

PROFESSIONAL SERVICES AGREEMENT

THIS IS AN AGREEMENT made as of _____, 2022 between the LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT (**OWNER**) and TETRA TECH, INC. (**PROFESSIONAL**). **OWNER** intends to proceed with the Former Jacks Creek Pike Landfill Improvement Project at Raven Run Nature Sanctuary in Lexington, Kentucky as described in the attached Request for Proposal document (Exhibit “A”). The services are to include engineering professional services for the city as contemplated in the **OWNER**’s Request for Proposal No. 17-2022. The services are hereinafter referred to as the Project.

OWNER and **PROFESSIONAL** in consideration of their mutual covenants herein agree in respect of the performance of Former Jacks Creek Pike Landfill Improvement Project by **PROFESSIONAL** and the payment for those services by **OWNER** as set forth below.

PROFESSIONAL was selected by **OWNER** based upon its response to the Request for Proposal No. 17-2022.

PROFESSIONAL shall provide engineering professional services for **OWNER** in all phases of the Project to which this Agreement applies, serve as **OWNER'S** representative for the Project as set forth below and shall give professional consultation and advice to **OWNER** during the performance of services hereunder.

SECTION 1 - BASIC SERVICES OF PROFESSIONAL

PROFESSIONAL shall perform all services as hereinafter stated which include customary planning and analysis incidental thereto.

The following documents are incorporated by reference herein as if fully stated and are attached hereto as exhibits: RFP No. 17-2022 (Exhibit “A”) and **PROFESSIONAL**’s Response dated April 2022.

1. **EXHIBIT A** - RFP #17-2022 Former Jacks Creek Pike Landfill Improvement Project
Raven Run Nature Sanctuary
2. **EXHIBIT B** - Certificate of Insurance
3. **EXHIBIT C** - Proposal Response to RFP #17-2022

To the extent there is conflict among their provisions, the provisions of this Agreement shall take precedence, followed by the provisions of Request for Proposal No. 17-2022 (Exhibit “A”).

After written authorization to proceed with the Project, **PROFESSIONAL** shall:

1. Notify the **OWNER** in writing of its authorized representative who shall act as Project Manager and liaison representative between the **PROFESSIONAL** and the **OWNER**.

2. The **PROFESSIONAL** must perform all duties necessary to fully complete the deliverables described in attached Exhibit A "Request for Proposals, RFP #17-2022 Former Jacks Creek Pike Landfill Improvement Project Raven Run Nature Sanctuary" and attached Exhibit C (**PROFESSIONAL's** response to RFP #17-2022).
3. The **PROFESSIONAL** shall provide written documentation of all meetings and responsible for incorporating all comments and changes resulting there from in final work product.
4. The **PROFESSIONAL** shall submit appropriate copies of **PROJECT** deliverables as described in **EXHIBIT A**.
5. After the **OWNER'S** detailed review, the **PROFESSIONAL** will revise the initial draft final for all work products for this **PROJECT**, and the **PROFESSIONAL** shall deliver appropriate copies of **PROJECT** deliverables as described in **EXHIBIT A**.
6. Immediately notify of any delay in the delivery of a work product or deliverable, regardless of cause. Give written **OWNER** notice to **OWNER** within five (5) business days whenever **PROFESSIONAL** observes or otherwise becomes aware of any development that affects the scope or timing of **PROFESSIONAL'S** services, or any defect in the work of Contractor(s).

This Agreement (consisting of pages 1 to 9 inclusive), together with (Exhibit "A") and schedules identified above constitutes the entire Agreement between **OWNER** and **PROFESSIONAL** and supersedes all prior written or oral understandings. This Agreement and said Exhibits and schedules may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

The General Provisions of RFP No. 17-2022 are incorporated herein by reference as if fully stated.

SECTION 2 - ADDITIONAL SERVICES BY PROFESSIONAL

- 2.1. The **OWNER** may desire to have the **PROFESSIONAL** perform work or render services in connection with this Project other than provided by (Exhibit "A") of this Agreement. Such work shall be considered as "Additional Services", subject to a change order, supplemental to this Agreement, setting forth the character and scope thereof and the compensation therefore. Work under such change order shall not proceed until the **OWNER** gives written authorization. Should the **OWNER** find it desirable to have previously satisfactorily completed and accepted plans or parts thereof revised, the **PROFESSIONAL** shall make such revisions as directed, in writing, by the **OWNER**. This work shall be considered as "Additional Services" and shall be paid as such.

- 2.2. All "Additional Services" is subject to prior written authorization of **OWNER** and necessary appropriations made by the Urban County Council.

SECTION 3 - OWNER'S RESPONSIBILITIES

OWNER shall:

- 3.1. Provide criteria and information as to **OWNER'S** requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations.
- 3.2. Assist **PROFESSIONAL** by placing at its disposal available information pertinent to the Project.
- 3.3. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by **PROFESSIONAL**, and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of **PROFESSIONAL**.
- 3.4. Designate in writing a person to act as **OWNER'S** representative with respect to the services to be rendered under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define **OWNER'S** policies and decisions with respect to materials, equipment, elements and systems pertinent to **PROFESSIONAL'S** services.
- 3.5. Give written notice to **PROFESSIONAL** whenever **OWNER** observes or otherwise becomes aware of any development that affects the scope or timing of **PROFESSIONAL'S** services, or any defect in the work of Contractor(s).
- 3.6. Furnish or direct **PROFESSIONAL** to provide, necessary Additional Services as stipulated in Section Two (2) of this Agreement or other services as required.

SECTION 4 - PERIOD OF SERVICES

- 4.1. Time is of the essence. See (Exhibit "A") (attached) for the project schedule.
- 4.2. The provisions of this Section Four (4) and the various rates of compensation for **PROFESSIONAL'S** services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion.
- 4.3. If delays result by reason of acts of the **OWNER** or approving agencies or other causes, which are beyond the control of the **PROFESSIONAL**, an extension of time for such delay will be considered. If delays occur, the **PROFESSIONAL** shall within 30 days from the date of the delay apply in writing to the **OWNER** for an extension of time for such reasonable period as may be mutually agreed upon between the

parties, and if approved, the Project schedule shall be revised to reflect the extension. Such extension of time to the completion date shall in no way be construed to operate as a waiver on the part of the **OWNER** of any of its rights in the Agreement. Section 6.5, under DISPUTES, of this Agreement, shall apply in the event the parties cannot mutually agree upon an extension of time.

In the event that the overall delay resulting from the above described causes is sufficient to prevent complete performance of the Agreement within six (6) months of the time specified therein, the Agreement fee or fees shall be subject to reconsideration and possible adjustment. Section 6.5 of this Agreement shall apply in the event the parties cannot mutually agree upon an adjustment of fee.

- 4.4. If delays result solely by reason of act of the **PROFESSIONAL**, the **PROFESSIONAL** must immediately notify the **OWNER** in the event of such delay, and provide the **OWNER** a written action plan within five (5) business days on how it will reasonably attempt to resolve the delay. If the parties cannot mutually agree to an extension of time or an adjustment, Section 6.5 of this Agreement shall apply. If the delay would prevent complete performance of the project within six (6) months of the time specified herein, **OWNER** shall have the option of canceling the project or otherwise adjusting the scope of service or work and any related fees.

SECTION 5 - PAYMENTS TO PROFESSIONAL

5.1 Methods of Payment for Services of PROFESSIONAL

5.1.1 For Basic Service.

All Lump Sum Pricing shall include all direct labor and supervision necessary to complete the item in a manner that meets or exceeds the **OWNER'S** satisfaction. It shall also include the labor payroll costs, overhead (such as unemployment taxes, general liability insurance, rent, utilities, phones, supplies, administrative salaries, F.I.C.A. sick and vacations, etc. disposal fees tool allowance, equipment, materials, profit and all other costs used on the job). The negotiated cost of services for Phase One is established \$37,000.

5.2. Times of Payment.

5.2.1. PROFESSIONAL shall submit a schedule of values subject to approval by the **OWNER** prior to starting work. The approved schedule of values will be the basis for monthly statements for Basic Services and Additional Services rendered. The Statements will be based upon **PROFESSIONAL'S** estimate of the proportion of the total services actually completed at the time of billing and are subject to approval by the **OWNER**. **OWNER** shall pay **PROFESSIONAL'S** monthly statements within thirty (30) days of receipt.

5.3. Other Provisions Concerning Payments.

5.3.1. In the event the Agreement is terminated by the **OWNER** without fault on the part of the **PROFESSIONAL**, the **PROFESSIONAL** shall be paid for the work performed or services rendered in an amount bearing the same ratio to the total Agreement fee as the amount of work completed or partially completed and delivered to the **OWNER** is to the total amount of work provided for herein, as determined by mutual agreement between the **OWNER** and the **PROFESSIONAL**.

5.3.2. In the event the services of the **PROFESSIONAL** are terminated by the **OWNER** for fault on the part of the **PROFESSIONAL**, the **PROFESSIONAL** shall be paid reasonable value of the work performed or services rendered and delivered, and the amount to be paid shall be determined by the **OWNER**.

5.3.3. In the event the **PROFESSIONAL** shall terminate the Agreement because of gross delays caused by the **OWNER**, the **PROFESSIONAL** shall be paid as set forth in Section 5.3.1. above.

SECTION 6 – ADDITIONAL GENERAL CONSIDERATIONS

6.1. Termination

6.1.1. **PROFESSIONAL** may only terminate this Agreement due to **OWNER'S** material breach of the terms hereof which breach causes **PROFESSIONAL** to be unable to perform its duties and responsibilities under this Agreement, and only upon ten (10) days written notice to **OWNER**, and provided **OWNER** fails to cure such default within the ten (10) day period.

6.1.2. The **OWNER** reserves the right to terminate the Agreement for any reason at any time upon seven (7) days written notice to the **PROFESSIONAL**.

6.2. Ownership and Reuse of Documents.

All documents, including Drawings and Specifications, prepared by the **PROFESSIONAL** pursuant to this Agreement shall be delivered to and become the property of the **OWNER**. The **OWNER** shall have the right to reuse same without restriction or limitation, but without liability or legal exposure to **PROFESSIONAL**.

6.3. Legal Responsibilities and Legal Relations.

6.3.1. The **PROFESSIONAL** shall familiarize itself with and shall at all times comply with all federal, state and local laws, ordinances, and regulations which in any manner affect the services of this Agreement.

6.3.2. In performing the services hereunder, the **PROFESSIONAL** and its **PROFESSIONALS**, employees, agents and representatives shall not be deemed or construed to be employees of **OWNER** in any manner whatsoever. Except as otherwise provided in this Agreement, the **PROFESSIONAL** shall be acting as an independent contractor. The **PROFESSIONAL** shall not hold itself out as, nor claim to be, an officer or employee of **OWNER** by reason hereof and shall not make any

claim, demand or application to or for any right or privilege applicable to an officer or employee of **OWNER**. The **PROFESSIONAL** shall be solely responsible for any claims for wages or compensation by **PROFESSIONAL'S** employees, agents and representatives, including **PROFESSIONALS**, and shall save and hold **OWNER** harmless therefrom.

6.3.3. The parties hereto agree that causes of actions between the parties shall be governed by applicable provisions of the Kentucky Revised Statutes, that venue of any legal action shall be a court of appropriate jurisdiction in Fayette County, Kentucky, and that Kentucky law shall apply with respect to the interpretation of any provision of this Agreement.

6.4. Successors and Assigns.

6.4.1. PROFESSIONAL binds itself and its partners, successors, executors, administrators, assigns and legal representatives to this Agreement in respect to all covenants, agreements and obligations of this Agreement. **PROFESSIONAL** shall not assign any interest, obligation or benefit in this Agreement. **PROFESSIONAL** shall not assign any interest, obligation or benefit in this Agreement or transfer any interest in the same, whether by assignment or novation, without prior written consent of **OWNER**.

6.4.2. The **PROFESSIONAL** shall not subcontract more than fifty percent (50%) of the work, based upon dollar value, to be provided under this Agreement. The **PROFESSIONAL** shall obtain written approval prior to subletting or assigning any services contained in this Agreement, and consent to sublet or assign any part of this Agreement shall not be construed to relieve the **PROFESSIONAL** of any responsibility for compliance with the provisions of this Agreement.

6.4.3. Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than **OWNER** and **PROFESSIONAL**.

6.5. Disputes.

Except as otherwise provided in this Agreement, any dispute concerning the amount of payment due the **PROFESSIONAL** or any dispute concerning any question of fact of any act to be performed under this Agreement, which is not disposed of by agreement between the Urban County Division of Central Purchasing and the **PROFESSIONAL**, shall be submitted to the Commissioner, Department of General Services, Lexington-Fayette Urban County Government for review. The decision of the Commissioner as to the determination of such dispute shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, capricious, arbitrary or so grossly erroneous as necessarily to imply bad faith. Pending a final decision of a dispute hereunder, the **PROFESSIONAL** shall proceed diligently with the performance of the Agreement in accordance with the directions of the **OWNER**.

6.6. Security Clause.

The **PROFESSIONAL** certifies that it shall not at any time release or divulge any information concerning the services covered by this Agreement to any person or any public or private organization except the **OWNER** without prior approval of the **OWNER** unless required by law.

6.7. Access to Records.

The **PROFESSIONAL** and its sub-**PROFESSIONALS** shall maintain all books, documents, papers, and accounting records, and make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of final payment under the contract for inspection by the **OWNER**, and copies thereof shall be furnished if requested. Failure to maintain such records for three (3) years after the date of final payment may be grounds for the **OWNER** to disqualify the **PROFESSIONAL** from consideration for future **PROFESSIONAL** service agreements.

6.8. Required Risk Management Provisions.

The Risk Management Provisions of RFP No.17-2022 are incorporated herein by reference as if fully stated. Copies of the required Certificates of Insurance shall be provided to **OWNER** as required therein.

SECTION 7 - EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this service agreement, the **PROFESSIONAL** agrees as follows:

- 7.1. The **PROFESSIONAL** will not discriminate against any employee or application for employment because of race, color, religion, national origin, sex, age or handicap. The **PROFESSIONAL** will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, sex, age or handicap. Such action shall include, but not be limited to the following: employment upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeships. The **PROFESSIONAL** agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.
- 7.2. The **PROFESSIONAL** will, in all solicitations or advertisements for employees placed by or on behalf of the **PROFESSIONAL**, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age (between forty and seventy), or handicap.

SECTION 8 - SPECIAL PROVISIONS

8.1. This Agreement is subject to the following provisions.

8.1.2. Pursuant to subparagraph 3.4 of this Agreement, **OWNER'S** representative is authorized to monitor, direct and review the performance of work of the **PROFESSIONAL**. Documents, data, reports and all matters associated with carrying out this Agreement shall be addressed to the **OWNER'S** representative or their designee. Questions by the **PROFESSIONAL** regarding interpretations of the terms, provisions and requirements under this Agreement shall be addressed to the **OWNER'S** representative or their designee. The **PROFESSIONAL** shall look only to the **OWNER'S** representative or their designee for direction in its performance under this Agreement; no other direction shall be binding upon **OWNER**. **OWNER** shall respond to written requests by **PROFESSIONAL** within thirty (30) days.

8.2. NO THIRD PARTY RIGHTS. This agreement does not create a contractual relationship with or right of action in favor of a third party against either **OWNER** or **PROFESSIONAL**.

8.3. UNENFORCEABLE TERMS/SURVIVABILITY. If any term or provision of this Agreement shall be found to be illegal or unenforceable, this Agreement shall remain in full force and such term or provision shall be deemed stricken. The provisions of Section 6 of this Agreement shall survive its termination.

8.4. NON-WAIVER. The failure of either party to enforce any right reserved to it in this Agreement shall not be a waiver of any such right to which the party is entitled.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

OWNER (LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT):

Signature: _____
MAYOR

Date: _____

ATTEST:

CLERK OF URBAN COUNTY COUNCIL

PROFESSIONAL (TETRA TECH, INC.):

Signature: Herbert R. Lemaster

Printed Name: Herbert R. Lemaster

Position: Senior Project Manager

Date: 4-26-2022

COMMONWEALTH OF KENTUCKY
COUNTY OF (Fayette)

The foregoing instrument was subscribed, sworn to and acknowledged before me by
Herbert R. Lemaster as Senior Project Manager for
and on behalf of Tetra Tech, Inc., on this the 26th day of
April, 2022

My commission expires: 04/24/2024

Mary L. Corbitt
NOTARY PUBLIC, STATE AT LARGE, KY

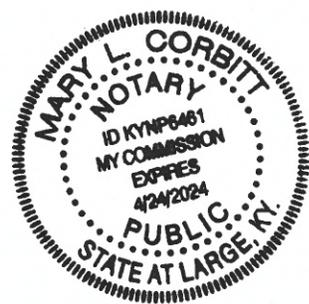


EXHIBIT A
Former Jacks Creek Pike Landfill Improvement Project
Raven Run Nature Sanctuary
RFP# 17-2022



Lexington-Fayette Urban County Government

Request for Proposals

The Lexington-Fayette Urban County Government hereby requests proposals for **RFP #17-2022 Former Jacks Creek Pike Landfill Improvement Project Raven Run Nature Sanctuary** to be provided in accordance with terms, conditions and specifications established herein.

Sealed proposals will be received through Ion Wave until **2:00 PM**, prevailing local time, on **April 8, 2022**. All forms and information requested in RFP must be included and attached in Response Attachments tab in Ion Wave.

Proposals received after the date and time set for opening proposals will not be accepted. It is the sole responsibility of the Proposer to assure that his/her proposal is submitted in Ion Wave before the date and time set for opening proposals.

Proposals, once submitted, may not be withdrawn for a period of one hundred twenty (120) calendar days.

The Lexington-Fayette Urban County Government reserves the right to reject any or all proposals, and to waive technicalities and informalities when such waiver is determined by the Lexington-Fayette Urban County Government to be in its best interest.

Signature of this proposal by the Proposer constitutes acceptance by the Proposer of terms, conditions and requirements set forth herein.

Minor exceptions may not eliminate the proposal. Any exceptions to the specifications established herein shall be listed in detail on a separate sheet and attached hereto. The Lexington-Fayette Urban County Government shall determine whether any exception is minor.

The Lexington-Fayette Urban County Government encourages the participation of minority- and women-owned businesses in Lexington-Fayette Urban County Government contracts. This proposal is subject to Affirmative Action requirements attached hereto.

Please do not contact any LFUCG staff member or any other person involved in the selection process other than the designated contact person(s) regarding the project contemplated under this RFP while this RFP is open and a selection has not been finalized. Any attempt to do so may result in disqualification of the firm's submittal for consideration.

A pre-RFP meeting will be held March 31, 2022, 10:00 am, at the Nature Center at 3885 Raven Run Way. Interested parties will have an opportunity to tour the landfill.

Laws and Regulations

All applicable state laws, municipal ordinances and regulations of all authorities having jurisdiction over the project shall apply to the contract, and shall be deemed to be incorporated herein by reference.

Equal Employment Opportunity

The Entity (regardless of whether construction contractor, non-construction contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, religion, sex (including pregnancy, sexual orientation or gender identity), national origin, disability, age, genetic information, political affiliation, or veteran status, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.

Kentucky Equal Employment Opportunity Act

The Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any "county, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

"During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, or national origin;
- (2) The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, or national origin;
- (3) The contractor will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provision of the nondiscrimination clauses required by this section; and
- (4) The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses."

The Act further provides:

"KRS 45.610. Hiring minorities -- Information required

- (1) For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective

bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetables.

(2) Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.

KRS 45.620. Action against contractor -- Hiring of minority contractor or subcontractor

(1) If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.

(2) If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 to 45.640.

(3) The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.

KRS 45.630 Termination of existing employee not required, when

Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that employee was employed prior to the date of the contract.

KRS 45.640 Minimum skills

Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job."

It is recommended that all of the provisions above quoted be included as special conditions in each contract. In the case of a contract exceeding \$250,000, the contractor is required to furnish evidence that his workforce in Kentucky is representative of the available work-force in the area from which he draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the contract.

LFUCG Non-Appropriation Clause

Contractor acknowledges that the LFUCG is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate.

In the event that public funds are unavailable and not appropriated for the performance of the LFUCG's obligations under this contract, then this contract shall automatically expire without penalty to the LFUCG thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that the LFUCG shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations.

In the event of a change in the LFUCG's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects the LFUCG's authority to continue its obligations under this contract, then this contract shall automatically terminate without penalty to the LFUCG upon written notice to Contractor of such limitation or change in the LFUCG's legal authority.

Contention Process

Vendors who respond to this invitation have the right to file a notice of contention associated with the RFP process or to file a notice of appeal of the recommendation made by the Director of Central Purchasing resulting from this invitation.

Notice of contention with the RFP process must be filed within 3 business days of the bid/proposal opening by (1) sending a written notice, including sufficient documentation to support contention, to the Director of the Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his/her contention with the RFP process. After consulting with the Commissioner of Finance the Chief Administrative Officer and reviewing the documentation and/or hearing the vendor, the Director of Central Purchasing shall promptly respond in writing findings as to the compliance with RFP processes. If, based on this review, a RFP process irregularity is deemed to have occurred the Director of Central Purchasing will consult with the Commissioner of Finance, the Chief Administrative Officer and the Department of Law as to the appropriate remedy.

Notice of appeal of a RFP recommendation must be filed within 3 business days of the RFP recommendation by (1) sending a written notice, including sufficient documentation to support appeal, to the Director, Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his appeal. After reviewing the documentation and/or hearing the vendor and consulting with the Commissioner of Finance and the Chief Administrative Officer, the Director of Central Purchasing shall in writing, affirm or withdraw the recommendation.

AMERICAN RESCUE PLAN ACT

CERTIFICATION OF COMPLIANCE FOR AMERICAN RESCUE PLAN ACT EXPENDITURES

The Lexington-Fayette Urban County Government (“LFUCG”) may classify the subject matter of this bid as an expenditure under the American Rescue Plan Act of 2021. Expenditures under the American Rescue Plan Act of 2021 require evidence of the contractor’s compliance with Federal law. Therefore, by the signature below of an authorized company representative, you certify that the information below is understood, agreed, and correct. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

The bidder agrees and understands that in addition to all conditions stated within the attached bid documents, the following conditions will also apply to any Agreement entered between bidder and LFUCG, if LFUCG classifies the subject matter of this bid as an expenditure under the American Rescue Plan Act. The bidder further certifies that it can and will comply with these conditions, if this bid is accepted and an Agreement is executed:

1. Any Agreement executed as a result of acceptance of this bid may be governed in accordance with 2 CFR Part 200 and all other applicable Federal law and regulations and guidance issued by the U.S. Department of the Treasury.
2. Pursuant to 24 CFR 85.43, any Agreement executed as a result of acceptance of this bid can be terminated if the contractor fails to comply with any term of the award. This Agreement may be terminated for convenience in accordance with 24 CFR 85.44 upon written notice by LFUCG. Either party may terminate this Agreement with thirty (30) days written notice to the other party, in which case the Agreement shall terminate on the thirtieth day. In the event of termination, the contractor shall be entitled to that portion of total compensation due under this Agreement as the services rendered bears to the services required. Either party may terminate this Agreement for good cause shown with forty-five (45) days written notice, which shall explain the party’s cause for the termination. If the parties do not reach a settlement before the end of the 45 days, then the Agreement shall terminate on the forty-fifth day.
3. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:
 - (1) Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
 - (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
 - (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other

employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

- (4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part, and the contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Provided, however, that in the event a contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

4. If fulfillment of the contract requires the contractor to employ mechanic's or laborers, the contractor further agrees that it can and will comply with the following:

- (1) *Overtime requirements: No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such a workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such a workweek.*
- (2) *Violation: liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which*

such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

- (3) *Withholding for unpaid wages and liquidated damages. LFUCG shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.*
- (4) *Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower-tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.*

5. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

6. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.

7. The contractor shall include these requirements in numerical paragraphs 5 and 6 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funding.

8. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

9. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.

10. The contractor shall include these requirements in numerical paragraphs 8 and 9 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funds.

11. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

12. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency regional office.

13. The contractor shall include these requirements in numerical paragraphs 11 and 12 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funds.

14. The contractor shall include this language in any subcontract it executes to fulfill the terms of this bid: “the sub-grantee, contractor, subcontractor, successor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury’s Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract (or agreement). Title VI also includes protection to persons with ‘Limited English Proficiency’ in any program or activity receiving

federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this contract or agreement.”

15. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency. Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier, up to the recipient. The required certification is included here:

- a. The undersigned certifies, to the best of his or her knowledge and belief, that:
 - (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.
 - (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
- b. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signature

Date

SELECTION CRITERIA:

Qualifications and Past Performance	35 points
Proposal / Project Approach	20 points
Schedule for Implementation	15 points
Cost	15 points
Degree of Local Employment	15 points

Proposals shall contain the appropriate information necessary to evaluate based on these criteria. A committee composed of government employees as well as representatives of relevant user groups will evaluate the proposals.

Questions shall be submitted via IonWave at: <https://lexingtonky.ionwave.net>

Affirmative Action Plan

All vendors must submit as a part of the proposal package the following items to the Urban County Government:

1. Affirmative Action Plan for his/her firm;
2. Current Work Force Analysis Form;

Failure to submit these items as required may result in disqualification of the submitter from award of the contract. All submissions should be directed to:

Director, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor
Lexington, Kentucky 40507

All questions regarding this proposal must be directed to the Division of Central Purchasing, (859)-258-3320.

AFFIDAVIT

Comes the Affiant, _____, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is _____ and he/she is the individual submitting the proposal or is the authorized representative of _____, the entity submitting the proposal (hereinafter referred to as "Proposer").

2. Proposer will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.

3. Proposer will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.

4. Proposer has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.

5. Proposer has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Proposer will not violate any provision of the campaign finance laws of the Commonwealth.

6. Proposer has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."

Continued on next page

7. Proposer acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

STATE OF _____

COUNTY OF _____

The foregoing instrument was subscribed, sworn to and acknowledged before me

by _____ on this the _____ day

of _____, 20__.

My Commission expires: _____

NOTARY PUBLIC, STATE AT LARGE

EQUAL OPPORTUNITY AGREEMENT

Standard Title VI Assurance

The Lexington Fayette-Urban County Government, (hereinafter referred to as the "Recipient") hereby agrees that as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78Stat.252, 42 U.S.C. 2000d-4 (hereinafter referred to as the "Act"), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, (49 CFR, Part 21) Nondiscrimination in Federally Assisted Program of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the "Regulations") and other pertinent directives, no person in the United States shall, on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from the U.S. Department of Transportation, including the Federal Highway Administration, and hereby gives assurance that will promptly take any necessary measures to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the Regulations.

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- Section 503 of the Rehabilitation Act of 1973 states:

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.

- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.
- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.

Signature

Name of Business

WORKFORCE ANALYSIS FORM

Name of Organization: _____

Categories	Total	White (Not Hispanic or Latino)		Hispanic or Latino		Black or African- American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Administrators																	
Professionals																	
Superintendents																	
Supervisors																	
Foremen																	
Technicians																	
Protective																	
Para-																	
Office/Clerical																	
Skilled Craft																	
Service/Maintena																	
Total:																	

Prepared by: _____ Date: ____/____/____

(Name and Title)

Revised 2015-Dec-15

**DIRECTOR, DIVISION OF CENTRAL PURCHASING
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 EAST MAIN STREET
LEXINGTON, KENTUCKY 40507**

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITIES AND DBE CONTRACT PARTICIPATION

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs. The Lexington Fayette Urban County Government also has set a goal that not less than three percent (3%) of the total value of this Contract be subcontracted to Veteran-owned Small Businesses. The goal for the utilization of Disadvantaged Business Enterprises as well Veteran –owned Small Businesses as subcontractors is a recommended goal. Contractor(s) who fail to meet such goal will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

Sherita Miller, MPA, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507
smiller@lexingtonky.gov

Firm Submitting Proposal: _____

Complete Address: _____
Street City Zip

Contact Name: _____ Title: _____

Telephone Number: _____ Fax Number: _____

Email address: _____

Lexington-Fayette Urban County Government
MWDBE PARTICIPATION GOALS

A. GENERAL

- 1) The LFUCG request all potential contractors to make a concerted effort to include Minority-Owned (MBE), Woman-Owned (WBE), Disadvantaged (DBE) Business Enterprises and Veteran-Owned Small Businesses (VOSB) as subcontractors or suppliers in their bids.
- 2) Toward that end, the LFUCG has established 10% of total procurement costs as a Goal for participation of Minority-Owned, Woman-Owned and Disadvantaged Businesses on this contract.
- 3) **It is therefore a request of each Bidder to include in its bid, the same goal (10%) for MWDBE participation and other requirements as outlined in this section.**
- 4) The LFUCG has also established a 3% of total procurement costs as a Goal for participation for of Veteran-Owned Businesses.
- 5) **It is therefore a request of each Bidder to include in its bid, the same goal (3%) for Veteran-Owned participation and other requirements as outlined in this section.**

B. PROCEDURES

- 1) The successful bidder will be required to report to the LFUCG, the dollar amounts of all payments submitted to Minority-Owned, Woman-Owned or Veteran-Owned subcontractors and suppliers for work done or materials purchased for this contract. (See Subcontractor Monthly Payment Report)
- 2) Replacement of a Minority-Owned, Woman-Owned or Veteran-Owned subcontractor or supplier listed in the original submittal must be requested in writing and must be accompanied by documentation of Good Faith Efforts to replace the subcontractor / supplier with another MWDBE Firm; this is subject to approval by the LFUCG. (See LFUCG MWDBE Substitution Form)
- 3) For assistance in identifying qualified, certified businesses to solicit for potential contracting opportunities, bidders may contact:
 - a) The Lexington-Fayette Urban County Government, Division of Central Purchasing (859-258-3320)
- 4) The LFUCG will make every effort to notify interested MWDBE and Veteran-Owned subcontractors and suppliers of each Bid Package, including information on the scope of work, the pre-bid meeting time and location, the bid date, and all other pertinent information regarding the project.

C. DEFINITIONS

- 1) A Minority-Owned Business Enterprise (MBE) is defined as a business which is certified as being at least 51% owned, managed and controlled by persons of African American, Hispanic, Asian, Pacific Islander, American Indian or Alaskan Native Heritage.
- 2) A Woman-Owned Business Enterprise (WBE) is defined as a business which is certified as being at least 51% owned, managed and controlled by one or more women.

- 3) A Disadvantaged Business (DBE) is defined as a business which is certified as being at least 51% owned, managed and controlled by a person(s) that are economically and socially disadvantaged.
- 4) A Veteran-Owned Small Business (VOSB) is defined as a business which is certified as being at least 51% owned, managed and controlled by a veteran and/or a service disabled veteran.
- 5) Good Faith Efforts are efforts that, given all relevant circumstances, a bidder or proposer actively and aggressively seeking to meet the goals, can reasonably be expected to make. In evaluating good faith efforts made toward achieving the goals, whether the bidder or proposer has performed the efforts outlined in the Obligations of Bidder for Good Faith Efforts outlined in this document will be considered, along with any other relevant factors.

D. OBLIGATION OF BIDDER FOR GOOD FAITH EFFORTS

- 1) **The bidder shall make a Good Faith Effort to achieve the Participation Goal for MWDBE and Veteran-Owned subcontractors/suppliers. The failure to meet the goal shall not necessarily be cause for disqualification of the bidder; however, bidders not meeting the goal are required to furnish with their bids written documentation of their Good Faith Efforts to do so.**
- 2) Award of Contract shall be conditioned upon satisfaction of the requirements set forth herein.
- 3) The Form of Proposal includes a section entitled "MWDBE Participation Form". The applicable information must be completed and submitted as outlined below.
- 4) **Failure to submit this information as requested may be cause for rejection of bid or delay in contract award.**

E. DOCUMENTATION REQUIRED FOR GOOD FAITH EFFORTS

- 1) Bidders reaching the Goal are required to submit only the MWDBE Participation Form." The form must be fully completed including names and telephone number of participating MWDBE firm(s); type of work to be performed; estimated value of the contract and value expressed as a percentage of the total Lump Sum Bid Price. The form must be signed and dated, and is to be submitted with the bid.
- 2) Bidders not reaching the Goal must submit the "MWDBE Participation Form", the "Quote Summary Form" and a written statement documenting their Good Faith Effort to do so. If bid includes no MWDBE and/or Veteran participation, bidder shall enter "None" on the subcontractor / supplier form). In addition, the bidder must submit written proof of their Good Faith Efforts to meet the Participation Goal:
 - a. Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.
 - b. Included documentation of advertising in the above publications with the bidders good faith efforts package

- c. Attended LFUCG Central Purchasing Economic Inclusion Outreach event
- d. Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned businesses of subcontracting opportunities
- e. Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses.
- f. Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).
- g. Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.
- d. Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs and/or Veteran-Owned businesses soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.
- e. Followed up initial solicitations by contacting MWDBEs and Veteran-Owned Businesses to determine their level of interest.
- j. Provided the interested MWDBE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.
- k. Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce
- l. Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.
- m. Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.
- n. Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

o. Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

p. Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

q. Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

Note: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to review by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.



MINORITY BUSINESS ENTERPRISE PROGRAM

Sherita Miller, MPA
Minority Business Enterprise Liaison
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
smiller@lexingtonky.gov
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long term economic viability of Lexington-Fayette Urban County Government.

To that end the city council adopted and implemented Resolution 484-2017 – A Certified Minority, Women and Disadvantaged Business Enterprise ten percent (10%) minimum goal and a three (3%) minimum goal for Certified Veteran-Owned Small Businesses and Certified Service Disabled Veteran – Owned Businesses for government contracts.

The resolution states the following definitions shall be used for the purposes of reaching these goals (a full copy is available in Central Purchasing):

Certified Disadvantaged Business Enterprise (DBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a person(s) who is socially and economically disadvantaged as defined by 49 CFR subpart 26.

Certified Minority Business Enterprise (MBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by an ethnic minority (i.e. African American, Asian American/Pacific Islander, Hispanic Islander, Native American/Native Alaskan Indian) as defined in federal law or regulation as it may be amended from time-to-time.

Certified Women Business Enterprise (WBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a woman.

Certified Veteran-Owned Small Business (VOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

Certified Service Disabled Veteran Owned Small Business (SDVOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a disabled veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

The term “Certified” shall mean the business is appropriately certified, licensed, verified, or validated by an organization or entity recognized by the Division of Purchasing as having the appropriate credentials to make a determination as to the status of the business.

We have compiled the list below to help you locate certified MBE, WBE and DBE certified businesses. Below is a listing of contacts for LFUCG Certified MWDBEs and Veteran-Owned Small Businesses in (<https://lexingtonky.ionwave.net>)

Business	Contact	Email Address	Phone
LFUCG	Sherita Miller	smiller@lexingtonky.gov	859-258-3323
Commerce Lexington – Minority Business Development	Tyrone Tyra	ttyra@commercelexington.com	859-226-1625
Tri-State Minority Supplier Diversity Council	Susan Marston	smarston@tsmsdc.com	502-365-9762
Small Business Development Council	Shawn Rogers UK SBDC	shawn.rogers@uky.edu	859-257-7666
Community Ventures Corporation	Phyllis Alcorn	palcorn@cvky.org	859-231-0054
KY Transportation Cabinet (KYTC)	Melvin Bynes	Melvin.bynes2@ky.gov	502-564-3601
KYTC Pre-Qualification	Shella Eagle	Shella.Eagle@ky.gov	502-782-4815
Ohio River Valley Women’s Business Council (WBENC)	Sheila Mixon	smixon@orvwbc.org	513-487-6537
Kentucky MWBE Certification Program	Yvette Smith, Kentucky Finance Cabinet	Yvette.Smith@ky.gov	502-564-8099
National Women Business Owner’s Council (NWBOC)	Janet Harris-Lange	janet@nwvoc.org	800-675-5066
Small Business Administration	Robert Coffey	robertcoffey@sba.gov	502-582-5971
LaVoz de Kentucky	Andres Cruz	lavozdeky@yahoo.com	859-621-2106
The Key News Journal	Patrice Muhammad	production@keynewsjournal.com	859-685-8488



LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # _____

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately. **Failure to submit a completed form may cause rejection of the bid.**

MWDBE Company, Name, Address, Phone, Email	MBE WBE or DBE	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1.				
2.				
3.				
4.				

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title



LFUCG MWDBE SUBSTITUTION FORM
Bid/RFP/Quote Reference # _____

The substituted MWDBE and/or veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title



MWDBE QUOTE SUMMARY FORM

Bid/RFP/Quote Reference # _____

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project. Failure to submit this form may cause rejection of the bid.

