with an ultra violet (U.V.) sensor. The flame safeguard controls the ignition system, pilot fuel solenoid, and landfill gas isolation valve. The U.V. sensor detects the presence of the flame and provides the signal to the flame safeguard for safe operation of the combustion process.

Exhibit 2

6. PILOT ASSEMBLY

The pilot assembly provides a flame source to prove the combustion process has been established and to ignite the main burner during flare operation.

7. LANDFILL GAS ISOLATION VALVE

This valve controls the flow of landfill gas to the burner. It operates pneumatically; is electrically controlled, and it operates fail-safe closed. The fail-safe operation assures that upon loss of operating power or air pressure, the valve will automatically close stopping the flow of landfill gas to the flare burner.

8. THERMOCOUPLE

The thermocouple is isolated in the upper portion of the flare stack and provides a temperature indicating signal to the temperature controller and temperature recorder.

9. BLOWER(S)

Blower(s) provide the means to evacuate the methane from the landfill field under negative pressure, compressing the gas and discharging it into the flare to be disposed of by controlled combustion.

10. KNOCK-OUT POT (K/O POT)

The K/O port provides moisture and particulate separation of the incoming landfill gas from the field.

11. K/O POT TRANSFER PUMP(S)

This/these pump(s) separates condensate from the K/O pot to the condensate storage tank. The pump(s) will operate automatically or can be manually operated.

12. CONDENSATE INJECTION SYSTEM

The condensate injection system stores condensate from the K/O pot and injects it into the flare during operation. This evaporates the water and disposes of the contaminates by means of incineration.

B. OPERATION

This system operates in the following manner and sequence.

1. When the main control panel power is turned to the "ON" position, this allows the control system to be electrically powered, and the temperature controller and the temperature recorder become operational automatically.

2. When the flare operation selector switch is turned to the automatic ("AUTO") position, the flare system will automatically turn on. The flame safeguard becomes powered allowing the pilot solenoid to open and the ignitor coil to energize. the pilot then ignites and the U.V. sensor detects and proves the establishment of the pilot flame.

3. When the pilot flame has been established and proven by the U.V. sensor, the flame safeguard will allow power to be supplied to the blower motor starter, starting the blower. The motor starter energizing closes contact to allow the landfill gas isolation valve to open.

4. The landfill gas blower and isolation valve is controlled by the flame safeguard system.

5. The pilot flame ignites the landfill gas being released and the combustion of the landfill gas causes the temperature to rise in the flare stack. As the temperature rises, the thermocouple senses the temperature and transmits a signal to the temperature controller indicating the temperature inside the flare stack. The temperature controller, in turn, signals the damper motors located on the base of the flare. The dampers adjust (open or close) to maintain the required temperature as regulated by the temperature controller. The temperature setting for the temperature controller is programmable and may be set as needed to meet the specified temperature requirements.

6. The flare will continue to operate until the system is manually shut down. The system will automatically shut down if the methane supply is depleted or if it malfunctions.

7. the flame from the pilot and/or the main burner is monitored at all times by the U.V. sensor. If the signal from the U.V. sensor verifying the presence of the flame is lost, at any time while the flare is in operation, the flame safeguard system will automatically shut down the system. After shutdown, the flame safeguard will reset, and the purge delay will reactivate the system re-start. The pilot solenoid and ignition coil will again energize, causing the pilot to re-light. If the U.V. sensor verifies the

presence of the pilot flame, the system will turn on the and operate as described above.

8. In the event of flame failure where the pilot energizes, but the U.V. sensor does not verify the presence of the pilot flame during the energizing process, the flame safeguard system will shut down and lock out the operation of the flare system. When the problem is resolved, the flame safeguard is reset.

9. Manual Operation

When the flare control is set in the "MANUAL" operation mode, the flare system will operate in the same manner as described above EXCEPT AS FOLLOWS:

Once the pilot flame has been proven by the flame safeguard, the "MANUAL BLOWER START" button will then have to be pushed and the selected blower will start. With the blower in operation, push the Manual Landfill Gas "ON" button and the landfill gas isolation valve will open. In this "Manual" operation mode, the burner will stay in operation with all of the same safety features of the automatic operation.

BURNER ADJUSTMENT
for
CANDLE STYLE FLARE

The "NEW KIND OF CANDLE" flare has been designed to provide a very high efficiency of combustion on a wide fuel range. This unit will operate with a low methane content of 12% with an oxygen content of 12 %. In order to operate over a very wide fuel range of 50% to 12% methane, the fuel to air ratio must be adjusted to achieve the desired combustion characteristic.

SHUTTER ADJUSTMENT

A. The lower the methane content the less combustion and cooling air is required. (close shutters)

B. The higher the methane content the combustion and cooling air must be increased. (open shutters)

TO ADJUST THE SHUTTERS

1. SHUT DOWN THE FLARE AND LOCK OUT THE ELECTRICAL CONTROL SYSTEM. ALLOW THE FLARE TO COOL.

2. Install a ladder to reach the bottom side of the flare head and the location of the shutters. Tie off the ladder carefully to stabilize the ladder.

3. Loosen the two retaining nuts on the shutter and adjust the air gap as needed. Use anti seize compound on the shutter retaining nuts when re installing the shutters each time they are adjusted.

ADJUSTMENT INDICATIONS

Open the shutters when:

A. The flare is operating at an excessive temperature

B. There is visible yellow flames above the flare during operation

C. Drastic increase in landfill gas flow or an increase of 15% or more in the methane content may require shutter adjustment.

Exhibit 2

Close the shutters when:

A. The flare is operating at a lower temperature than desired.

B. The flare vibrates during operation (loud pounding combustion noise). This would be caused by to high of air to fuel ratio causing premature detonation of the landfill gas causing sever vibration.

C. Drastic decrease in landfill gas flow or a decrease of 15% or more in the methane content may require shutter adjustment.

TROUBLE SHOOTING INSTRUCTIONS
for
CANDLE STYLE FLARE

Many malfunctions can be isolated by mounting the panel lamps and their relationship to the components on the electrical schematic.

In addition to those causes listed below, loose or broken wiring and blown fuses should also be considered where applicable.

For repair instructions, refer to the appropriate manufacture's information.

MALFUNCTION - POSSIBLE CAUSE

1. Failure of pilot to light.

    A. Grounded spark rod, disconnected cable.
    B. One or more safety limits ahead of safeguard may be open.
    C. Faulty solenoid valve.

2. Pilot light will light but will not prove.

    A. Pilot flame is too short, possibly due to insufficient gas pressure or plugged spud.
    B. Malfunctioning U.V. flame detector.
    C. U.V. flame detector lens is fogged or dirty.
    D. Faulty safeguard.

3. If the system is in full operation and the indicated temperature remains low for more than three (3) minutes after the burner on lamp lights, check the following:

    A. The air control shutters need to be adjusted or of one or more of the following:

        1. Dirty, damaged or improperly installed thermocouple

        2. Insufficient land fill gas flow to maintain temperature.

        3. Failed temperature monitor.

    B. Main gas valve is closed.

        1. Open circuit to actuator.
        2. Faulty gas valve actuator

C. The thermocouple is grounded or shorted.

D. Plugged spuds.

E. Insufficient BTU content of landfill gas.

4. Over temperature condition (actuator or indicted.)

A. Thermocouple is open.
B. The air control shutters open to far or :

1. The landfill gas flow (Btu loading) is beyond the capacity of the flare.
2. The methane content of the landfill gas has increased. Adjust shutters
3. Faulty temperature monitor

5. Pilot Gas Low Pressure

Indication: "Low Pressure Fuel"
Red Alarm light will Illuminate.

Effect: If the flare is not in operation at the time. The system will not start.

Cause: Insufficient fuel pressure.

Action: Open fuel valve(s), or re-fill propane tank.

6. High Temp Alarm

Indication: "High Temp Alarm"
Red Alarm light will Illuminate.

Effect: Will cause Flare Shut Down & will activate auto dialer (IF USED) activates timed delay relay , which will shut down the system after a field adjustable timed delay relay times out.

Cause: Improperly adjusted air shutters, failed thermocouple, failed temperature monitor, excessive landfill gas flow rate or BTU loading.

Action: Adjust air control shutters, Repair or Replace Malfunctioning Equipment.

7. High Temp Shutdown

Indication: "High Temp Shutdown"
Red Alarm light will Illuminate.

Effect: Will cause Flare Shut Down.

Cause: Same as High Temperature Alarm.

Action: Remedy malfunction then push "High Temperature Reset" button to re-start the system.

8. Low Temperature Alarm

Indication: "Low Temp Alarm"
Red Alarm light will Illuminate.

Effect:

A. After a field selectable timed delay (STDR), the supplemental fuel system will activate, if turned on.(IF SUPPLIED WITH SYSTEM) This will increase the BTU input to the flare and raise the operation temperature.

B. If supplemental fuel is not activated (OR SUPPLIED)the system will shut down & activate the auto dialer. (IF SUPPLIED)

Cause: Insufficient Landfill Gas flow, (low BTU loading), improperly adjusted air control shutters, failed temperature monitor.

Action: Increase Landfill Gas flow, adjust air control shutters, replace Temperature Monitor, check thermocouple..

9. Condensate Tank High Level Alarm (IF SUPPLIED)

Indication: "Condensate Tank High Level Alarm"
Red Alarm light will Illuminate.

Effect: Auto Dialer activated, field selectable timed relay activates and the flare system will shut down.

Cause: High Condensate Level in Storage Tanks (Sump) closes High Limit switch sending signal to Main Control Panel.

10. High level Alarm

Indication: Auto Dialer Activated
Red Alarm light will Illuminate.

Effect: Flare System Shutdown

Cause: Low Temperature Alarm
High Temperature Alarm
Flame Failure
K.O. Pot High Level Alarm (IF SUPPLIED)
Condensate High Level Alarm (IF SUPPLIED)
High O2 Alarm (IF SUPPLIED)

Action: Respond to alarm & re-start system.

12. O2 High Level Shut Down (IF SUPPLIED)

Indication: "O2 High Level Alarm"
Red Alarm light will Illuminate.