Company Name	Contact Person
Address/Phone/Email	Bid Package / Bid Date

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female	Veteran

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Company

Company Representative

Date

Title



LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. The LFUCG also has a 3% goal plan adopted by cited council to increase the participation of veteran owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE and Veteran contractors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # _____

Total Contract Amount Awarded to Prime Contractor for this Project _____

Project Name/ Contract #	Work Period/ From: _____ To: _____
Company Name:	Address:
Federal Tax ID:	Contact Person:

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title

LFUCG STATEMENT OF GOOD FAITH EFFORTS

Bid/RFP/Quote # _____

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE and Veteran-Owned business enterprises on the project and can supply the appropriate documentation.

_____ Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.

_____ Included documentation of advertising in the above publications with the bidders good faith efforts package

_____ Attended LFUCG Central Purchasing Economic Inclusion Outreach event

_____ Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities

_____ Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses

_____ Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).

_____ Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

_____ Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

_____ Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.

_____ Provided the interested MWDBE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.

_____ Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items

into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce

_____ Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

_____ Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

_____ Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

_____ Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

_____ Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

_____ Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to approval by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Company

Company Representative

Date

Title

GENERAL PROVISIONS

1. Each Respondent shall comply with all Federal, State & Local regulations concerning this type of service or good.

The Respondent agrees to comply with all statutes, rules, and regulations governing safe and healthful working conditions, including the Occupational Health and Safety Act of 1970, *29 U.S.C. 650 et. seq.*, as amended, and KRS Chapter 338. The Respondent also agrees to notify the LFUCG in writing immediately upon detection of any unsafe and/or unhealthful working conditions at the job site. The Respondent agrees to indemnify, defend and hold the LFUCG harmless from all penalties, fines or other expenses arising out of the alleged violation of said laws.

2. Failure to submit ALL forms and information required in this RFP may be grounds for disqualification.
3. Addenda: All addenda and IonWave Q&A, if any, shall be considered in making the proposal, and such addenda shall be made a part of this RFP. Before submitting a proposal, it is incumbent upon each proposer to be informed as to whether any addenda have been issued, and the failure to cover in the bid any such addenda may result in disqualification of that proposal.
4. Proposal Reservations: LFUCG reserves the right to reject any or all proposals, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by a Respondent in the preparation of proposals.
6. Changes/Alterations: Respondent may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the proposal, and received by LFUCG prior to the scheduled closing time for receipt of proposals, will be accepted. The proposal, when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of proposal".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from a Respondent.
8. Bribery Clause: By his/her signature on the bid, Respondent certifies that no employee of his/hers, any affiliate or Subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.

9. Additional Information: While not necessary, the Respondent may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the Respondent's response. Additional documentation shall not serve as a substitute for other documentation which is required by this RFP to be submitted with the proposal,
10. Ambiguity, Conflict or other Errors in RFP: If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting this proposal, the Respondent agrees that it has carefully examined the specifications and all provisions relating to the work to be done attached hereto and made part of this proposal. By acceptance of a Contract under this RFP, proposer states that it understands the meaning, intent and requirements of the RFP and agrees to the same. The successful Respondent shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to Respondent shall be authorized for services or expenses reasonably covered under these provisions that the proposer omits from its Proposal.
12. Cancellation: If the services to be performed hereunder by the Respondent are not performed in an acceptable manner to the LFUCG, the LFUCG may cancel this contract for cause by providing written notice to the proposer, giving at least thirty (30) days notice of the proposed cancellation and the reasons for same. During that time period, the proposer may seek to bring the performance of services hereunder to a level that is acceptable to the LFUCG, and the LFUCG may rescind the cancellation if such action is in its best interest.

A. Termination for Cause

- (1) LFUCG may terminate a contract because of the contractor's failure to perform its contractual duties
- (2) If a contractor is determined to be in default, LFUCG shall notify the contractor of the determination in writing, and may include a specified date by which the contractor shall cure the identified deficiencies. LFUCG may proceed with termination if the contractor fails to cure the deficiencies within the specified time.
- (3) A default in performance by a contractor for which a contract may be terminated shall include, but shall not necessarily be limited to:
 - (a) Failure to perform the contract according to its terms, conditions and specifications;
 - (b) Failure to make delivery within the time specified or according

- to a delivery schedule fixed by the contract;
- (c) Late payment or nonpayment of bills for labor, materials, supplies, or equipment furnished in connection with a contract for construction services as evidenced by mechanics' liens filed pursuant to the provisions of KRS Chapter 376, or letters of indebtedness received from creditors by the purchasing agency;
 - (d) Failure to diligently advance the work under a contract for construction services;
 - (e) The filing of a bankruptcy petition by or against the contractor; or
 - (f) Actions that endanger the health, safety or welfare of the LFUCG or its citizens.

B. At Will Termination

Notwithstanding the above provisions, the LFUCG may terminate this contract at will in accordance with the law upon providing thirty (30) days written notice of that intent, Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.

13. **Assignment of Contract:** The contractor shall not assign or subcontract any portion of the Contract without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
14. **No Waiver:** No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this Contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
15. **Authority to do Business:** The Respondent must be a duly organized and authorized to do business under the laws of Kentucky. Respondent must be in good standing and have full legal capacity to provide the services specified under this Contract. The Respondent must have all necessary right and lawful authority to enter into this Contract for the full term hereof and that proper corporate or other action has been duly taken authorizing the Respondent to enter into this Contract. The Respondent will provide LFUCG with a copy of a corporate resolution authorizing this action and a letter from an attorney confirming that the proposer is authorized to do business in the State of Kentucky if requested. All proposals must

be signed by a duly authorized officer, agent or employee of the Respondent.

16. **Governing Law:** This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this Contract, the Parties agree that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division. All parties expressly consent to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to this Contract or any rights or obligations arising thereunder. Service of process may be accomplished by following the procedures prescribed by law.
17. **Ability to Meet Obligations:** Respondent affirmatively states that there are no actions, suits or proceedings of any kind pending against Respondent or, to the knowledge of the Respondent, threatened against the Respondent before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of Respondent to perform its obligations under this Contract, or which question the legality, validity or enforceability hereof or thereof.
18. Contractor understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Contractor is an independent contractor at all times during the performance of the services specified.
19. If any term or provision of this Contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.
20. Contractor [or Vendor or Vendor's Employees] will not appropriate or make use of the Lexington-Fayette Urban County Government (LFUCG) name or any of its trade or service marks or property (including but not limited to any logo or seal), in any promotion, endorsement, advertisement, testimonial or similar use without the prior written consent of the government. If such consent is granted LFUCG reserves the unilateral right, in its sole discretion, to immediately terminate and revoke such use for any reason whatsoever. Contractor agrees that it shall cease and desist from any unauthorized use immediately upon being notified by LFUCG.

Signature

Date

**RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION**

INDEMNIFICATION AND HOLD HARMLESS PROVISION

- (1) It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- (2) CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.
- (3) In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
- (4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.
- (5) LFUCG is a political subdivision of the Commonwealth of Kentucky. CONTRACTOR acknowledges and agrees that LFUCG is unable to provide indemnity or otherwise save, hold harmless, or defend the CONTRACTOR in any manner.

FINANCIAL RESPONSIBILITY

BIDDER/CONTRACTOR understands and agrees that it shall demonstrate the ability to assure compliance with the above Indemnity provisions and these other risk management provisions prior to final acceptance of its bid and the commencement of any work or provision of goods.

INSURANCE REQUIREMENTS

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW, AND YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO COMPLY WITH THE INSURANCE REQUIREMENTS BELOW, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Required Insurance Coverage

BIDDER/CONTRACTOR shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR. The cost of such insurance shall be included in any bid:

<u>Coverage</u>	<u>Limits</u>
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million aggregate or \$2 million combined single limit
Worker's Compensation	Statutory
Employer's Liability	\$100,000
Professional Liability	\$1 million
Excess Liability	\$1 million

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
- c. The General Liability Policy shall include Premises and Operations coverage unless it is deemed not to apply by LFUCG.
- d. The General Liability Policy shall include Employment Practices Liability coverage or an endorsement in a minimum amount of \$1 million unless it is deemed not to apply by LFUCG.
- e. The Policy shall include Umbrella/Excess Liability coverage in the amount of \$1 million per occurrence, \$1 million aggregate, unless it is deemed not to apply by LFUCG.
- f. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- g. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

Deductibles and Self-Insured Programs

IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE RESPONSE DATE.

Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of BIDDER/CONTRACTOR's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage

Safety and Loss Control

CONTRACTOR shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

BIDDER/CONTRACTOR agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

CONTRACTOR understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

BIDDER/CONTRACTOR understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging BIDDER/CONTRACTOR for any such insurance premiums purchased, or suspending or terminating the work.

Former Jacks Creek Pike Landfill Improvement Project Raven Run Nature Sanctuary

Lexington-Fayette Urban County Government (LFUCG) is accepting proposals from interested professional engineering firms for engineering services at the Former Jacks Creek Pike Landfill at the Raven Run Nature Sanctuary in Fayette County, Kentucky. The selected firm shall perform professional services as hereinafter stated which include project management, preparation of engineered drawings for construction, coordination with permitting agencies, preparation of technical specifications for bidding purposes, bid assistance, and construction administration assistance related to implementation of a landfill repair and improvement project. This Scope of Engineering Services provides a minimum set of guidelines, tasks, and activities for the design, bidding, and construction administration services for the project.

The selected firm shall anticipate two phases of work: Phase 1 Design, Construction Planning, and Bidding Services and Phase 2 Construction Administration. Phase 2 shall not begin until a separate Task Order is executed. Firms shall provide a fee quote for Phase 1. For Phase 2, firms shall provide (1) a labor rate sheet, (2) a daily rate for construction monitoring, and (3) a fee quote for preparation of final as-built drawings, a construction project close out report and an Operations and Maintenance Plan.

1. Scope of Work

1.1. General Project Description

Raven Run Nature Sanctuary is a 734-acre natural area owned and operated by the Lexington-Fayette Urban County Government (LFUCG) in southern Fayette County. Within the bounds of the nature sanctuary is the former Jacks Creek Pike Landfill, also known as Raven Run Landfill. From 1969 to 1972, Fayette County accepted household waste, industrial wastes, and construction/demolition debris at the landfill. The landfill stopped accepting waste after a fire occurred onsite, at which time a layer of soil was placed over the waste and the landfill was abandoned.

To address the environmental impact from orphaned and abandoned landfills, House Bill 174 established KRS 224.43-505, the Kentucky Pride Fund (Orphan Landfill Program). This statute provided a funding mechanism for abandoned municipal solid waste disposal facilities that ceased accepting wastes before July 1, 1992, to undergo proper characterization, corrective action, and closure. In 2002, the Jacks Creek Pike Landfill was placed on a priority list for characterization, cleanup, and closure.

In 2006, the Kentucky Division of Waste Management (KDWM) retained Tetra Tech, Inc., to perform site characterization activities in preparation for closure of the landfill under the Orphan Landfill Program. Tetra Tech submitted a Site Characterization Report on June 25, 2008, which summarized investigation activities that included a hydrogeologic investigation; surface water, sediment and waste sampling; an ecological survey; a geophysical investigation; and a geotechnical investigation. These investigation activities were conducted in support of designing a closure strategy. Based on the results of the investigation, Tetra Tech concluded that the project was suited for use of phytoremediation techniques for both the landfill cap and the treatment of leachate. Tetra Tech recommended a closure plan that included consolidation of the waste to a smaller footprint, grading of the waste for appropriate drainage, creating diversion ditches to minimize surface water reaching the cap, planting of native trees and grasses to support phytoremediation, and designing a passive leachate collection system.

In December 2011, after the design and bidding process, Perdue Environmental Contracting Company (PECCO) overseen by Tetra Tech and the KDWM, began the closure construction activities. In the first phase, approximately 4,500 cubic yards of waste was consolidated and the landfill footprint was reduced from 8.7 acres to 6.7 acres. A passive leachate management system was installed for the conveyance of leachate through a rock-filled bioswale. The next phase of work involved installation of the phytoremediation cap which included placement of an estimated 27,800 cubic yards of backfill and topsoil and planting of native trees. Construction activities occurred from December 2011 through January 2012, ceased for winter, and then resumed from April 2012 through June 2012. Punch list items were addressed, seedlings were planted, and the final inspection was performed on December 19, 2012. Construction activities were documented in the Final Construction Document submitted by Tetra Tech to the KDWM in September 2013.

After completion of construction activities, in June 2014, the KDWM notified LFUCG that the project was complete, asked that a notification be placed on the property deed and delegated responsibility of management of the closed landfill to LFUCG. As part of the management activities, LFUCG has performed routine inspections and completed required maintenance as needed.

During inspections conducted in 2020, it was noted that water was coming out of Manhole No. 4 likely indicating some plugging from sediment was occurring within the bioswale and leachate collection system. The leachate collection system consists of a perforated pipe surrounded by crushed stone which is wrapped with geotextile at the toe of the landfill. There are four manholes throughout the collection system with solid pipe connecting the leachate collection system to the bioswale header. The bioswale, which is approximately 150 feet to 200 feet long, consists of four cleanouts. Manhole No. 4 is the most downgradient manhole closest to the bioswale system. Since the 2020 inspection, the bioswale system has been jet-rodded and cleaned three times, in June 2020, in October 2020, and again in October 2021.

Based on observations made during the cleaning activities and the frequency at which the system requires maintenance, it is assumed that the bioswale media has become clogged with silt and sediment causing the restriction of flow. While the jet-rod cleaning assists with maintenance, the 10-year length of operation of the bioswale has necessitated more frequent maintenance. As such, LFUCG has been determined that a longer-term solution needs to be implemented by replacing the bioswale media with clean, crushed stone and new non-woven geotextile fabric.

Therefore, LFUCG is interested in hiring an engineering company to perform the following tasks:

- Review the engineering design and project information;
- Meet with LFUCG personnel to discuss goals for the bioswale replacement and landfill improvement project;
- If necessary, conduct any additional investigations or inspections to support the project;
- Prepare bid specifications and engineering drawings to provide clear direction to the bidders for the work to be accomplished;
- Assist with any permitting or KDWM agency involvement;
- Assist with preparation of a Request for Bid (RFB) and provide technical assistance during the bid evaluation process;
- As part of Phase 2, provide construction project management, oversight and owner's engineer services during implementation of the construction phase of the project; and,

- Prepare final as-built drawings and a construction project close out report, including an Operations and Maintenance Plan.

1.2. Scope of Services

Phase 1 – Design and Bid Services

1. Prepare and submit a Health and Safety Plan which will serve as the consultant's safety plan through the duration of the project. The plan can be amended as necessary to accommodate any unanticipated or new work tasks.
2. Review pertinent existing documentation and perform reconnaissance of the area as necessary for design and construction planning.
3. If determined to be necessary by the respondent, conduct any additional investigations or inspections to support the project. Details regarding proposed activities should be outlined in the scope of work portion of the bid response.
4. Prepare construction drawings necessary for implementation of the improvement project. Drawings shall provide sufficient detail for all elements of the project to include access requirements, staging areas, access road improvements, bioswale replacement design, site restoration requirements, and any new infrastructure requirements determined to be necessary to provide access during construction and furthermore, limit access by the public in the future.
5. LFUCG is open to value added engineering recommendations for design modifications for the bioswale to improve effectiveness of its designed purpose, increase the life expectancy of the feature, and/or modifications to make the system easier to clean and maintain.
6. Prepare contract documents for construction bidding. Documents shall include the construction drawings and specification package. Drawings shall be provided in CAD format and also as final PDF drawings. The contract specifications package shall include, but is not limited to, the following elements:
 - a. Summary of Work
 - b. Work Restrictions
 - c. Submittal Procedure
 - d. Safety Requirements
 - e. Quality Control
 - f. Temporary Construction Facilities and Controls
 - g. Temporary Environmental Controls (including leachate management during construction)
 - h. Temporary Stormwater Pollution Control, including appropriate documents for the development of an Erosion and Sediment Control Plan and/or a Stormwater Pollution Prevention Plan by the Contractor.
 - i. Site Restoration
7. Prepare Engineer's Opinion of Probable Cost
8. Assist in bid process to include:
 - a. Coordinate the preparation and distribution of Contract Documents to the Division of Central Purchasing.
 - b. Provide LFUCG with two (2) complete sets of the Contract Documents at no charge.
 - c. Attend pre-bid meeting and prepare and distribute meeting minutes.
 - d. Respond to questions from bidders and assist in preparing addenda.
 - e. Attend bid opening.
 - f. Review bids, prepare the bid tabulation, and recommend award.

Phase 2 – Construction Administration

Please note - Costs to be provided once a contractor is selected and a schedule is established

1. Conduct a pre-construction conference and prepare and distribute meeting minutes.
2. Review all shop drawings and documents submitted by the Contractor that are required by the Contract Documents for construction.
3. Respond to Contractor's requests for information.
4. Prepare change orders and submit to LFUCG for approval.
5. Conduct construction progress meetings and prepare and distribute meeting minutes.
6. Perform daily site visits by a project engineer to gauge progress and to resolve technical issues. Issue inspection reports for each visit.
7. Conduct all required testing.
8. Review Contractor's pay requests.
9. Develop a punch list once the project reaches Substantial Completion.
10. Assist the LFUCG Project Manager with the final inspection of the project.
11. Prepare As-Built Drawings and Final Construction Documents.
12. Provide LFUCG with organized PDF electronic files containing all items relative to the project, including drawings and final closeout project documents.
13. Prepare an Operations and Maintenance Plan for use by LFUCG.

1.3. Meetings

The Consultant shall schedule, coordinate, and preside over meetings; develop the agenda; and keep and distribute meeting minutes. Meetings shall be, at a minimum, the following:

Design and Bid Services - Phase 1

1. Kick-off meeting to address project scope and task list (this can be combined with the onsite meeting)
2. Onsite meeting to discuss project goals and site restoration elements
3. One meeting with LFUCG to review the construction plans draft at 50% complete
4. One pre-bid meeting
5. One meeting with LFUCG to review bid responses

Construction Administration - Phase 2

Please note - Costs to be provided once a contractor is selected and a schedule is established

1. Kick-off meeting with selected Contractor
2. Contractor meetings, as needed, including one meeting at Substantial Completion
3. One project close-out meeting with LFUCG and Contractor

1.4. Project Schedule

The duration of all activities defined and listed above as Phase 1 shall begin as soon as the Consultant has received a written notice to proceed and shall not exceed the times listed below. Extension of the duration will be at the sole discretion of the Division of Waste Management, and requests for extensions by the Consultant shall be in writing and considered only for additional major activities not included in this document. The following schedule is provided as a basis for task deadlines and will remain in effect until a replacement schedule is approved in writing by LFUCG. The intent is to have the construction substantially completed by the end of the first quarter of 2023. The goal is to have construction occur in a window from November 2022 through February 2023.

Design Services - Phase 1 Task Schedule (duration cumulative from Notice to Proceed)	Duration
Initial meeting to review project details and to address scope and task development	10 days
Onsite visit	30 days
50% complete meeting and draft construction plans	60 days
90% complete draft construction plans	90 day
Construction Documents finalized, engineer's opinion of probable cost complete	100 days
Bid Services - Phase 1 Task Schedule	Duration
Bid Review Response and Provide Recommendations, estimate for Phase 2 services	10 days after receiving bids

Administration - Phase 2 Task Schedule (duration NOT cumulative)	Duration
Kick-off meeting with selected Contractor (after Contract approved by Council)	10 days
Construction administration activities (from Notice to Proceed)	60 days
Project close out (from final inspection/project close-out meeting)	10 days

2. Proposal Evaluation Criteria

Proposals will be evaluated by LFUCG based on the following criteria.

EVALUATION CRITERIA	POINTS POSSIBLE
Qualifications and Past Performance	35 points possible
Proposal / Project Approach	20 points possible
Schedule for Implementation	15 points possible
Cost	15 points possible
Degree of Local Employment	15 points possible
Total points possible	100 points possible

Qualifications and Past Performance (up to 35 points): Respondents are required to provide a statement detailing their experience (years of experience, nature of work, etc.) in performing similar projects and also provide a summary of past projects completed with LFUCG. Resumes and license information should be provided for the personnel who will be performing the engineering services as the licensed engineer on the project and the project manager.

Proposal / Project Approach (up to 20 points): Each respondent shall provide a narrative detailing how they will meet the objectives and requirements of this RFP. Each response will be evaluated based on their explanation in their written proposal. Any value added engineering information that should be considered should be provided in this narrative in addition to a description of any additional investigations or inspection activities being proposed by the respondent.

Schedule for Implementation (up to 15 points): Each respondent shall provide a planned schedule for completing the Phase 1 work tasks (through finalizing the construction documents and bid preparation) by the anticipated date of August 9, 2022. Finalized dates for the Project will be listed in the Contract.

Cost for Minimum Deliverables (up to 15 points): Provide the fee to complete Phase 1 services. For Phase 2 services, provide anticipated hourly rates for personnel, a daily rate for onsite construction monitoring (to include all personnel time, and associated mobilization, demobilization and daily reporting time, but not including any extra subcontracted testing or testing equipment) and an estimated fee to complete the final drawing package, closeout report, and Operations and Maintenance Plan.

Degree of Local Employment (up to 15 points): Points will be awarded for companies with an office in Lexington, Kentucky, or in Central Kentucky.

3. Method of Invoice and Payment

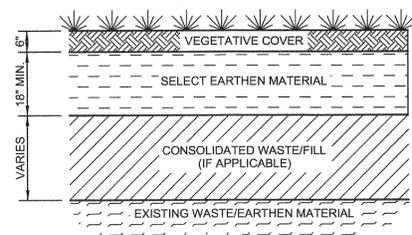
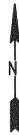
The Consultant may submit monthly invoices for basic services or work rendered, based upon the Consultant's estimate of the portion of the total services actually completed during the billing cycle. Each invoice shall show the amount to be paid, the subtotal of all prior invoices, and the LFUCG Purchase Order Number against which the invoice is to be charged.

The Division of Waste Management – Project Manager will either approve or deny each invoice within fourteen (14) calendar days of receipt.

4. Stop Work Notice

The Consultant shall at all times monitor time allotted and amounts invoiced for tasks and activities as compared to their original estimates and expectations. The Consultant shall notify the Division of Waste Management immediately upon discovery of facts that may necessitate a change in the contract amount or may extend the contract time. If the amount of the change is expected to exceed ten percent (10%) of the original contract amount, the Consultant shall immediately stop all work related to this Scope of Services. Work shall not recommence without written notification from the Division of Waste Management. The Consultant shall submit all requests for changes to the Division of Waste Management in writing and shall be present when the issue is discussed before the Urban County Council. Failure by LFUCG to endorse the requested change does not relieve the Consultant of the contractual requirements and activities defined by this entire Scope of Services.

LFUCG reserves the right to terminate the contract when a mutually satisfactory agreement cannot be reached in a timely manner. All engineering project data must be submitted to LFUCG upon request. If it is determined that the Consultant failed to notify LFUCG on a timely basis regarding insufficient fee or inadequate schedule, LFUCG reserves the right to terminate the contract at any time thereafter.



WASTE AREA CAP DETAIL
NOT TO SCALE

LEGEND

- INTERMEDIATE CONTOUR
- INDEX CONTOUR
- DRAINAGE DITCH
- DRAINAGE BERM
- LEACHATE COLLECTION PIPE
- BIOSWALE

RECORD DOCUMENTS

Upon completion of the Work, the Design Professional shall compile for and deliver to the client a reproducible set of Record Documents conforming to the marked-up prints, drawings and other data furnished to the Design Professional by the Contractor. This set of Record Documents will show the reported location of the Work and significant changes made during the construction process. Because these Record Documents are based on unverified information provided by other parties which will be assumed reliable, the Design Professional cannot and does not warrant their accuracy.

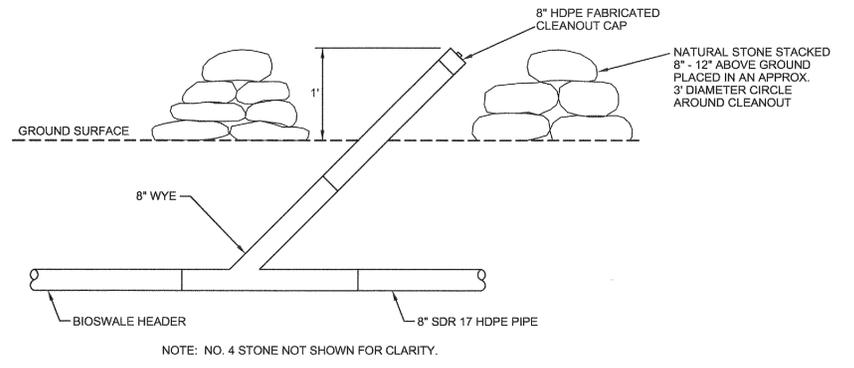
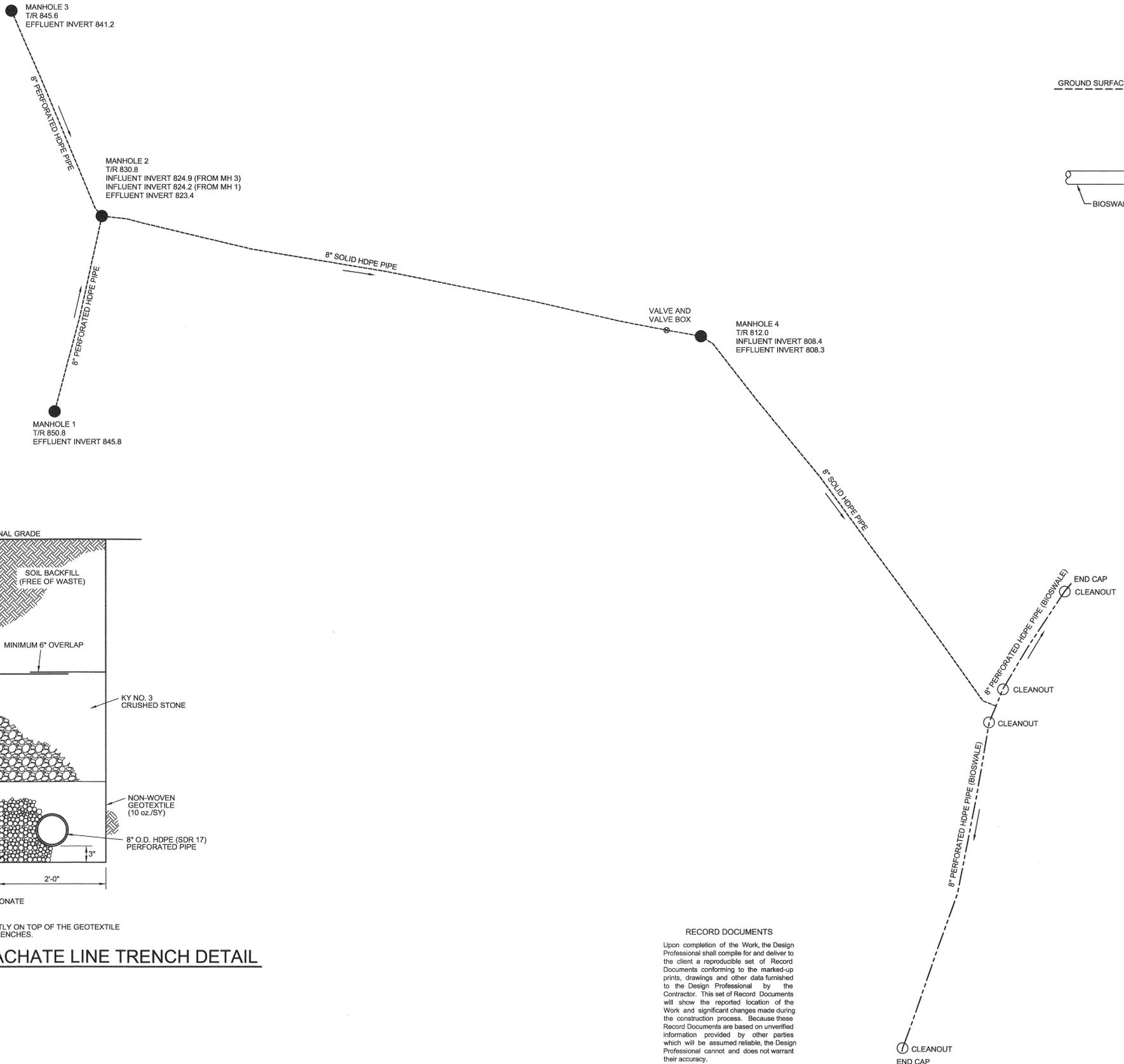
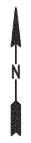
Tetra Tech, Inc.

Date 3-29-2012 By [Signature]

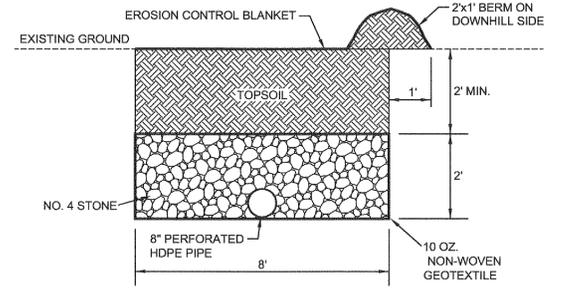
RAVEN RUN – LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY		
RECORD DATE June 22, 2012	FINAL GRADE AS-BUILTS	DRAWING NO. C-1
DRAWN BY CAH	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	REVIEWED DIV. OF ENGR.
CHECKED BY HRL	TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	FOR INTENT ONLY ACCOUNT NO. CSW2-129-DWM- XX78-00
A&E FILE NO. 05559		AGENCY AUTHORIZED AGENT
DATE FEB. 2013	DIVISION OF ENGINEERING	DATE
REVISIONS	APPROVED FOR PROGRAM CONCEPT ONLY	
1		
2		
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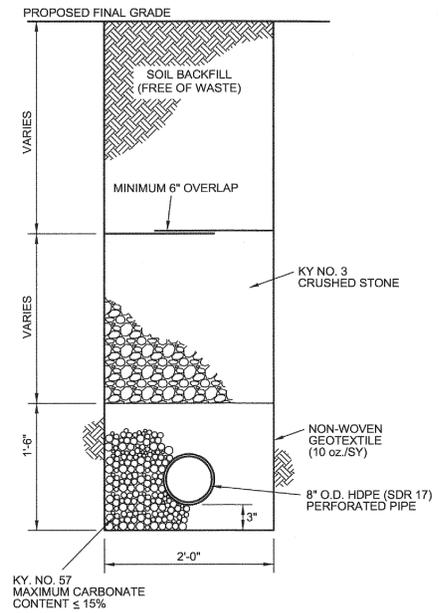
SURVEY INFORMATION PROVIDED TO TETRA TECH, INC. FROM THE CONTRACTOR (PECCO, INC.)



CLEANOUT DETAIL
NOT TO SCALE



BIOSWALE HEADER DETAIL
NOT TO SCALE



NOTE: IDENTIFICATION TAPE IS INSTALLED DIRECTLY ON TOP OF THE GEOTEXTILE OVERLAP ABOVE THE NO. 3 STONE IN ALL PIPE TRENCHES.

TYPICAL LEACHATE LINE TRENCH DETAIL
NOT TO SCALE



SURVEY INFORMATION PROVIDED TO TETRA TECH, INC. FROM THE CONTRACTOR (PECCO, INC.)

RECORD DOCUMENTS

Upon completion of the Work, the Design Professional shall compile for and deliver to the client a reproducible set of Record Documents conforming to the marked-up prints, drawings and other data furnished to the Design Professional by the Contractor. This set of Record Documents will show the reported location of the Work and significant changes made during the construction process. Because these Record Documents are based on unverified information provided by other parties which will be assumed reliable, the Design Professional cannot and does not warrant their accuracy.

Tetra Tech, Inc.

Date 3/24/13 By *[Signature]*

NOTE: VALVE WRENCH GIVEN TO LFUG PERSONNEL.

REVISIONS		DATE	RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
1			RECORD DATE Aug. 3, 2012	DRAWING NO. C-2
2			DRAWN BY CAH	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY
3			CHECKED BY HRL	
4			A&E FILE NO. 05559	REVIEWED DIV. OF ENGR.
5			DATE FEB. 2013	ACCOUNT NO. CSWZ-129-DWMA-XX78-00
6			AGENCY AUTHORIZED AGENT	APPROVED FOR PROGRAM CONCEPT ONLY
7			DIVISION OF ENGINEERING	APPROVED FOR PROGRAM CONCEPT ONLY
8				
9				

05559-Raven Run Landfill As-Built.dwg



ADDENDUM #1

RFP Number: #17-2022

Date: April 1, 2022

Subject: Former Jacks Creek Pike Landfill Improvement Project
Raven Run Nature Sanctuary

Address inquiries to:
Sondra Stone
sstone@lexingtonky.gov

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced RFP:

1. Pre-bid sign-in sheet is attached.
2. Can the response date be extended?
Response deadline date has been extended to April 11th at 2PM EST
3. Do we need to notify LFUCG if we want to return to visit the site between now and the response deadline?
Arrangements can be made for additional site access prior to the bid due date. Please contact Sondra Stone with the desired date and time of additional site visits and Sondra will work with Raven Run and Division of Environmental Services staff to arrange access.
4. If we are the successful respondent, do we need to notify LFUCG if we want to return to visit the site for project-related work?
Once an award has been made, the selected company can make arrangements as needed for site access. The LFUCG project manager will be Sarah Donaldson, who will be the primary contact during execution of the project.
5. Regarding Value Added Engineering, would any proposed items need to further the objective of maintaining the discharge as a non-point source / diffuse flow concept?
Yes. LFUCG will consider any modifications that extend the life or increase efficiency of the system; however, the overall design concept will need to be in general conformance with the original intent of the leachate collection system.



6. How much flow does the bioswale receive?

LFUCG does not monitor flow through the system with the use of flow meters. Leachate quantity was discussed in a 2012 annual report prepared by the Kentucky Division of Waste Management (attached) which estimated flow in 2012 at 500 GPD (after installation of diversion ditches). Current flow information can be a part of the data collection phase for the successful respondent and LFUCG will work with the successful bidder and/or their subcontractor to provide access for collection of that information if needed.

7. Can LFUCG provide any sampling date of the leachate?

Available leachate data collected during the landfill closure is attached, which represents the most recent leachate specific water quality data collected.

8. What is planted on the cap?

The cap was planted with selected trees (20% each of Shellbark Hickory, Swamp White Oak, Eastern Cottonwood, Black Maple and Yellow Buckeye). Native Grasses and wildflowers were also planted at the time of site restoration. Native grasses were to include the following:

<i>Seed Species</i>	<i>Seeding rates (pounds per acre)</i>
<i>Big Bluestem</i>	<i>4.0</i>
<i>Little Bluestem</i>	<i>6.0</i>
<i>Switchgrass</i>	<i>2.0</i>
<i>Indian Grass</i>	<i>6.0</i>
<i>Canada Wild Rye</i>	<i>10.0</i>
<i>Partridge Pea</i>	<i>2.0</i>
<i>Annual Rye Grass</i>	<i>25.0</i>
<i>Black-Eyed Susan</i>	<i>0.5</i>
<i>Lanceleaf Coreopsis</i>	<i>0.5</i>
<i>Common Milkweed</i>	<i>0.5</i>
<i>Wild Bergamot</i>	<i>0.5</i>
<i>Buffalograss</i>	<i>25.0</i>

9. Do bidders need to account for any permits that might need to be obtained as part of the design / construction?

Yes, bidders will need to assist with identification of required permits and provide assistance with obtaining any permits throughout all phases of the project. LFUCG has communicated with the KDWM Division of Solid Waste regarding the project and at this time, the scope of work is considered to be O&M.



*As indicated on page 1 of the scope of work: The selected firm shall perform professional services as hereinafter stated which include project management, preparation of engineered drawings for construction, **coordination with permitting agencies**, preparation of technical specifications for viding purposes, bid assistance, and construction administration assistance related to implementation of a landfill repair and improvement project.*



Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____



- City of Richmond Landfill – Madison County
- Marion County Landfill
- Perry County Landfill
- Multi-County Services – Rockcastle County
- Briar Hill Landfill – Scott County
- Sims Road Landfill – Scott County
- City of Campbellsville Landfill – Taylor County
- Glen Lily – Warren County
- City of Bowling Green Inert – Warren County
- Grassy Springs Landfill – Woodford County

Two landfill closure projects are presently under construction. Total cost for site characterization, design and construction is estimated at \$5.6 million.

- Jacks Creek Pike Landfill – Fayette County
- Billy Glover Landfill – Jessamine County

Two historic landfill closure projects are in the design phase and will be scheduled for construction. The total construction cost estimate is approximately \$4.5 million, which includes site characterization as well as design and engineering oversight.

- Johnson County Landfill
- Trigg County Landfill

Initial characterization of 162 sites is complete. The reports and data have been reviewed and the sites have been prioritized based on the perceived threat to human health and the environment. An additional 100 landfills in 23 counties are under contract for initial site characterization. The characterization includes file reviews, property assessment, environmental sampling, and evaluation for threat to human health and the environment. The estimated cost for the initial site characterization project excluding direct and indirect personnel expenses is \$1.2 million.

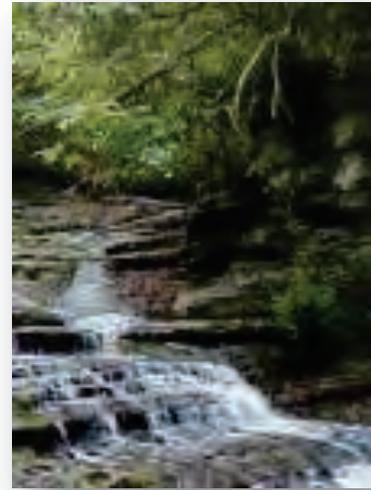
SOLID WASTE BRANCH HIGHLIGHT

Raven Run Nature Sanctuary

By Tammi Hudson, P.E.

Raven Run is a 734-acre nature sanctuary located in Fayette County off Jacks Creek Pike. The sanctuary is visited by more than 32,000 people annually but most people do not know that a former county landfill is situated within the 10 miles of hiking trails.

Fayette County accepted household wastes, industrial wastes, and construction/demolition debris at Jacks Creek Pike landfill from 1969 to 1972. The landfill stopped accepting waste after a fire in 1971, and a layer of soil was placed over the waste and the landfill was abandoned. In 2002, House Bill 174 established a program to clean up orphaned or abandoned landfills and Jacks Creek Pike landfill was placed on the priority list for cleanup because of its potential threat to human health and the environment. The landfill is situated in a ravine with natural springs flowing through it and it produces a large volume of leachate.



*Raven Run Nature Sanctuary
Lexingingky.gov photo*

The Division of Waste Management and their consultant, Tetra Tech, Inc., worked with Lexington's Parks and Recreation Department to choose a non-disruptive technology to remediate the leachate. Phytoremediation was selected because it could provide dual benefits by reducing the quantity and quality of leachate while maintaining the sanctuary's natural landscape. As the trees mature, their roots could uptake and remove contaminants from the leachate.

As funding became available, plans were developed to consolidate the waste into a smaller footprint, install a passive leachate collection system, replace the cap, and plant trees on the landfill. With the help of consulting firm, Tetra Tech, Inc., and contractor, PECCO, Inc., construction began on Dec. 12, 2011.

Raven Run Nature Sanctuary is open daily and one obstacle for the construction project was minimizing disturbance to visitors. Cell phones and Verizon 4LTE Hot Spot® were used for communication and internet service, which eliminated the need for temporary overhead utility lines. Equipment and materials were staged away from main trails and construction activity was not visible from the nature center.

Construction workdays were decreased by incorporating current technology with heavy equipment. Global Positioning System (GPS) units were mounted in dozers and track excavators, and construction plans were loaded into the Trimble Tablet® which communicated with earth moving equipment. PECCO installed a 2-foot by 3-foot solar panel to supply power to the base station of the GPS system.

In the first phase of the project approximately 4,500 cubic yards of waste from the construction/demolition debris (C/DD) landfill and four small areas of C/DD were relocated to the former municipal solid waste landfill area. Using track excavators, dozers, and articulating trucks, the municipal waste and C/DD waste were moved upstream 100 yards to fill the valley and to isolate and reroute a natural spring which was flowing through the waste. Almost 25,850 cubic yards of waste were combined and reshaped in the valley, and the total landfill footprint was reduced from 8.7 acres to 6.7 acres. The natural spring flow was redirected from the waste to a diversion ditch resulting in a decrease of leachate by more than 10,000 gallons per day.

The quantity of leachate was minimized to less than 500 gallons per day, and the leachate did not have color, odor, or contaminants in concentrations above surface water discharge limits. A passive gravity system was installed, directing the leachate through a rock filled bioswale allowing natural overland flow.

The next phase of work was installing the phytoremediation cap. An estimated 27,800 cubic yards of backfill and topsoil were trucked from an off-site borrow area to the nature sanctuary. Again using GPS equipment mounted on dozers, the clay and topsoil were placed and final contours were achieved within 28 days. Native species of water loving trees, such as sycamores and poplars, were randomly planted. At completion, the disturbed 11 acres will be repopulated with more than 5,000 trees to provide a natural environment on the municipal waste landfill. Native grass seed, including buffalo and Indian grass seed, was broadcast in areas where C/DD waste had been removed.

During the three years Jacks Creek Pike landfill operated, segments of the property were designated for changing oil and lubricating machinery. During the Division of Waste Management's site characterization, soil impacted with low levels of volatile organic compounds was identified beside Raven Run Sanctuary's popular Meadow Trail. The area was a designated sludge pit and several drum carcasses remained in the pit. Approximately 900 cubic yards of soil were removed, sampled, and transported off-site for disposal. The excavated area was backfilled and hydroseeded with native grasses.

The Division of Waste Management worked diligently to keep activities at the park uninterrupted, minimize disturbance to surrounding homes, and maintain the natural beauty of the popular park. Attention to details was very important. For example, during construction of a diversion ditch a nest of turtles was discovered and construction stopped to relocate the five turtles to a new habitat.

For more information on Raven Run Nature Sanctuary, including hours of operation, public programs, school programs and trails, visit the website hosted by the Lexington-Fayette Urban County Government at <http://www.lexingtonky.gov/index.aspx?page=276>.

ANALYTICAL RESULTS

During construction, soil and surface water samples were collected and submitted to a laboratory for analysis of various parameters.

Soil

While excavating the former waste oil pits, a crushed 30-gallon steel drum was discovered on January 3, 2012. As the drum was moved during the excavation, a liquid leaked from the drum. One initial sample was collected from the area and analyzed for TCLP VOCs, TCLP SVOCs, TCLP RCRA Metals, PCBs, and flashpoint in order to characterize the waste and determine the proper disposal methods. There were no exceedances for TCLP VOCs, TCLP SVOCs, TCLP RCRA Metals, or PCBs, but the flashpoint result was 62° F. Roll-off containers were brought to the site to store the excavated material from that area until additional samples could be collected. Representative samples were collected from each roll-off container and all the analytical results were acceptable for disposal of the soil at a contained landfill. The material was transported to the Georgetown Landfill and properly disposed.

Previous sampling activities conducted in 1991 and 2002 indicated that elevated lead concentrations were contained in soil samples collected from the former waste oil pit areas. Samples were again collected in April 2006 to determine the status of the material. The results from the 2006 sampling activities verified that elevated lead concentrations were still present. Upon completion of excavation of the former waste oil pits during the recent closure activities, confirmatory soil samples were collected to verify that all impacted soil was removed. The excavation area was divided up into five areas. One composite soil sample was collected from each of the five areas and analyzed for lead. All soil samples collected from the former waste oil pit excavation area were below the EPA Region IX allowable level of 750 mg/Kg for industrial soil, confirming that all the contaminated material was removed. A total of 1,228.23 tons of soil, which includes the drum impacted material described above, were transported to the Georgetown Landfill for disposal. A copy of the contaminated soil disposal summary is attached.

On February 27, 2012, the water (7,600 gallons) that accumulated in the excavated pit was pumped into three vacuum trucks and transported to Waste Water Recyclers in Mount Sterling, Kentucky for disposal. No samples of the pit water were collected for analysis. The excavated area was then filled with soil obtained from an off-site borrow area and seeded with Buffalo Grass.

Leachate

During the removal and relocation of the municipal solid waste, leachate was encountered on January 30, 2012. A sample of the leachate was collected by the contractor (PECCO, Inc.) and submitted to the laboratory for cyanide, arsenic, cadmium, chromium, hexavalent chromium, copper, lead, nickel, silver, and zinc analyses. The analytical results indicated a lead concentration of 1.9 mg/L, which is above the allowable maximum contaminant level (MCL) for water of 0.015 mg/L and required off-site disposal at a treatment facility. All other analytical results were below the allowable limits. A total of 569,250 gallons of leachate were transported for treatment at the Town Branch Treatment Plant in Lexington, Kentucky. A follow-up sample by Tetra Tech was collected on February 10, 2012, and was analyzed for lead, BOD, PAH, TOC, TSS, TDS, chlorides, sulfate, ammonia, iron, sodium, and RCRA Metals. All analytical results were either below the allowable limits or below the detection levels and it was then deemed acceptable to discharge on-site. Because only the lead concentration contained in the January 30th sample exceeded the MCL, Tetra Tech collected a sample from the holding pond weekly in order to monitor the lead concentration to

ensure that on-site discharge continued to be acceptable. No elevated lead concentrations were contained in any of the post-January 30th samples collected by Tetra Tech. Sampling ceased after the leachate collection system and the bioswale were installed and functional.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

DJ Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

Report Summary

Thursday February 02, 2012

Report Number: L558063

Samples Received: 01/31/12

Client Project:

Description: Ky Div of WM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Leslie Newton , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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Est. 1970

REPORT OF ANALYSIS

February 02, 2012

DJ Bays
 PECCO, Inc.
 250 Etter Dr.
 Nicholasville, KY 40356

ESC Sample # : L558063-01

Date Received : January 31, 2012
 Description : Ky Div of WM
 Sample ID : 001 LEACHATE WATER
 Collected By : DJ Bays
 Collection Date : 01/30/12 15:00

Site ID :
 Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide, free	BDL	0.0050	mg/l	4500CN-E	02/01/12	1
Cyanide	BDL	0.0050	mg/l	4500CN-E	02/01/12	1
Chromium, Hexavalent	BDL	0.010	mg/l	3500Cr-D	01/31/12	1
Mercury	0.00038	0.00020	mg/l	245.1	02/01/12	1
Arsenic	BDL	0.020	mg/l	200.7	01/31/12	1
Cadmium	0.015	0.0050	mg/l	200.7	01/31/12	1
Chromium	0.064	0.010	mg/l	200.7	01/31/12	1
Copper	0.56	0.020	mg/l	200.7	01/31/12	1
Lead	1.9	0.0050	mg/l	200.7	01/31/12	1
Nickel	0.16	0.020	mg/l	200.7	01/31/12	1
Silver	BDL	0.010	mg/l	200.7	01/31/12	1
Zinc	7.8	0.030	mg/l	200.7	01/31/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/02/12 09:21 Printed: 02/02/12 10:06

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L558063-01	WG576397	SAMP	Cyanide	R2021212	T2W
	WG576438	SAMP	Cyanide, free	R2021472	WT2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T2	(ESC) - Additional method/sample information: The laboratory analysis was from an unpreserved or improperly preserved sample.
W	(ESC)-The laboratory analysis was from a sample collected in an improper container

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

E208

Page ___ of ___

Prepared by:

**ENVIRONMENTAL
SCIENCE CORP.**

12065 Lebanon Road
Mt. Juliet, TN 37122

Phone (615) 758-5858
Phone (800) 767-5839
FAX (615) 758-5859

CoCode (lab use only)

Template/PrelogIn

Shipped Via:

Remarks/Contaminant

Sample # (lab use only)

Peene Row
SHER H-20

Analysis/Container/Preservative

Free Cyanides
Total Cyanides
Total As, Pb, Cd, Cr-6, Cu, Pb, Hg, Ni, As, Zn

Alternate billing information:

A/P
250 ERTEZ DL
NICHOLSON SURVEY KY 40356
Report to:
DJ Bays
Email to: die pecco inc. net

City/State Collected

LEWISTOWN, KY

ESC Key:

P.O.#: 843379

Client Project #:

Site/Facility ID#:

Lab MUST Be Notified

Same Day.....200%
Next Day.....100%
Two Day.....50%

Date Results Needed:

Email? No Yes

FAX? No Yes

No. of Cntrs

4

Date

1/30/12

Time

1500

Depth

N/A

Main#

WN

Comp/Grab

Comp

Sample ID

#1001 LEACHATE WATER

*Matrix: **SS** - Soil/Solid **GW** - Groundwater **IWW** - WasteWater **DW** - Drinking Water **OT** - Other

Remarks

9669 7463 9413

pH

Temp

Flow

Samples returned via

UPS Counter

Temp: 3.1°C

Bottles Received 4

Date: 1/31/12

Time: 09:00

Relinquished by (Signature)

Date: 1/31/12

Time: 4:05 PM

Received by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

Received for lab by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

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Received for lab by (Signature)

Date:

Time:

Relinqu



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

DJ Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

Report Summary

Monday February 06, 2012

Report Number: L558655

Samples Received: 02/03/12

Client Project: KY DWM

Description: Raven Run - Leachate Water

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Leslie Newton, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

DJ Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

February 06, 2012

Date Received : February 03, 2012
Description : Raven Run - Leachate Water
Sample ID : 1 RAVEN RUN FRAC 1
Collected By : DJ Bays
Collection Date : 02/02/12 16:00

ESC Sample # : L558655-01

Site ID :

Project # : KY DWM

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	0.027	0.0050	mg/l	200.7	02/03/12	1
Zinc	0.37	0.030	mg/l	200.7	02/03/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/05/12 09:08 Revised: 02/06/12 09:34



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

D J Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

Report Summary

Monday February 06, 2012

Report Number: L558901

Samples Received: 02/04/12

Client Project: KY DWM

Description: Raven Run - Leachate Water

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Leslie Newton, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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Fax (615) 758-5859
Tax I.D. 62-0814289
Est. 1970

REPORT OF ANALYSIS

February 06, 2012

D J Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

ESC Sample # : L558901-01

Date Received : February 04, 2012
Description : Raven Run - Leachate Water
Sample ID : #1 SPRING LEACHATE
Collected By : DJ Bays
Collection Date : 02/03/12 16:05

Site ID :
Project # : KY DWM

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	0.10	0.0050	mg/l	200.7	02/04/12	1
Zinc	1.2	0.030	mg/l	200.7	02/04/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/06/12 11:11 Printed: 02/06/12 11:33



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 Est. 1970

REPORT OF ANALYSIS

February 06, 2012

D J Bays
 PECCO, Inc.
 250 Etter Dr.
 Nicholasville, KY 40356

ESC Sample # : L558901-02

Date Received : February 04, 2012
 Description : Raven Run - Leachate Water

Site ID :

Sample ID : #2 POND LEACHATE

Project # : KY DWM

Collected By : DJ Bays
 Collection Date : 02/03/12 16:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	0.060	0.0050	mg/l	200.7	02/04/12	1
Zinc	0.49	0.030	mg/l	200.7	02/04/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/06/12 11:11 Printed: 02/06/12 11:33



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Est. 1970

REPORT OF ANALYSIS

February 06, 2012

D J Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

ESC Sample # : L558901-03

Date Received : February 04, 2012
Description : Raven Run - Leachate Water
Sample ID : #3 DISCHARGE LEACHATE
Collected By : DJ Bays
Collection Date : 02/03/12 16:18

Site ID :
Project # : KY DWM

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	BDL	0.0050	mg/l	200.7	02/04/12	1
Zinc	0.063	0.030	mg/l	200.7	02/04/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/06/12 11:11 Printed: 02/06/12 11:33

B026



Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Analysis/Container/Preservation

Billing Information:
Accounts Payable
250 Etter Dr.
Nicholasville, KY 40356

Report to: D.J. Bays
Email to: djb@pecco.com
City/State Collected: LEXINGTON KY
ESC Key: LEXINGTON KY
Client Project #: KY NJM
Site/Facility ID#: DJ Bays
P.O.#: 84332

Rush? (Lab MUST Be Notified)
Same Day..... 200%
 Next Day..... 100%
 Two Day..... 50%
 Three Day..... 25%

Date Results Needed:
Email? No Yes
FAX? No Yes

Sample ID	Comp/Grab	Matrix*	Depth	Date		Time	No. of Cntrs
				Matrix*	Depth		
#1 Spring LEACHATE	Comp	WW	N/A	2/3/12	2/3/12	16:05	1
#2 Pond LEACHATE	Comp	WW	N/A	2/3/12	2/3/12	16:10	1
#3 DISCHARGE LEACHATE	Comp	WW	N/A	2/3/12	2/3/12	16:18	1

TOTAL LEAD
TOTAL ZINC

CoCode PECCO (lab use only)
Template/Protocol
Shipped Via:
Remarks/Contaminant
Sample # (lab only)

PLEASE RUSH
" "
" "

L558901-01
" "
" "

pH _____ Temp _____

Flow _____ Other _____

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: 9669 77463 9413

Relinquished by: (Signature) <u>[Signature]</u>	Date: <u>2/3/12</u>	Time: <u>17:32</u>	Received by: (Signature) <u>[Signature]</u>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: <u>NO Fee (lab use only)</u> <u>PH adjusted IN JE lab</u> <u>CoC Seals Intact 09/10 N/NA</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date: _____	Time: _____	Received by: (Signature) _____	Temp: <u>26°C</u>	Bottles Received: <u>3</u>
Relinquished by: (Signature) _____	Date: _____	Time: _____	Received for lab by: (Signature) _____	Date: <u>2-4-12</u>	Time: <u>0900</u>

pH Checked _____ NCF _____

Microbac

Microbac Laboratories, Inc.

KENTUCKY TESTING LABORATORY DIVISION
 3323 Gilmore Industrial Blvd. Louisville, KY 40213 502.962.6400 Fax: 502.962.6411
 Lexington 859.276.3506 • Paducah 270.898.3637 • Evansville 812.464.9000 • Hazard 606.487.0511



Chemical, Biological, Physical, Molecular, and Toxicological Services

CERTIFICATE OF ANALYSIS

1202-00719

TETRA TECH, INC.
 KEVIN CAREY
 800 CORPORATE DIVE
 SUITE 200
 LEXINGTON, KY 40503

Date Reported 02/17/2012
 Date Due 02/17/2012
 Date Received 02/10/2012
 Date Sampled 02/10/2012
 Invoice No. 12553
 Customer # C076
 Customer P.O.

RAVEN RUN P#12005559

Analysis	Out of Spec	Qualif	Result	Unit	Min	Max	Method	Cus Limit	Rpt Limit	Date	Time	Tech
Sample: 001 HOLDING POND										02/10/2012	@ 14:20	
LEAD			<0.01	MG/L			EPA 200.7		0.010	02/14/12	11:25	EML
BOD, 5 DAY			<5	MG/L			SM 5210B		2.0	02/11/12	11:00	GTB
[Polynuc] Arom Hydrocarbon							SW846 8270C		0.15			
NAPHTHALENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
ACENAPHTHYLENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
ACENAPHTHENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
FLUORENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
FLUORACENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
PHENANTHRENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
FLUORANTHRENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
PYRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(A)ANTHRACENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
CHRYSENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(B)FLUORANTHRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(K)FLUORANTHRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(A)PYRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
INDENO(1,2,3-C,D)PYRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
DIBENZO(A,H)ANTHRACENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(G,H,I)PERYLENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
[Surrogate Rec. - B/N]										02/14/12	10:34	LJC
SR / NITROBENZENE-D5			58	%						02/14/12	10:34	LJC
SR / 2-FLUOROBIPHENYL			58	%						02/14/12	10:34	LJC
SR / P-TERPHENYL			58	%						02/14/12	10:34	LJC
DATE EXTRACTED PAH - 8270			COMPLETED	---			SW846 3510C			02/13/12	15:00	MSR
TOTAL ORGANIC CARBON			2.7	MG/L			SM 5310C		0.5	02/14/12	15:00	MSR
SOLIDS, TOTAL SUSPENDED			14	MG/L			I-3765-85		5	02/14/12	17:00	CJL
SOLIDS, DISSOLVED			530	MG/L			SM2540C		50	02/14/12	11:36	CJL
SOLIDS, TOTAL			580	MG/L			I-3750-85		10	02/14/12	15:52	CJL
CHLORIDE			<10	MG/L			EPA 300.0		10	02/15/12	23:41	ARW



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Chemical, Biological, Physical, Molecular, and Toxicological Services

CERTIFICATE OF ANALYSIS

1202-00719

TETRA TECH, INC.
KEVIN CAREY
RAVEN RUN P#12005559

Date Reported 02/17/2012
Date Received 02/10/2012
Date Sampled 02/10/2012

Analysis	Out of Spec	Qualif	Result	Unit	Min	Max	Method	Cus Limit	Rpt Limit	Date	Time	Tech	
Sample: 001 HOLDING POND										Sampled	02/10/2012	@ 14:20	
continued													
SULFATE			110	MG/L			EPA 300.0		10	02/15/12	23:41	ARW	
NITROGEN, AMMONIA			<0.25	MG/L			SM 4500-NH3 G		0.25	02/16/12	13:01	ARW	
[Total RCRA Metals]							SW846 6010C						
ARSENIC			<0.050	MG/L			SW846 6010C		0.050	02/14/12	10:34	EML	
BARIUM			0.077	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
CADMIUM			<0.010	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
CHROMIUM			<0.010	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
MERCURY			<0.0002	MG/L			SW846 7470A		0.0002	02/17/12	16:00	MSR	
SELENIUM			<0.050	MG/L			SW846 6010C		0.050	02/14/12	10:34	EML	
SILVER			<0.010	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
			0.77	MG/L			EPA 200.7		0.010	02/14/12	10:34	EML	
SODIUM			7.2	MG/L			EPA 200.7		0.50	02/14/12	10:34	EML	

THIS REPORT HAS BEEN REVIEWED AND APPROVED FOR RELEASE:

LABORATORY DIRECTOR, KENTUCKY DIVISION

As regulatory limits change frequently, Microbac advises the recipient of this report to confirm such limits with the appropriate Federal, state, or local authorities before acting in reliance on the regulatory limits provided.

For any feedback concerning our services, please contact Andrew Clifton, the Laboratory Director at 502.962.6400. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com

Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

Lexington-Fayette Urban County Government



Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

October 16, 2020

PRESENTED TO

Lexington-Fayette Urban County Government
Division of Environmental Services
200 East Main Street, 9th Floor
Lexington, KY 40507

PRESENTED BY

Tetra Tech
424 Lewis Hargett Circle
Suite 110
Lexington, KY 40503

P +1-859-223-8000
F +1-859-224-1025
tetratech.com

Prepared by:



10/16/2020

Chris Hale
Project Engineer

Date

Reviewed by:



10/16/2020

Herbert R. Lemaster, PE
Project Manager

Date

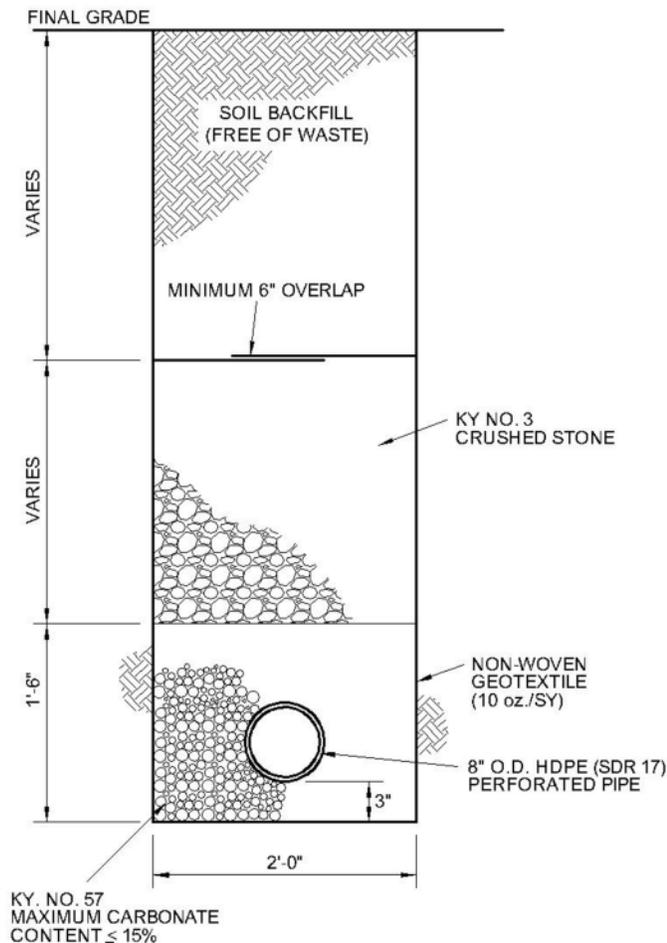
TABLE OF CONTENTS

1.0 BACKGROUND	3
2.0 CLEANING ACTIVITIES	6
3.0 CONCLUSION AND RECOMMENDATIONS	8

1.0 BACKGROUND

In the late 1960s and early 1970s, Fayette County operated the Jacks Creek Pike landfill. The landfill accepted household wastes, industrial wastes, and construction/demolition debris. The landfill stopped accepting waste after a fire in 1971 and was covered with soil and abandoned. The Kentucky General Assembly passed House Bill (HB) 174 in 2002 which included the creation of the Historic Landfill Program. Part of the program was to clean up abandoned landfills. The Jacks Creek Pike landfill was considered a priority for cleanup and closure.

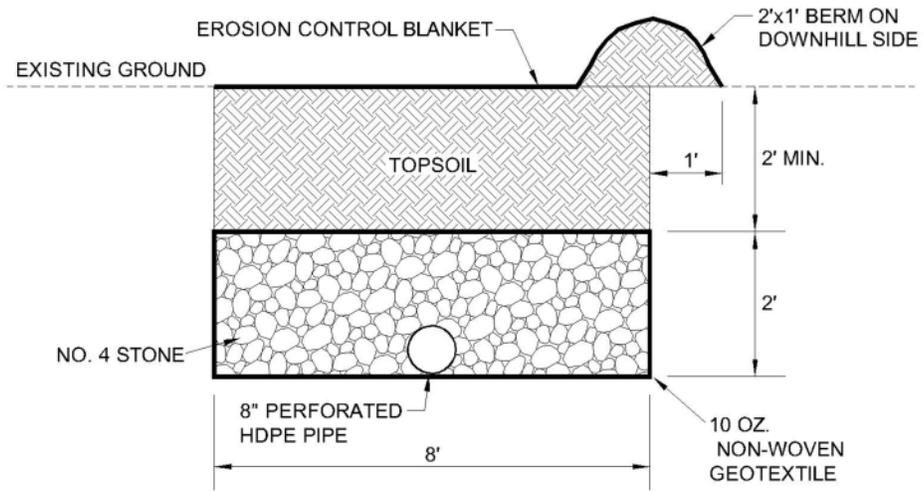
Tetra Tech, under contract to the Commonwealth of Kentucky, designed the cleanup and closure of the landfill. The design included consolidation of the waste into a smaller footprint, capping the waste with two feet of soil, planting native trees and grasses on the 2-foot cap for a phytoremediation system, installing a leachate collection system at the toe of the waste area, and construction of a bioswale. The leachate collection system consists of perforated pipe surrounded by crushed stone and wrapped with geotextile at the toe of the landfill, four manholes, solid pipe connecting the leachate collection system to the bioswale header, and four cleanouts for the bioswale. (See Leachate Line Trench Detail, Bioswale Header Detail, Cleanout Detail, and Site Plan.) Construction was completed in December of 2012.



NOTE: IDENTIFICATION TAPE IS INSTALLED DIRECTLY ON TOP OF THE GEOTEXTILE OVERLAP ABOVE THE NO. 3 STONE IN ALL PIPE TRENCHES.

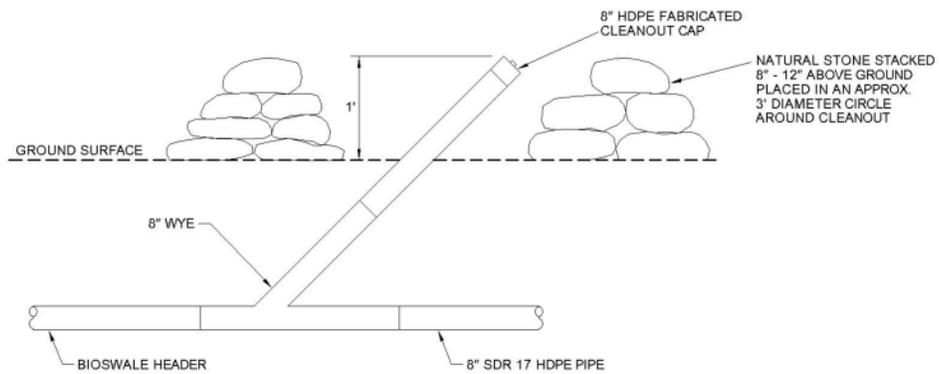
LEACHATE LINE TRENCH DETAIL

NOT TO SCALE



BIOSWALE HEADER DETAIL

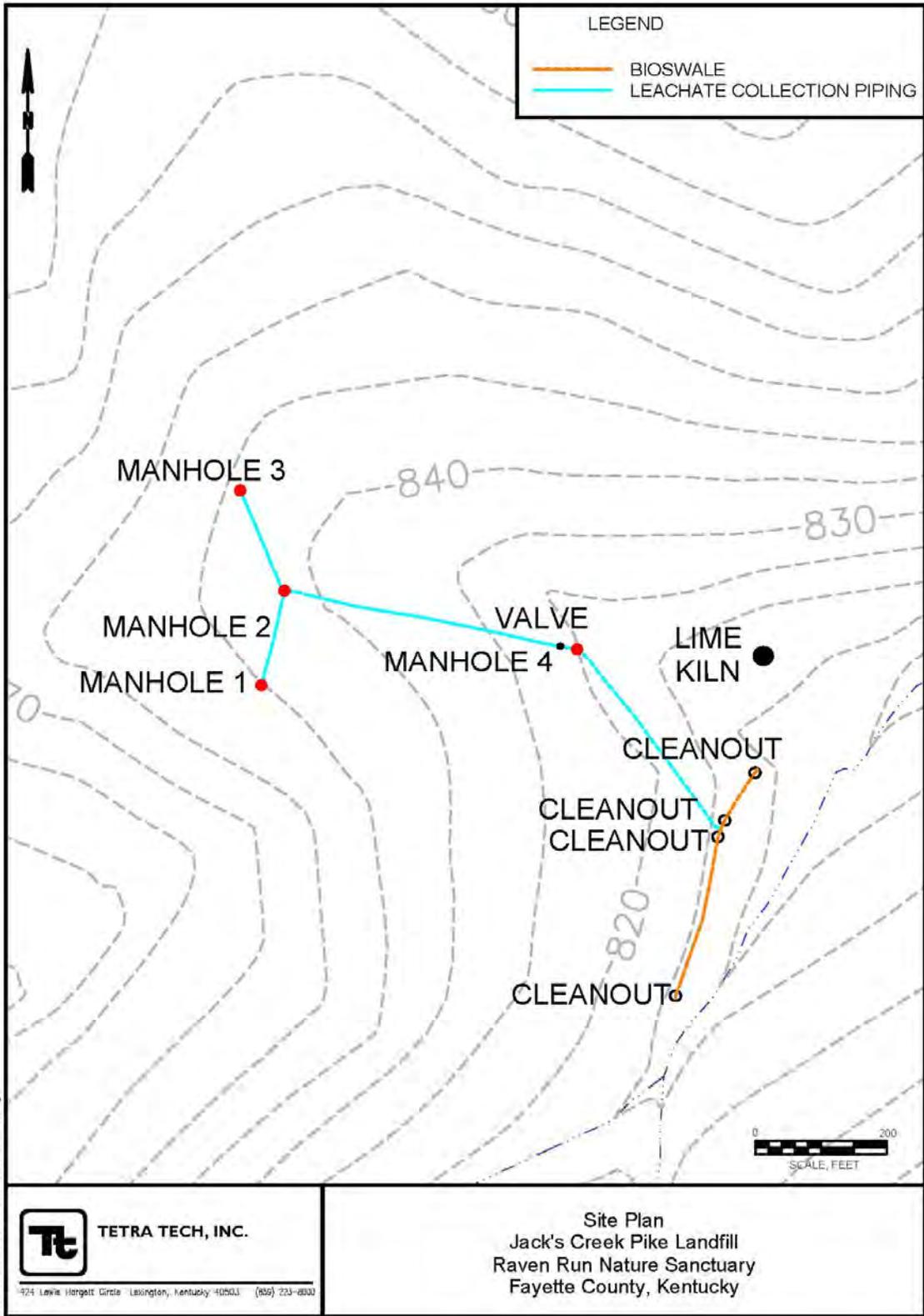
NOT TO SCALE



NOTE: NO. 4 STONE NOT SHOWN FOR CLARITY.

CLEANOUT DETAIL

NOT TO SCALE



After construction was concluded, the area has been inspected semi-annually by the Lexington-Fayette Urban County Government (LFUCG). During a recent inspection, it was noted that water was coming out of the vent pipe of Manhole No. 4. (See Photo No. 1.) LFUCG contacted Tetra Tech and a site visit was conducted on February 13, 2020. After some observation and discussion, the decision was made that cleaning of the leachate line and bioswale would be beneficial to optimize the performance of the system. LFUCG then issued a purchase order to Tetra Tech to coordinate the efforts of this project.



Photo 1
Manhole No. 4 (2/13/2020)

2.0 CLEANING ACTIVITIES

Cleaning activities commenced on June 26, 2020 by the means of jet rodding. Tetra Tech contracted with TPM Group, Inc. to provide a jetting/vacuum truck with trained operators to perform the services. The cleaning began at the two cleanouts in the middle of the bioswale header. Once the blind flange caps were removed, it was discovered that water was standing in the bioswale system to within six inches of the top of the cleanouts. The northeast section was jet rodded first and the standing water drained immediately, with some mud withdrawn during pull-back. The southwest section was then jet rodded. The northeast section was jet rodded one more time and the southwest section was jet rodded two more times. The bioswale could not be videoed because the camera could not make the 45-degree bend of the cleanouts. The jetting truck was out of water and had to return to the water loading station located at Fire Station No. 18 on South Cleveland Road to refill the tank.

After refilling, the truck returned to jet rod at Manhole No. 4. It was noted that water was no longer coming out of the vent pipe at Manhole No. 4. When the manhole cover was removed, it was observed that quite a bit of mud and

debris had accumulated in the manhole, but the system was flowing as a result of the jet rodding performed on the bioswale. (See Photo No. 2.) The manhole cover on Manhole No. 2 was removed to evaluate the leachate collection system at the toe of the landfill. Flow in the system was observed. Jet rodding continued from Manhole No. 4 to Manhole No. 2. No problems were encountered. After jet rodding this segment, a camera was deployed to investigate the integrity of the pipe. No issues were encountered, and the pipe was structurally sound.



Photo 2
Manhole No. 4 (6/26/2020)

After the camera work, the segment from Manhole No. 4 downstream to the cleanouts at the bioswale was jet rodded. Work progressed, but during retrieval, the jet rodder became lodged in the pipe. After significant effort, the jet rodder could not be removed. A decision was made by the operator to cut the jet rod hose and abandon the 2-inch hose and nozzle; leaving them inside the 8-inch solid HDPE pipe. As a result, no more jet rodding could be performed that day. Also, a camera could not be deployed down the pipe from Manhole No. 4 to the bioswale cleanouts because the abandoned hose would impede its maneuverability. Visual observations at the completion of the cleaning operations indicated that the flow within the system was significantly improved by these efforts.

On July 8, 2020, Tetra Tech met with LFUCG personnel on-site to observe and discuss the result of the cleaning operations. The manhole cover for Manhole No. 4 was removed to inspect the mud/debris. The decision was made that a second cleaning effort would be necessary.

On October 2, 2020, the jetting/vacuum truck mobilized for the second cleaning event. The priority for cleaning activities was to remove the mud and debris from Manhole No. 4. Work began with jetting and vacuuming the mud and debris from Manhole No. 4. (See Photo No. 3.) After vacuuming the manhole, all the mud and debris were removed. (See Photo No. 4.) The vacuum hose was removed and the pipes, downstream and upstream from the manhole, were jet rodded. This was done for approximately 50 feet both ways.



Photo 3
Manhole No. 4 Jetting/Vacuuming
(10/2/2020)



Photo 4
Manhole No. 4 After Jetting/Vacuuming
(10/2/2020)

The jetting/vacuum truck then relocated in order to jet rod the perforated leachate collection system pipes at the toe of the landfill. Jetting began at Manhole No. 1 and continued to Manhole No. 2 and then up to Manhole No. 3. With the two cleaning events, the entire system was jet rodded.

3.0 CONCLUSION AND RECOMMENDATIONS

Currently, the entire system is flowing with no issues. It is our understanding that this was the first significant maintenance performed on the system since construction was completed in December of 2012. There was a considerable amount of effort involved in the overall cleaning. It is recommended that this cleaning maintenance be performed every other year to keep the system functioning effectively.

Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

Lexington-Fayette Urban County Government



Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

November 2021

PRESENTED TO

Lexington-Fayette Urban County Government
Division of Environmental Services
200 East Main Street, 9th Floor
Lexington, KY 40507

PRESENTED BY

Tetra Tech
424 Lewis Hargett Circle
Suite 110
Lexington, KY 40503

P +1-859-223-8000
F +1-859-224-1025
tetratech.com

Prepared by:



11/18/2021

Chris A. Hale
Project Engineer

Date

Reviewed by:



11/18/2021

Herbert R. Lemaster, PE
Project Manager

Date

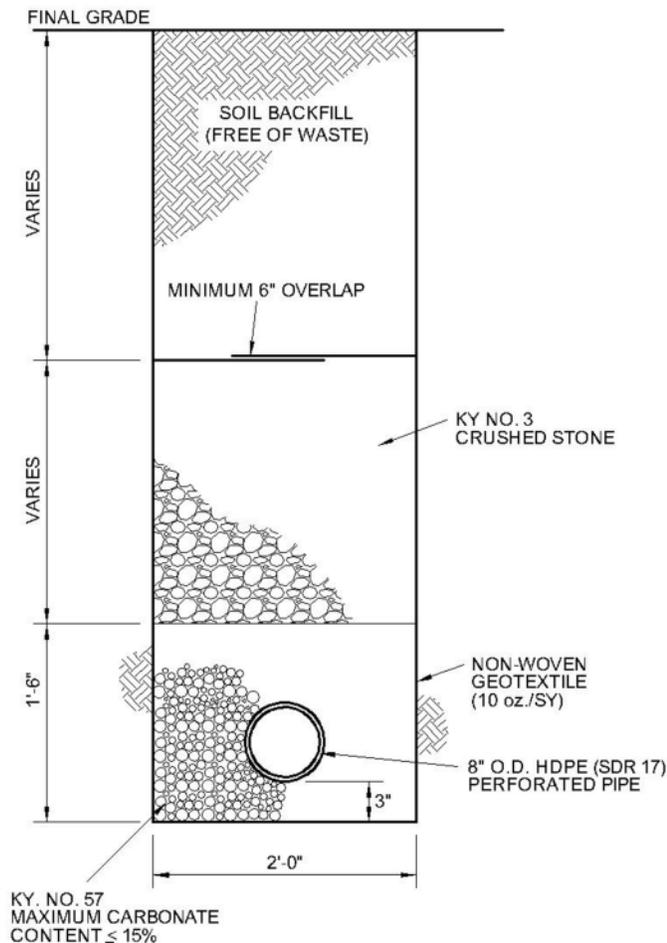
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3.0 CONCLUSION AND RECOMMENDATIONS	9

1.0 BACKGROUND

In the late 1960s and early 1970s, Fayette County operated the Jacks Creek Pike landfill. The landfill accepted household wastes, industrial wastes, and construction/demolition debris. The landfill stopped accepting waste after a fire in 1971 and was covered with soil and abandoned. The Kentucky General Assembly passed House Bill (HB) 174 in 2002 which included the creation of the Historic Landfill Program. Part of the program was to clean up abandoned landfills. The Jacks Creek Pike landfill was considered a priority for cleanup and closure.

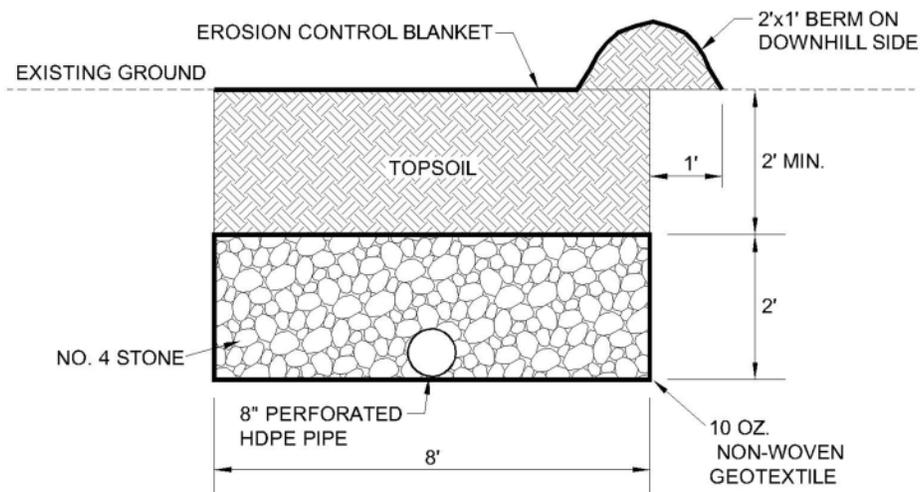
Tetra Tech, under contract to the Commonwealth of Kentucky, designed the cleanup and closure of the landfill. The design included consolidation of the waste into a smaller footprint, capping the waste with two feet of soil, planting native trees and grasses on the 2-foot cap for a phytoremediation system, installing a leachate collection system at the toe of the waste area, and construction of a bioswale. The leachate collection system consists of perforated pipe surrounded by crushed stone and wrapped with geotextile at the toe of the landfill, four manholes, solid pipe connecting the leachate collection system to the bioswale header, and four cleanouts for the bioswale. (See Leachate Line Trench Detail, Bioswale Header Detail, Typical Cleanout Detail, and Site Plan.) Construction was completed in December of 2012.



NOTE: IDENTIFICATION TAPE IS INSTALLED DIRECTLY ON TOP OF THE GEOTEXTILE OVERLAP ABOVE THE NO. 3 STONE IN ALL PIPE TRENCHES.

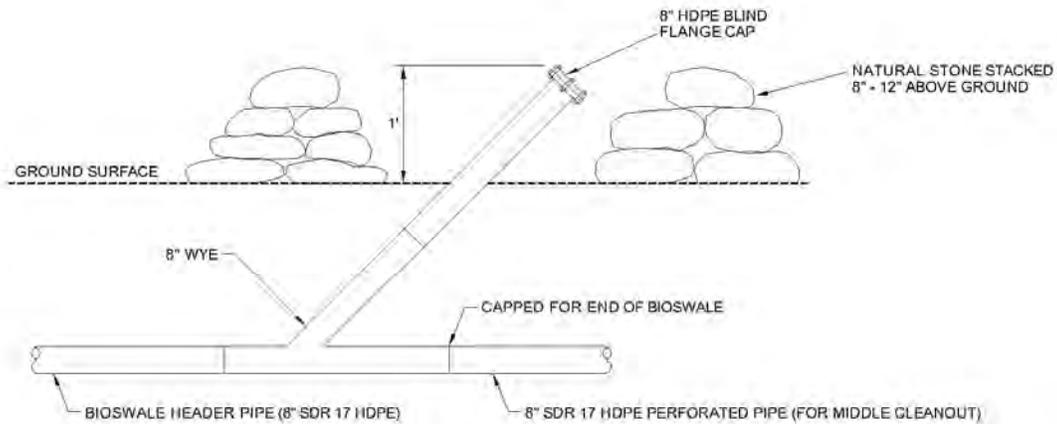
LEACHATE LINE TRENCH DETAIL

NOT TO SCALE



BIOSWALE HEADER DETAIL

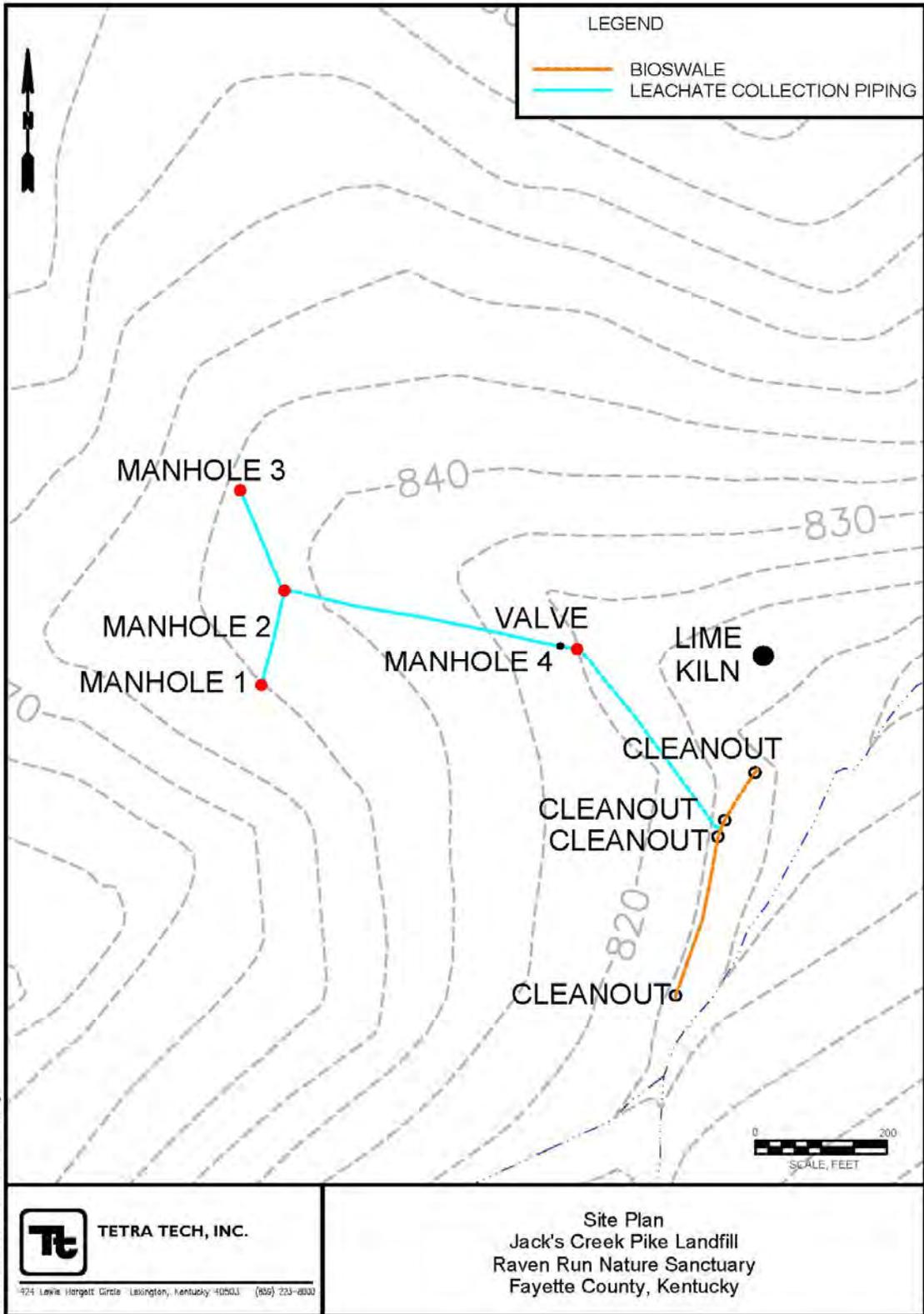
NOT TO SCALE



NOTE: NO. 4 STONE NOT SHOWN FOR CLARITY.

TYPICAL CLEANOUT DETAIL

NOT TO SCALE



After construction was concluded, the area has been inspected semi-annually. During an inspection in early 2020, it was noted that water was coming out of the vent pipe of Manhole No. 4. The Lexington-Fayette Urban County Government (LFUCG) contacted Tetra Tech and the decision was made to clean the leachate line and bioswale. LFUCG contracted with Tetra Tech to coordinate the efforts of this project.

The leachate system was cleaned using a jet rod on June 26, 2020. After cleaning, it was observed that quite a bit of mud and debris had accumulated in Manhole 4. The manhole was cleaned with a vacuum truck on October 2, 2020. The leachate lines were jet rodded after vacuuming the manhole. At that time, the entire system was flowing with no issues.

During mid-June of 2021, LFUCG personnel observed Manhole 4 overflowing again. (See Photo No. 1.) LFUCG contracted with Tetra Tech to coordinate the efforts to clean the bioswale and leachate lines in order to increase flow in the system.



Photo No. 1
Manhole No. 4
(06/17/2021)

2.0 CLEANING ACTIVITIES

Cleaning activities were conducted on October 19, 2021 by the means of jet rodding. Tetra Tech utilized PECCO, Inc. to provide jet rodding and vacuuming services. Upon arrival, Manhole No. 4 was observed to still be overflowing. The cleaning began at the two cleanouts in the middle of the bioswale header. In order to access the bioswale, the blind flange caps were removed. It was noted that some of the flange bolts were very tight and difficult to remove. During removal of the blind flange caps, water poured from the cleanouts. (See Photo No. 2.)



Photo No. 2
Cleanout Flange Cap Removal
(10/19/2021)

The northeast section was jet rodded first all the way to the end. This section was jet rodded twice. The southwest section was then jet rodded twice all the way to the end.

After jet rodding the bioswale, personnel relocated to Manhole No. 4. It was observed that water was no longer overflowing from Manhole No. 4. When the manhole cover was removed, the system was seen flowing in the manhole trough as a result of the jet rodding performed on the bioswale. The pipe from Manhole No. 4 to the bioswale was then jet rodded twice. (See Photo No. 3.) No mud or debris was seen within the manhole. Since water was seen flowing through the manhole trough, it was determined that system upstream of Manhole No. 4 was functioning properly and no more jet rodding was performed.



Photo No. 3
Jet Rodding at Manhole No. 4
(10/19/2021)

The blind flange caps were placed back on the cleanouts. The bolts were not tightened as much as they were previously to make removal easier should they need to be accessed at a later date.

3.0 CONCLUSION AND RECOMMENDATIONS

After the cleaning on October 19, 2021, the entire system was flowing with no issues. Tetra Tech will observe the system during their inspection scheduled for December 2021.

There are concerns related to the blockage of flow within the system less than one year since the previous cleaning and jet rodding. It is assumed that the bioswale media has become clogged with silt and sediment causing restriction of flow. The jet rodding helps but is only able to clear silt/sediment a short distance from the perforations of the bioswale pipe.

It is recommended to check the system at least quarterly and jet rod as needed. However, this may be a short-term solution as silt and sediment will continue to build up. A longer-term solution would be to remove the existing bioswale media and replace with clean crushed stone and new non-woven geotextile. While this work is being performed, it would be suggested to replace the middle cleanouts of the bioswale system with a manhole. Replacing the middle cleanouts with a manhole would allow for better access for maintenance, such as jet rodding, in the future.



16 December 2014

DELIVERED ELECTRONICALLY

Mr. Dann Dettman
Environmental Compliance Coordinator
Lexington-Fayette Urban County Government
200 East Main Street, 9th Floor
Lexington, KY 40507

Re: Landfill Site Visit Report Form
November 20, 2014 Site Visit
Former Jacks Creek Pike Landfill, Raven Run Nature Sanctuary
3885 Raven Run Way, Lexington, Kentucky
AI # 52010, Solid Waste Permit No. 034-00003, AIN ARM20110002
Geographic Coordinates: 37.888, -84.395
AMEC Project Number 7362-14-2145

Dear Mr. Dettman:

AMEC Environment & Infrastructure, Inc. (AMEC), a wholly owned subsidiary of AMEC Foster Wheeler, plc, is submitting the attached Site Visit Report Form for the former Jacks Creek Pike Landfill. The attached form was developed by AMEC as a means of documenting the post-closure site visits required by the Kentucky Division of Waste Management (KDWM) in their letter to LFUCG dated June 12, 2014. The form and attachments have been completed for our initial site visit with LFUCG personnel on November 20, 2014.

We appreciate the opportunity to be of service to LFUCG and look forward to working with you on this and future projects.

Sincerely,
AMEC Environment & Infrastructure, Inc.

A blue ink signature of Dean A. Duncan, P.E., written in a cursive style.

Dean A. Duncan, P.E.
Associate Engineer

A blue ink signature of Alison L. Dunn, P.G., written in a cursive style.

Alison L. Dunn, P.G.
Associate Hydrogeologist / Project Manager

Attachment:
Landfill Site Visit Report Form, November 20, 2014 and attachments

Correspondence:
AMEC Environment & Infrastructure, Inc.
2456 Fortune Drive, Suite 100
Lexington, Kentucky 40509-4241
Tel +1 (859) 255-3308
Fax +1 (859) 254-2327

www.amecfw.com

Landfill Site Visit Report Form
Jack's Creek Pike Landfill
Raven Run Nature Sanctuary, Lexington, Kentucky
Solid Waste Permit No. 034-00003
Agency Interest No. 52010

See Attached Annotated Site Map and Photolog

Year

2014

Date of Observation

November 20, 2014

Observers: Steve Williams (SGW), AMEC

Dean Duncan (DAD), AMEC

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
General:				
Do trails/natural barriers control unauthorized access?	Yes	If No, provide location and description	Lack of trails provides limited access, honey suckle provides barricade on path from barn, sign at access point on southwest corner says "Authorized Personnel Only."	SGW/DAD
Is there evidence of activities (such as off-road vehicles, cattle) causing erosion or penetration of the cap?	No	If Yes, provide location the type of damage		SGW/DAD
Are access roads being maintained appropriately?	N/A	If No, provide location and description	There are no access roads, past the short access road at southwest corner.	SGW/DAD
Is sediment coming on to the landfill/ditches from up-slope?	No	If Yes, provide location and description		SGW/DAD
Are diversion ditches clear of debris/sediment?	Yes	If No, provide location and description		SGW/DAD
Is the sediment control pond on the downstream end of combined drainage ditch properly maintained?	Yes	If No, provide location and description		SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation November 20, 2014

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Landfill Cap:				
Is there growth of indigenous trees and grasses?	Yes	If No, provide location and description		SGW/DAD
Are invasive woody plant species (such as bush honeysuckle) present?	No	If Yes, provide location and description		SGW/DAD
Are the erosion control berms functioning as intended?	No	If No, provide location and description	Erosion ditches forming on eastern slope of landfill over leachate line near Manhole 2.	SGW/DAD
Is surface erosion visible (deeper than 6 inches)?	Yes	If Yes, provide location and description	Erosion ditches mentioned above are 6"- 12" deep, and up to 18" deep in some spots.	SGW/DAD
Are there visible leachate outbreaks?	No	If Yes, provide location and description		SGW/DAD
Is there visible distress of vegetative cover from outbreaks?	No	If Yes, provide location and description		SGW/DAD
Is settlement or standing water on the cap evident?	No	If Yes, provide location and description		SGW/DAD
Is positive drainage of the cap being maintained?	Yes	If No, provide location and description		SGW/DAD
Is there evidence of activity (excavation, drilling, grading) or structures that could have disturbed integrity of cap since last visit?	No	If Yes, provide location the type of damage		SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation November 20, 2014

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Surface Water Drainage and Erosion Control System:				
Is the existing condition consistent with design?	Yes	If No, provide details		SGW/DAD
Is there visible erosion occurring in the drainage ditches?	Yes	If Yes, provide location and description	Vertical erosion in North ditch of up to 12 inches deep on slope near intersection with South ditch.	SGW/DAD
Is standing water evident in drainage ditches?	No	If Yes, provide location and description		SGW/DAD
Are there any obstructions or structural damages?	No	If Yes, provide location and description		SGW/DAD
Is there sediment buildup in the drainage ditches?	No	If Yes, provide location and description		SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation November 20, 2014

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Leachate Collection and Treatment System:				
Are bioswales and associated structures (drainage lines, manholes, cleanouts) in good condition?	Yes	If No, provide details		SGW/DAD
Are the cleanouts and manholes accessible and intact?	Yes	If No, provide details		SGW/DAD
Is the stone protection around the cleanouts intact?	Yes	If No provide details		SGW/DAD
Are any pipes or valves leaking?	No	If Yes, Provide Details		SGW/DAD
Is there evidence of overflow/outbreaks?	Yes	If Yes, provide location and description	There is overflow emerging from the ground surface near Cleanout 4.	SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

November 20, 2014

Observations

General Comments or Observations (inc. weather):

Sunny, 40's.
LFUCG personnel who attended the site visit with AMEC included Laurie Thomas, Park Naturalist Raven Run, Division of Parks and Recreation and Dann Dettman, Environmental Compliance Coordinator, Division of Environmental Services. Alison Dunn of AMEC also attended.

Observed by:

Steve Williams

Typed or Printed Name



Signature

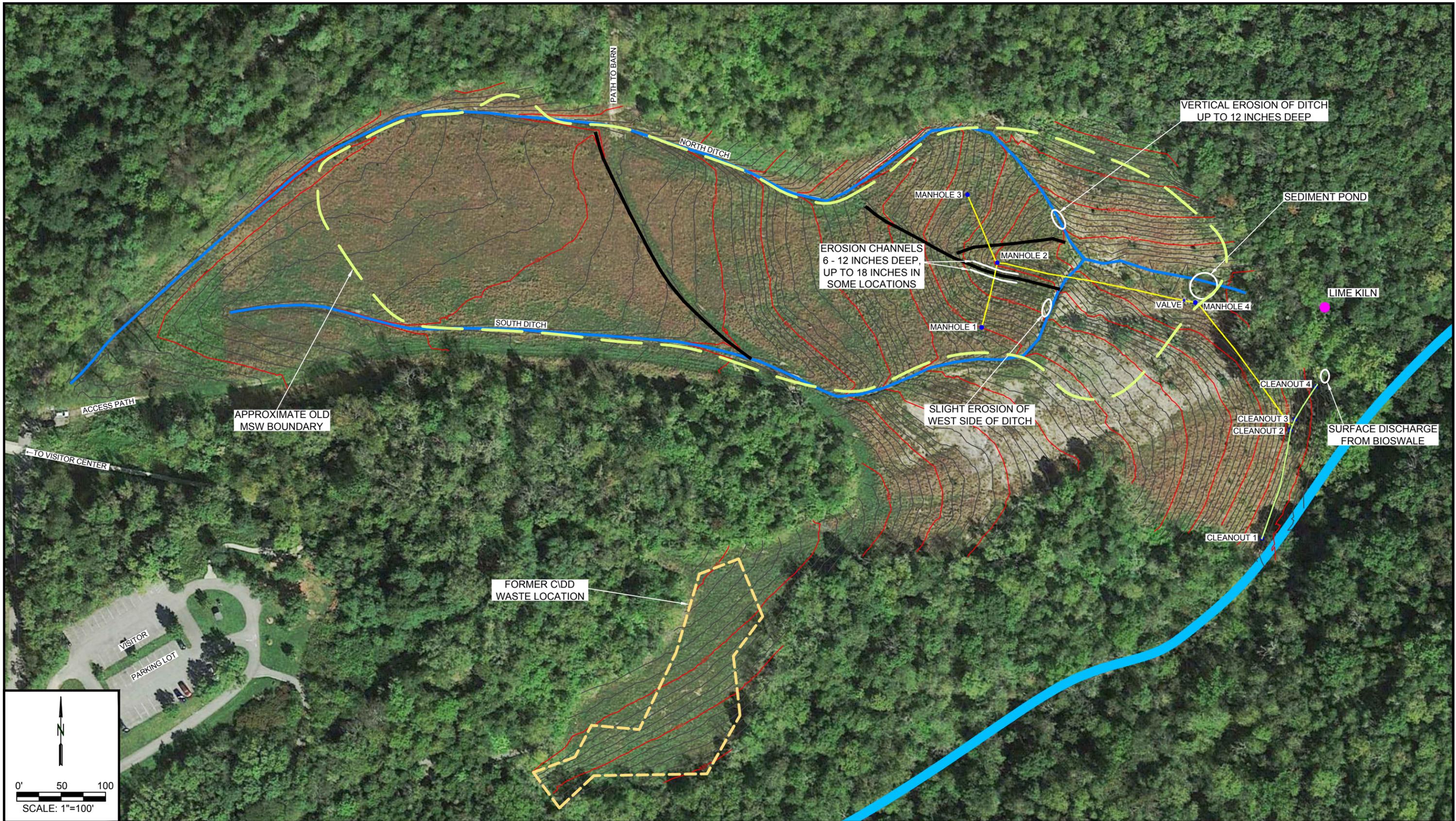
Reviewed by:

Dean Duncan

Typed or Printed Name



Signature



LEGEND	
	INTERMEDIATE CONTOUR
	INDEX CONTOUR
	900
	DRAINAGE DITCH
	DRAINAGE BERM
	LEACHATE COLLECTION PIPE
	BIOSWALE



Amec Foster Wheeler
 2456 Fortune Drive, Suite 100
 Lexington, Kentucky 40509
 Phone: (859) 255-3308

JACK'S CREEK PIKE LANDFILL AT
 RAVEN RUN NATURE SANCTUARY
 LEXINGTON, KENTUCKY

LANDFILL SITE PLAN WITH OBSERVATION NOTES
NOVEMBER 20, 2014
JACK'S CREEK PIKE LANDFILL
 PROJECT NUMBER: 7362142145

SCALE	1" = 100'
DATE	12/16/2014
DRAWN BY	CSR/P
APPROVED BY	DAD

FIG. 1



PHOTO 1:
Access path at southwest corner of landfill.



PHOTO 2:
Bare rock exposed on southeast slope of landfill site.



PHOTO 3:

Typical tree planted as part of landfill closure.



PHOTO 4:

View of South Ditch facing West with slight erosion.



PHOTO 5:

Valve marker.



PHOTO 6:

Valve box with marker



PHOTO 7:

Manhole 4, yellow vent pipe in foreground.



PHOTO 8:

Interior of Manhole 4,
flow from upper right
(west) to left
(southeast).



PHOTO 9:

Cleanouts 2 and 3 in center of bioswale.



PHOTO 10:

Looking up at bioswale level (persons standing) from stream level.



PHOTO 11:

Stream at base of slope.



PHOTO 12:

Cleanout 4 at north end of bioswale.



PHOTO 13:

Flow discharging east from north end of bioswale, below cleanout 4, flowing to stream at toe of slope.



PHOTO 14:

Flow discharging east from north end of bioswale, below cleanout 4, flowing to stream at toe of slope.



PHOTO 15:

Cleanout 1 at south end of bioswale.



PHOTO 16:

Rock dam on lower end of combined drainage ditch, below sedimentation pond.



PHOTO 17:

Looking south at sediment control pond on downstream end of combined drainage ditch.



PHOTO 18:

Looking west along northern perimeter slope of landfill.



PHOTO 19:

Looking west along
centerline of landfill.



PHOTO 20:

Looking west-
southwest across
landfill.



PHOTO 21:

Looking south.



PHOTO 22:

Looking south at valve
box marker.



PHOTO 23:

North ditch, erosion logs placed during construction have been undercut by water flow in ditch.



PHOTO 24:

Looking upstream along north ditch.



PHOTO 25:

Eroded banks along north ditch.



PHOTO 26:

North ditch, looking downstream (east), eroded bank in foreground.

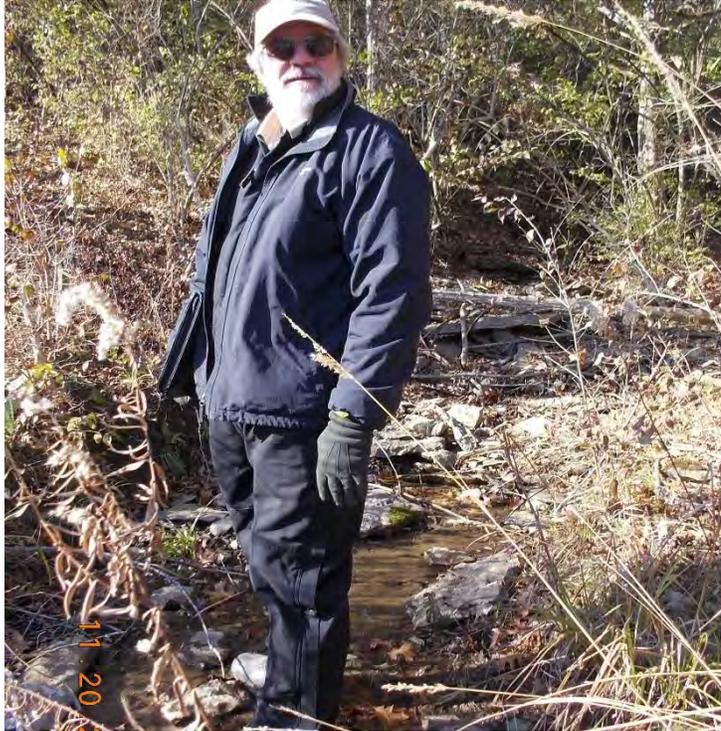


PHOTO 27:

Stream flowing into
north ditch from north
valley wall.



PHOTO 28:

Inside of Manhole 3
(no flow).



PHOTO 29:

Inside Manhole 2. Flow entering from top (south) and bottom (north) and exiting left (east).



PHOTO 30:

Manhole 1, no visible flow. Drains to left (north).



PHOTO 31:

Looking upstream
along erosion feature
on steep slope just
south of Manhole 2.



PHOTO 32:

Looking north along
path leaving landfill
area, toward Barn.
Path has been blocked
with cut brush.

Landfill Site Visit Report Form
Jack's Creek Pike Landfill
Raven Run Nature Sanctuary, Lexington, Kentucky
Solid Waste Permit No. 034-00003
Agency Interest No. 52010

Year

Date of Observation

See Attached Site Map and Photolog

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
General:				
Do trails/natural barriers control unauthorized access?	Yes	If No, provide location and description	There is an "Authorized Personnel Only" sign posted. Recommend periodically trimming around the sign.	Chris Hale and Shann Easterling
Is there evidence of activities (such as off-road vehicles, cattle) causing erosion or penetration of the cap?	No	If Yes, provide location the type of damage	None.	Chris Hale and Shann Easterling
Are access roads being maintained appropriately?	Yes	If No, provide location and description	Mowed Trail to landfill - No public access	Chris Hale and Shann Easterling
Is sediment coming on to the landfill/ditches from up-slope?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Are diversion ditches clear of debris/sediment?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Is the sediment control pond on the downstream end of combined drainage ditch properly maintained?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

December 15, 2021

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Landfill Cap:				
Is there growth of indigenous trees and grasses?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Are invasive woody plant species (such as bush honeysuckle) present?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Are the erosion control berms functioning as intended?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Is surface erosion visible (deeper than 6 inches)?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Are there visible leachate outbreaks?	Yes	If Yes, provide location and description	Minor at toe of landfill - no flow	Chris Hale and Shann Easterling
Is there visible distress of vegetative cover from outbreaks?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Is settlement or standing water on the cap evident?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Is positive drainage of the cap being maintained?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Is there evidence of activity (excavation, drilling, grading) or structures that could have disturbed integrity of cap since last visit?	No	If Yes, provide location the type of damage	None.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation December 15, 2021

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Surface Water Drainage and Erosion Control System:				
Is the existing condition consistent with design?	Yes	If No, provide details	None.	Chris Hale and Shann Easterling
Is there visible erosion occurring in the drainage ditches?	Yes	If Yes, provide location and description	Minimal and not significant. Ditches at toe of landfill.	Chris Hale and Shann Easterling
Is standing water evident in drainage ditches?	Yes	If Yes, provide location and description	Minimal and not significant. Ditches at toe of landfill.	Chris Hale and Shann Easterling
Are there any obstructions or structural damages?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Is there sediment buildup in the drainage ditches?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation December 15, 2021

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Leachate Collection and Bioswale System:				
Are bioswales and associated structures (drainage lines, manholes, cleanouts) in good condition?	Bioswale is questionable. Yes to everything else.	If No, provide details	There were some rocks and debris in manholes 1, 2, and 3. Manhole 4 has standing water. Water surfacing at North Cleanout.	Chris Hale and Shann Easterling
Are the cleanouts and manholes accessible and intact?	Yes	If No, provide details	None.	Chris Hale and Shann Easterling
Is the stone protection around the cleanouts intact?	Yes	If No provide details	None.	Chris Hale and Shann Easterling
Are any pipes or valves leaking?	No	If Yes, Provide Details	The valve was closed and opened (26 turns, each way). The valve wrench was left next to the valve.	Chris Hale and Shann Easterling
Is there evidence of overflow/outbreaks?	Yes	If Yes, provide location and description	Water surfacing at North Cleanout. Soggy soil.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

December 15, 2021

Observations

General Comments or Observations (inc. weather):

December 15, 2021 - 63°, Cloudy

Manhole No. 4 has standing water, meaning water is getting backed up from the bioswale. Also, water is surfacing at the north cleanout.

The bioswale was jet rodded on October 19, 2021. After the jet rodding, the flow through Manhole No. 4 and the system was normal. It is assumed that the jet rodding is clearing the pipe perforations and a minimal area of the stone media outside the perforations. Silt and sediment appear to be clogging the bioswale again; either pipe perforations, stone media, or both.

It is recommended to check the system at least quarterly and jet rod/vacuum as needed. However, this may be a short-term solution as silt and sediment will continue to build up. A longer-term solution would be to remove the existing bioswale media, replace with clean crushed stone and new non-woven geotextile, and clean the perforations in the pipe.