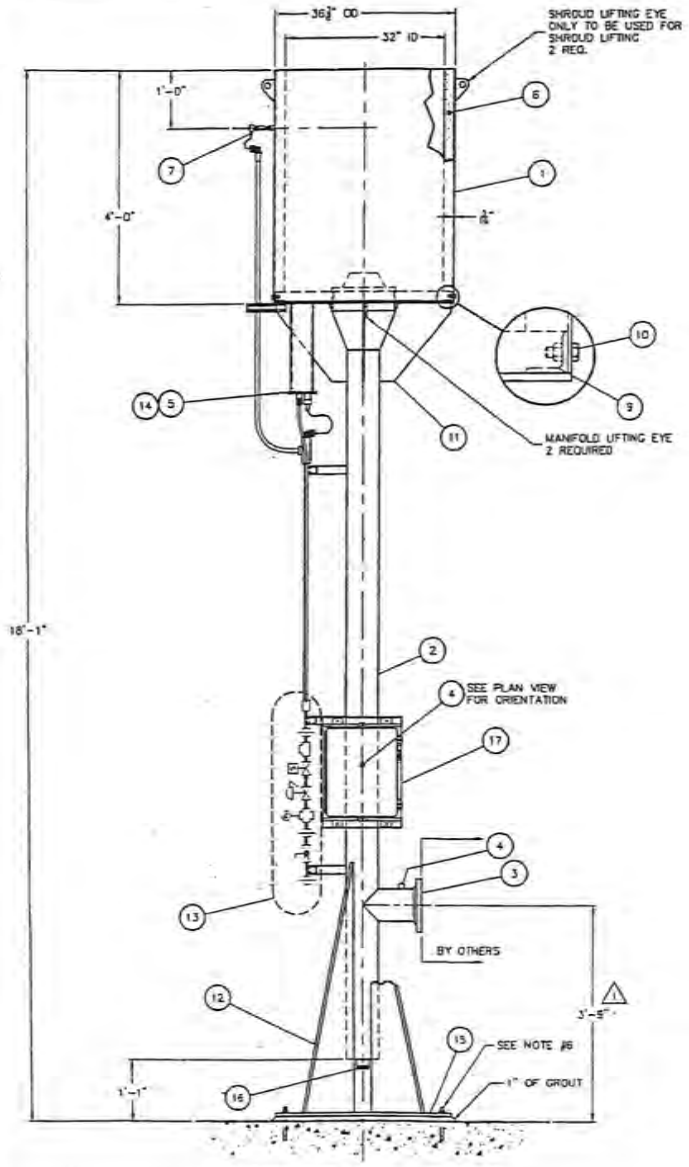
Effect: Auto Dialer activated, field selectable timed relay activates () is activated and the flare system will shut down.

Cause: High O2 content in Landfill Gas, broken or open Landfill Gas Lines, Excessive Vacuum on Landfill Fields, valve open in landfill Gas Lines.

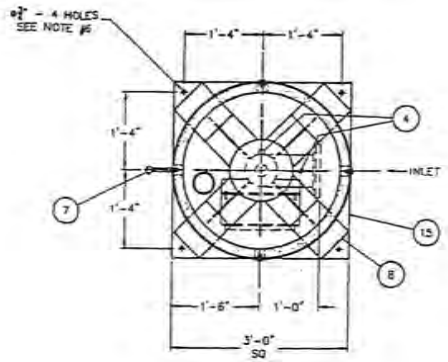
Action: Reduce Landfill Gas flow rate, located and repair leaks in Landfill Gas piping.

Note: Refer to Electrical DWG. & or Timer Log for times settings for relays.

Exhibit 2



CANDLE FLARE ELEVATION



CANDLE FLARE PLAN

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN FEET-INCHES.
2. WEIGHT:
   A. TOTAL ESTIMATED WEIGHT = 1,500 lbs
3. PILOT SUPPLY DATA:
   A. FUEL: LPG.
   B. SUPPLY PRESSURE OF 5 P.S.I.G.
   C. 120,000 BTUH MAX. @ 1 P.S.I.G. AT PILOT.
4. WASTE GAS SUPPLY DATA:
   A. SEE DWG.# GFC-2023-02, PROCESS FLOW DIAGRAM
5. ELECTRICAL SUPPLY TO MAIN CONTROL PANEL:
   A. 115 VOLTS, 60 Hz, SINGLE PHASE REQUIRED SUPPLY = 10 AMPS

LEGEND:

2200° F MINIMUM CERAMIC FIBRE INSULATION

6. ANCHOR BOLTS SHALL BE (4) 5/8 – 11 NC SST WEDGE STYLE WITH 5" MINIMUM EMBEDMENT AND ARE TO BE SUPPLIED BY OTHERS

EQUIPMENT LIST

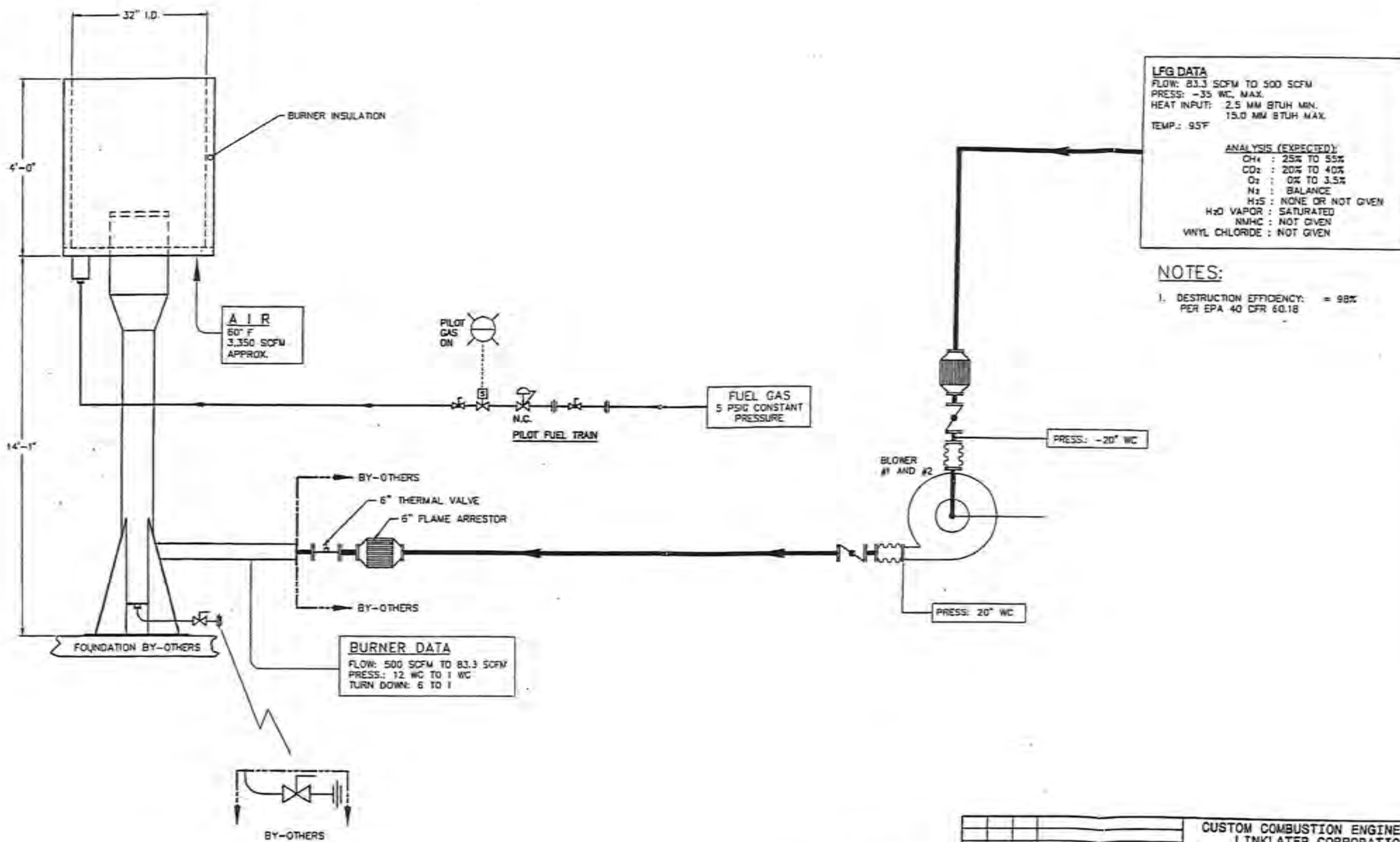
NO	QTY	DESCRIPTION
1	1	CANDLE FLARE SHROUD – A36
2	–	6" SCH. 40 PIPE – A53 OR EQUAL
3	1	6" x 150# SLIP ON FLANGE – FORGED STEEL
4	2	TEST PORT (1/2" NPT COUP. W/1/2" x 1/4" RED. & 1/4" NPT PLUG)
5	1	4" PILOT ASSEMBLY
6	–	2" THK. BLANKET INSUL. – 2200° F MIN. CERAMIC FIBER
7	1	THERMOCOUPLE ASSEMBLY – TYPE "K"
8	4	MANUAL ADJUSTMENT AIR SHUTTERS
9	4	ATTACHMENT CLIP
10	4	5/8–11 NC x 1¼" BOLT
11	4	1/4" TOP GUSSETS
12	4	3/8" BASE GUSSETS
13	1	FM PILOT TRAIN
14	1	UV SENSOR FOR FLAME
15	1	PL 3/4" x 36" SQ. (BASE PLATE)
16	1	1" NPT COUP. W/1" NPT PLUG
17	1	REMOTE CONTROL PANEL

NO.	DATE	BY	REVISION
1	1/28/97	AEB	HEIGHT WAS 3'-0"

FILE NAME: G22301AD.DWG

CUSTOM COMBUSTION ENGINEERING
LINKLATER CORPORATION

SCALE: 1"=1'-0" | APPROVED BY: | DRAWN BY: ZZZ
DATE: 1-28-97 | REVISED:
CANDLE FLARE GENERAL ARRANGEMENT | SHEET 1 OF 1
TRUAX LANDFILL | DRAWING NUMBER: GFC-2023-01



NOTES:

1. DESTRUCTION EFFICIENCY: = 98%
PER EPA 40 CFR 60.18

THE DESIGNS ON THIS DRAWING ARE THE PROPERTY OF CUSTOM COMBUSTION ENGINEERING AND ARE TO BE TREATED CONFIDENTIALLY

CUSTOM COMBUSTION ENGINEERING LINKLATER CORPORATION			
SCALE NONE	APPROVED BY JWG		DRAWN BY DAE
DATE 2-18-97			REVISED
PROCESS FLOW DIAGRAM			REV NO
			SHEET 1 OF 1
TRUAX - LANDFILL			DRAWING NUMBER CFC-2021-72