Observed by:

Chris Hale

Typed or Printed Name

Ch. A. Hale

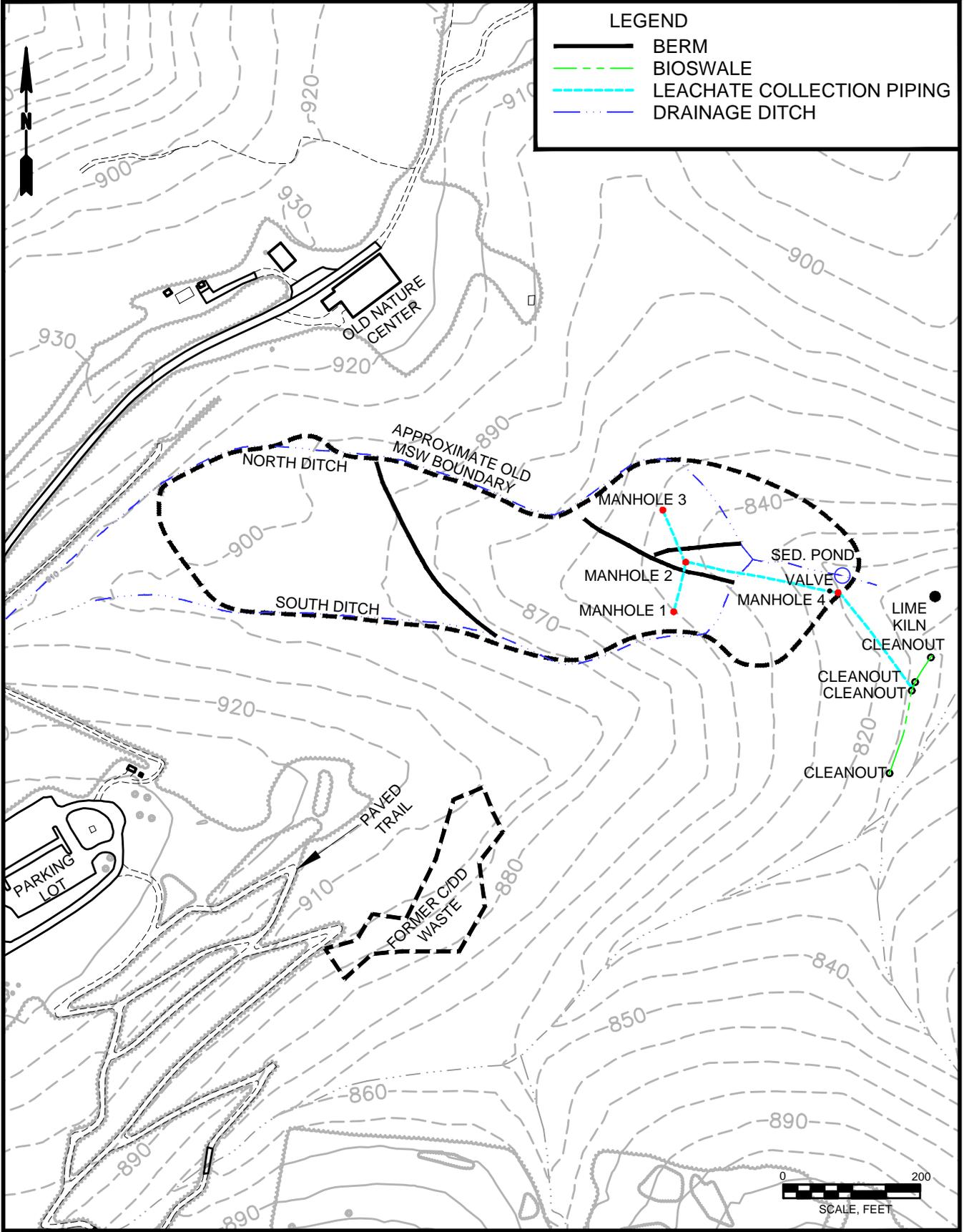
Signature

Reviewed by:
Shann Easterling

Typed or Printed Name

Shann Easterling

Signature



200-11681-21006-Raven Run Site.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

Site Inspection Map - December 2021
 Jack's Creek Pike Landfill
 Raven Run Nature Sanctuary
 Fayette County, Kentucky



North Drainage Ditch at Toe of Landfill



South Drainage Ditch at Toe of Landfill

200-11681-21006-Photo.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



Landfill Vegetated Cap



Bioswale Cleanouts

200-11681-21006-Photo.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



North Bioswale Cleanout



South Bioswale Cleanout



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



Manhole No. 1



Manhole No. 2

200-11681-21006-Photo.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



Manhole No. 3



Manhole No. 4

200-11681-21006-Photo.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky

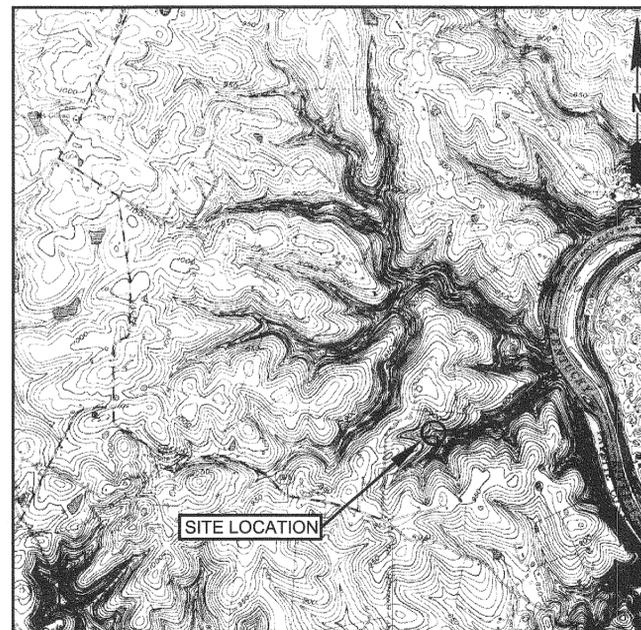
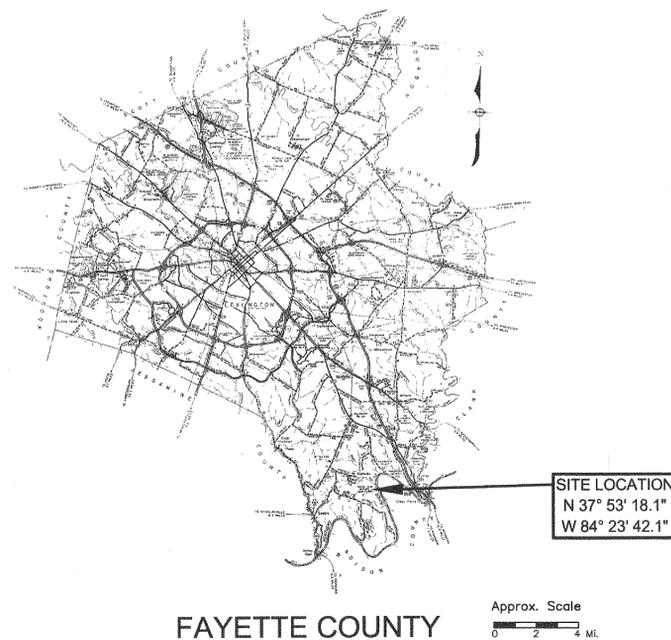
RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY

KENTUCKY DIVISION OF WASTE MANAGEMENT

PROJECT ACCOUNT NUMBER C5WZ-129-DWM-XX78-00
SEPTEMBER 2011

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING AND CONTRACT ADMINISTRATION
FRANKFORT, KENTUCKY

STEVEN L. BESHEAR, GOVERNOR



Adopted from USGS Topographical Map
Coletown, KY Quadrangle
Scale: 1" = 2000'

INDEX OF DRAWINGS

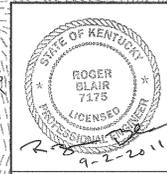
- Sheet G-1 Cover Sheet and Location Map
- Sheet C-1 Existing Conditions
- Sheet C-2 Site Plan
- Sheet C-3 Profile
- Sheet C-4 Miscellaneous Details
- Sheet C-5 Leachate Collection Toe Drain
- Sheet C-6 Revegetation Plan
- Sheet C-7 Storm Water Pollution Prevention Plan

		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
		RECORD DATE COVER SHEET & LOCATION MAP	DRAWING NO. G-1
DRAWN BY CAH		COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	
CHECKED BY HRL		REVIEWED DIV. OF ENGR. <i>Rap</i>	
A&E FILE NO. 05559		TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	
DATE September 2011		ACCOUNT NO. C5WZ-129-DWM-XX78-00	
AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING		DATE 9-14-11 DATE 9-19-11	
REVISIONS 1 2 3 4 5 6 7 8 9		APPROVED FOR PROGRAM CONCEPT ONLY APPROVED FOR PROGRAM CONCEPT ONLY	

A1A-0103

SURVEY CONTROL INFORMATION			
POINT NO.	NORTHING	EASTING	ELEV.
1	139,060.49	1,596,177.30	964.16
2	140,008.38	1,596,013.01	978.20
4	144,199.21	1,596,036.23	942.81
5	142,575.48	1,596,842.27	949.28
6	140,949.94	1,601,237.64	928.08
9	143,649.60	1,603,163.46	783.14

MAPPING PERFORMED BY GRW AERIAL SURVEYS, INC. ON FEBRUARY 1, 2006. THE CONTROL NETWORK IS BASED UPON NAD83 HORIZONTAL AND NAVD88 VERTICAL DATUM, KENTUCKY STATE PLANE COORDINATE SYSTEM. THE CONTOUR INTERVAL IS 2'.



RAVEN RUN - LANDFILL CLOSURE
FAYETTE COUNTY, KENTUCKY

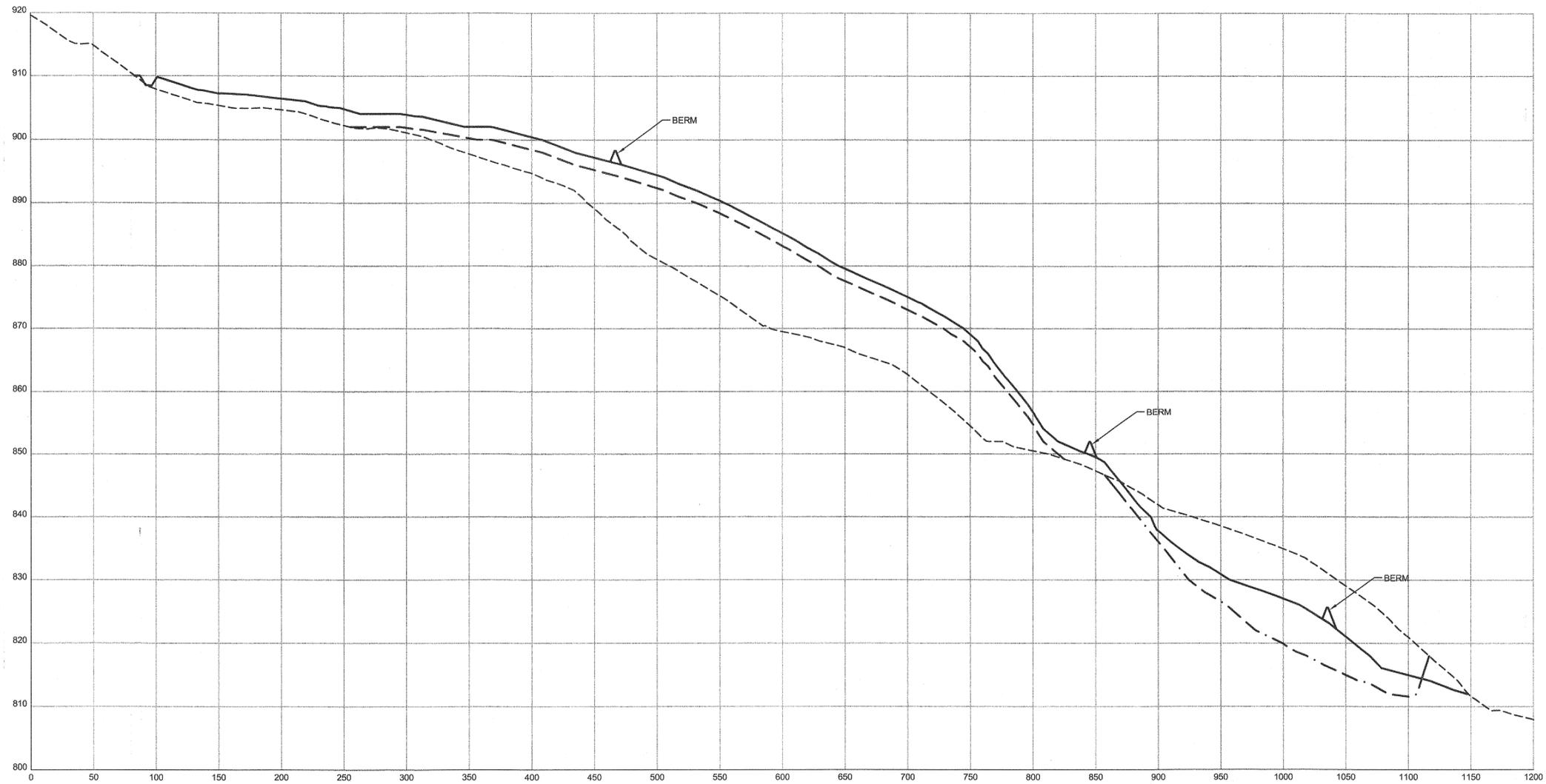
RECORD DATE	EXISTING CONDITIONS	DRAWING NO.
DRAWN BY CAH	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	C-1
CHECKED BY HRL	TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	REVIEWED DIV. OF ENGR.
A&E FILE NO.		<i>RCP</i> <small>FOR REVIEW ONLY</small> ACCOUNT NO. CSW2-125-DWM- XX78-00
REVISIONS	DATE	DATE
1		
2		
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SCALE, FEET
0 200

A2A-0104

05056-RavenRun EC-Concept.dwg

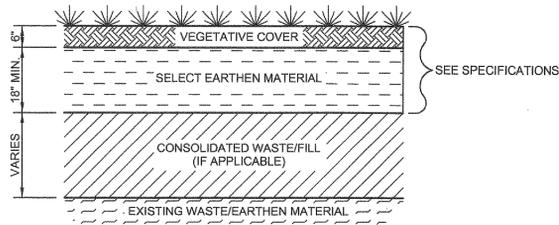
LEGEND
 - - - - - EXISTING GROUND
 - - - - - EXCAVATED WASTE
 - - - - - RELOCATED WASTE
 - - - - - PROPOSED FINAL GRADE



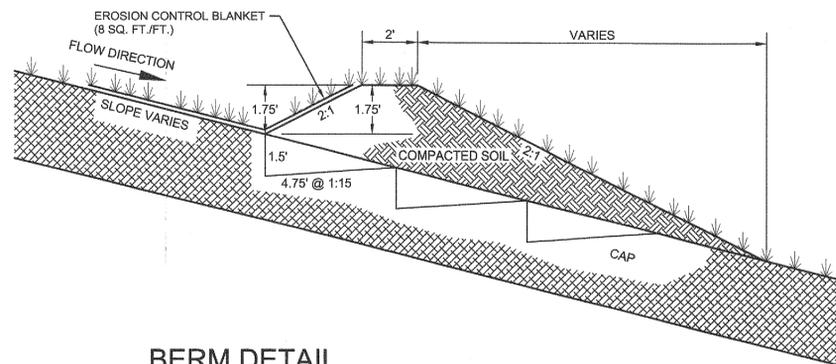
PROFILE 3.1
 SCALE: 1" = 50' H
 1" = 10' V
C-2

A1A-0106

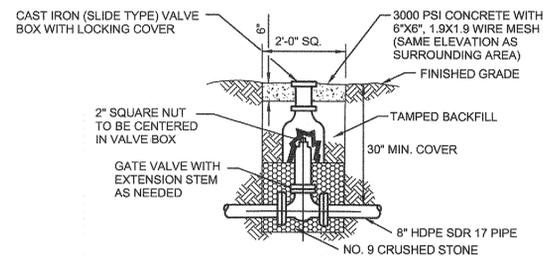
		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY		RECORD DATE	PROFILE	DRAWING NO.
		COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY		DRAWN BY CAH	C-3	
CHECKED BY HRL	A&E FILE NO. 05559	DATE September 2011	REVIEWED DIV. OF ENGR. <i>Rap</i>			
REVISIONS 1 2 3 4 5 6 7 8 9	DATE	AGENCY AUTHORIZED AGENT <i>James Roggen</i> <small>APPROVED FOR PROGRAM CONCEPT ONLY</small>	DATE 9-14-11			
		DIVISION OF ENGINEERING <i>John C. ...</i> <small>APPROVED FOR PROGRAM CONCEPT ONLY</small>	DATE 9/19/11			
		TETRA TECH, INC. <small>800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000</small>	ACCOUNT NO. <small>CSWZ-128-DWMA-XX78-00</small>			



WASTE AREA CAP DETAIL
NOT TO SCALE

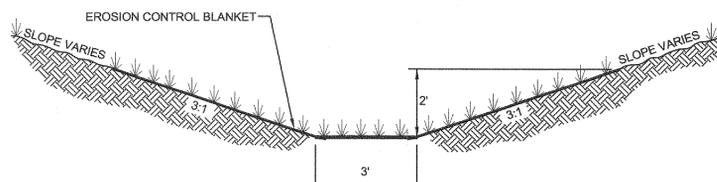


BERM DETAIL
NOT TO SCALE

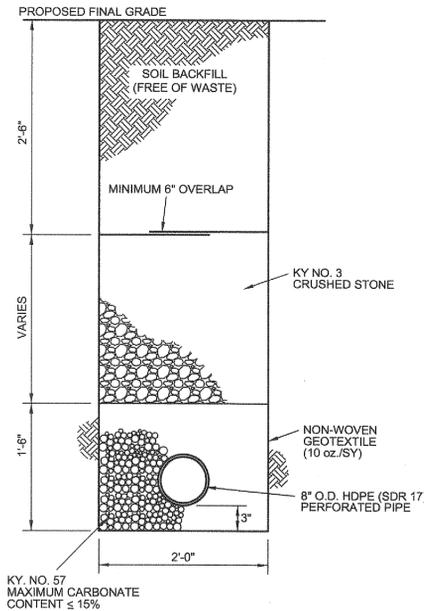


NOTE: A VALVE BOX MARKER SHALL BE PLACED AT EVERY VALVE BOX.

VALVE BOX
NOT TO SCALE

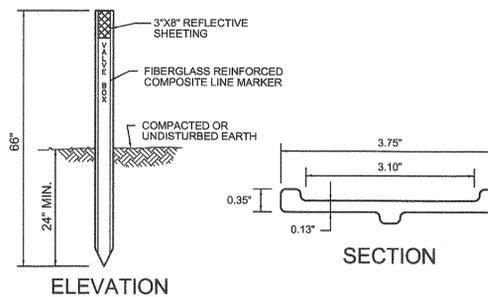


VEGETATED DITCH DETAIL
NOT TO SCALE



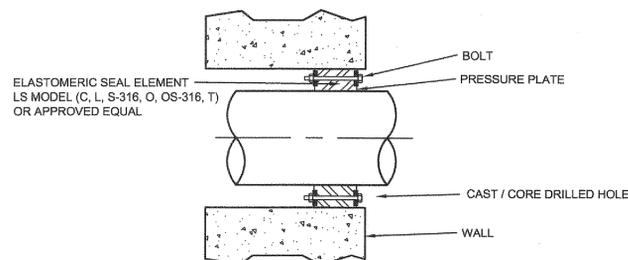
NOTE: IDENTIFICATION TAPE, PER THE SPECIFICATIONS, SHALL BE INSTALLED DIRECTLY ON TOP OF THE GEOTEXTILE OVERLAP ABOVE THE NO. 3 STONE IN ALL PIPE TRENCHES.

LEACHATE LINE TRENCH DETAIL
NOT TO SCALE



NOTE: INSTALL VALVE BOX MARKER ADJACENT TO ALL VALVE BOXES.

VALVE BOX MARKER DETAIL
NOT TO SCALE



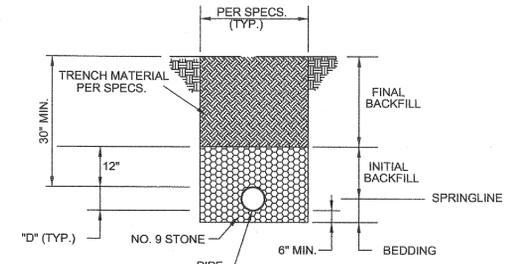
LS Model	Seal Element	Bolts/Nuts	Pressure Plate
C	EPDM (Black)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
L	EPDM (Blue)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
O	Nitrile	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
T	Silicone	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Steel Zinc Dichromate
(C,L,O)+S-316 (see model options)	316 Stainless Steel		Reinforced Nylon Polymer

Sleeve Model Description Material
 CS Century-Line Sleeve HDPE
 WS Steel Wall Sleeve Steel

© MODULAR SEALS WITH CAST OR CORE DRILLED WALL OPENING
 MANUFACTURED BY PIPELINE SEAL & INSULATOR, INC. OR APPROVED EQUAL.
 HOUSTON, TEXAS, U.S.A. TEL: 800-423-2410 E-MAIL: INFO@PSIPSI.COM

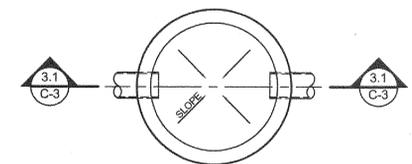
DETAIL OBTAINED VIA INTERNET FROM LINK-SEAL AT WWW.LINKSEAL.COM

PIPE SEAL SYSTEM DETAIL
NOT TO SCALE

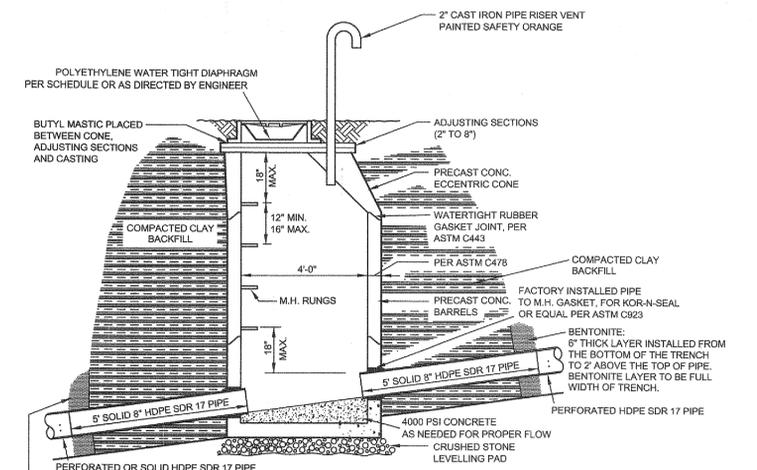


NOTE: IDENTIFICATION TAPE, PER THE SPECIFICATIONS, SHALL BE INSTALLED DIRECTLY ON TOP OF THE INITIAL BACKFILL IN ALL PIPE TRENCHES.

TRENCHING, BEDDING, AND BACKFILL
NOT TO SCALE



PLAN



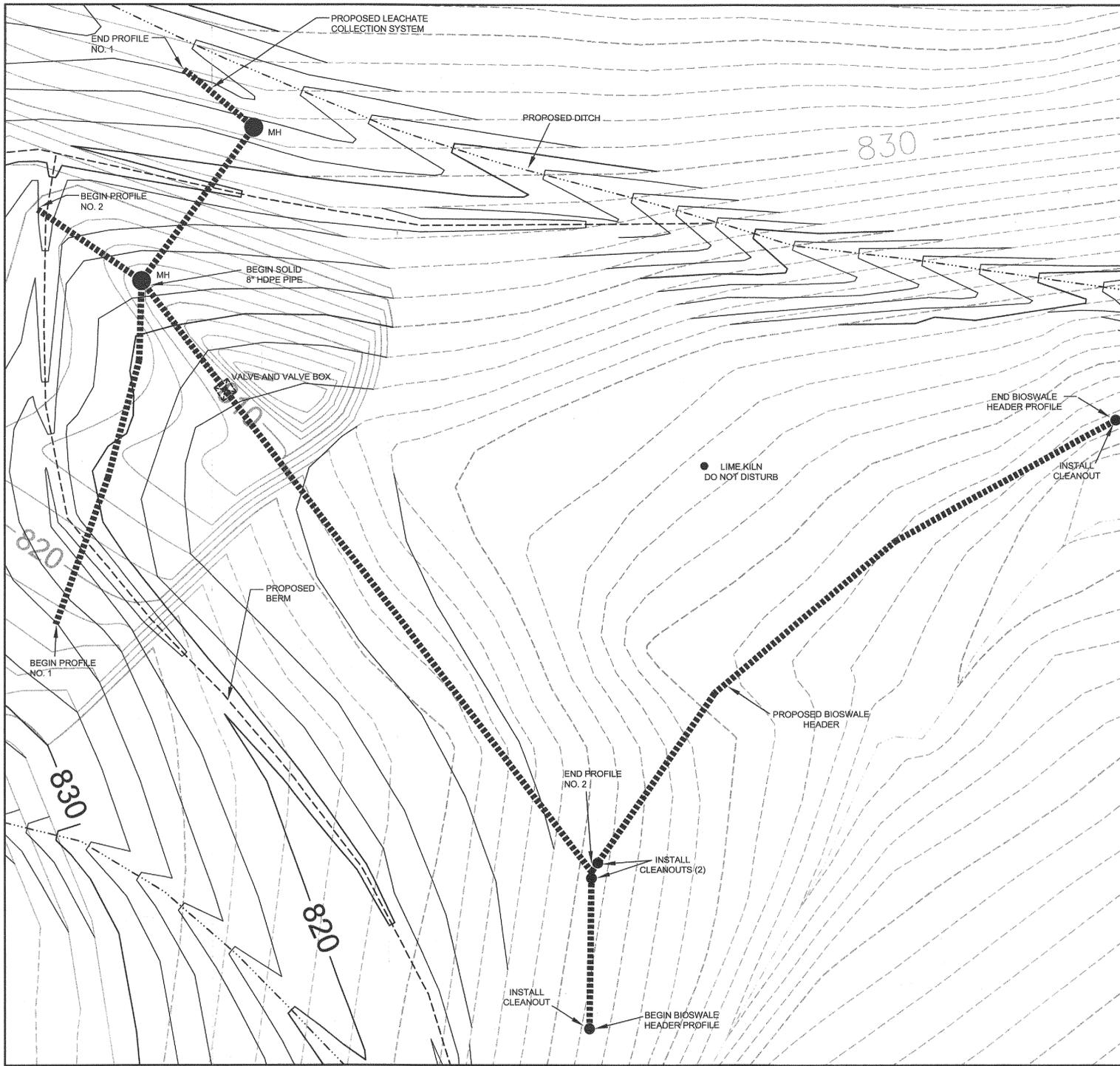
BENTONITE: 6" THICK LAYER INSTALLED FROM THE BOTTOM OF THE TRENCH TO 2" ABOVE THE TOP OF PIPE. BENTONITE LAYER TO BE FULL WIDTH OF TRENCH.

SECTION 3.1 C-3

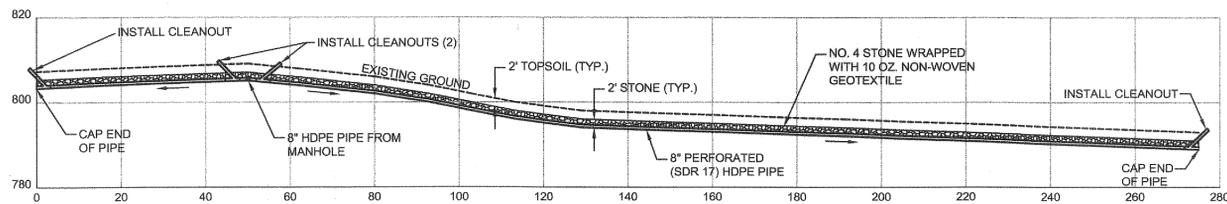
STANDARD MANHOLE
NOT TO SCALE

		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
		MISCELLANEOUS DETAILS	
RECORD DATE DRAWN BY CHECKED BY A&E FILE NO.	DATE September 2011	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	DRAWING NO. C-4
REVISIONS 1 2 3 4 5 6 7 8 9	DATE September 2011	REVIEWED DIV. OF ENGR. FOR INTENT ONLY ACCOUNT NO. CSWZ-129-DW/M-007609	TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000
AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING		DATE 9-14-11 DATE 9-19-11	APPROVED FOR PROGRAM CONCEPT ONLY

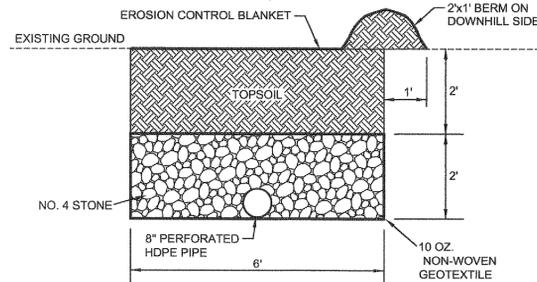
ALA-0107



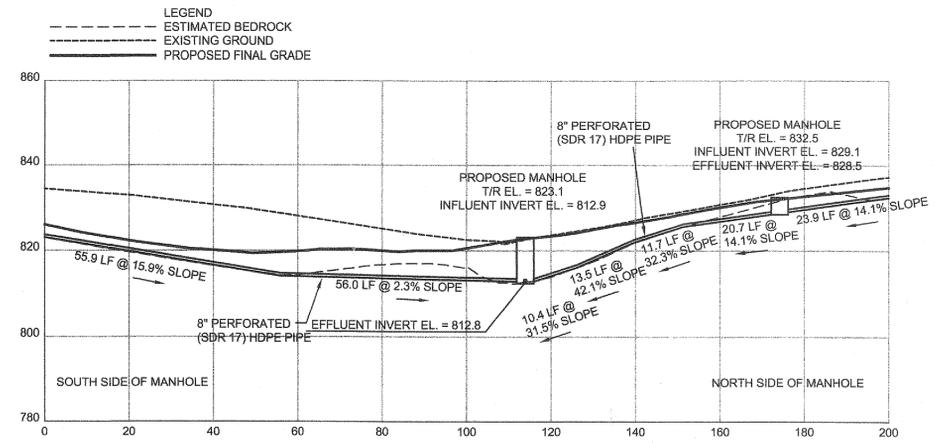
LEACHATE COLLECTION TOE DRAIN SITE PLAN
SCALE: 1" = 20'



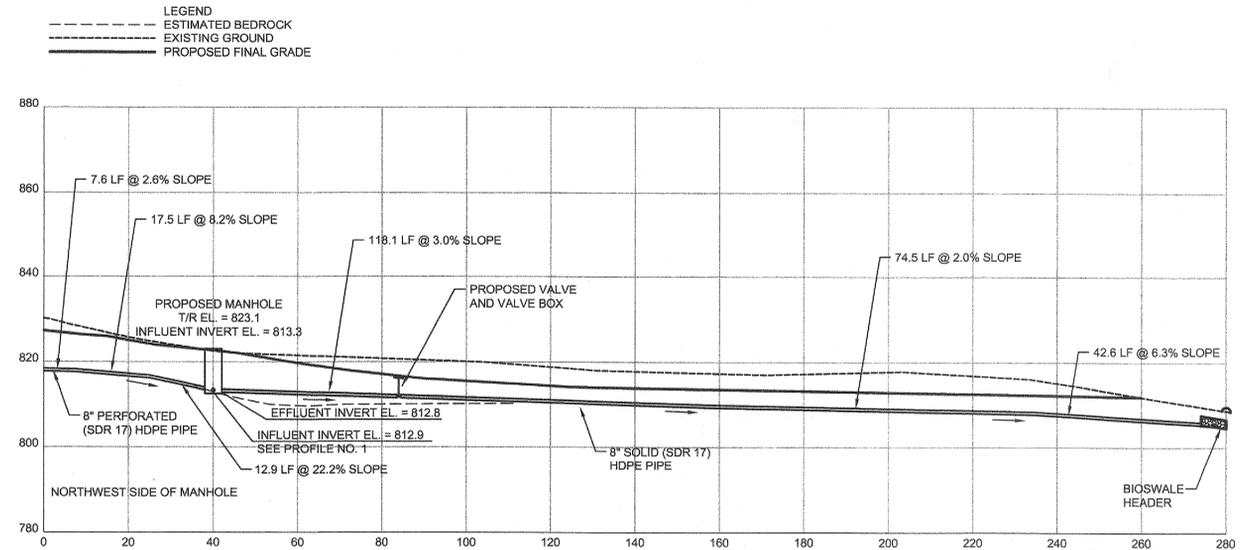
BIOSWALE HEADER PROFILE
SCALE: 1" = 20' H&V



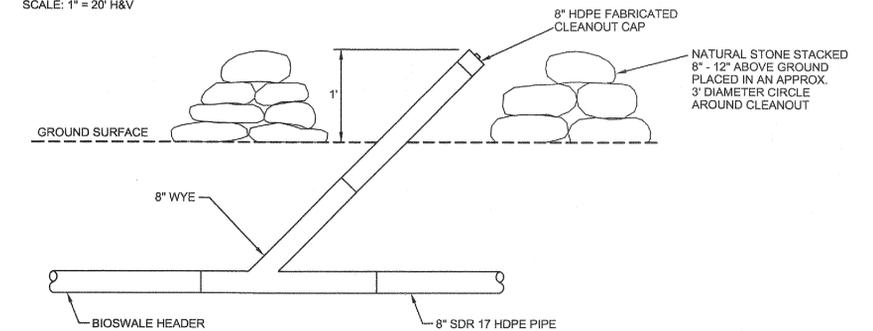
BIOSWALE HEADER DETAIL
NOT TO SCALE



LEACHATE COLLECTION TOE DRAIN PROFILE NO. 1
SCALE: 1" = 20' H&V



LEACHATE COLLECTION TOE DRAIN PROFILE NO. 2
SCALE: 1" = 20' H&V

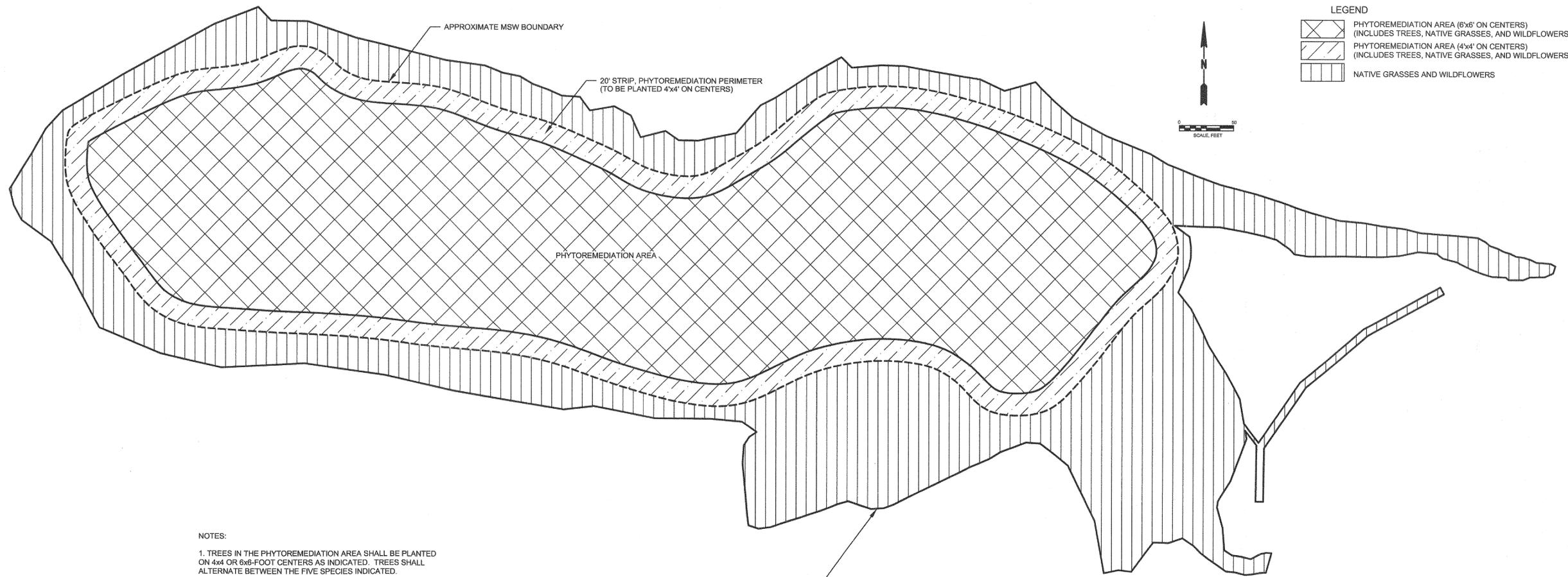


NOTE: NO. 4 STONE NOT SHOWN FOR CLARITY.

CLEANOUT DETAIL
NOT TO SCALE

		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY		RECORD DATE DRAWN BY CHECKED BY A&E FILE NO.	DRAWING NO. C-5
COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY		LEACHATE COLLECTION TOE DRAIN		REVIEWED DIV. OF ENGR. <i>RCP</i>	
TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000		DATE September 2011		ACCOUNT NO. CSW2-129-DWM-XX78-00	
AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING		DATE 9-14-11		DATE 9/19/11	
APPROVED FOR PROGRAM CONCEPT ONLY		APPROVED FOR PROGRAM CONCEPT ONLY		APPROVED FOR PROGRAM CONCEPT ONLY	
REVISIONS 1 2 3 4 5 6 7 8 9		DATE		DATE	

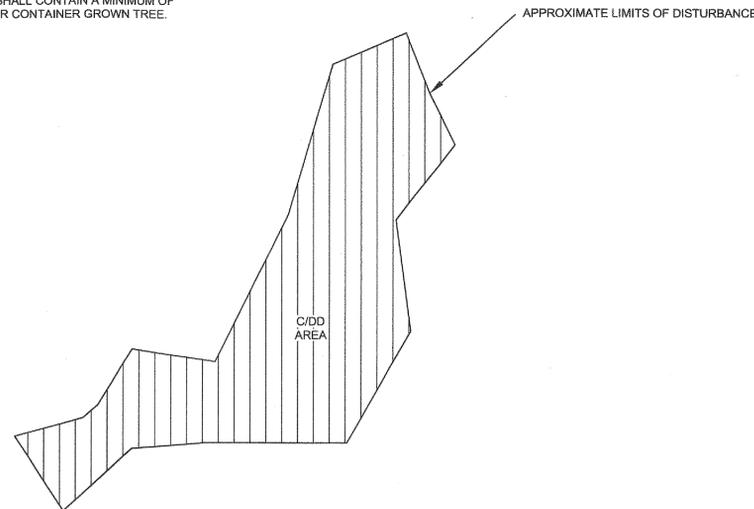
A1A-0108



LEGEND

	PHYTOREMEDIATION AREA (6x6' ON CENTERS) (INCLUDES TREES, NATIVE GRASSES, AND WILDFLOWERS)
	PHYTOREMEDIATION AREA (4x4' ON CENTERS) (INCLUDES TREES, NATIVE GRASSES, AND WILDFLOWERS)
	NATIVE GRASSES AND WILDFLOWERS

- NOTES:**
- TREES IN THE PHYTOREMEDIATION AREA SHALL BE PLANTED ON 4x4 OR 6x6-FOOT CENTERS AS INDICATED. TREES SHALL ALTERNATE BETWEEN THE FIVE SPECIES INDICATED.
 - EACH 4x4 OR 6x6-FOOT GRID SHALL CONTAIN A MINIMUM OF ONE BALLED AND BURLAPPED OR CONTAINER GROWN TREE.