NO | DATE | BY | REVISION — FILE NAME: G2230ZA0

48

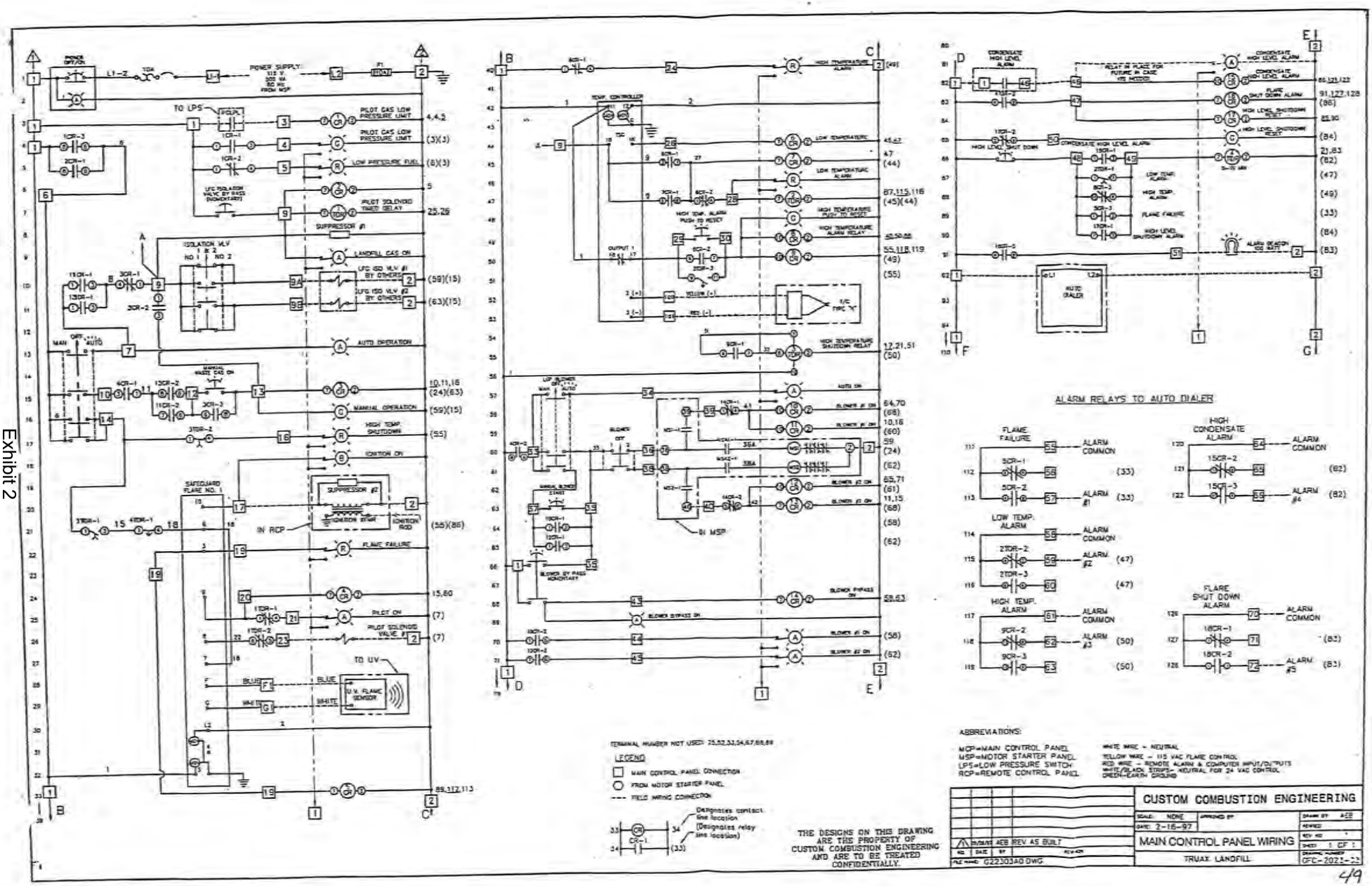

POWER SUPPLY
TO LPS
PILOT GAS LOW PRESSURE LIMIT
LOW PRESSURE FUEL
PILOT SOLENOID TIMED DELAY
SUPPRESSOR #1
LANDFILL GAS ON
AUTO OPERATION
MANUAL OPERATION
HIGH TEMP. SHUTDOWN
IGNITION ON
SUPPRESSOR #2
SAFEGUARD FLARE NO. 1
IGNITION ROD
FLAME FAILURE
PILOT ON
PILOT SOLENOID VALVE #2
TO UV
U.V. FLAME SENSOR
BLUE
WHITE
LOW TEMPERATURE
LOW TEMPERATURE ALARM
HIGH TEMPERATURE ALARM
HIGH TEMPERATURE SHUTDOWN RELAY
BLOWER #1 ON
BLOWER #2 ON
BLOWER BYPASS ON
IN MCP
IN MSP
IN RCP
CONDENSATE HIGH LEVEL ALARM
HIGH LEVEL SHUTDOWN
AUTO DIALER
ALARM RELAYS TO AUTO DIALER
FLAME FAILURE
HIGH CONDENSATE ALARM
LOW TEMP. ALARM
HIGH TEMP. ALARM
FLARE SHUT DOWN ALARM
ALARM COMMON
TERMINAL NUMBER NOT USED: 25,52,53,54,67,68,69
LEGEND
MAIN CONTROL PANEL CONNECTION
FROM MOTOR STARTER PANEL
FIELD WIRING CONNECTION
Designates contact line location
(Designates relay line location)
ABBREVIATIONS:
MCP=MAIN CONTROL PANEL
MSP=MOTOR STARTER PANEL
LPS=LOW PRESSURE SWITCH
RCP=REMOTE CONTROL PANEL
WHITE WIRE = NEUTRAL
YELLOW WIRE = 115 VAC FLARE CONTROL
RED WIRE = REMOTE ALARM & COMPUTER INPUT/OUTPUTS
WHITE/BLACK STRIPE= NEUTRAL FOR 24 VAC CONTROL
GREEN=EARTH GROUND
THE DESIGNS ON THIS DRAWING ARE THE PROPERTY OF CUSTOM COMBUSTION ENGINEERING AND ARE TO BE TREATED CONFIDENTIALLY.
CUSTOM COMBUSTION ENGINEERING
SCALE: NONE
DATE: 2-16-97
DRAWN BY: AEB
REVISED AEB REV AS BUILT
MAIN CONTROL PANEL WIRING
TRUAX LANDFILL
DRAWING NUMBER: CFC-2025-22
SHEET 1 OF 1
FILE NAME: G22303A0.DWG

Exhibit 2

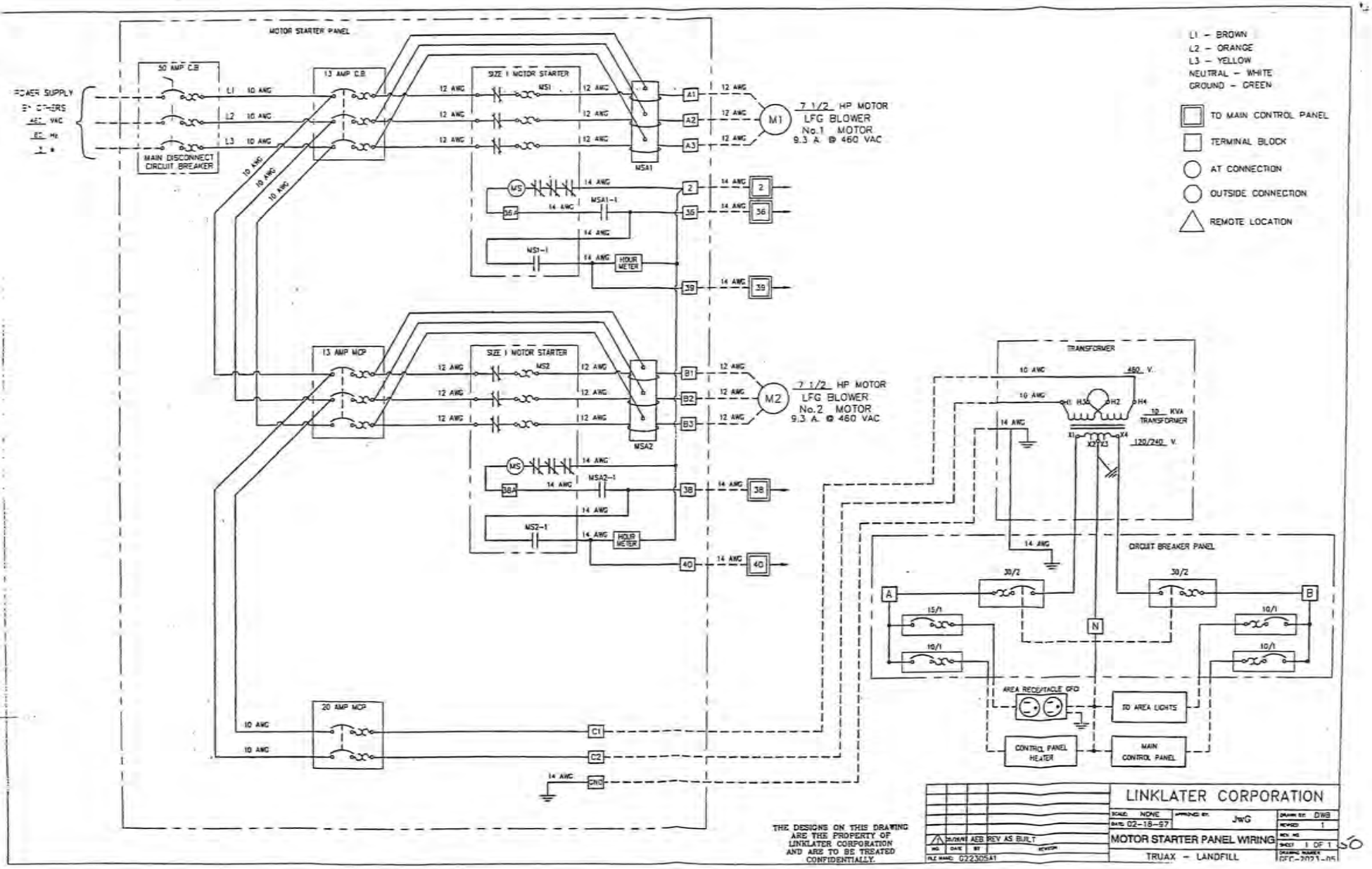
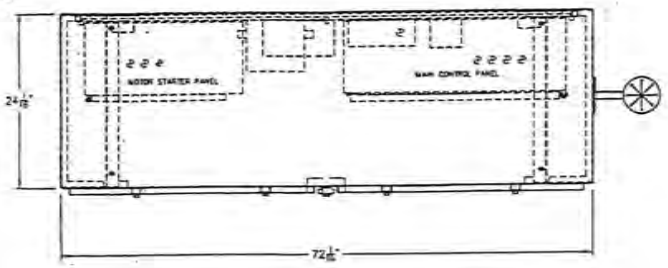
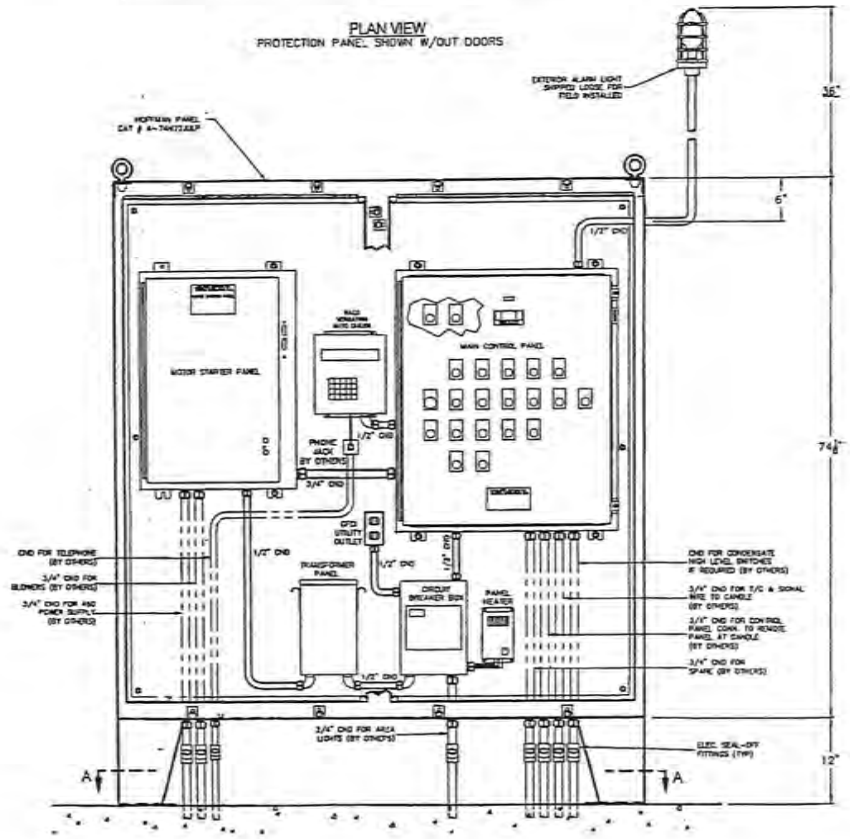