NATIVE GRASS SCHEDULE FOR DISTURBED AREAS AROUND WASTE OIL PITS

SEED SPECIES	SEEDING RATES (POUNDS PER ACRE OF PURE LIVE SEED)
BUFFALOGRASS (<i>Buchloe dactyloides</i>)	150.0

NATIVE GRASS AND WILDFLOWER SCHEDULE PHYTOREMEDIATION AREA AND OTHER DISTURBED AREAS

SEED SPECIES	SEEDING RATES (POUNDS PER ACRE OF PURE LIVE SEED)
BIG BLUESTEM (<i>Andropogon gerardi</i>)	4.0
LITTLE BLUESTEM (<i>Schizachyrium scoparium</i>)	6.0
SWITCHGRASS (<i>Panicum virgatum</i>)	2.0
INDIANGRASS (<i>Sorghastrum nutans</i>)	6.0
CANADA WILD RYE (<i>Elymus canadensis</i>)	10.0
PARTRIDGE PEA (<i>Chamaecrista fasciculata</i>)	2.0
ANNUAL RYE GRASS (<i>Lolium multiflorum</i>)	25.0
BLACK-EYED SUSAN (<i>Rudbeckia hirta</i>)	0.5
LANCELEAF COREOPSIS (<i>Coreopsis lanceolata</i>)	0.5
COMMON MILKWEED (<i>Asclepias syriaca</i>)	0.5
WILD BERGAMOT (<i>Monarda fistulosa</i>)	0.5
BUFFALOGRASS (<i>Buchloe dactyloides</i>)	25.0

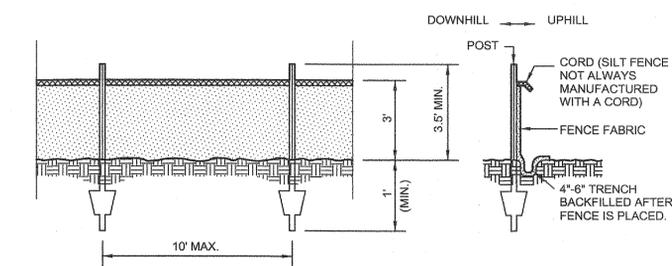
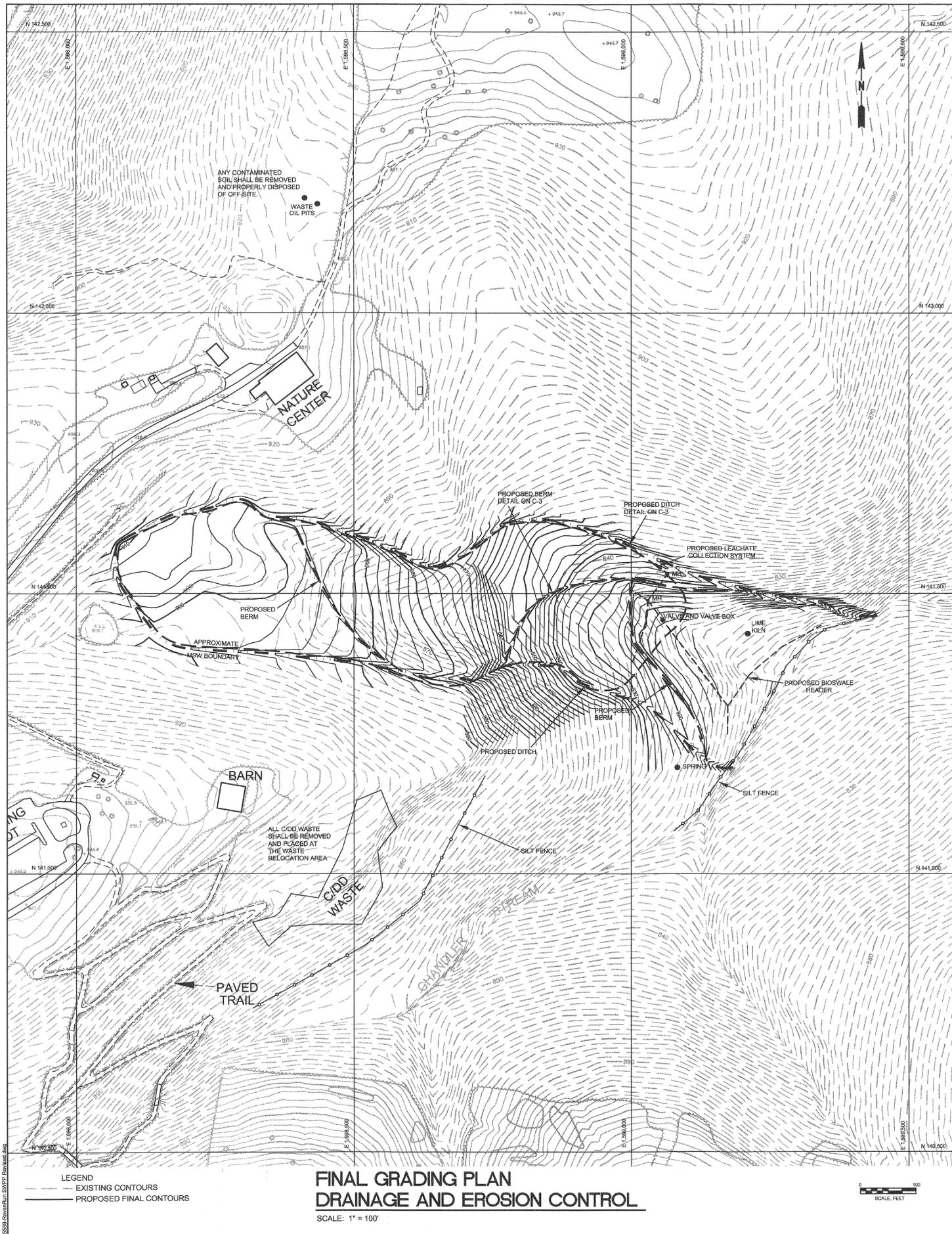
TREE SCHEDULE PHYTOREMEDIATION AREA

ESTIMATED QUANTITY	BOTANICAL NAME	COMMON NAME	FORM	UNIT AND SIZE	PLANTING RATIO
1,605	<i>Carya laciniosa</i>	Shellbark Hickory	Tree	See Note Below	20% of Trees
1,605	<i>Quercus bicolor</i>	Swamp White Oak	Tree	See Note Below	20% of Trees
1,605	<i>Populus deltoids</i>	Eastern Cottonwood	Tree	See Note Below	20% of Trees
1,605	<i>Acer nigrum</i>	Black Maple	Tree	See Note Below	20% of Trees
1,605	<i>Aesculus octandra</i>	Yellow Buckeye	Tree	See Note Below	20% of Trees

NOTE: Twenty five percent of the quantity shall be balled and burlapped or container grown and the remaining seventy five percent shall be seedlings. The balled and burlapped or container grown trees shall have at least a one inch caliper size.

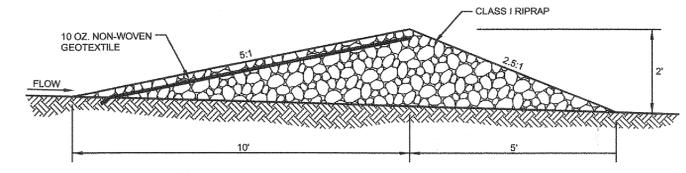
A1A-0109

		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY		
		RECORD DATE DRAWN BY CHECKED BY A&E FILE NO.	REVEGETATION PLAN COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	DRAWING NO. C-6
REVISIONS 1 2 3 4 5 6 7 8 9	DATE September 2011	05559	 TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	REVIEWED DIV. OF ENGR. <i>RCP</i> FOR BIDDING ONLY ACCOUNT NO. CSW/2129-0014- 0078-00
AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING		<i>Jai Brown</i> APPROVED FOR PROGRAM ACCEPT ONLY	DATE 9-14-11	
APPROVED FOR PROGRAM CONCEPT ONLY		<i>Arden B...</i> APPROVED FOR PROGRAM CONCEPT ONLY	DATE 9/19/11	



- INSTALLATION PROCEDURE:**
1. FENCE POSTS CONSISTING OF EITHER STEEL OR WOOD ARE INSTALLED 6' TO 10' APART ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUN-OFF SOURCE.
 2. A TRENCH 4" TO 6" DEEP IS DUG ALONG THE UPHILL SIDE OF THE FENCE LINE.
 3. THE SILT FENCE IS UNROLLED AND LAID OUT ALONG THE FENCE LINE.
 4. BUILT-IN ATTACHMENT CORD RUNS THROUGHOUT THE FULL LENGTH OF EACH 150 LINEAR FOOT ROLL. ONE END OF THE ROLL HAS APPROXIMATELY 5' OF CORD. THE OTHER END HAS APPROXIMATELY 20' OF CORD. THE END WITH 5' OF CORD IS WRAPPED AROUND THE FIRST POST AND SECURED.
 5. THE FENCE IS PULLED TO THE NEXT POST AND A 1.5" SLIT IS MADE IN THE HEM DIRECTLY ABOVE THE CORD. THE CORD IS PULLED OUT OF THE HEM AND PULLED TAUT FROM THE PRECEDING POST AND WRAPPED TWICE AROUND THE POST.
 6. THE SLITTING OF THE HEM AT EACH POST IS REPEATED UNTILL THE FINAL POST IS REACHED AT WHICH TIME THE MATERIAL IS WRAPPED AROUND THE LAST POST AND SECURED WITH THE ENCLOSED CORD.
 7. AT THIS TIME THE LOWER 4" TO 6" OF THE FENCE IS LAID IN THE TRENCH AND CURLED TOWARD THE EROSION SOURCE.
 8. THE TRENCH IS THEN FILLED WITH ANY AVAILABLE SOIL.

SILT FENCE DETAIL
NOT TO SCALE



NOTE: ROCK CHECK DAM LOCATIONS ARE NOT SHOWN ON THE PLAN, BUT SHALL BE CONSTRUCTED AS NEEDED OR AS DIRECTED BY THE ENGINEER.

ROCK CHECK DAM DETAIL
NOT TO SCALE

- NOTES:**
1. THE CONTRACTOR SHALL ACQUIRE A STORM WATER GENERAL PERMIT BY SUBMITTING A NOTICE OF INTENT (NOI) TO THE DIVISION OF WATER. CONSTRUCTION CANNOT BEGIN UNTIL NOTIFICATION OF COVERAGE FROM THE KENTUCKY DIVISION OF WATER HAS BEEN RECEIVED.
 2. THE CONTRACTOR SHALL KEEP ON SITE A MAINTENANCE LOG OF ALL EROSION CONTROL FEATURES AND SHALL INSPECT, CLEANOUT, REPLACE, OR MODIFY ALL FEATURES DURING THE COURSE OF THE PROJECT AS THEY RESPOND TO WEATHER AND STORM WATER.
 3. THE CONTRACTOR SHALL SUBMIT A SITE PHASING PLAN OR OTHER RELATED DOCUMENTS THAT MAY INFLUENCE OR AFFECT THE PERFORMANCE OF THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
 4. THE CONTRACTOR SHALL KEEP COPIES OF THE NOI, GENERAL PERMIT, SWPPP WITH RELATED DOCUMENTS, AND A MAINTENANCE LOG BOOK ON SITE.
 5. UPON COMPLETION OF THE PROJECT, AND ONCE FINAL VEGETATIVE COVER HAS BEEN ESTABLISHED TO THE SATISFACTION OF THE ENGINEER, THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL DEVICES, RESTORE THE DISTURBED PORTIONS TO THE FINAL GRADE, AND SUBMIT A NOTICE OF TERMINATION TO THE DIVISION OF WATER.
 6. THOUGH NOT SHOWN ON THIS PLAN, EROSION CONTROL DEVICES SHALL BE USED AS NECESSARY IN THE BORROW AREA. ALL PARTS OF THIS STORM WATER POLLUTION PREVENTION PLAN APPLY TO THE BORROW AREA AS WELL AS THE CONSTRUCTION AREA.

		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY		RECORD DATE	SWPP PLAN	DRAWING NO. C-7
		DRAWN BY CAH	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	CHECKED BY HRL	A&E FILE NO. 05559	DATE September 2011
REVISIONS	DATE	AGENCY AUTHORIZED AGENT <i>Tom Patten</i>	TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-9000	DATE 9-14-11	ACCOUNT NO. CSWZ-178-DWM-XXX78-00	
1	2	DIVISION OF ENGINEERING <i>Tom Patten</i>	APPROVED FOR PROGRAM CONCEPT ONLY	DATE 9/19/11		
2						
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9						

11A-010

**EXHIBIT B
CERTIFICATE OF INSURANCE**



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
04/21/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Insurance Services West, Inc. Los Angeles CA Office 707 Wilshire Boulevard Suite 2600 Los Angeles CA 90017-0460 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (800) 363-0105		
	E-MAIL ADDRESS:		
INSURED Tetra Tech, Inc. 424 Lewis Hargett Circle Suite 110 Lexington KY 40503 USA	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Zurich American Ins Co		16535
	INSURER B: American Guarantee & Liability Ins Co		26247
	INSURER C: Lexington Insurance Company		19437
	INSURER D: American International Group UK Ltd		AA1120187
	INSURER E:		
INSURER F:			

COVERAGES **CERTIFICATE NUMBER:** 570092788639 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> X,C,U Coverage GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:	Y		GL0181740603	10/01/2021	10/01/2022	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY	Y		BAP 1857085 03	10/01/2021	10/01/2022	COMBINED SINGLE LIMIT (Ea accident) \$5,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
D	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$100,000			62785232	10/01/2021	10/01/2022	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
A B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WC254061603 WC185708703	10/01/2021 10/01/2021	10/01/2022 10/01/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE-EA EMPLOYEE \$1,000,000 E.L. DISEASE-POLICY LIMIT \$1,000,000
C	Env Contr Prof			028182375 Prof/Poll Liab SIR applies per policy terms & conditions	10/01/2021	10/01/2022	Each Claim \$1,000,000 Aggregate \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 RE: Job Description: RFP #17-2022 Former Jacks Creek Pike Landfill Improvement Project Raven Run Nature Sanctuary. Lexington-Fayette Urban County Government is included as Additional Insured in accordance with the policy provisions of the General Liability and Automobile Liability policies, as required by written contract. General Liability evidenced herein is Primary to other insurance available to an Additional Insured, but only in accordance with the policy provisions, as required by written contract. Should any of the above described policies be cancelled before the expiration date thereof, the policy provisions will govern how notice of cancellation may be delivered to certificate holders in accordance with the policy provisions of each policy. Stop Gap coverage for the following states: OH, ND, WA, WY.

CERTIFICATE HOLDER Lexington-Fayette Urban County Govt. Room 338, Government Center Attn: Purchasing Director 200 East Main Street Lexington KY 40507 USA	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Aon Risk Insurance Services West, Inc.</i>
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EXHIBIT C
PROFESSIONAL PROPOSAL



Lexington-Fayette Urban County Government



Former Jacks Creek Pike Landfill Improvement Project Raven Run Nature Sanctuary

RFP #17-2022 | APRIL 2022



TETRA TECH



April 11, 2022

Mr. Todd Slatin – Purchasing Director
Lexington-Fayette Urban County Government
200 East Main Street
3rd Floor
Lexington, KY 40507

Point of Contact

Herbert R. Lemaster, PE
424 Lewis Hargett Circle, Suite 110
Lexington, KY 40503
859-514-8752
herbert.lemaster@tetratech.com

Subject: RFP # 17-2022 Former Jacks Creek Pike Landfill Improvement Project Raven Run Nature Sanctuary

Dear Mr. Slatin and Selection Committee:

The Raven Run Nature Sanctuary area has been impacted by the Jacks Creek Pike Landfill since the landfill began operating in 1969. The landfill closed in 1972 and was covered by a layer of soil. The Kentucky Division of Waste Management (KDWM) completed a site remediation project in 2013, at which time LFUCG accepted responsibility for inspection and maintenance. LFUCG is committed to making improvements to the site to ensure the leachate management system performs as originally designed by Tetra Tech.

Tetra Tech was involved with the initial characterization of the landfill in 1991 under contract to LFUCG. In addition, Tetra Tech was contracted by KDWM to continue the studies and planning for the closure of the landfill from 2005 to 2008 and implemented the original closure plan in 2011. As a result, we have a keen appreciation for how the closed landfill must co-exist with the operation of Raven Run Nature Sanctuary. We have an in-depth understanding of the topography, surface drainage system, vegetation, and leachate management system. In addition, we have the institutional knowledge of the activities and decisions of KDWM and LFUCG regarding the design, operation, and maintenance of the landfill.

Our team's knowledge and experience at this facility is unmatched. We fully understand the critical importance of protecting the environment and maintaining the natural ambiance within the Raven Run Nature Sanctuary. The objectives of the project are to return the leachate management system's function through the bioswale back to the original performance levels and where possible provide enhanced capabilities for maintenance procedures and opportunities for increased life expectancy of the bioswale. Completing these objectives will require a team that has a thorough understanding of the existing closure system and the constraints of the surrounding area and regulatory obligations. Tetra Tech has assembled that team.

EXTENSIVE DESIGN EXPERIENCE

Tetra Tech is a leading national consulting firm that has been **ranked Number 1** in the nation for water by **Engineering News-Record (ENR)** for the past 18 years in a row, **Number 2** in Solid Waste, **Number 4** in Environmental Engineering/Design, and **Number 4 in the Top 500 Design Firms**. For over 30 years, our Lexington office's technical design staff has studied, planned, designed, and permitted landfill related and leachate management facilities across Kentucky and assisted our offices with these tasks across the United States.

We are the Engineer of Record on the former Jacks Creek Pike Landfill Closure conducted under House Bill 174 by the Kentucky Finance and Administration Cabinet for the Kentucky Division of Waste Management, Closure Branch. As part of our previous work on this facility we have evaluated several alternatives and approaches. Since Tetra Tech has no learning curve associated with understanding the needs for this facility and associated challenges, we can quickly provide cost effective solutions. The Qualifications and Past Performance section of our submittal lists projects performed by the people on our team who have the necessary understanding and experience to perform this project quickly and efficiently. We have provided studies, planning activities, and landfill closure/leachate management designs for many projects like this across Kentucky.

PROVEN PERFORMANCE WITH LFUCG

Tetra Tech is the Engineer of Record for the Haley Pike Landfill Closure Design, West Hickman Wastewater Treatment Plant Headworks and Wet Weather Storage (WWS) facilities, Wolf Run WWS facility, and the Walhampton Stormwater Improvements project. Our local office has provided planning, permitting, design, and construction administration services for these projects. When necessary, we have integrated our national experts within Tetra Tech into a cohesive and responsive team that has met the demanding requirements and schedules of these highly complex projects. Because of our past experiences with LFUCG processes and procedures, there will be no learning curve – we will hit the ground running, saving you time and money.

TEAM-ORIENTED APPROACH

Tetra Tech understands the importance of listening to the people who will be maintaining this facility and who operate the Raven Run Nature Sanctuary. We are committed to providing open communication to ensure that the needs of LFUCG staff for maintenance/operational activities are met and that the concerns of the LFUCG staff operating the Sanctuary are addressed. Our goal is to operate as a direct extension of your staff, as we have done on recent maintenance activities at the Jacks Creek Pike Landfill. In addition, we have demonstrated our ability to do this on other projects like Haley Pike Landfill and the Consent Decree projects at West Hickman and Wolf Run.

WHY CHOOSE TETRA TECH

- Tetra Tech has extensive experience with the Jacks Creek Pike Landfill facility, there will be no learning curve.
- Tetra Tech has extensive experience working with KDWM Closure Branch on similar projects.
- Tetra Tech has long-term experience working with LFUCG on various projects.
- Tetra Tech has established a reputation of providing the high-level of service you expect.
- Tetra Tech uses a problem-solving approach. When we identify a problem that requires input by your staff, we will always bring you viable solutions to consider.
- Tetra Tech has the staff and resources available to meet your schedule.
- Tetra Tech performs the work with minimal oversight from your staff. Our goal is to be an extension of your staff. We look to you for your guidance on the direction of the project and provide you with alternatives to review.

Tetra Tech has included team members **Third Rock Consulting** to assist with environmental permitting and **Salt River Engineering** to provide cost analysis.

All of the work for this project will be performed in the Lexington office. If necessary, Tetra Tech has ample resources that can be utilized to meet schedule demands. Being local to the community means that we are personally invested in improving the quality of life in Lexington, and we take great pride in working together with you to reach your goals. We look forward to working with you on this project and continuing the relationships we have developed.

Sincerely,



Richard W. Walker, PE, CFM
Vice President



Herbert R. Lemaster, PE
Senior Project Manager

TETRA TECH, INC.

424 Lewis Hargett Circle, Suite 110, Lexington, KY 40503
Tel 859.223.8000 Fax 859.224.1025 www.tetrattech.com



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Lexington-Fayette
Urban County
Government



QUALIFICATIONS AND PAST PERFORMANCE



QUALIFICATIONS AND PAST PERFORMANCE

Tetra Tech is a leading provider of consulting, engineering, program management, and construction management services with over 21,000 employees. Tetra Tech is a leading national consulting firm that has been **ranked Number 1** in the nation for water by **Engineering News-Record (ENR)** for the past 18 years in a row, **Number 2** in Solid Waste, **Number 4** in Environmental Engineering/Design, and **Number 4 in the Top 500 Design Firms**. Tetra Tech has a national reputation as a leader in water, wastewater, and stormwater engineering. Tetra Tech is a full service firm that routinely provides civil engineering, structural engineering, electrical engineering, mechanical engineering, and architectural services to our clients. The Lexington office provides engineering services for water and wastewater engineering, stormwater management, landfill engineering, and environmental services projects. In addition, the Lexington office provides project support to multiple Tetra Tech offices for accounting, human resources, information technology, operations, and marketing.

Our major clients in the region include the following:

- LFUCG
- Commonwealth of Kentucky Division of Waste Management
- Blue Grass Airport
- East Kentucky Power Cooperative
- Kentucky Utilities
- U.S. Army Corps of Engineers

We have demonstrated our ability to deliver high-quality products, on schedule, and within budget. As a result, we understand your operating style and culture, and how to best respond to your needs. We have built a relationship of mutual trust and respect, which has allowed us to work as an extension of your staff.

Our team members include:

Third Rock Consulting was established in 2001. They will be supporting our team with environmental permitting. Their services include ecological surveys and analyses; stream and wetland restoration design and construction; environmental planning (including environmental permitting, NEPA documentation, and feasibility studies); MS4 program management and permit monitoring; erosion protection and sediment control planning and inspection; and aquatic taxonomy. Their staff includes ecologists, professional engineers, professional geologists, environmental planners, construction inspectors, technical writers, GIS analysts, and AutoCAD technicians. Third Rock is certified as a disadvantaged business enterprise (DBE), small business (SB), and woman-owned business (WBE) by various federal, state and local agencies and maintain DOT consultant prequalification in Kentucky, Tennessee, Georgia, Illinois, Ohio, and North Carolina. Tetra Tech has worked with Third Rock on multiple projects since its founding and has a strong working relationship.

Salt River Engineering (SRE) is a DoD verified, veteran-owned small business specializing in engineering design and rate-making for water, wastewater and stormwater utilities. They offer design solutions for water and wastewater utilities and will provide cost analysis for this project. With over 30 years of experience serving Kentucky municipalities and regulated utilities, SRE's system planning and infrastructure projects are practical, effective and efficient solutions for city officials and utility managers. SRE's owner is both a professional engineer and a certified construction manager. SRE provides agency construction management for municipal and private utility capital construction including time, cost and general project management.



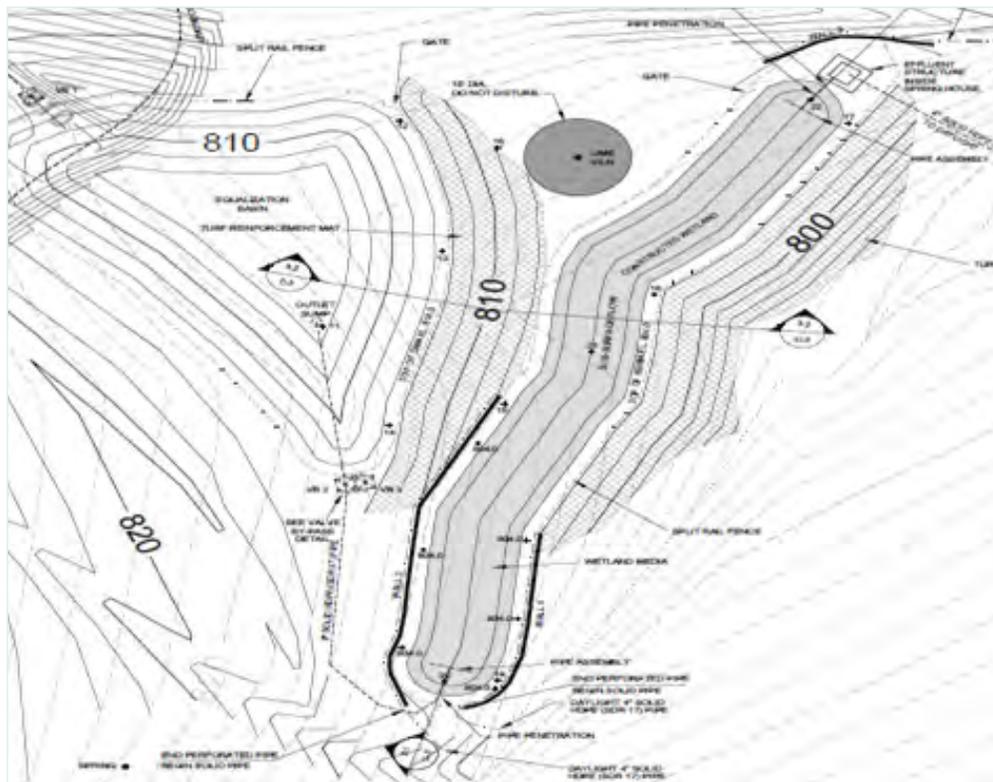


Summary of Projects at Raven Run/Jacks Creek Pike Landfill

The Lexington Tetra Tech team has extensive experience with the Former Jacks Creek Pike Landfill, various LFUCG design/construction and stormwater management projects, and other landfill closure projects.

LFUCG retained us in 1991 to conduct a Site Characterization of the Raven Run Nature Sanctuary that included an evaluation of three waste oil pits, a sludge pit, the landfill area, and the separate construction debris disposal area. In 2005, Tetra Tech was retained by the Kentucky Finance and Administration Cabinet (Ky FAC) for the Kentucky Division of Waste Management (KDWM), Closure Branch to conduct an additional Site Characterization for the Jacks Creek Pike/Raven Run Landfill Closure, which included a hydrogeologic investigation to locate springs, sampling of water and soils to determine any environmental impacts, and delineating the extent of the waste footprint and depth to bedrock. Tetra Tech was authorized by Ky FAC to proceed with the design documents for the closure of the landfill. During the design process, Tetra Tech work closely with KDWM and LFUCG to determine the most environmentally cost-effective solutions to address the concerns of the waste oil pits, sludge pit, and the old landfill and to properly close the landfill with the requirements of the regulations.

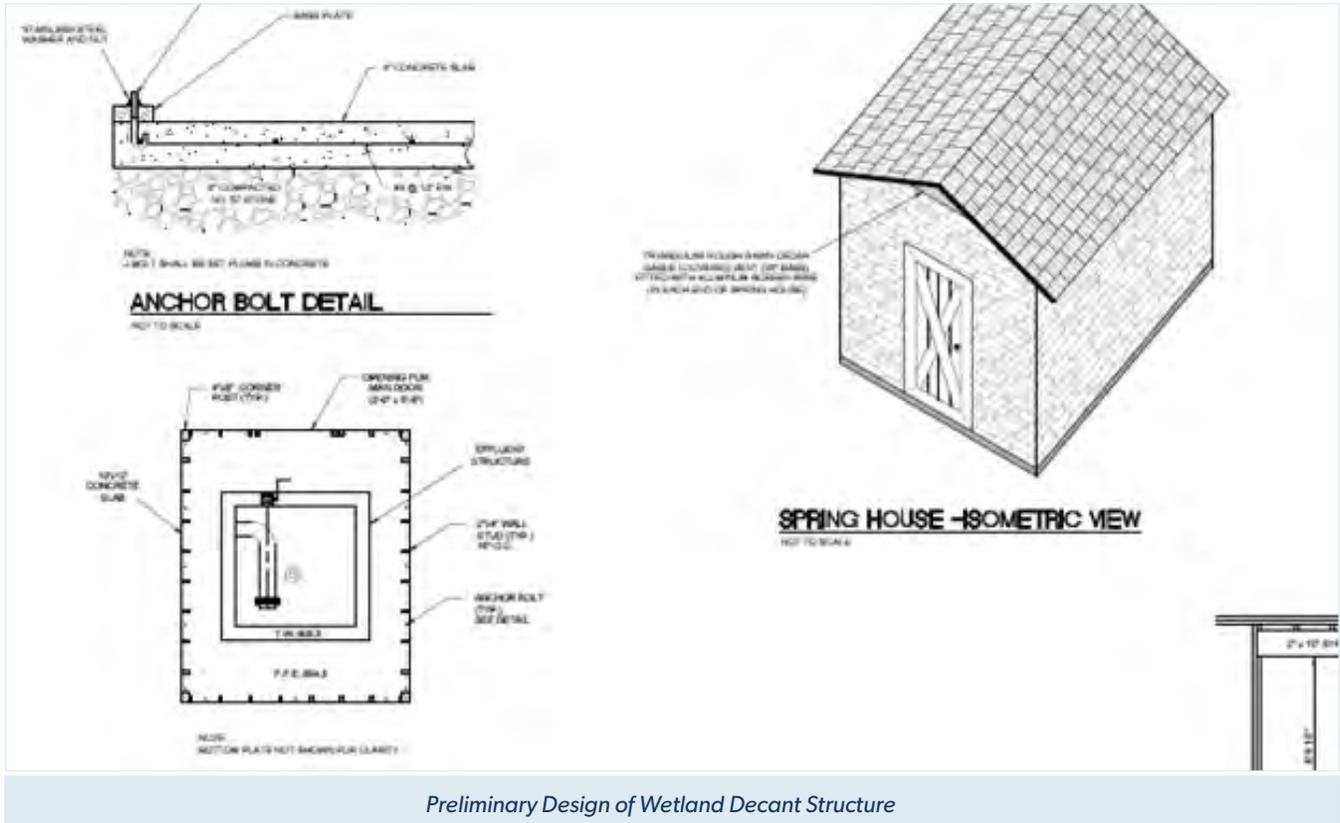
One of the largest concerns during the landfill closure design process was the management of the leachate generated by the landfill. Several options were evaluated to accomplish this task. A preliminary design was completed utilizing an equalization basin and constructed wetlands to manage and treat the leachate.



Preliminary Design of Equalization Basin and Wetlands



This design included a spring house that would be aesthetically pleasing and would complement the adjacent lime kiln and surrounding area which would enclose the decant (effluent) structure for the wetlands cell.



KDWM decided not to continue with this design alternative after discussions with the Kentucky Division of Water indicated that this would create a discharge point that would require Kentucky Pollutant Discharge Elimination Systems (KPDES) permitting, sampling, and monitoring. This decision evolved into the conceptual design of a wet well and pump station down-gradient of the equalization basin that would pump the leachate to a tank on top of the hill for storage until it could be hauled for treatment at the wastewater treatment plant. Concerns from LFUCG regarding the necessity to install electrical lines and equipment in this part of the nature sanctuary and the continuous operation/maintenance and hauling costs associated with this alternative led to KDWM requesting Tetra Tech to evaluate an additional alternative. This resulted in the design with the bioswale and phytoremediation that was the selected alternative that met the requirements of a non-point source discharge desired by KDWM and achieved the goals of LFUCG.

Tetra Tech provided professional services for the former Jacks Creek Pike Landfill after construction of the closure was complete. These services included site inspections and cleaning of the bioswale.

The following pages provide examples of our relevant experience with the former Jacks Creek Pike Landfill/Raven Run, various LFUCG design/construction and stormwater management projects, and other landfill closure projects.



Summary of Projects at Raven Run/Jacks Creek Pike Landfill

PROJECT NAME, LOCATION	COMPLETION DATE	SERVICES PROVIDED / PROJECT DESCRIPTION	FIRM
Raven Run Nature Sanctuary Site Characterization, Lexington, Kentucky	1991	Site evaluation, sampling, and testing to determine environmental impacts of landfill and associated areas.	Tetra Tech
Site Characterization Jacks Creek Pike Raven Run - Landfill Closure, Lexington, Kentucky	2008	Site evaluation, sampling, and testing to determine environmental impacts and delineate footprint of landfill.	Tetra Tech
Design and Construction of the Raven Run Landfill Closure, Lexington, Kentucky	2012	Design of Closure Cap and leachate management system. Construction administration for installation activities.	Tetra Tech
Raven Run Landfill Site Inspection, Lexington, Kentucky	2015	Inspection of installed facilities and report of findings.	Tetra Tech
Raven Run Leachate Line Cleaning, Lexington, Kentucky	2020	Cleaning and Jet-rodding of collection lines and bioswale drain lines and removal of sediment; report of findings.	Tetra Tech
Raven Run Leachate Line Cleaning, Lexington, Kentucky	2021	Cleaning and Jet-rodding of collection lines and bioswale drain lines, report of findings.	Tetra Tech
Raven Run Landfill Site Inspection, Lexington, Kentucky	2021	Inspection of installed facilities and report of findings.	Tetra Tech
Raven Run Landfill Maintenance Plan, Lexington, Kentucky	2021	Development of maintenance plan for bioswale and recommendations for the future.	Tetra Tech



Summary of Projects with LFUCG

PROJECT NAME, LOCATION	COMPLETION DATE	SERVICES PROVIDED / PROJECT DESCRIPTION	FIRM
West Hickman Wet Weather Storage – Phase 2 Lexington, Kentucky	Ongoing	Design and construction administration for a 18-million gallon wet weather storage tank and related facilities.	Tetra Tech
Campbell, Barnard, Bob-O-Link Stormwater Analysis, Lexington, Kentucky	Ongoing	Hydraulic evaluation of existing stormwater conveyance systems, development of improvement alternatives, and development of design/construction documents.	Tetra Tech
Idle Hour and Industry Road Stormwater Analysis, Lexington, Kentucky	2021	Hydraulic evaluation of existing stormwater conveyance systems, development of improvement alternatives, and development of design/construction documents.	Tetra Tech
West Hickman Wet Weather Storage – Phase 1 Lexington, Kentucky	2020	Design and construction administration for new headworks facility that included screens, grit handling facilities, 70 MGD influent pump station, 80 MGD wet weather pump station, and a 22-million gallon wet weather storage tank, and related facilities.	Tetra Tech
Wolf Run Wet Weather Storage and Wastewater Conveyance, Lexington, Kentucky	2017	Design and construction administration for a 2-million gallon wet weather storage tank and related facilities	Tetra Tech
Haley Pike Compost Pad Addition Lexington, Kentucky	2017	Provided design, construction quality assurance, and construction administration for improvements to the Haley Pike Compost Pad.	Tetra Tech
Haley Pike Landfill Closure - Phase 1 and 2	2006	Design and Construction administration of Phase 1 and 2 Landfill Closure of Lexington’s 105-acre Haley Pike Solid Waste Landfill.	Tetra Tech



Summary of Projects with LFUCG (cont.)

PROJECT NAME, LOCATION	COMPLETION DATE	SERVICES PROVIDED / PROJECT DESCRIPTION	FIRM
Haley Pike Landfill Closure - Phase 3 Lexington, Kentucky	2008	Design and Construction administration of Phase 3 Landfill Closure of Lexington's 105-acre Haley Pike Solid Waste Landfill.	Tetra Tech
Design of Haley Pike Landfill Closure Lexington, Kentucky	2007	Design of Closure Cap. Equalization basin and constructed wetlands.	Tetra Tech
Water Monitoring, Haley Pike Landfill Lexington, Kentucky	2007	Monitored and analyzed surface water and groundwater. Monitored leachate and groundwater parameters. Monitored for compliance with KPDES permit.	Tetra Tech
Walhampton Stormwater Improvements Project, Lexington, Kentucky	2015	Design of storm sewers and a detention basin.	Tetra Tech
Wolf Run Wet Weather Storage and Wastewater Conveyance, Lexington, Kentucky	2017	Included installation of approximately 200 linear feet of 36- to 42-inch sanitary sewer.	Tetra Tech
Wetland Leachate Treatment for Haley Pike Landfill Closure Lexington, County, Kentucky	2006	Multi-phase closure of Lexington's 105-acre Haley Pike Solid Waste Landfill.	Tetra Tech
Development of Haley Pike Landfill Closure Plan, Lexington, Kentucky	2004	Development of closure plans and submittal to Kentucky Division of Waste Management for approval.	Tetra Tech



Summary of Related Landfill Projects

PROJECT NAME, LOCATION	COMPLETION DATE	SERVICES PROVIDED / PROJECT DESCRIPTION	FIRM
Johnson County Landfill Leachate Management System, Kentucky Division of Waste Management Johnson County, Kentucky	Ongoing	Design and Construction management for leachate management system from closed landfill.	Tetra Tech
Billy Glover Waste Facility Closure, Kentucky Division of Waste Management Jessamine County, Kentucky	2015	Design and Construction Administration for landfill closure and leachate management system.	Tetra Tech
Landfill Characterization 34 Inactive Sites, Kentucky Division of Waste Management Various Southern Kentucky Counties	2013	Compiled site geology, hydrogeology, and geomorphic conditions; collected water and soil samples, determined environmental issues; completed report for each site detailing finding.	Tetra Tech
Richmond Landfill, Closure Leachate Management, Kentucky Division of Waste Management, Madison County, Kentucky	2010	Design and construction management for leachate management system from closed landfill.	Tetra Tech
Cynthiana Landfill Leachate Management, Kentucky Division of Waste Management Harrison County, Kentucky	2008	Design and construction of leachate management system for closed landfill that included pump station, equalization basin, and two surface flow wetland cells.	Tetra Tech
Harlan County Landfill Leachate Management, Kentucky Division of Waste Management, Harlan County, Kentucky	2007	Design and construction of leachate management system for closed landfill that included equalization basin, and two subsurface flow wetland cells.	Tetra Tech
Landfill Characterization 30 Inactive Sites, Kentucky Division of Waste Management, Various Central and Eastern Kentucky Counties	2007	Compiled site geology, hydrogeology, and geomorphic conditions; collected water and soil samples, determined environmental issues; completed report for each site detailing finding.	Tetra Tech
Leitchfield Landfill Leachate Management, Kentucky Division of Waste Management Grayson County, Kentucky	2006	Design and construction of Leachate management system for closed landfill that included pump station, equalization basin, and three subsurface flow wetland cells.	Tetra Tech



Experience Performing Similar Projects



Jacks Creek Pike/Raven Run Landfill Closure | Fayette County, KY

The Kentucky Division of Waste Management (KDWM) selected Tetra Tech for Phase II Site Characterization, remediation design, and construction oversight for closure of a construction/demolition debris disposal area and former waste oil pits. Because this area is located in a Nature Sanctuary, it was imperative to complete the project in a way that blends it with the surroundings in an unobtrusive manner, ensures safety of the public, and minimizes damage to the surrounding area.