MOTOR STARTER PANEL
POWER SUPPLY
50 AMP C.B
13 AMP C.B
SIZE 1 MOTOR STARTER
MAIN DISCONNECT CIRCUIT BREAKER
L1 - BROWN
L2 - ORANGE
L3 - YELLOW
NEUTRAL - WHITE
GROUND - GREEN
TO MAIN CONTROL PANEL
TERMINAL BLOCK
AT CONNECTION
OUTSIDE CONNECTION
REMOTE LOCATION
7 1/2 HP MOTOR
LFG BLOWER
No.1 MOTOR
9.3 A. @ 460 VAC
M1
MSA1
MSA1-1
MS1
MS1-1
HOUR METER
7 1/2 HP MOTOR
LFG BLOWER
No.2 MOTOR
9.3 A. @ 460 VAC
M2
MSA2
MSA2-1
MS2
MS2-1
20 AMP MCP
TRANSFORMER
10 KVA TRANSFORMER
460 V.
120/240 V.
CIRCUIT BREAKER PANEL
AREA RECEPTACLE GFCI
50 AREA LIGHTS
CONTROL PANEL HEATER
MAIN CONTROL PANEL
THE DESIGNS ON THIS DRAWING ARE THE PROPERTY OF LINKLATER CORPORATION AND ARE TO BE TREATED CONFIDENTIALLY.
LINKLATER CORPORATION
DATE: 02-18-97
JWG
MOTOR STARTER PANEL WIRING
TRUAX - LANDFILL
SHEET 1 OF 1

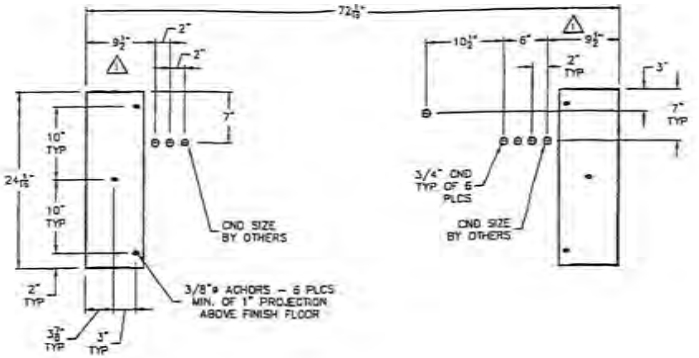
Exhibit 2



PLAN VIEW
PROTECTION PANEL SHOWN W/OUT DOORS



FRONT VIEW
PROTECTION PANEL SHOWN W/OUT DOORS



SECTION A-A

NOTE: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN INCHES.
2. ENTRANCE HOLES FOR PROTECTION PANEL AND INNER PANELS ARE NOT PRE PUNCH FOR INCOMING CONDUIT SUPPLIED BY OTHERS.
3. LOCATIONS FOR INCOMING CONDUIT ARE GIVEN AS SUGGESTIONS AND FINAL LOCATIONS TO BE DETERMINED @ FIELD INSTALLATION.

NO.	DATE	BY	REVISION
1	2/7/97	AEB	RELOCATED CND LOCATIONS

FILE NAME: C22307A0.DWG

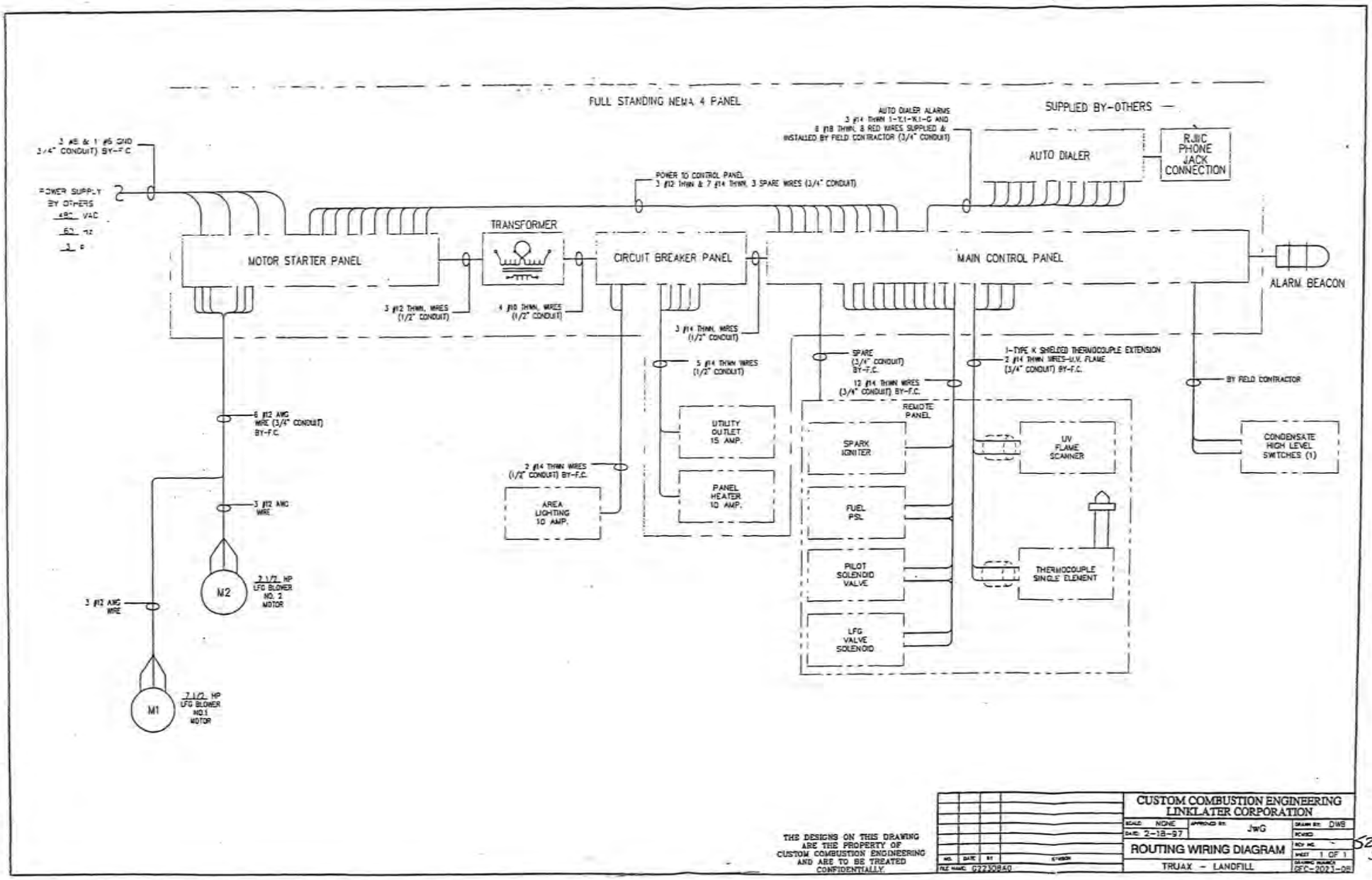
CUSTOM COMBUSTION ENGINEERING
LINKLATER CORPORATION

SCALE: 1/8"=1" | APPROVED BY: | DRAWN BY: AEB
DATE: 2-21-97 | REVISED
REV. NO. 1
SHEET 1 OF 1
DRAWING NUMBER GFC-2023-07

PROTECTION PANEL
TRUAX LANDFILL

Exhibit 2

Exhibit 2



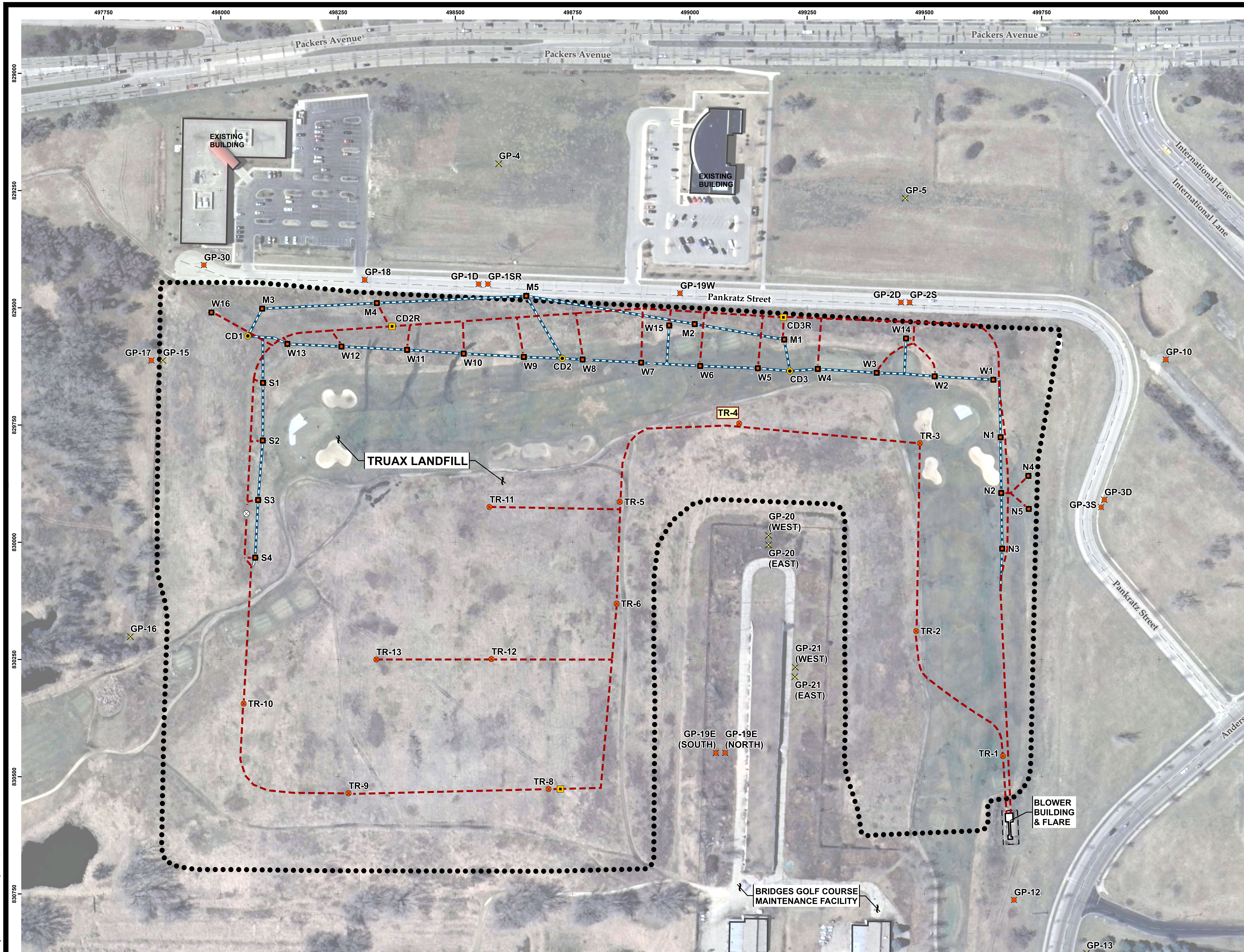
CUSTOM COMBUSTION ENGINEERING LINKLATER CORPORATION			
SCALE: NONE	APPROVED BY: JWG	DRAWN BY: DWB	
DATE: 2-18-97		REVISED	
ROUTING WIRING DIAGRAM		REV. NO. -	
TRUAX – LANDFILL		SHEET 1 OF 1	
		DRAWING NUMBER: CFC-2021-08	

NO. | DATE | BY | REVISION

FILE NAME: 022397840

52/52

EXHIBIT 3



LEGEND

- INACTIVE LFG PROBE
- ACTIVE LFG PROBE
- LFG EXTRACTION WELL
- TRENCH RISER VALVE
- CONDENSATE KNOCKOUT
- CONDENSATE MANAGEMENT MANHOLE
- HEADER VALVE
- ACTIVE LFG HEADER SYSTEM
- FORMER LFG HEADER SYSTEM, ABANDONED IN PLACE; CONNECTIONS MAINTAINED FOR CONDENSATE MANAGEMENT
- LIMITS OF WASTE
- EXISTING BUILDING FOOTPRINT
- TR-4 LFGCS COMPONENT MISSING

NOTES

1. MAP PROJECTION AND GRID COORDINATES ARE NAD83 HARN, DANE COUNTY COORDINATE SYSTEM, US SURVEY FEET.
2. AERIAL PHOTOGRAPHY SUPPLIED BY DANE COUNTY LAND INFORMATION OFFICE, 2010.
3. LANDFILL FEATURES AND ROAD LOCATIONS ARE APPROXIMATE.
4. "LFG" = LANDFILL GAS.
5. ALL LEGEND ITEMS SHOWN ARE AT APPROXIMATE LOCATIONS; FIELD VERIFICATION IS RECOMMENDED.

0 100 200 FEET

NO.	DATE	REVISION	BY	CHK'D	APV'D
1.	7/22/2013	EDITS	JP	CM	CM

PROJECT:

TRUAX LANDFILL

SHEET TITLE:

LANDFILL GAS EXTRACTION SYSTEM

DRAWN BY: PAPEZ J	SCALE: AS NOTED	PROJ. NO.	185752-000
CHECKED BY: FREE D		FILE NO.	00340-16-02A.mxd
APPROVED BY: MADSEN C	DATE PRINTED:	**FIGURE 2**	
DATE: APRIL 2016			

TRC
708 Heartland Trail, Suite 3000
Madison, WI 53717
Phone: 608.826.3600
Fax: 608.826.3941
www.trcsolutions.com

E:\RMT_DATA\00340\16\00340-16-02A.mxd
Saved By: RSuemnicht on 28 Apr 2016, 13:39:44

EXHIBIT 4

LEGEND

- GROUNDWATER MONITORING WELL
- ABANDONED GROUNDWATER MONITORING WELL
- INACTIVE LFG PROBE
- ACTIVE LFG PROBE
- LFG EXTRACTION WELL
- TRENCH RISER VALVE
- CONDENSATE KNOCKOUT
- CONDENSATE MANAGEMENT MANHOLE
- HEADER VALVE
- ACTIVE LFG HEADER SYSTEM
- FORMER LFG HEADER SYSTEM, ABANDONED IN PLACE; CONNECTIONS MAINTAINED FOR CONDENSATE MANAGEMENT
- LIMITS OF WASTE
- EXISTING BUILDING FOOTPRINT

NOTES

1. BASE MAP IMAGERY FROM USDA – NATIONAL AGRICULTURE IMAGERY PROGRAM, 6/19/2013.
2. MAP PROJECTION AND GRID COORDINATES ARE NAD83 HARN, DANE COUNTY COORDINATE SYSTEM, US SURVEY FEET.
3. TOPOGRAPHIC CONTOURS AND BUILDING FOOTPRINTS SUPPLIED BY DANE COUNTY LAND INFORMATION OFFICE.
4. LANDFILL FEATURES AND ROAD LOCATIONS ARE APPROXIMATE.
5. "LFG" = LANDFILL GAS.
6. ALL LEGEND ITEMS SHOWN ARE AT APPROXIMATE LOCATIONS; FIELD VERIFICATION IS RECOMMENDED.

0 200 400 FEET

NO.	DATE	REVISION	BY	CHK'D	APV'D
2.	7/29/2014	UPDATED MW-1	JP	CM	CM
1.	7/22/2013	REMOVED DUPLICATE WELLS	JP	CM	CM

PROJECT:

TRUAX LANDFILL

SHEET TITLE:

GROUNDWATER MONITORING LOCATIONS

DRAWN BY:	PAPEZ J	SCALE: AS NOTED	PROJ. NO. 185752-000
CHECKED BY:	FREE D		FILE NO. 00340-16-03A.mxd
APPROVED BY:	MADSEN C	DATE PRINTED:	**FIGURE 3**
DATE:	APRIL 2016		

TRC
708 Heartland Trail, Suite 3000
Madison, WI 53717
Phone: 608.826.3600
Fax: 608.826.3941
www.trcsolutions.com

E:\RMT_DATA\00340\160\00340-16-03A.mxd
Saved By: RSuemnicht on 28 Apr 2016, 13:41:49

EXHIBIT 5

708 Heartland Trail
Suite 3000
Madison, WI 53717

608-826-3600 PHONE
608-826-3941 FAX

www.TRCsolutions.com

April 23, 2012

Mr. Tom Bennwitz, P.E.
Environmental Engineer
Wisconsin Department of Natural Resources
South Central Region
Madison Service Center
101 S. Webster Road
Madison, WI 53703

Subject: Expedited Plan Modification
Reduction in Data Reporting
Dane County Truax Landfill
WDNR License No. 3306

Dear Mr. Bennwitz:

On behalf of the Dane County Regional Airport, TRC Environmental Corporation (TRC) is submitting this request for an expedited plan modification relative to three items; (1) to compile the various quarterly and annual reports currently submitted to WDNR into two report submittals per year; (2) to reduce the quarterly condensate monitoring at Gas Extraction Wells N-4 and N-5 to semi-annually; and, (3) to reduce the twice-monthly monitoring of the Blower inlets and Blower outlet to monthly. These requests are being made in accordance with NR 514.09(1)10.

To simplify the logistics of preparation and review of the several reports that are required to be submitted for review every year TRC proposes to combine the reporting requirements into two submittals per year. The first submittal, which would occur by July 31st of each year, would include the monthly landfill gas (LFG) monitoring data, the March semi-annual groundwater monitoring data, the annual site inspection summary, and the Annual Operations and Maintenance (O&M) Progress Report. The second submittal, which would occur by January 31st of each year, would include the monthly LFG monitoring data and the September semi-annual groundwater monitoring data.

TRC also proposes to reduce monitoring condensate levels in LFG extraction wells N-4 and N-5 (see attached figure) from quarterly to semi-annually (to coincide with the semi-annual groundwater monitoring. The reduction of monitoring at N-4 and N-5 was commented by

the Department in their letter to Mike Kirchner, dated February 20, 2007. The condensate levels and monitoring frequency were evaluated as part of the Year 2008 Annual O&M Progress Report and it was determined, due to slight increases in the condensate level at LFG extraction well N-5, that monitoring would be continued through 2009. TRC reassessed the condensate levels in the second submittal of 2011, and planned to, but never submitted an Addendum to the Plan Modification approval dated December 15, 2004. A summary of the condensate level data through the first quarter of 2012 is included in the attached Table 1. Condensate levels have been consistent for several years.

It is also proposed to reduce the monitoring of the landfill gas blower inlets and outlet to monthly (from semi-monthly), to align with the frequency of other monitoring requirements, and in consideration of the closed and stable nature of the landfill gas collection system operation, typical absence of methane in the perimeter gas probes, and groundwater monitoring results.

If you have any questions or comments after you review the information provided, please call me, at (608) 826-3640.