To characterize the site and surrounding area, Tetra Tech geologists performed a hydrogeologic investigation to locate springs within a ¼-mile radius of the site. Surface water samples were collected from specific springs to determine if landfill contaminants were impacting the local groundwater system. Studies of other sites that Tetra Tech has conducted in karst regions have shown that monitoring springs directly connected to the karst system is more effective than the installation of a groundwater monitoring well network. Monitoring springs also eliminates the cost and time for installing monitoring wells.

Before exploration activities commenced, a complete ecological survey was conducted to ensure that no threatened or endangered species would be impacted. The study included an assessment of the various bats, trees, and native plants within the future construction area.

An electromagnetic survey was conducted to map the lateral extent of the waste boundary, and a GPS unit with sub-meter accuracy was used to record features while traversing the site. A resistivity survey was used to determine the thickness of the waste, as well as other subsurface features. Both methods were successful in delineating the waste and creating a more accurate determination of the volume of waste located at the site. A limited geotechnical investigation was also conducted to confirm the depth to bedrock as determined from the geophysical investigation.

Information from these investigations methods were used to design a closure cap and leachate treatment system. The closure activities will include consolidating the waste material to reduce the cap area; grading the waste material for better drainage; minimizing the surface water drainage by diverting surface flow; using a phytoremediation technique to pull leachate from the landfill while minimizing the borrowed soil needed for the closure cap; selecting trees and grasses that will blend into the natural landscape of the site; designing a wetland area at the toe of the waste area to treat leachate; as well as other site activities to close the site. It is anticipated that the construction activities will begin in the near future.

Client

Kentucky Division of Waste Management (KDWM), Solid Waste Branch

Project Duration

2011

Project Value

\$1,500,000

Project Highlights

- Conducted geophysical surveys to delineate waste boundary
- Conducted extensive spring survey
- Conducted ecological survey for rare and endangered species
- Developed closure plan

Reference

Mr. Tim Rogers, PG
502.564.6716
Ms. Tammi Hudson, PE
502.564.6716
Kentucky Division of Waste Management
200 Fair Oaks Lane
Frankfort, KY 40622



DDSI Construction/Demolition Debris Landfill | Fayette County, KY

This project involved permitting and design of a 23-acre construction/demolition debris (C/DD) landfill located on a 60-acre tract in eastern Fayette County, Kentucky. The 23-acre landfill footprint was to be developed in eight phases and would hold about 1.2 million cubic yards of waste. Tetra Tech completed financial pro-forma, after which the client authorized proceeding with the permit application.

Obtaining the environmental permit involved a three-phase permit process required by the state environmental regulatory agency. As a part of the permitting procedure, Tetra Tech developed base mapping from aerial photography, conducted biological and wetlands surveys, arranged for Phase I and II archaeological surveys, directed the completion of an extensive geotechnical investigation, and characterized groundwater and surface water.

Following collection of physical data, Tetra Tech developed a grading plan to maximize the available air space, optimize the traffic flow, handle surface drainage, retain surface flow to allow sediment to be captured, and collect leachate generated during operation. Services also included design of construction haul roads, personnel/maintenance buildings, scale house, and 70' x 12', 200,000 lb. capacity electronic scale.

Following issuance of the construction permit, Tetra Tech provided both construction surveying and quality assurance. Tetra Tech compiled the construction certification report for submittal to the regulatory authority. In the following years, Tetra Tech provided quality assurance services for Phase 2 (1998), Phase 3 (2000), Phase 4 (2003), Phase 5 (2007), and Phase 6 (2011). In addition, Tetra Tech prepared construction plans and bid documents for Phase 6 (2010).

Tetra Tech also designed and provided construction quality assurance services for a 2,750,000-gallon leachate storage lagoon.



Lexington-Fayette Urban County Government

Client

Demolition Disposal Services

Project Duration

1993 to 2011

Project Value

\$645,000

Project Highlights

- Prepared permitting documents
- Developed optimal grading plan
- Provided construction surveying and quality assurance
- Leachate storage lagoon

Reference

Mr. Troy Thompson
Demolition Disposal Services
2393 Alumni Drive
Suite 100
Lexington, KY 40517
859.266.7300



Stormwater Drainage Improvements, Hardin County Contained Landfill | Hardin County, KY

Tetra Tech provided engineering services to the Hardin County Fiscal Court for the design, bidding, and construction oversight and administration of stormwater drainage improvements at their existing landfill. The existing facility had very steep sloped ditches and the site was prone to have intense storm events that produced high velocity stormwater, resulting in ditch erosion. The objective was to design ditches and culverts for a road crossing that could withstand the substantial stormwater flows at the landfill.

Tetra Tech had recent aerial mapping of the facility because of other projects performed at the site. Design involved utilizing this mapping for layout and obtaining information for input into SedCAD modeling software. A 100-year, 24-hour storm event was used for designing the ditches' cross-sectional shape as well as sizing the culvert pipes. Grouted riprap ditches and triple 36" reinforced concrete pipes with a headwall were incorporated into the design.

After completing the drawings and specifications, Tetra Tech assisted in the bidding process. Once bids were received, Tetra Tech performed a bid tabulation, reviewed contractors' references, and made a contractor recommendation. Once the contractor was selected and contracts were completed, construction began after Tetra Tech conducted a pre-construction meeting with the contractor. During construction, Tetra Tech performed construction oversight and administration until the project was complete.

Client

Hardin County Fiscal Court

Project Duration

2007

Project Value

Construction: \$270,000
Fee: \$31,000

Project Highlights

- Design stormwater improvements to reduce erosion
- Develop construction drawings and specifications
- Bid project for construction
- Construction oversight and administration

Reference

Mr. Daniel London
Deputy Judge Executive
Hardin County Fiscal Court
100 Public Square
3rd Floor
Elizabethtown, KY 42701
270.360.9207



Wetland Leachate Treatment for Harlan County Landfill | Harlan County, KY

Harlan County owns and manages a closed, sanitary landfill in Harlan County, Kentucky. Though closed, there was still a need to collect and transport leachate from the landfill to a publicly owned treatment works (POTW). The Kentucky Division of Waste Management (DWM) selected Shield Environmental, who in turn subcontracted to Tetra Tech, Inc., (Tt) the design and construction oversight of a leachate treatment system that would eliminate the need for transporting the leachate to the POTW. The DWM desired a simple, low operating cost, and reliable treatment system. The use of constructed wetlands for leachate treatment was preferred by the DWM.

Tt prepared engineering plans and specifications suitable for bidding and construction of an on-site leachate treatment system. The work effort also included construction administration, construction quality assurance plan and services, and preparation of a construction certification report.

A number of tasks were undertaken to accomplish the project objective, including obtaining data necessary for design; characterization of waste and leachate to be treated; determining property location and boundaries; determining the condition of the cap; determining the structural features and confirming the integrity of the leachate collection system; site topography, soils, and geology.

From the data above, Tt determined the treatment alternatives for the leachate, and recommended a subsurface flow constructed wetland, keeping in mind the direct discharge warm water aquatic habitat criteria that must be met.

Client

Kentucky Division of Waste Management (KDWM), Solid Waste Branch

Project Duration

2007

Project Value

\$650,000

Project Highlights

- Characterized quality of leachate
- Designed equalization basin and wetland cells
- Developed construction cost estimates, plans, and specifications
- Provided construction quality assurance services

Reference

Mr. Danny Anderson, PE
KDWM, Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601
502.564.6716



Billy Glover Waste Dump, Characterization Closure | Jessamine County, KY

Tetra Tech was selected to complete a site characterization and closure of an old landfill, commonly referred to as the Billy Glover Dump Site. The old landfill ceased operation in 1983, and subsequent investigations by the Division of Waste Management (KDWM) revealed large areas of exposed waste, leachate outbreaks, and the presence of volatile organic compounds, PCBs, and heavy metals in the sediment and surface water of the receiving stream.

A work plan to characterize the extent of impact to surface water, groundwater, stream sediment, and site soil was developed and approved by the KDWM's superfund branch. An extensive spring survey was conducted and 34 springs were identified within a one-mile radius of the landfill. All springs and various waste piles/items on the immediate landfill property were documented and mapped using a GPS unit. A GIS interfaced database, using the survey data, was used to generate scaled maps and diagrams of the landfill and surrounding property.

Because the site is located within karst terrain, a dye trace was conducted in the fall of 2004 to identify which springs are connected to the groundwater network underlying the former disposal facility. The springs that were identified via the dye trace will serve as points to monitor the effectiveness of the upcoming corrective action activities, which are anticipated for mid-2005. Geophysical testing was used to delineate the extent of the buried waste across the site. Samples were collected to determine if the waste piles on the surface had impacted the soil. Additionally, once the subsurface waste boundaries were located, soil samples were collected to determine if the soil was impacted by the subsurface waste. All tires and white goods were segregated from the waste pile and transported off-site for recycling purposes.

The information generated from these activities was used by Tetra Tech to prepare dual closure plans that include the engineered construction drawings, specifications, and cost estimates to properly close the landfill. Two designs, construction wetland and pump station with force main, were prepared to give the owner agency a leachate treatment choice.

Strategies for minimizing costs addressed both capital construction cost and long-term care cost. These strategies included consolidating the waste into the smallest area possible to reduce the size of the engineered cap and provided two options for leachate treatment. Once a choice for leachate treatment was made, Tetra Tech assisted in bidding and providing construction quality assurance services.

Client

Kentucky Division of Waste Management (KDWM), Solid Waste Branch

Project Duration

2002 to 2015

Project Value

\$4,500,000

Project Highlights

- Conducted a dye trace study to identify springs
- Geophysical testing to delineate the extent of waste
- Developed construction documents and specifications for construction
- Provided construction oversight and construction administration services

Reference

Mr. Tim Rogers, PG
Kentucky Division of Waste Management, Historic Landfill Closure Section
300 Sower Boulevard
Second Floor
Frankfort, KY 40601
502.564.6716



Wetland Leachate Treatment for City of Leitchfield Landfill | Leitchfield, KY

The City of Leitchfield owns and manages a closed, sanitary landfill in Grayson County, Kentucky. Though closed, considerable resources were required to collect and transport leachate from the landfill to the publicly owned treatment works (POTW), Leitchfield Wastewater Treatment Plant. Based on historical data, it was estimated that over 37,000 gallons of leachate were hauled and treated each year. The Kentucky Division of Waste Management (DWM) selected Tetra Tech, Inc., (Tt) to design and provide construction oversight of a leachate treatment system that would eliminate the need for transporting the leachate to the POTW. The DWM desired a simple, low operating cost, and reliable treatment system. The use of constructed wetlands for leachate treatment was preferred by the DWM.

Tt prepared engineering plans and specifications suitable for bidding and construction of an on-site leachate treatment system. The work effort also included construction administration, construction quality assurance plan, and preparation of a construction certification report.

A number of tasks were undertaken to accomplish the project objective, including obtaining data necessary for design; characterization of waste and leachate to be treated; determining property location and boundaries; determining the condition of the cap; determining the structural features and confirming the integrity of the leachate collection system; site topography, soils, and geology.

From the data above, Tt determined the treatment alternatives for the leachate, and recommended a surface flow constructed wetland, keeping in mind the direct discharge warm water aquatic habitat criteria that must be met.

Client

Kentucky Division of Waste Management (KDWM), Solid Waste Branch

Project Duration

2006

Project Value

\$564,000

Project Highlights

- Characterized quality of leachate
- Designed equalization basin and wetland cells
- Designed pump station and force main
- Developed construction cost estimates, plans, and specifications
- Provided construction quality assurance services

Reference

Mr. Tim Rogers, PG
KDWM, Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601
502.564.6716



Wetland Leachate Treatment for Cynthiana Landfill | Cynthiana, KY

The City of Cynthiana owns and manages a closed, sanitary landfill in Harrison County, Kentucky. Though closed, considerable resources were required to collect and transport leachate from the landfill to the publicly owned treatment works (POTW), Cynthiana Wastewater Treatment Plant. Based on historical data, it was estimated that over 700,000 gallons of leachate were hauled and treated each year. The Kentucky Division of Waste Management (DWM) selected Tetra Tech, Inc., (Tt) to design and provide construction oversight of a leachate treatment system that would eliminate the need for transporting the leachate to the POTW. The DWM desired a simple, low operating cost, and reliable treatment system. The use of constructed wetlands for leachate treatment was preferred by the DWM.

Tt prepared engineering plans and specifications suitable for bidding and construction of an on-site leachate treatment system. The work effort also included construction administration, construction quality assurance plan, and preparation of a construction certification report.

A number of tasks were undertaken to accomplish the project objective, including obtaining data necessary for design; characterization of waste and leachate to be treated; determining property location and boundaries; determining the condition of the cap; determining the structural features and confirming the integrity of the leachate collection system; site topography, soils, and geology.

From the data above, Tt determined the treatment alternatives for the leachate, and recommended a surface flow constructed wetland, keeping in mind the direct discharge warm water aquatic habitat criteria that must be met.

Client

Kentucky Division of Waste Management (KDWM), Solid Waste Branch

Project Duration

2006

Project Value

\$1,200,000

Project Highlights

- Provided design and construction services for a constructed wetland to treat leachate
- Design elements included pump station, force main, equalization basin, and wetland cells
- Developed construction cost estimates, plans, and specifications

Reference

Mr. Tim Rogers, PG
KDWM, Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601
502.564.6716



Wetland Leachate Treatment for Johnson County Landfill | Johnson County, KY

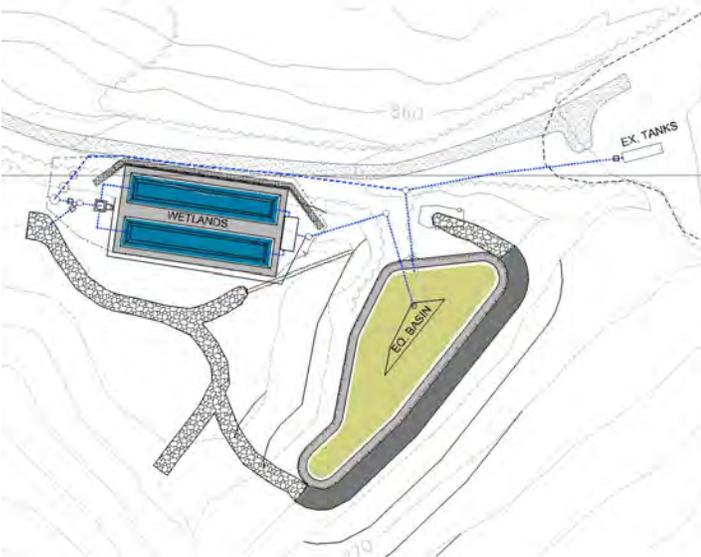
Johnson County owns and manages a closed, sanitary landfill in Johnson County, Kentucky. Though closed, the Owner was faced with the continued chore and expense of collecting and transporting leachate from the landfill to a publicly owned treatment works (POTW). The Kentucky Division of Waste Management (DWM) selected Tetra Tech, Inc., (Tt) to design and provide construction oversight of a leachate treatment system that would eliminate the need for transporting the leachate to the POTW. The DWM desired a simple, low operating cost, and reliable treatment system. The use of constructed wetlands for leachate treatment was preferred by the DWM.

Tt prepared engineering plans and specifications suitable for bidding and construction of an on-site leachate treatment system. When construction commences, Tt will provide construction administration and quality assurance services and will prepare a construction certification report.

A number of tasks were undertaken to accomplish the project objective, including obtaining data necessary for design; characterization of waste and leachate to be treated; determining property location and boundaries; determining the condition of the cap; determining the structural features and confirming the integrity of the leachate collection system; site topography, soils, and geology.

From the data above, Tt determined the treatment alternatives for the leachate, and recommended a subsurface flow constructed wetland, keeping in mind the direct discharge warm water aquatic habitat criteria that must be met.

Due to point source discharge regulatory concerns, an alternative design was completed for this facility that did not utilize wetlands.



Client

Kentucky Division of Waste Management (KDWM), Solid Waste Branch

Project Duration

2007

Project Value

\$521,000

Project Highlights

- Performed site characterization
- Provided design and construction services for a constructed wetland to treat leachate
- Design elements included pump station, force main, equalization basin, and wetland cells
- Developed construction cost estimates, plans, and specifications

Reference

Mr. Tim Rogers, PG
KDWM, Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601
502.564.6716



Design of Haley Pike Landfill Closure | Fayette County, KY

This innovative closure plan was for a 97-acre landfill, which is the largest landfill closure to-date in Kentucky. The closure design had to meet the newest and most stringent landfill regulations for municipal solid waste landfills. Although the landfill had operated historically as a municipal solid waste landfill, a portion of the area on top of the fill remained in use as a construction debris (C/DD) landfill.

Key features of the landfill closure are:

- Use of synthetic materials in the closure cap eliminates the need to purchase and transport large volumes of expensive gravel and clay and reduces cost by about 25 percent.
- Design of an equalization basin and man-made wetlands to treat large quantities of leachate during the post-closure life of the facility. This system replaces the practice of pumping leachate from 30 manholes and hauling it 20 miles to LFUCG's treatment plant, resulting in significant savings over the post-closure life of the facility.
- Development of an incremental closure approach, allowing the continued operation of the CD/D disposal cell for four additional years. The incremental closure spreads costs over a five-year period and provides a continuing revenue stream from the CD/D operation.
- Initial Tier I calculations indicated that the landfill would require an active methane collection system. It performed Tier II testing, which showed that gas generation had peaked and was at a level that allowed the use of a passive versus active methane collection system.

Tetra Tech prepared construction plans and bid documents for the various closure phases. In addition, Tetra Tech provided construction quality assurance and certification services for constructing nearly 69 acres of closure cap, as well as the leachate handling and treatment system. The closure cap will be applied to the remaining 28 acres when the C/DD landfill closes.



Lexington-Fayette Urban County Government

Client

Lexington-Fayette Urban County Government (LFUCG)

Project Duration

2000 – 2007

Project Value

Construction: \$9,400,000
Fee: \$879,000

Project Highlights

- Innovative and cost-effective Closure Plan
- Design of Closure Cap
- Largest landfill closure to-date in Kentucky
- Use of synthetic materials
- Equalization basin and man-made wetlands

Reference

Mr. Richard Boone
Lexington-Fayette Urban County Government (LFUCG)
200 East Main Street
Lexington, KY 40507
859.425.2255



Wetland Leachate Treatment for Haley Pike Landfill Closure | Fayette County, KY

Tetra Tech (Tt) planned and is providing engineering and environmental science consulting services for the largest landfill closure to date in the Commonwealth of Kentucky. This project is the multi-phase closure of Lexington’s 97-acre Haley Pike Solid Waste Landfill.

Tt prepared engineering plans and specifications suitable for bidding and In addition to managing the large size of the project, Tt’s regulatory specialists are guiding the incremental closure concept through the state’s regulatory program. The concept is to close the landfill in roughly equal increments over a five-year period, spreading the closure expense over time, while continuing to operate the construction/demolition debris (C/DD) landfill located on a portion of the closure site.

Closure planning and design addressed the various environmental requirements of the Kentucky Division of Waste Management and Air Quality, including:

- Leachate collection and treatment
- Tier 2 gas monitoring
- Methane gas collection system
- Groundwater assessment and monitoring plan

Because of the long term cost consequences of transporting and treating leachate, Tt conducted a further investigation into the use of constructed wetlands for wastewater treatment. Use of a natural system to treat landfill leachate reduces disposal and treatment costs and reduces conventional pollutants in the landfill property. The investigation concluded that this technique could be used and would result in significant savings for LFUCG.



Client

Lexington-Fayette Urban County Government (LFUCG)

Project Duration

2005 — 2006

Project Value

\$900,000

Project Highlights

- Multi-phase closure of Lexington’s 97-acre Haley Pike Solid Waste Landfill
- Used natural system to treat landfill leachate to reduce disposal and treatment costs and reduce conventional pollutants in the landfill property

Reference

Mr. Richard Boone
Lexington-Fayette Urban County Government (LFUCG)
200 East Main Street
Lexington, KY 40507
859.425.2255



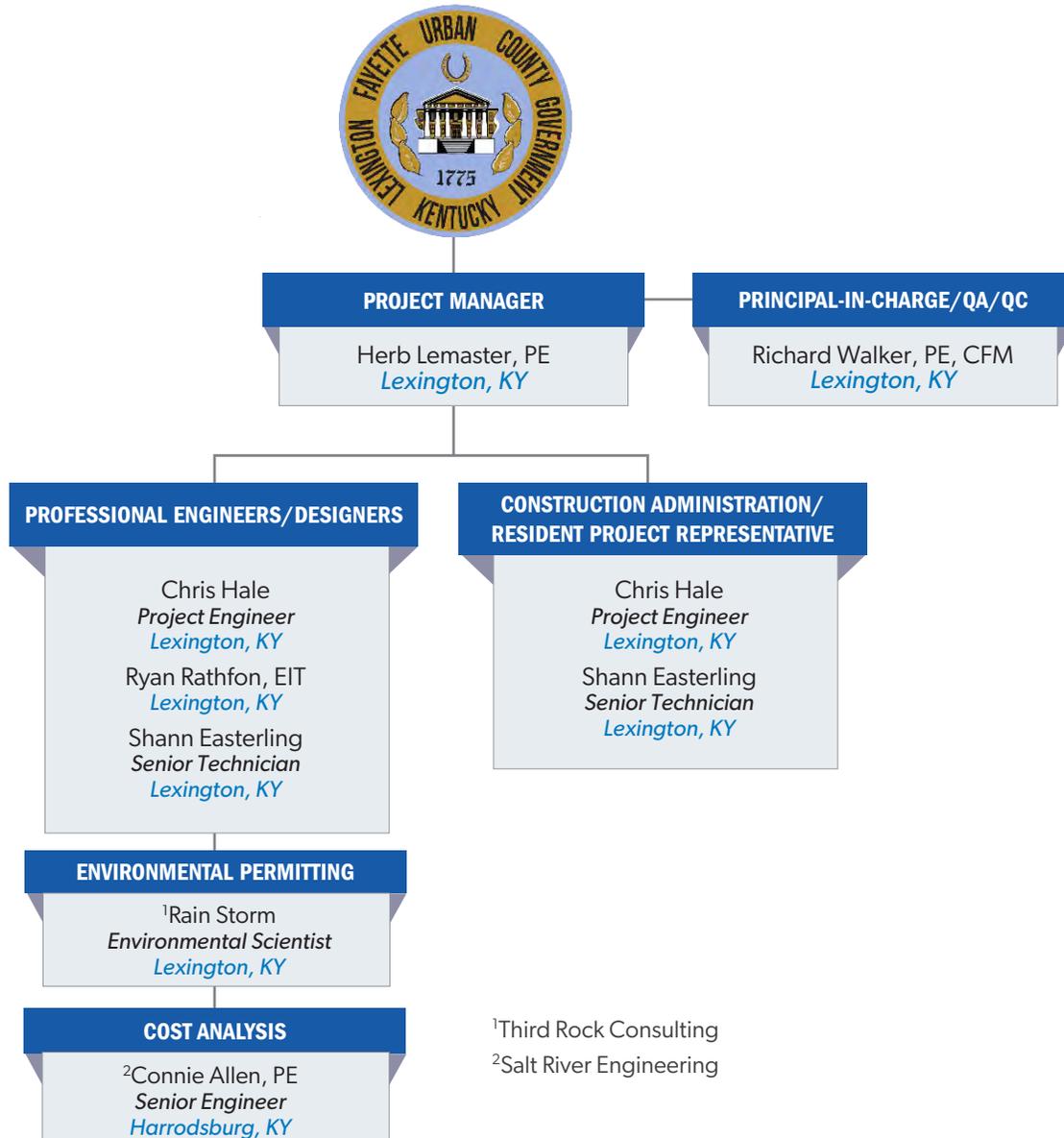
Resumes and License Information

Tetra Tech is committed to providing the resources necessary to meet LFUCG’s needs and providing the high level of service that is required to complete the project on schedule. All Tetra Tech staff working on this project will be located in the Lexington office.

We understand the importance of disadvantaged business enterprise/minority-owned business enterprise/women-owned business enterprise (DBE/MBE/WBE) goals and are committed to providing meaningful minority and veteran participation at levels desired by LFUCG. Our track record on similar efforts demonstrates our commitment to, and success in, achieving or exceeding project-specific goals. To achieve or exceed your 10% DBE/MBE/WBE and 3-percent veteran-owned small business (VOSB) participation goals, we have added Third Rock Consulting (DBE/SB/WBE) to provide environmental permitting and Salt River Engineering (VOSB) to provide cost analysis to the team.

The organizational chart below outlines the key members proposed for this project. With over 21,000 Tetra Tech professionals, additional staff will be brought into Lexington if resources are needed to complete or meet the project schedules.

Organizational Chart





PROJECT MANAGER



Herbert Lemaster, PE

Mr. Lemaster is the senior project manager on all design and construction projects in Tetra Tech’s Lexington office. He is responsible for analysis and design, writing specifications, developing contract documents and cost estimates, preparation of construction drawings, construction administration, and construction engineering. Mr. Lemaster has managed many large-scale stormwater, solid waste landfill, water, wastewater, and environmental projects.

His solid waste landfill projects include design of sedimentation ponds, landfill liners and caps, leachate collection and storage facilities, gas removal and venting systems, modeling leachate production, and general site layout.

Other projects completed by Mr. Lemaster include designing earth retaining structures, groundwater removal and remediation systems, stormwater retention basins, evaluations of stormwater facilities, stormwater modeling, and environmental compliance.

EDUCATION:

MS, Civil Engineering (Environmental), University of Kentucky, 1992

BS, Civil Engineering, University of Kentucky, 1990

AS, Prestonsburg Community College, 1988

REGISTRATIONS/ CERTIFICATIONS:

Professional Engineer: KY, No. 19309; OH, No. 77200

Land Surveyor-in-Training: Kentucky, No. 1232

Troxler Nuclear Gauge Certification, No. 093841

Permit-Required Confined Space Entry Training

OFFICE LOCATION:

Lexington, Kentucky

TOTAL YEARS OF EXPERIENCE:

32

YEARS WITH TETRA TECH:

30

Haley Pike Landfill Pump Station Improvements, Lexington-Fayette Urban County Government, KY.

Senior Engineer. Design to replace an existing 25 gpm pump station with a 150 gpm pump station meeting owner requirements for a Class C pump station and about 1,200 feet of 6-inch HDPE force main to handle increased flows.

Billy Glover Waste Dump Characterization and Closure, Kentucky Division of Waste Management, Jessamine County, KY.

Project Manager and Senior Engineer. Completed a site characterization and closure of an old landfill. An extensive site characterization was completed of impact to surface water, groundwater, stream sediment, and site soil for the Kentucky Division of Waste Management’s (KDWM’s) Superfund Branch. Remedial measures designed included consolidating waste into the smallest area possible to reduce the size of the engineered cap and using a constructed wetland to treat leachate gravity-flows to the treatment unit.

Harlan County Landfill Leachate Treatment System, Kentucky Division of Waste Management, Harlan County, KY.

Senior Engineer. Provided design, bidding, and construction administration services to close this old landfill and develop an effective on-site treatment system for leachate. Work elements of this project included 400-feet of 8-inch perforated HDPE leachate collection pipe, a double-lined equalization basin and two subsurface flow wetland cells operating in parallel (4,000 square yards

of 60-mil HDPE liner and 2,000 square yards of double-sided geocomposite), and a decanting/effluent facility.

Leitchfield Landfill Leachate Treatment System, Kentucky Division of Waste Management, Grayson County, KY.

Senior Engineer. Provided design, bidding, and construction administration services to close this old landfill and develop an effective on-site treatment system for leachate. Work elements of this project included a double-lined equalization basin and two surface flow wetland cells operating in parallel (6,000 square yards of 60-mil HDPE liner and 3,000 square yards of double-sided geocomposite), a decanting facility, a pump station with dual 5 horsepower pumps, 1,200 feet of 2-inch force main, an irrigation line, and an emergency standby generator.

Cynthiana Landfill Leachate Treatment System, Kentucky Division of Waste Management, Harrison County, KY.

Senior Engineer. Provided design, bidding, and construction administration services to close this old landfill and develop an effective on-site treatment system for leachate. Work elements of this project included 4,000 feet of 8-inch leachate collection pipe, a double-lined equalization basin and two surface flow wetland cells operating in series (27,000 square yards of 60-mil HDPE liner and 13,500 square yards of double-sided geocomposite), a decanting facility, a pump station with dual 5 horsepower pumps, 2,100 feet of 4-inch force main, and an emergency standby generator.



PROJECT ENGINEER



Chris Hale

Mr. Hale has worked on several landfill projects that have included horizontal and vertical expansions, major and minor modifications, permit applications, new construction, and closures. He has developed grading plans, and designed access roads, drainage ditches, culverts, sediment ponds, and constructed wetlands. He has used SedCAD software for the hydraulic design of ditches, pipes, and sediment ponds. He has created cross-sections to calculate and maximize air space and performed take-off of quantities to develop bid schedules. He has answered contractors' technical questions; reviewed requests for payments; reviewed shop drawings and submittals; prepared technical specifications; observed construction; performed Construction Quality Assurance (CQA); prepared final construction certification documents; performed construction staking and layout; and prepared required reports. Using Hydrologic Evaluation of Landfill Performance (HELP) software, he has analyzed leachate production at landfills to design leachate storage facilities.

EDUCATION:

BS, Civil Engineering
Technology, Western Kentucky
University, 1990

REGISTRATIONS/ CERTIFICATIONS:

Professional Engineer:
VA, No. 0402-03225
Land Surveyor-in-Training (LSIT),
Kentucky, No. 1273
Landfill Manager, KY Division of
Waste Management, 2009
Radiation Safety Office, 2013
Troxler Nuclear Gauge
Certification, 2010
AutoCAD Certification, No.
3FADTT0477
Hazardous Waste Operations
and Emergency Response
Certification, CFR 1910.120
HAZMAT Certification, As
Required by USDOT and IATA,
2022
RADWORKER Certification,
2015

OFFICE LOCATION:

Lexington, Kentucky

TOTAL YEARS OF EXPERIENCE:

34

YEARS WITH TETRA TECH:

32

*Raven Run Landfill, Lexington-Fayette
Urban County Government, KY.* Project
Engineer. Provided design services to
close this old landfill and develop an
effective treatment system for leachate.
This facility is located within a natural
park maintained by local government.
Used natural systems to accomplish
leachate treatment through a bioswale
and phytoremediation.

*Billy Glover Dump Characterization and
Closure, Kentucky Division of Waste
Management, Jessamine County,
KY.* Project Engineer. Completed a
site characterization and closure of
an old landfill, commonly referred
to as the Billy Glover Dump Site. An
extensive site characterization was
completed of impact to surface water,
groundwater, stream sediment, and site
soil for the KDWM's Superfund Branch.
Remedial measures designed included
consolidating waste into the smallest
area possible to reduce the size of the
engineered cap, final cap, drainage
features, access road, and cascading
aeration system.

*Leachate Treatment Systems at Various
Kentucky Locations, Commonwealth of
Kentucky Finance and Administration
Cabinet.* Project Engineer. Provided
design and construction oversight of
leachate treatment systems at various
sites in eastern and western Kentucky.
Implemented large holding lagoons and
equalization basins into designs for both
passive and active treatment methods.
Provided construction administration
and certification services.

*Haley Pike Constructed Wetlands,
Design of Haley Pike Landfill Closure,
Fayette County, KY.* Project Engineer.
This innovative closure plan was for a
97-acre landfill, making it the largest
landfill closure to-date in Kentucky. Key
closure features included design of
an equalization basin and man-made
wetlands to treat large quantities of
leachate during the post-closure life of the
facility. This system replaced the practice
of pumping leachate from 30 manholes
and hauling it 20 miles to the client's
treatment plant, resulting in significant
savings over the post-closure life of the
facility.



EIT



Ryan Rathfon, EIT

Mr. Rathfon's project experience includes site civil and structural designs for light manufacturing, power plants, and commercial and educational facilities; municipal utility design for potable water, sanitary sewer, and storm sewer systems; surveying for utility line construction, municipal stormwater program management, and landfill management; flood mitigation design analysis for municipal wastewater facilities.

EDUCATION:

BS, Architectural Engineering,
Drexel University, 2010

REGISTRATIONS/ CERTIFICATIONS:

Engineer in Training, KY
CDT – Construction Document
Technologist

OFFICE LOCATION:

Lexington, Kentucky

TOTAL YEARS OF EXPERIENCE:

12

YEARS WITH TETRA TECH:

6

West Hickman Wet Weather Storage Facility, Lexington-Fayette Urban County Government, KY. Project Engineer and Construction Administrator. Wet weather storage facility and improvements to the headworks of the existing treatment plant, including new screening facilities, new grit facilities, 70 MGD influent pump station, 70 MGD wet weather pump station, two 20 MGD storage tanks, recycle pump station, upgrades to the nonpotable water system, and all associated piping and electrical.

Rental Car Facility, Blue Grass Airport, KY. Resident Project Representative. Performed daily job site observations, inspections, documentations, and digitally archived photos of construction progress for the construction of three new rental car facilities and site preparation activities that involved 36.5 acres and 100,000 CY of earth work. Assured all site construction, building construction, and utility installation activities were in accordance with project plans and specifications. Facilitated communication between the Owner, Design Team, and Contractor.

Solar Field Site Plans, Florida Power and Light, FL. Design and modeling of site plan for a three-square mile solar field, produced grading, site, basin drainage, erosion and sediment control plans and details for environmental permitting and bidding.

Evansville Christian High School, IN.* Project Engineer and Civil Designer. Design and modeling of site features for the new high school, including extension of sanitary main, stormwater detention pond design, storm sewer, site grading, new entrance drive design, and design of utility service for the new facility. Assisted in submitting plans to local municipality for approval.

Coal Combustible Residuals Treatment Building, E. W. Brown Power Plant,

Confidential Client, Harrodsburg, KY. Project Engineer, Civil Designer, and Structural Designer. Design and modeling of site features for the new facility. Included pumps, conveyors, filters, and electrical equipment for the plant's upgraded coal combustible residuals treatment (CCRT) process. Responsibilities included designs for site grading, storm sewer, sanitary sewer, domestic water, and underground process piping. Assisted in modeling of structural components of the facility.

82,000 SF Warehouse and Office Space, Brenntag AG, Houston, TX. Project Engineer and Civil Designer. Assisted with site design and modeling for an 82,000 SF warehouse, adjacent office space, and 10,000 SF open-air chemical storage warehouse. Included a new stormwater detention pond, stormwater piping and structures, site grading, new loading dock and parking layout, truck scale traffic layout, and site utility routing, including sanitary sewer, domestic water, and fire protection water lines.