Sincerely,

TRC Environmental Corporation

Curt Madsen, P.E.
Senior Project Manager

Attachments: Table 1
Figure 1

cc: Mike Kirchner – Dane County Regional Airport
Jim Kralick--WDNR
Scott Inman – TRC
Central Files

Table 1
Liquid Head Measurements: Wells N-4 and N-5
Truax Landfill Gas Extraction System

MONITORING ROUND (Month-Year)	TOTAL WELL DEPTH (feet)	DEPTH TO LIQUID (feet)	LIQUID HEAD (feet)
N-4 (WDNR ID #647)			
January-05	20.92	19.50	1.42
February-05	20.92	20.33	0.59
March-05	20.92	20.47	0.45
April-05	20.92	20.57	0.35
May-05	20.92	20.50	0.42
June-05	20.92	20.42	0.50
July-05	20.92	20.34	0.58
August-05	20.92	20.46	0.46
September-05	20.92	19.46	1.46
October-05	20.92	19.52	1.40
November-05	20.92	19.57	1.35
December-05	20.92	19.35	1.57
January-06	20.92	19.44	1.48
February-06	20.92	19.51	1.41
March-06	20.92	19.46	1.46
April-06	20.92	19.32	1.60
May-06	20.92	19.30	1.62
June-06	20.92	19.31	1.61
July-06	20.92	19.47	1.45
August-06	20.92	19.45	1.47
September-06	20.92	19.38	1.54
October-06	20.92	19.05	1.87
November-06	20.92	NR	NR
December-06	20.92	19.32	1.60
January-07	20.92	19.31	1.61
February-07	20.92	19.61	1.31
March-07	20.92	19.61	1.31
July-07	20.92	19.60	1.32
December-07	20.92	19.40	1.52
April-08	20.92	19.60	1.32
June-08	20.92	19.60	1.32
September-08	20.92	18.21	2.71
November-08	20.92	17.52	3.40
March-09	20.92	18.06	2.86
June-09	20.92	17.54	3.38
August-09	20.92	17.91	3.01
December-09	20.92	18.31	2.61
March-10	20.92	18.44	2.48
June-10	20.92	18.81	2.11
September-10	20.92	18.31	2.61
December-10	20.92	19.36	1.56
January-11	20.92	19.56	1.36
May-11	20.92	19.00	1.92
February-12	20.92	17.17	3.75

Table 1 (continued)
Liquid Head Measurements: Wells N-4 and N-5
Truax Landfill Gas Extraction System

MONITORING ROUND (Month-Year)	TOTAL WELL DEPTH (feet)	DEPTH TO LIQUID (feet)	LIQUID HEAD (feet)
N-5 (WDNR ID #649)			
January-05	18.68	17.27	1.41
February-05	18.68	18.16	0.52
March-05	18.68	18.13	0.55
April-05	18.68	18.44	0.24
May-05	18.68	18.39	0.29
June-05	18.68	18.34	0.34
July-05	18.68	18.33	0.35
August-05	18.68	18.27	0.41
September-05	18.68	17.34	1.34
October-05	18.68	17.55	1.13
November-05	18.68	17.45	1.23
December-05	18.68	17.46	1.22
January-06	18.68	17.35	1.33
February-06	18.68	17.46	1.22
March-06	18.68	17.42	1.26
April-06	18.68	17.47	1.21
May-06	18.68	17.46	1.22
June-06	18.68	17.47	1.21
July-06	18.68	17.43	1.25
August-06	18.68	17.48	1.20
September-06	18.68	17.15	1.53
October-06	18.68	17.15	1.53
November-06	18.68	NR	NR
December-06	18.68	17.37	1.31
January-07	18.68	17.21	1.47
February-07	18.68	17.26	1.42
March-07	18.68	17.26	1.42
July-07	18.68	17.23	1.45
December-07	18.68	17.20	1.48
April-08	18.68	17.20	1.48
June-08	18.68	17.20	1.48
September-08	18.68	16.54	2.14
November-08	18.68	16.15	2.53
March-09	18.68	16.64	2.04
June-09	18.68	17.30	1.38
August-09	18.68	17.56	1.12
December-09	18.68	17.42	1.26
March-10	18.68	16.38	2.30
June-10	18.68	16.38	2.30
September-10	18.68	16.24	2.44
December-10	18.68	16.58	2.10
January-11	18.68	16.58	2.10
May-11	18.68	16.90	1.78
February-12	18.68	16.32	2.36

"NR" = No Reading taken (data not available).

Notes:

1. The monitoring frequency was reduced from monthly to quarterly per the February 20, 2007 WDNR Approval Letter.

By: J. Roelke
Checked By: S. Inman

\\mtapb-madison\msn-vol6\-WPMSN\PJT 2\185752\0000\185752000.00.001 x lsm
4/23/2012

Exhibit 5

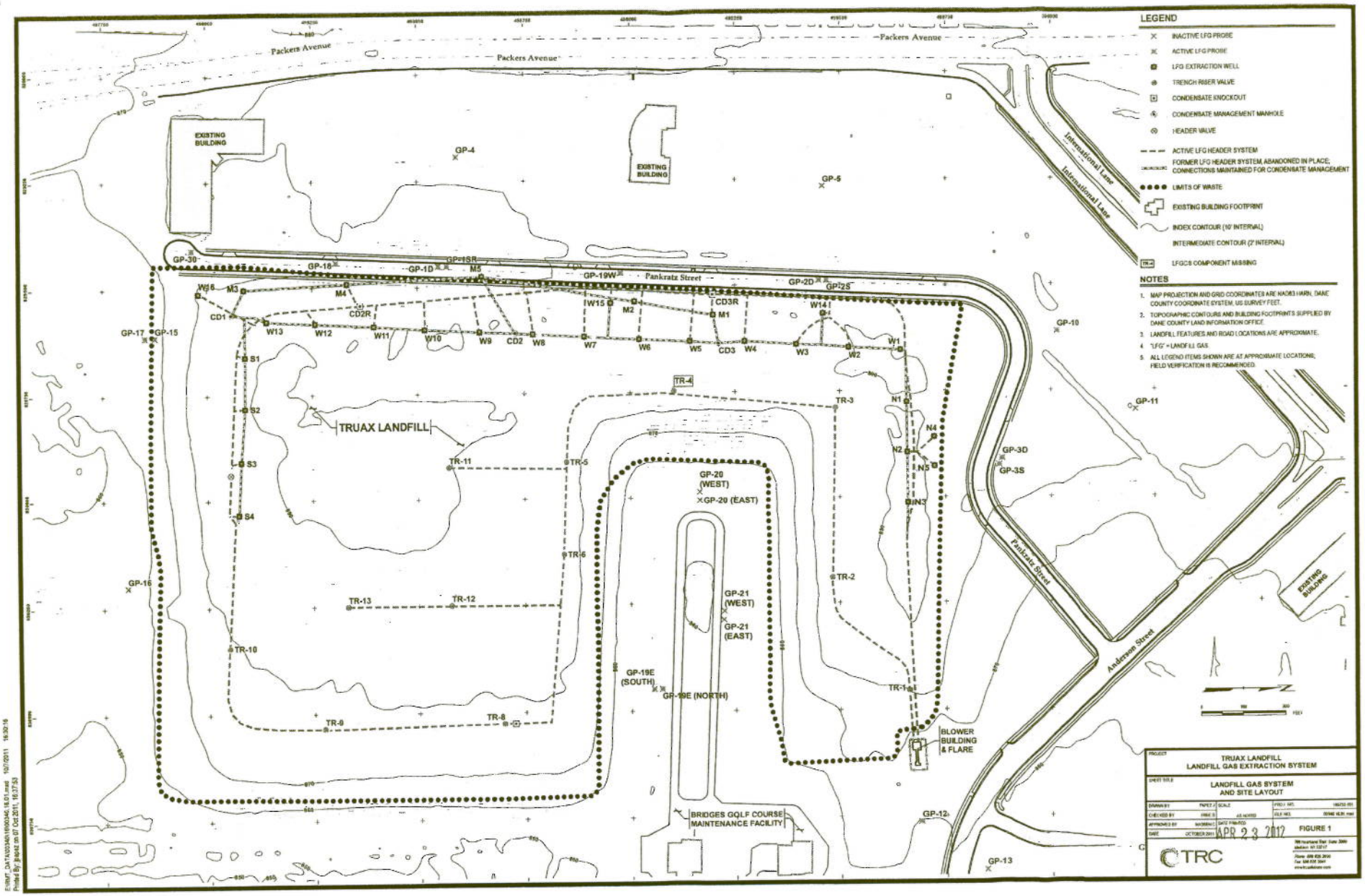

LEGEND
INACTIVE LFG PROBE
ACTIVE LFG PROBE
LFG EXTRACTION WELL
TRENCH RISER VALVE
CONDENSATE KNOCKOUT
CONDENSATE MANAGEMENT MANHOLE
HEADER VALVE
ACTIVE LFG HEADER SYSTEM
FORMER LFG HEADER SYSTEM, ABANDONED IN PLACE; CONNECTIONS MAINTAINED FOR CONDENSATE MANAGEMENT
LIMITS OF WASTE
EXISTING BUILDING FOOTPRINT
INDEX CONTOUR (10' INTERVAL)
INTERMEDIATE CONTOUR (2' INTERVAL)
LFGCS COMPONENT MISSING
NOTES
1. MAP PROJECTION AND GRID COORDINATES ARE NAD83 HARN, DANE COUNTY COORDINATE SYSTEM, US SURVEY FEET.
2. TOPOGRAPHIC CONTOURS AND BUILDING FOOTPRINTS SUPPLIED BY DANE COUNTY LAND INFORMATION OFFICE.
3. LANDFILL FEATURES AND ROAD LOCATIONS ARE APPROXIMATE.
4. "LFG" = LANDFILL GAS.
5. ALL LEGEND ITEMS SHOWN ARE AT APPROXIMATE LOCATIONS; FIELD VERIFICATION IS RECOMMENDED.
Packers Avenue
EXISTING BUILDING
GP-4
GP-5
International Lane
GP-30
GP-18
GP-1D
GP-1SR
GP-1S
M5
GP-19W
Pankratz Street
GP-2D
GP-2S
GP-10
W16
M3
M4
CD2R
W15
M2
CD3R
M1
W14
CD1
W13
W12
W11
W10
W9
CD2
W8
W7
W6
W5
CD3
W4
W3
W2
W1
GP-17
GP-15
S1
S2
S3
S4
TR-4
TR-3
N1
N2
N3
N4
N5
GP-11
TRUAX LANDFILL
TR-11
TR-5
GP-20 (WEST)
GP-20 (EAST)
GP-3D
GP-3S
TR-6
TR-2
GP-16
TR-13
TR-12
GP-21 (WEST)
GP-21 (EAST)
TR-10
GP-19E (SOUTH)
GP-19E (NORTH)
TR-1
TR-9
TR-8
BLOWER BUILDING & FLARE
BRIDGES GOLF COURSE MAINTENANCE FACILITY
GP-12
GP-13
Anderson Street
TRUAX LANDFILL
LANDFILL GAS EXTRACTION SYSTEM
LANDFILL GAS SYSTEM AND SITE LAYOUT
FIGURE 1
TRC

Exhibit 5

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

WISCONSIN
DEPT. OF NATURAL RESOURCES

MAY 31 2012

Mr. Mike Kirchner
Dane County Regional Airport
4000 International Lane
Madison, WI 53704-3120

File Ref: FID #113183620
Dane County
SW Approval

Subject: Expedited Plan Modification request for the Dane County Truax Landfill, WDNR Lic # 03306

Dear Mr. Kirchner:

We have reviewed, and approved the expedited plan modification request that we received on April 23, 2012 from TRC regarding the reduction in reporting frequency, condensate monitoring, and monitoring of the blowers.

Currently the Dane County Truax landfill submits quarterly and annual reports to the Department. In the future Dane County will be allowed to consolidate the reporting requirements into two report submittals per year. The second request is to reduce the quarterly condensate monitoring at Gas Extraction wells N-4 & N-5 to semi-annually, and third request is to reduce the twice monthly monitoring of the Blower inlets and outlets to monthly.

If you have any questions regarding this letter please contact Tom Bennwitz at (608) 275-3211, or Jim Kralick at (608) 275-7769.

Sincerely:

Dennis Mack, P.E.
Waste Management Supervisor
South Central Region

Cc: Tom Bennwitz/Jim Kralick – SCR
Curtis Madsen, P.E. TRC

Exhibit 6

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
3911 Fish Hatchery Road
Fitchburg WI 53711-5397

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

July 13, 2020

File Ref: FID 113183620
Dane County
SW Approval

Mr. Mike Kirchner, Airport Director
Dane County Airport
4000 International Lane
Madison, Wisconsin 53704

Subject: Conditional Construction Documentation Approval and Plan of Operation Approval Modification for Environmental Monitoring Program, Dane County Truax Landfill, License # 3306

Dear Mr. Kirchner:

The Department of Natural Resources (department) has reviewed and conditionally approves the construction documentation submitted for the installation, abandonment, and repair work performed on monitoring wells and gas probes at the Truax Landfill. The work was conducted in response to a potential gas migration issue at the site. Please include the attached approval in the written operating record for the landfill as specified in s. NR 506.17, Wis. Adm. Code.

The report documents the installation of three new gas probes (GP-36, GP-37 and GP-38), the abandonment of one unknown groundwater monitoring well and one unknown gas probe, and repair/modification to gas probes GP-19E North, GP-19E South, GP-20 East, GP-20 West, GP-21 East and GP-21 West. The gas probes were adjusted to be stick-ups instead of flush mounts.

The environmental monitoring program has been updated to include the new gas probes and to change the monitoring frequencies for some of the monitoring wells and gas probes. Refer to the attached tables.

If you have questions regarding this approval, please contact Carolyn Cooper at carolyn.cooper@wisconsin.gov or 608-275-7779.

Sincerely,

Cynthia Moore

Cynthia Moore
Waste and Materials Management Program Supervisor
South Central Region

cc: John Welch – Dane County (e-copy)
Colin Maus – DNR SCR (e-copy)
Carolyn Cooper – DNR SCR (e-copy)
Robert Langdon – SCS Engineers (e-copy)

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

CONDITONAL CONSTRUCTION DOCUMENTATION APPROVAL
AND PLAN OF OPERATION APPROVAL MODIFICATION FOR
DANE COUNTY TRUAX LANDFILL (License # 3306)

FINDINGS OF FACT

The Department of Natural Resources (department) finds that:

1. Dane County owns a closed solid waste disposal facility located in the NE ¼ of Section 31, T8N, R10E, City of Madison, Dane County Wisconsin.

2. In 1972, the Department issued the City of Madison License #0306 for the Truax Landfill. In 1973, ownership of the landfill was transferred from the City of Madison to Dane County.

3. The facility is a non-approved facility under s. 289.01(24), Stats. Prior to 1990, the Department had not approved any plans for the landfill. In 1990, the Department assigned license number #3306 to the landfill and a facility identification number (FID #113183620).

4. On February 28, 2020, Dane County submitted construction documentation to the department for installation, abandonment, and repair work performed on monitoring wells and gas probes at the Dane County Truax Landfill. The review fee of $1,650 was received by the department on July 6, 2020.

5. The information submitted in connection with the construction documentation and the modification request includes:

    a. A letter entitled “Monitoring Point Installation/Abandonment/Repair Documentation and Plan Modification to Environmental Monitoring Plan, Dane County Truax Landfill, Madison, Wisconsin” dated February 28, 2020 and received by the department on March 3, 2020.

6. Additional documents considered in connection with the construction documentation and the modification request include the following:

    a. The department's July 12, 1995 conditional plan approval for the landfill final cover and gas extraction system, Truax Landfill, Madison Wisconsin.

    b. The department’s November 18, 1999 conditional plan of operation approval of an environmental monitoring program.

    c. The department's March 22, 2002 conditional plan of operation approval modification for a revised environmental monitoring program schedule.

    d. The department's January 20, 2004 expedited plan of operation approval modification for groundwater monitoring.

e. The department's December 15, 2004 expedited plan of operation approval modification for the addition of three gas extraction wells.

f. The department's February 20, 2007 letter regarding approval of a reduction in monitoring for Wells N-4 and N-5.

g. The department's October 15, 2007 plan of operation approval modification for a reduction in groundwater and gas probe monitoring requirements.

h. The department's May 31, 2012 expedited plan of operation approval modification for a reduction in reporting frequency, condensate monitoring, and monitoring of the blowers.

i. The department's February 25, 2019 email correspondence to Dane County regarding the county's July 5, 2018 and February 18, 2019 letters.

j. Dane County's August 16, 2019 construction documentation for installation, abandonment, and repair work performed on monitoring wells and gas probes.

k. The department's February 4, 2020 construction documentation approval and plan of operation approval modification for installation, abandonment, and repair work performed on monitoring wells and gas probes.

l. The department's files pertaining to the Dane County Truax Landfill (License # 3306).

7. The special conditions set forth below are needed to assure that the site is operated and maintained in an environmentally sound manner. If the special conditions are complied with, the proposed modifications will not inhibit compliance with the standards set forth in the applicable portions of chs. NR 500-538, Wis. Adm. Code.

CONCLUSIONS OF LAW

1. The department has authority under s. 289.30, Wis. Stats., and ch. NR 516, Wis. Adm. Code, to require that the owner of a solid waste disposal facility demonstrate that the facility has been constructed in substantial compliance with the conditional plan of operation approval.

2. In accordance with the foregoing, the department has the authority to issue the following construction documentation approval.

3. The department has the authority under s. 289.30(6) Stats., to modify a plan of operation approval if the modification would not inhibit compliance with the applicable portions of chs. NR 500-538, Wis. Adm. Code.

4. The department has the authority to approve a modification to the plan of operation with special conditions if the conditions are needed to ensure compliance with the applicable portions of chs. NR 500-538, Wis. Adm. Code.

5. The conditions of approval set forth below are needed to ensure compliance with the applicable portions of chs. NR 500-538, Wis. Adm. Code.

6. In accordance with the foregoing, the department has the authority under s. 289.30(6), Stats., to issue the following conditional plan of operation modification approval.

CONDITIONAL CONSTRUCTION DOCUMENTATION APPROVAL

The department hereby approves the proposed construction documentation report and the proposed plan modification for the Dane County Truax Landfill, subject to compliance with chs. NR 500-538, Wis. Adm. Code, and the following conditions:

1. In addition to the notification requirements under s. NR 507.22(1)(c), Wis. Adm. Code, Dane County shall notify the department in writing within 7 days of detecting methane at or above the lower explosive limit (LEL) in gas monitoring probes GP-3S, GP-36, GP-37, or GP-38.

2. For the gas probes monitored on a quarterly basis, Dane County shall increase the frequency from quarterly to monthly if a confirmed methane detection is at or above 0.5 percent. The department shall be notified in writing within 30 days of the confirmed reading.

3. For the gas probes monitored on a monthly basis, Dane County may decrease the frequency from monthly to quarterly if those probes do not have confirmed methane detection above 0.5 percent over a one-year period. The department shall be notified in writing within 30 days of the change in monitoring frequency.

4. The monitoring of gas probes GP-3S, GP-36, GP-37 and GP-38 shall remain on a monthly basis and would not decrease to quarterly monitoring allowed by condition 3 above.

5. Dane County shall abandon groundwater monitoring well TG-2 within 180 days of the date of this approval. Documentation of the abandonment shall be submitted to the department within 30 days of completion of the work.

6. Environmental monitoring shall be performed in accordance with the attached environmental monitoring tables 1 through 3. This condition supersedes all environmental monitoring requirements contained in previous department approvals.

This approval is based on the information available to the department as of the date of approval. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the department may ask you to provide further information relating to this activity. Likewise, the department accepts proposals to modify approvals, as provided for in state statutes and administrative codes.

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the department, you should know that Wisconsin statutes and administrative codes establish time periods and requirements for reviewing department decisions.

To seek judicial review of the department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the department to file your petition with the appropriate circuit court and serve the petition on the department. The petition shall name the Department of Natural Resources as the respondent.

Dated: _____July 13, 2020_____

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

_____
Cynthia Moore
Waste & Materials Management Program Supervisor
South Central Region

_____
Colin Maus
Waste Management Engineer
South Central Region

_____
Carolyn Cooper, P.G.
Hydrogeologist
South Central Region

Dane County Truax Landfill
License # 3306
Environmental Monitoring Tables

Table 1 - Groundwater Monitoring						
Wells	**DNR ID#**	**Wells**	**DNR ID#**	**Sampling & Reporting[1.] Frequency**	**Parameter Codes**	**Parameters**
Groundwater Monitoring Wells						
MW-3A MW-4B MW-5B MW-12B MW-12C MW-14	009 015 021 073 077 071			Sample Semiannually March and September	04189 00001 00002 00003 00010 00094 00400 00631 00946 01000 01007 01025 01046 01049 01056 22413 39036	Elevation, Groundwater (ft above MSL) Odor Color Turbidity Temperature, of water taken in field ^{U}C Field Conductivity @ 25^{0} C (umho/cm) Field pH (standard units) Nitrite plus Nitrate, dissolved (mg/l as N) Sulfate, dissolved (mg/l) Arsenic, dissolved (ug/l) Barium, total (ug/l) Cadmium, dissolved (ug/l) Iron, dissolved (mg/l) Lead, dissolved (ug/l) Manganese, dissolved (ug/l) Total Hardness, filtered (mg/L) Alkalinity, filtered (mg/L)
				Sample Annually September		VOCs (ug/L), EPA Method 8260 (NR 507, App III)
MW-1R MW-3 MW-4 MW-4A MW-5 MW-5A MW-7 MW-10 MW-11 MW-13 MW-13A MW-15	002 007 011 013 017 019 025 031 063 067 069 079			Sample Annually September	04189 00001 00002 00003 00010 00094 00400 00631 00946 01000 01005 01025 01046 01049 01056 22413 39036	Elevation, Groundwater (ft above MSL) Odor Color Turbidity Temperature, of water taken in field ^{0}C Field Conductivity @ 25^{0} C (umho/cm) Field pH (standard units) Nitrite plus Nitrate, dissolved (mg/l as N) Sulfate, dissolved (mg/l) Arsenic, dissolved (ug/l) Barium, total (ug/l) Cadmium, dissolved (ug/l) Iron, dissolved (mg/l) Lead, dissolved (ug/l) Manganese, dissolved (ug/l) Total Hardness, filtered (mg/L) Alkalinity, filtered (mg/L)

1. Unless specifically stated, reporting is as per code typically within 60 days after the end of the specified monitoring period.
Trip Blank (999) and/or Field Blank (997) data must also be submitted electronically.

Dane County Truax Landfill
License # 3306
Environmental Monitoring Tables

Table 2 - Landfill Gas Monitoring

Monitoring Point - DNR ID #				Sampling & Reporting[1,2] Frequency	Parameter Codes	Parameters
Landfill Gas Monitoring Probes						
Monitoring Pt	**ID#**	**Monitoring Pt**	**ID#**			
Monthly Gas Probes:						
GP-1D	503	GP-34	563	Monthly	85547	Percent Methane, by volume
GP-2S	505	GP-36	566	Report Semiannually	85550	Percent Oxygen, by volume
GP-2D	507	GP-37	567	(March and September)	46389	Soil Gas Pressure
GP-3S	509	GP-38	568			
GP-3D	511					
Quarterly Gas Probes:						
GP-1SR	502	GP-20 West	549			
GP-10	523	GP-21 East	551	Quarterly	85547	Percent Methane, by volume
GP-12	527	GP-21 West	553	(March, June, September	85550	Percent Oxygen, by volume
GP-16	535	GP-30	555	and December)	46389	Soil Gas Pressure
GP-18	539	GP-31	557	Report Semiannually		
GP-19W	541	GP-32	559	(March and September)		
GP-19E North	543	GP-33	561			
GP-19E South	545	GP-35	565			
GP-20 East	547					
Landfill Gas Extraction Wells						
Monitoring Pt	**ID#**	**Monitoring Pt**	**ID#**			
Gas Extraction Wells (Vertical System):						
N-1	641	W-9	631			
N-2	643	W-10	633	Monthly	85547	Percent Methane, by volume
N-3	645	W-11	635	Report Semiannually	85550	Percent Oxygen, by volume
N-4	647	W-12	637	(March and September)	46385	Wellhead Pressure (inches)
N-5	649	W-13	639		46387	Valve Setting (% open)
W-1	611	W-14	615		46388	Gas Temperature (^{o}F)
W-2	613	W-15	625			
W-3	617	W-16	640			
W-4	619	S-1	651			
W-5	621	S-2	653			
W-6	623	S-3	655			
W-7	627	S-4	657			
W-8	629					
Gas Extraction Valves (Horizontal System):						
TR-1	700	TR-9	714			
TR-2	702	TR-10	716	Monthly	85547	Percent Methane, by volume
TR-5	708	TR-11	718	Report Semiannually	85550	Percent Oxygen, by volume
TR-6	710	TR-12	720	(March and September)	46385	Wellhead Pressure (inches)
TR-8	712	TR-13	722		46387	Valve Setting (% open)
Blower						
Monitoring Pt		**ID#**				
Blower Inlets:						
Vertical System Inlet		760		Twice Monthly	46385	Wellhead Pressure (inches)
Horizontal System Inlet		762		Report Semiannually		
				(March and September)		
Blower Outlet:						
Blower Outlet		764		Twice Monthly	85547	Percent Methane, by volume
				Report Semiannually	85550	Percent Oxygen, by volume
				(March and September)	46385	Pressure (inches)
Site Conditions						
Site Conditions		900		Record at each monitoring event	00021	Ambient Air Temperature (^{o}F)
				Report Semiannually	00025	Barometric Pressure (mm of Hg)
				(March and September)	46381	Trend in Barometric Pressure
						Ground conditions, report annually in O&M Report

1. Unless specifically stated, reporting is as per code typically within 60 days after the end of the specified monitoring period. For items indicated as "Report Semiannually", the reporting is due within 60 days after the end of the last monitoring period in the semiannual period.
2. Immediate notification may be necessary under NR 507.22(1)(c) Wis. Adm. Code.

Dane County Truax Landfill
License # 3306
Environmental Monitoring Tables

Table 3 - Gas Condensate Monitoring						
Monitoring Pt.	**DNR ID#**	**Monitoring Pt.**	**DNR ID#**	**Sampling & Reporting Frequency**	**Parameter Codes**	**Parameters**
Gas Condensate: Lift Station	770			Monthly (Report Annually)		Report gas condensate liquid level and operational status of the wet well lift station in the annual O&M Report
				Sample Annually (September)	00094 00150 00310 00340 00400 00410 00610 00625 00900 00929 00940 00945 00951 01027 01032 01051 01055 71900 74010	Field Conductivity @ 25°C (umho/cm) Suspended Solids, total (mg/l) BOD (5 day @ 20°C (mg/L)) COD, unfiltered (mg/L) Field pH, (standard units) Alkalinity, total as CaCO3 (mg/L) Nitrogen, Ammonia, total (mg/L as N) Nitrogen, Kjeldahl, total (mg/L as N) Hardness, total (mg/L as CaCO3) Sodium, total (mg/L) Chloride, total (mg/L) Sulfate, total (mg/L) Fluoride, total (mg/l) Cadmium, total (ug/l) Chromium, hexavalent (ug/l as Cr) Lead, total (mg/L) Manganese, total (mg/L) Mercury, total (mg/L) Iron, total (mg/L) VOCs (ug/L), EPA Method 8260 (NR 507, App III) Base Neutral/Acid Extractable compounds, EPA Method 8270

Truax Landfill Cover
Inspection Record

Date	Name of Inspector

Description of Weather

Time	Temperature	Barometric Pressure	Precipitation

Weather Conditions	Ground Conditions	General Past 7-Day Weather Conditions
		.

Landfill Vegetation Cover

General Health of Vegetation		
Healthy ☐	Stressed ☐	Barren ☐

Comments

Density of Vegetation		
Good ☐	Fair ☐	Poor ☐

Comments

Evidence of Burrowing Animals		Comments
No ☐	Yes ☐	

Erosion of Landfill Cap		Comments
No ☐	Yes ☐	

Settlement of Landfill Cap		Comments
No ☐	Yes ☐	

Drainage Ditch Erosion		Comments
No ☐	Yes ☐	

Leachate Seeps Identified		Comments
No ☐	Yes ☐	

Location of Erosion on Landfill Cap

Location of Settlement of Landfill Cap

Location of Drainage Ditch Erosion

Location of Leachate Seeps

Horizontal Gas Wells

Well	Erosion		Comments
TR-1	Yes ☐	No ☐	
TR-2	Yes ☐	No ☐	
TR-3	Yes ☐	No ☐	
TR-4	Yes ☐	No ☐	
TR-5	Yes ☐	No ☐	
TR-6	Yes ☐	No ☐	
TR-7	Yes ☐	No ☐	
TR-8	Yes ☐	No ☐	
TR-9	Yes ☐	No ☐	
TR-10	Yes ☐	No ☐	
TR-11	Yes ☐	No ☐	
TR-12	Yes ☐	No ☐	
TR-13	Yes ☐	No ☐	

Vertical Gas Wells

Well	Erosion		Comments
N-1	Yes ☐	No ☐	
N-2	Yes ☐	No ☐	
N-3	Yes ☐	No ☐	
N-4	Yes ☐	No ☐	
N-5	Yes ☐	No ☐	
W-1	Yes ☐	No ☐	
W-2	Yes ☐	No ☐	
W-3	Yes ☐	No ☐	
W-4	Yes ☐	No ☐	
W-5	Yes ☐	No ☐	
W-6	Yes ☐	No ☐	
W-7	Yes ☐	No ☐	
W-8	Yes ☐	No ☐	
W-9	Yes ☐	No ☐	
W-10	Yes ☐	No ☐	
W-11	Yes ☐	No ☐	
W-12	Yes ☐	No ☐	
W-13	Yes ☐	No ☐	
W-14	Yes ☐	No ☐	
W-15	Yes ☐	No ☐	
W-16	Yes ☐	No ☐	
S-1	Yes ☐	No ☐	
S-2	Yes ☐	No ☐	
S-3	Yes ☐	No ☐	
S-4	Yes ☐	No ☐	

SCHEDULE B
Pricing Structure and Payment

Invoices/Payment:
PROVIDER shall issue an invoice upon completion of services and/or delivery of such deliverables. Invoices must reference the Dane County purchase order number issued for the services/deliverables described herein. Email delivery of invoices is encouraged and preferred – see the Bill To section of the purchase order. Payment shall be made within 30 days of COUNTY's receipt of accepted invoice unless otherwise noted in Schedule B.

Maximum Annual Cost

Calendar Year	Maximum Cost
2023	$39,600.00
2024	$40,788.00
2025	$42,012.00
2026	$43,272.00
2027	$44,570.00
MAXIMUM TOTAL CONTRACT COST	**$210,242.00**

Hourly Costs

	Hourly Cost by Year				
Position Title	2023	2024	2025	2026	2027
Project Manager	$138.55	$142.71	$146.99	$151.40	$155.94
Engineering Technician	$78.20	$80.55	$82.96	$85.45	$88.01
Database Manager	$113.90	$117.32	$120.84	$124.46	$128.20
Senior Project Coordinator	$91.80	$94.55	$97.39	$100.31	$103.32
Quality Assurance	$208.25	$214.50	$220.93	$227.56	$234.39
Principal in Charge	$259.25	$267.03	$275.04	$283.29	$291.79

Annual and hourly costs reflect a 3% increase per year.

SCHEDULE C

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of this contract, the Provider, for itself, its assignees, and successors in interest (hereinafter referred to as the "Provider") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-Assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq*.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-259) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990 (42 USC § 12101, et seq) (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration's Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations);
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs [70 Fed. Reg. 74087 (2005)];
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC § 1681, et seq).