Raw Water Inlet Silo, Midwest Fertilizer, Inc., Mount Vernon, IN. Project Engineer, Civil Designer, and Structural Designer for the design of a raw water intake silo and associated piping from the fertilizer plant to the silo situated on the Ohio River. Provided 3D modeling and construction plans and details for intake silo, structural elements of electrical substation, and piping from the silo to the main plant utilizing Revit and Civil3D. Structural modeling of adjacent structure housing electrical equipment for the project. Assisted with the design for routing of raw water intake and effluent discharge piping. Assisted with permitting applications for river construction (U.S. Army Corps of Engineers) and railroad pipeline occupancy (CSX).

**denotes experience prior to Tetra Tech*



SENIOR TECHNICIAN



Shann Easterling

Mr. Easterling’s duties include reviewing and processing reports of analytical data for analysis, assisting in river and stream assessments and calibration, and operation and maintenance of field equipment. He is knowledgeable about the collection, preservation, and transportation of samples for analysis. He is proficient in the installation, calibration, operation, and monitoring of water and wastewater flow meters and sequential samplers. He has conducted numerous installations at industrial and commercial sites. He is a team member for tracer dilution studies conducted throughout the United States. In addition, Mr. Easterling has worked at numerous U.S. Air Force and Army bases and airports conducting sustainability, Phase I and II assessments, above-ground storage tank inspections, and stormwater compliance monitoring.

EDUCATION:

Associate’s Degree,
Environmental Technology,
Central Kentucky Technical
College, 1999

REGISTRATIONS/ CERTIFICATIONS:

- SPCC and Stormwater Compliance Workshop, EPA Alliance Training Group, February 25–27, 2015
- Above-Ground Tank Inspector (AST) (Levels 1 and 2), Steel Tank Institute, 2011
- Permit-Required Confined Space Entry Training
- CFR 1910.120 Hazardous Waste Operations and Emergency Response
- CPR and First Aid Training
- Troxler Nuclear Gauge Safety Training Course, 2004
- HAZMAT Certification as required by USDOT and IATA, 2022

OFFICE LOCATION:

Lexington, KY

TOTAL YEARS OF EXPERIENCE:

20

YEARS WITH TETRA TECH:

20

Hardin County Landfill, Elizabethtown, KY. Engineering Technician. Produced quarterly surface water and ground water reports for submittal to regulatory agencies. In addition, Mr. Easterling conducted the quarterly groundwater, surface water, leachate, and methane monitoring. He regularly checked regulations and laboratory methods for proper procedures and testing requirements. He maintained a large database of statistical data.

Haley Pike Landfill, Lexington, KY. Engineering Technician. Assisted project teams with intra-well data analysis and manipulation. Mr. Easterling assisted in the production of monthly and quarterly reports that are submitted to state regulators. In addition, he compiled and reviewed monthly analytical results for exceedances or anomalies. He participated in well inspections and site visits with regulatory authorities. He conducted GPS onsite mapping of monitoring well locations and surface water sites. He converted this data using ArcView software, which was used for graphical representation of well and surface water data.

Winchester Municipal Landfill, KY. Engineering Technician. Produced quarterly surface water and ground water reports for submittal to regulatory agencies. Mr. Easterling regularly checked regulations and laboratory methods for proper procedures and testing requirements. He assisted in the scheduling of sample collection and determined frequency of analysis. He maintained a large database for statistical data.

DDSI Landfill, Lexington, KY. Engineering Technician. Developed a database and control limits for the statistical analysis of groundwater for this landfill. Mr. Easterling produced quarterly reports that were submitted to regulatory agencies and reviewed the statistical data for any errors or anomalies.

Characterize 34 South Central Landfill Sites, Kentucky Division of Waste Management, Solid Waste Branch, Various Counties, KY. Engineering Technician. Team member on one of four field teams that gathered the necessary data to characterize the various sites covered by the project scope. Following completion of field work, Mr. Easterling assisted the reporting team in preparing the written reports and in developing the priority ratings for the sites.

Harlan County Landfill, KY. Engineering Technician. Assisted with the development of an intra-well monitoring program for the Harlan County Landfill. Mr. Easterling created a database and reviewed regulations that allowed the client to reduce the frequency of monitoring. He maintained this database.

Characterize 30 East and South-Central Landfill Sites, Kentucky Division of Waste Management, Solid Waste Branch, Various Counties, KY. Engineering Technician. Team member on one of four field teams that gathered the necessary data to characterize the various sites covered by the project scope. Following completion of field work, he assisted the reporting team in preparing the written reports and in developing the priority ratings for the sites.



PROPOSAL/PROJECT APPROACH

APPROACH TO PROJECT

Tetra Tech understands the critical need to maintain the project within schedule and budget while delivering high quality design documents necessary for success of the project. It is our understanding that the design documents must be completed within 100 days of the Notice to Proceed. It is anticipated that this task will be completed prior to the end of LFUCG’s 2021-2022 fiscal year. The construction of the project is anticipated to be substantially completed within 60-days after the selected contractor has been provided the Notice to Proceed. The construction is to be completed between the period of November 2022 and February 2023 to address the concerns of the facility manager related to visitors at the park.

This project will include the preparation of design documents and specifications for the replacement of approximately 270-feet of bioswale media and non-woven geotextile around the existing bioswale header pipe located at the toe of the closed Raven Run Landfill. Additionally, recommendations will be provided that will increase the effectiveness of the system, increase the life expectancy of the media, or enhance routine maintenance accessibility. The project will also include providing assistance during the bidding process for selecting a contractor for the construction, providing construction administration services to monitor the progress of construction and ensure the contractor is meeting the intent of the design documents, and providing on-site presence daily during construction to address any issues that may occur ensure compliance of approved construction documents.

We have organized our approach to meet these critical needs of this project. Key elements in the approach are related to the Project Management, Communications, Quality Control, Scheduling, and Work Plan.

PROJECT MANAGEMENT

At the beginning of the project, Tetra Tech’s Project Manager, Herb Lemaster, will prepare a detailed Work Plan to be followed during the design and construction activities and a Site-Specific Health and Safety Plan that will be followed throughout the project by Tetra Tech staff. This will ensure all parties of the team are connected with the project scope and expectations. The Work Plan will set forth such vital information as project goals, lines of communications, schedule, budget, project controls, scope of work, and a plan for implementation and task



completion. The plan is a summary of procedures and process that will be used to ensure that consistency and quality is maintained throughout all phases of the project.

COMMUNICATIONS

It is critical to projects such as this that the multiple participants stay engaged in the project delivery process and contribute in a timely fashion. We will confirm, in concert with LFUCG, the engineering standards to be followed throughout the project. The Work Plan will be communicated to all participants and continuously monitored to keep the project on course.

Meetings will be scheduled with LFUCG staff at significant project milestones. All meetings will be documented in meeting minutes prepared by Tetra Tech.



QUALITY CONTROL

Delivering project excellence is Tetra Tech's highest goal and is achieved by utilizing our quality management program through senior management oversight, proprietary processes and tools, and in-depth training.

Mr. Lemaster will be responsible for QA/QC of the project. He will ensure the priorities and success criteria are set in accordance with the goals of LFUCG. Mr. Lemaster will ensure that his team members follow the QA/QC procedure specifically developed for the project, including proper checks, and making sure all deliverables have been reviewed and signed off before they are delivered to LFUCG staff. Our policy is to check all calculations as they are being completed to ensure we progress on reliable and accurately calculated information. Mr. Lemaster will ensure through our own internal process that these calculations have been done, checked, and included in the deliverables submitted.

Tetra Tech adheres to a rigorous quality management program with detailed Standards of Practice (SOPs) providing guidance, checklists, and proven examples to be followed in the execution of all projects.

In addition to our quality management SOPs, Tetra Tech has developed proprietary tools that integrate quality steps into each of the five project management process areas: initiation, planning, execution, controlling, and closing. The Project Execution Process Flow used by Tetra Tech includes the key elements of our critical quality management elements:

- Project Management Work Plan,
- Independent technical review: Correct, Concise, and Constructable,
- Quality assurance discipline checks,
- Continuous improvement and cost avoidance opportunity techniques,
- Application of Best Practices from similar project

A project deliverable does not leave our office until a discipline leader signs off that the deliverable has met the required level of quality checking.

SCHEDULING

We will work with LFUCG staff to confirm or modify the project schedule to meet LFUCG's needs. The schedule will allow for effective tracking of progress through milestones and other similar methods. We will identify each key element and will expand on those elements as may be necessary to effectively track the project. We will develop a detailed deliverables list to serve as a good tracking tool for the project.



WORK PLAN

The following work plan summarizes our approach using the tasks listed in the Request for Proposals. The task headings are as follows:

- **Phase 1 - Design and Bid Services**
 - Task 1 – Preparation of Health and Safety Plan
 - Task 2 – Review of Existing Information
 - Task 3 – Conduct Additional Investigations
 - Task 4 – Develop Construction Drawings
 - Task 5 – Value Engineering Recommendations
 - Task 6 – Preparation of Contract/Bidding Documents
 - Task 7 – Preparation of Engineer's Opinion of Probable Cost
 - Task 8 – Provide Assistance During Bidding Process
- **Phase 2 – Construction Administration**
 - Task 1 – Conduct Pre-Construction
 - Task 2 – Review Construction Submittals
 - Task 3 – Respond to Contractor Requests for Information
 - Task 4 – Preparation of Change Orders
 - Task 5 – Conduct Construction Progress Meetings and Prepare Minutes
 - Task 6 – Perform Daily Site Visits
 - Task 7 – Conduct Required Testing
 - Task 8 – Review Contractor's Pay Requests
 - Task 9 – Develop Punch List
 - Task 10 – Assist with Final Inspection



- Task 11 – Preparation of “As-Built Drawings”
- Task 12 – Preparation of electronic Files and Closeout Documents
- Task 13 – Preparation of Operation and Maintenance Plan

Phase 1 – Design and Bid Services

Task 1 – Preparation of Health and Safety Plan

The project manager will develop a Site-Specific Health and Safety Plan at the beginning of the project. This plan will address anticipated hazards that may be encountered (environmental, biological, chemical, or physical), elements to reduce potential effects of hazards, required safety and personal protection equipment necessary for the project, who to contact in the event of an accident, and where to go in the event of an accident. This plan will be submitted to LFUCG for review and comment. The Site-Specific Health and Safety plan will be utilized throughout the duration of the project. Kickoff and Review of Existing Information. The plan may be revised during the project as needed.

Task 2 – Review Existing Information

The review of the existing information will serve as the basis for the foundation of the project. Tetra Tech is very familiar with this facility. As previously discussed, Tetra Tech has a



large amount of existing information that we have developed during the initial evaluation of the facility and the development of the design drawings they were used for the construction of the Raven Run Landfill Closure. We will use this information to supplement information that is

CONTROLS TO MANAGE SCHEDULES



COMPUTER-BASED PROJECT MANAGEMENT

Our ability to meet the project schedule is enhanced by our computer-based project management systems. We are experienced with project scheduling software developed by companies such as Primavera Systems, Inc. and Microsoft, and we will use LFUCG's preferred scheduling software. Tetra Tech currently uses Microsoft™ Office Project® for preparation and management of detailed project schedules. This software program tracks progress for the established schedule, delineates deliverables, logs project milestones, and visibly reflects the relationship of various tasks.



OPEN COMMUNICATION

Tetra Tech believes in open communication during all phases of every project. By dedicating time in the schedule to meet with LFUCG to fully understand the requirements of the project, Tetra Tech will minimize project re-design. Likewise, during permitting, Tetra Tech has an established philosophy of arranging pre-application meetings with all applicable permitting agencies as a means to facilitate a more streamlined permitting review process. We have permitted numerous projects without receiving any requests for additional information based on our commitment to working with the permitting agency and our ability to incorporate their comments into the design before it is finalized.



provided by LFUCG to ensure the design is current and relevant data.

During this task Tetra Tech will coordinate and conduct the project Kickoff Meeting. Communication is a key to successful project execution. The kickoff meeting will be the first step in the process. This meeting will be used to further define LFUCG's needs and goals and to refine the lines of future communications. An on-site meeting will also be conducted with LFUCG to ensure that the restoration goals are understood and addressed.

Task 3 – Conduct Additional Investigations

Tetra Tech will ensure that the proper information is available or gathered that will be needed to fully develop the design documents. This task will be further defined based on the information gathered from Task and the meetings with LFUCG. Initially for this proposal, it is anticipated that additional survey data will be collected to verify existing conditions of structure elevations and surface contours in proposed work area and develop a base map for design. Additional information may be collected based on the acceptance of any recommendations from the Value Engineering task that is accepted by LFUCG.

Task 4 – Develop Construction Drawings

The design package will include erosion and sediment control requirements, plan and profile views of the proposed bioswale replacement design, contractor access locations, contractor equipment and materials staging areas, typical details, and site restoration requirements. All required improvements necessary for construction access (and future maintenance operations) will be included in the design plans. LFUCG standard details and specifications will be included where they are available and related to this project.

Tetra Tech will coordinate with LFUCG for a design review meeting at the 50% and 90% complete stage. Prior to the meeting Tetra Tech will provide LFUCG with electronic and hard copies of the design drawing for your review.

Task 5 – Value Engineering Recommendations

Tetra Tech is eager for the opportunity to provide recommendations that will improve the systems efficiency and enhance maintenance operations. As previously stated, during the initial design process we evaluated and developed preliminary drawings for several concepts to manage the leachate from the landfill. These evaluated concepts included processes from constructed wetlands to installation of a pump station to transfer the leachate to a collection tank that is accessible for over the road trucks. We have the background and are knowledgeable on the limitations that are encountered with these



concepts. We also worked closely with the Kentucky Division of Waste Management, Closure Branch on the closure and management of leachate from approximately ten other facilities similar in size and scope to Raven Run. We have the knowledge and understanding of the limitations that the KDWM Closure Branch applies to these facilities. We are familiar with the requirements that KDWM, Closure Branch will apply to recommendations that will affect the closed facility.

Tetra Tech has previously discussed some recommendations with LFUCG such as installation of a manhole at the center of the bioswale and installation of an all-weather road. The manhole would be installed where the current center cleanouts are located. This is the location of the connection for the drain line and the bioswale perforated pipe. The installation of the manhole would allow for enhanced access for cleaning or jet rodding of the bioswale lines and the incoming collection lines. The current access road allows for lighter vehicle access during most of the season, however, it is not suitable for heavier trucks and cleaning equipment during the wetter periods. Improvements to this road will enhance the maintenance opportunities for the facility. Tetra Tech anticipates these items being incorporated into the design documents for this project. Other items we look forward to discussion with LFUCG include the addition of flow monitoring equipment installed in Manhole No. 4 and powered by solar and batteries that would provide data on the operation of the collection system; evaluation of alternative media that may increase the life expectancy of the bioswale; the possible addition of a septic tank to act as a settling basin upstream of the bioswale to reduce the amount of sediment entering the bioswale; and enhancements to the current surface water drainage system to reduce the



possibilities of surface water entering to the landfill collection system.

Additionally, Tetra Tech has recommendations related to the management of leachate during construction process by utilizing the existing gate valve upgradient of Manhole No. 4 to restrict the flow to the bioswale and require the contractor to monitor Manhole No. 2 for leachate accumulation that they would be responsible for pumping out and hauling for treatment. Tetra Tech assumes that a meeting will be held with LFUCG for review and discussion of recommendations. Accepted recommendations will be incorporated into the final design plans for bidding and construction.

Task 6 – Preparation of Contract/Bidding Documents

Tetra Tech will coordinate with LFUCG Central Purchasing to ensure the correct front-end specifications and LFUCG bid number are incorporated into the design documents to create the bidding documents. The contract/bidding documents will include LFUCG’s contract information, bidding form, general conditions, and technical specifications of the materials to be incorporate into the project. The contact/bidding documents will include:

- Summary of work to be conducted by the contractor,
- Work restrictions placed on the contractor,
- Requirements for submitting documents for review,
- Minimum safety requirements to be maintained by the contractor,

- Quality control requirements to be conducted by the contractor and quality assurance items that will be conducted by the engineer to review the contractor’s work,
- Requirements for the contractor’s temporary construction facilities,
- Requirements for the contractor’s temporary environmental controls,
- Inclusion of stormwater pollution control measures to be conducted by the contractor including preparation by the contractor of a Stormwater Pollution Prevention Plan or Erosion and Sediment Control Plan, and
- Requirements for site restoration after construction is completed.

Additionally, prior to commencement of work the successful bidding contractor will be required to submit a Work Plan describing their anticipated approach to the project and a Site-Specific Health and Safety Plan that will be used by their organization throughout the length of the construction project. The contractor will also be required to submit a project schedule for the entire length of the contact period and a Schedule of Values for use in payment applications.

Task 7 – Preparation of Engineer’s Opinion of Probable Cost

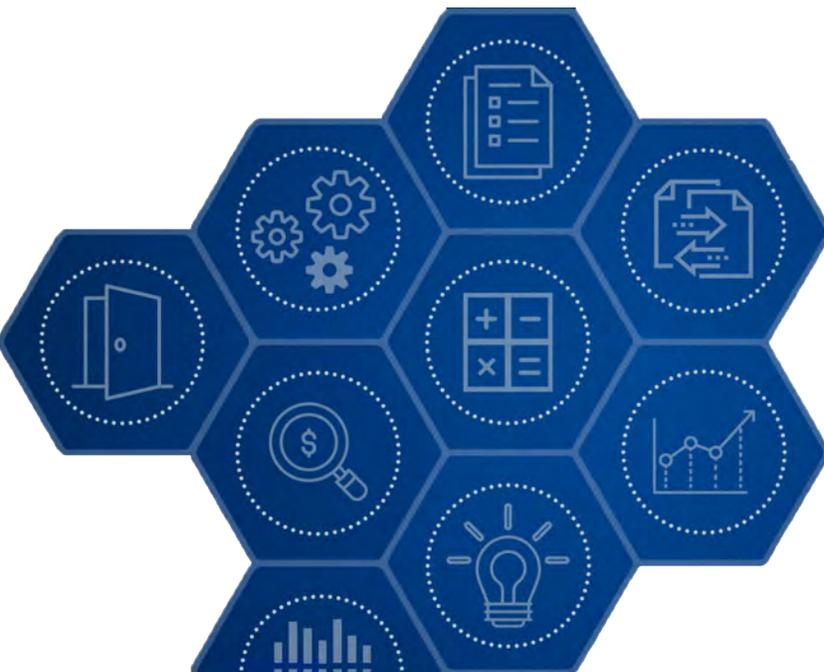
Tetra Tech will develop an Engineer’s Opinion of Probable Cost on the final design documents. The Opinion will be based on current data performing similar operations within Central Kentucky.

Tetra Tech will prepare and distribute meeting minutes.

Task 8 – Provide Assistance During Bidding Process

Bidding assistance to be provided includes:

- Coordination with LFUCG’s Division of Central Purchasing to obtain the appropriate LFUCG Bid Numbers; determine dates of Pre-Bid Meeting, Questions Shut off, and Bid Opening; and distribute the Contract Documents to prospective bidders, (note: Tetra Tech will provide LFUCG with two hard copies of the Contract Documents and an electronic pdf,
- Conducting the Pre-Bid meeting; a summary of the Pre-Bid meeting will be included in the first addendum,
- Responding to questions submitted by Bidders,
- Preparation of up to three addenda as necessary,
- Attend the bid opening, Review of the submitted bids, and prepare bid tabulation, and recommend award,





- Preparation of conformed plans and specifications to include all addenda and signed contracts. Anticipate providing five copies of the conformed documents for use by LFUCG and the contractor.

Phase 2 – Construction Administration

Services listed in the RFP and to be provided during construction include:

Task 1 – Conducting Pre-Construction Meeting

Tetra Tech will coordinate with LFUCG and the successful bidding contractor to schedule a Pre-Construction meeting to serve as the kickoff for the construction project. The Pre-Construction meeting will provide the opportunity to clarify communication channels, project requirements, and facility access limitations.

Tetra Tech will prepare and distribute meeting minutes.

Task 2 – Review of Contractor Submittals and Shop Drawings for Conformance with the Project Documents

Tetra Tech will review all submittals compiled by the contractor related to the project. This includes material shop drawings for items to be incorporated into the project, work plans, and stormwater pollution prevention plans. Tetra Tech will maintain a log of all submittals noting the date of receipt, date returned to contractor, and comments related to submittal.

Task 3 – Responding to Requests for Information from the Contractor

Tetra Tech will review all Requests for Information submitted by the contractor related to the project and provide the necessary response. A log will be maintained to keep track of all requests and related responses.

Task 4 – Assisting with Change Order Preparation and Submittal to LFUCG

Tetra Tech will coordinate with the contractor, as necessary, to assist in the preparation of change orders related to the project and submit to LFUCG for approval.

Task 5 – Progress Meetings

Tetra Tech will coordinate and manage monthly progress meetings that will cover the current status of the project, anticipated work to be conducted, and update LFUCG of any issues related to upcoming activities. It is anticipated

there will be two monthly progress meetings related to the construction period of this project.

Task 6 – Perform Daily Site Visits by the Project Engineer

Tetra Tech will provide daily site visits by the project engineer to review the current status of the project and confirm installation is in accordance with the contract documents and approved shop drawings. Inspection reports will be prepared. Tetra Tech is prepared to provide full time inspection with a senior environmental tech serving as the resident project representative if this is requested by LFUCG.

Task 7 – Conduct Required Testing

Tetra Tech will perform any construction quality assurance required for the project. The contractor shall be responsible for all quality control for the project.

Task 8 – Review Contractor’s Pay Requests

Tetra Tech will review all partial pay requests submitted by the contractor to confirm the quantities requested for payment are installed or properly stored in accordance with the contract documents.

Task 9 – Develop a Punch List Once Project Reaches Substantial Completion

Tetra Tech will conduct a site visit with the contractor and LFUCG to develop a punch list once notification of





Substantial Completion is provided by the contractor. The site visit will review all items installed and construction completed during the project for conformance with the contract documents and approved shop drawings and current status of site restoration. A detailed list of items remaining to be completed or corrected will be compiled and provided to the contractor.

Task 10 – Assist LFUCG Project Manager with the Final Inspection of the Project

Tetra Tech will conduct a site visit with the LFUCG Project Manager to review the completed project and confirm the punch list items have been completed in accordance with the contract documents and approved shop drawings.

Task 11 – Prepare As-Built Drawings and Final Construction Documents

Survey data will be collected during the construction period, as necessary, to be included in the final record drawings. This information along with red line mark ups provided by the contractor will be used to develop the final record documents (As-Built Drawings) for the project.

Task 12 – Provide LFUCG with Organized PDF Electronic Files Containing all Items Relative to the Project, Including Drawings and Final Closeout Project Documents

At the completion of the project, Tetra Tech will provide LFUCG with electronic files that contains all construction related documents. This includes shop drawings, contractor questions and responses, pay requests, change orders, site inspection reports, testing reports, closeout documents, and As-Built Drawings.

Task 13 – Prepare Operations and Maintenance Plan for Use by LFUCG

Tetra Tech will prepare an Operations and Maintenance Plan that incorporates all modifications that are included in the contract construction documents. This will include frequency of site inspections, anticipated cleaning intervals, and other items as necessary.





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SCHEDULE FOR IMPLEMENTATION



SCHEDULE FOR IMPLEMENTATION

NAME	START DATE	END DATE	2022 ————— 2023												
			APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB		
Design Services - Phase 1	4/10/22	6/30/22	[Timeline bar from April to June 2022]												
Initial meeting to review project details and to address scope and task development	4/25/22	4/29/22	[Bar]												
On-site visit	4/25/22	4/29/22	[Bar]												
50% complete meeting and draft construction plans	4/29/22	5/31/22		[Bar]											
90% complete draft construction plans	5/31/22	6/15/22			[Bar]										
Construction Documents finalized, engineer's opinion of probable cost complete	6/15/22	6/30/22			[Bar]										
Bid Services - Phase 1	8/12/22	8/22/22					[Bar]								
Bid Review Response and Provide Recommendations, estimate for Phase 2 services, estimate for Phase 2 services	8/12/22	8/22/22					[Bar]								
Construction Administration Phase 2	11/27/22	2/17/23									[Bar]				
Kick-off meeting with selected Contractor (after Contract approved by Council)	11/27/22	12/7/22									[Bar]				
Construction administration activities (from Notice to Proceed)	12/8/22	2/6/23									[Bar]				
Project close out (from final inspection/ project close-out meeting)	2/7/23	2/17/23												[Bar]	



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COST FOR MINIMUM DELIVERABLES



COST FOR MINIMUM DELIVERIES

Fees for Phase 1

PHASE/ACTIVITY	FEE
Phase 1 Design Services	\$37,000

Fees for Phase 2

PHASE/ACTIVITY	FEE
Phase 2 Services (Record drawings, closeout report, and operations and maintenance plan)	\$10,500
Phase 2 Daily rate for on-site construction monitoring	\$900*

*Assumes 6 hours effort per day

Anticipated Hourly Rates for Personnel – Phase 2

EMPLOYEE	JOB TITLE	HOURLY RATE
Tetra Tech		
Herbert Lemaster, PE	Project Manager	\$220/hr
Chris Hale	Project Engineer 3	\$150/hr
Ryan Rathfon, EIT	Project Engineer 2	\$110/hr
Shann Easterling	Senior Technician	\$105/hr
Third Rock Consultants		
Rain Storm	Environmental Scientist	\$100/hr
Salt River Engineering		
Connie Allen, PE	Senior Engineer	\$150/hr



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DEGREE OF LOCAL EMPLOYMENT



DEGREE OF LOCAL EMPLOYMENT

Tetra Tech’s work under this contract will be performed out of our Lexington office. The key personnel assigned to the project, including our subconsultant team members have a strong local presence and good relationships with LFUCG and the local regulatory agencies. We have assembled a robust team composed of longtime Kentuckians who are committed to enhancing the communities in which they live. This team has been recognized for innovation and dedication over the years, and we strive to bring that perspective to this project as an extension of LFUCG.

Tetra Tech Louisville Office
 2000 Warrington Way
 Suite 245
 Louisville, KY 40222

Lexington-Fayette Urban County Government
 200 E Main Street
 Lexington, KY 40507

Tetra Tech Lexington Office
 424 Lewis Hargett Circle
 Suite 110
 Lexington, KY 40503

Salt River Engineering
 108 West Poplar Street
 Harrodsburg, KY

Third Rock Consultants
 2526 Regency Road
 Suite 180
 Lexington, KY 40503

TETRA TECH
177 LOCAL STAFF

STAFF OFFICE LOCATION

STAFF	LOCATION
Tetra Tech	
Herbert Lemaster, PE	Lexington, KY
Chris Hale	Lexington, KY
Ryan Rathfon, EIT	Lexington, KY
Shann Easterling	Lexington, KY
Third Rock Consulting	
Rain Storm	Lexington, KY
Salt River Engineering	
Connie Allen, PE	Harrodsburg, KY



Tetra Tech
Third Rock Consultants **6 MILES** **LFUCG**

Salt River Engineering is located within an hours' drive of LFUCG.



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REQUIRED FORMS



Required Forms

The following forms are included in this section as per the RFP:

- Addendum #1
- American Rescue Plan Act
- Tetra Tech's Affirmative Action Plan
- Workforce Analysis Form
- Affidavit
- Equal Opportunity Agreement
- Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunities and DBE Contract Participation
- LFUCG MWDBE Participation Goals
- General Provisions



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ADDENDUM #1



ADDENDUM #1

RFP Number: #17-2022

Date: April 1, 2022

Subject: Former Jacks Creek Pike Landfill Improvement Project
Raven Run Nature Sanctuary

Address inquiries to:
Sondra Stone
sstone@lexingtonky.gov

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced RFP:

1. Pre-bid sign-in sheet is attached.
2. Can the response date be extended?
Response deadline date has been extended to April 11th at 2PM EST
3. Do we need to notify LFUCG if we want to return to visit the site between now and the response deadline?
Arrangements can be made for additional site access prior to the bid due date. Please contact Sondra Stone with the desired date and time of additional site visits and Sondra will work with Raven Run and Division of Environmental Services staff to arrange access.
4. If we are the successful respondent, do we need to notify LFUCG if we want to return to visit the site for project-related work?
Once an award has been made, the selected company can make arrangements as needed for site access. The LFUCG project manager will be Sarah Donaldson, who will be the primary contact during execution of the project.
5. Regarding Value Added Engineering, would any proposed items need to further the objective of maintaining the discharge as a non-point source / diffuse flow concept?
Yes. LFUCG will consider any modifications that extend the life or increase efficiency of the system; however, the overall design concept will need to be in general conformance with the original intent of the leachate collection system.



6. How much flow does the bioswale receive?

LFUCG does not monitor flow through the system with the use of flow meters. Leachate quantity was discussed in a 2012 annual report prepared by the Kentucky Division of Waste Management (attached) which estimated flow in 2012 at 500 GPD (after installation of diversion ditches). Current flow information can be a part of the data collection phase for the successful respondent and LFUCG will work with the successful bidder and/or their subcontractor to provide access for collection of that information if needed.

7. Can LFUCG provide any sampling date of the leachate?

Available leachate data collected during the landfill closure is attached, which represents the most recent leachate specific water quality data collected.

8. What is planted on the cap?

The cap was planted with selected trees (20% each of Shellbark Hickory, Swamp White Oak, Eastern Cottonwood, Black Maple and Yellow Buckeye). Native Grasses and wildflowers were also planted at the time of site restoration. Native grasses were to include the following:

<i>Seed Species</i>	<i>Seeding rates (pounds per acre)</i>
<i>Big Bluestem</i>	<i>4.0</i>
<i>Little Bluestem</i>	<i>6.0</i>
<i>Switchgrass</i>	<i>2.0</i>
<i>Indian Grass</i>	<i>6.0</i>
<i>Canada Wild Rye</i>	<i>10.0</i>
<i>Partridge Pea</i>	<i>2.0</i>
<i>Annual Rye Grass</i>	<i>25.0</i>
<i>Black-Eyed Susan</i>	<i>0.5</i>
<i>Lanceleaf Coreopsis</i>	<i>0.5</i>
<i>Common Milkweed</i>	<i>0.5</i>
<i>Wild Bergamot</i>	<i>0.5</i>
<i>Buffalograss</i>	<i>25.0</i>

9. Do bidders need to account for any permits that might need to be obtained as part of the design / construction?

Yes, bidders will need to assist with identification of required permits and provide assistance with obtaining any permits throughout all phases of the project. LFUCG has communicated with the KDWM Division of Solid Waste regarding the project and at this time, the scope of work is considered to be O&M.



*As indicated on page 1 of the scope of work: The selected firm shall perform professional services as hereinafter stated which include project management, preparation of engineered drawings for construction, **coordination with permitting agencies**, preparation of technical specifications for viding purposes, bid assistance, and construction administration assistance related to implementation of a landfill repair and improvement project.*



Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME: Tetra Tech, Inc.

ADDRESS: 424 Lewis Hargett Circle, Suite 110, Lexington, KY 40503

SIGNATURE OF BIDDER: Richard W. Walker



- City of Richmond Landfill – Madison County
- Marion County Landfill
- Perry County Landfill
- Multi-County Services – Rockcastle County
- Briar Hill Landfill – Scott County
- Sims Road Landfill – Scott County
- City of Campbellsville Landfill – Taylor County
- Glen Lily – Warren County
- City of Bowling Green Inert – Warren County
- Grassy Springs Landfill – Woodford County

Two landfill closure projects are presently under construction. Total cost for site characterization, design and construction is estimated at \$5.6 million.

- Jacks Creek Pike Landfill – Fayette County
- Billy Glover Landfill – Jessamine County

Two historic landfill closure projects are in the design phase and will be scheduled for construction. The total construction cost estimate is approximately \$4.5 million, which includes site characterization as well as design and engineering oversight.

- Johnson County Landfill
- Trigg County Landfill

Initial characterization of 162 sites is complete. The reports and data have been reviewed and the sites have been prioritized based on the perceived threat to human health and the environment. An additional 100 landfills in 23 counties are under contract for initial site characterization. The characterization includes file reviews, property assessment, environmental sampling, and evaluation for threat to human health and the environment. The estimated cost for the initial site characterization project excluding direct and indirect personnel expenses is \$1.2 million.

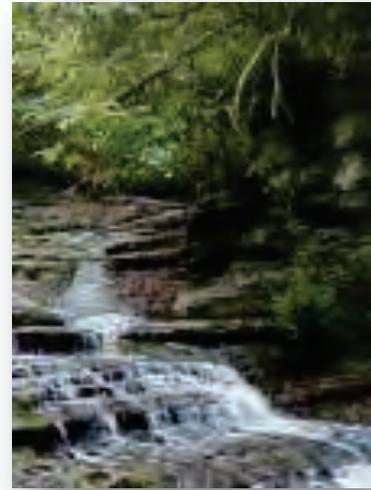
SOLID WASTE BRANCH HIGHLIGHT

Raven Run Nature Sanctuary

By Tammi Hudson, P.E.

Raven Run is a 734-acre nature sanctuary located in Fayette County off Jacks Creek Pike. The sanctuary is visited by more than 32,000 people annually but most people do not know that a former county landfill is situated within the 10 miles of hiking trails.

Fayette County accepted household wastes, industrial wastes, and construction/demolition debris at Jacks Creek Pike landfill from 1969 to 1972. The landfill stopped accepting waste after a fire in 1971, and a layer of soil was placed over the waste and the landfill was abandoned. In 2002, House Bill 174 established a program to clean up orphaned or abandoned landfills and Jacks Creek Pike landfill was placed on the priority list for cleanup because of its potential threat to human health and the environment. The landfill is situated in a ravine with natural springs flowing through it and it produces a large volume of leachate.



*Raven Run Nature Sanctuary
Lexingtonky.gov photo*

The Division of Waste Management and their consultant, Tetra Tech, Inc., worked with Lexington's Parks and Recreation Department to choose a non-disruptive technology to remediate the leachate. Phytoremediation was selected because it could provide dual benefits by reducing the quantity and quality of leachate while maintaining the sanctuary's natural landscape. As the trees mature, their roots could uptake and remove contaminants from the leachate.

As funding became available, plans were developed to consolidate the waste into a smaller footprint, install a passive leachate collection system, replace the cap, and plant trees on the landfill. With the help of consulting firm, Tetra Tech, Inc., and contractor, PECCO, Inc., construction began on Dec. 12, 2011.

Raven Run Nature Sanctuary is open daily and one obstacle for the construction project was minimizing disturbance to visitors. Cell phones and Verizon 4LTE Hot Spot® were used for communication and internet service, which eliminated the need for temporary overhead utility lines. Equipment and materials were staged away from main trails and construction activity was not visible from the nature center.

Construction workdays were decreased by incorporating current technology with heavy equipment. Global Positioning System (GPS) units were mounted in dozers and track excavators, and construction plans were loaded into the Trimble Tablet® which communicated with earth moving equipment. PECCO installed a 2-foot by 3-foot solar panel to supply power to the base station of the GPS system.

In the first phase of the project approximately 4,500 cubic yards of waste from the construction/demolition debris (C/DD) landfill and four small areas of C/DD were relocated to the former municipal solid waste landfill area. Using track excavators, dozers, and articulating trucks, the municipal waste and C/DD waste were moved upstream 100 yards to fill the valley and to isolate and reroute a natural spring which was flowing through the waste. Almost 25,850 cubic yards of waste were combined and reshaped in the valley, and the total landfill footprint was reduced from 8.7 acres to 6.7 acres. The natural spring flow was redirected from the waste to a diversion ditch resulting in a decrease of leachate by more than 10,000 gallons per day.

The quantity of leachate was minimized to less than 500 gallons per day, and the leachate did not have color, odor, or contaminants in concentrations above surface water discharge limits. A passive gravity system was installed, directing the leachate through a rock filled bioswale allowing natural overland flow.

The next phase of work was installing the phytoremediation cap. An estimated 27,800 cubic yards of backfill and topsoil were trucked from an off-site borrow area to the nature sanctuary. Again using GPS equipment mounted on dozers, the clay and topsoil were placed and final contours were achieved within 28 days. Native species of water loving trees, such as sycamores and poplars, were randomly planted. At completion, the disturbed 11 acres will be repopulated with more than 5,000 trees to provide a natural environment on the municipal waste landfill. Native grass seed, including buffalo and Indian grass seed, was broadcast in areas where C/DD waste had been removed.

During the three years Jacks Creek Pike landfill operated, segments of the property were designated for changing oil and lubricating machinery. During the Division of Waste Management's site characterization, soil impacted with low levels of volatile organic compounds was identified beside Raven Run Sanctuary's popular Meadow Trail. The area was a designated sludge pit and several drum carcasses remained in the pit. Approximately 900 cubic yards of soil were removed, sampled, and transported off-site for disposal. The excavated area was backfilled and hydroseeded with native grasses.

The Division of Waste Management worked diligently to keep activities at the park uninterrupted, minimize disturbance to surrounding homes, and maintain the natural beauty of the popular park. Attention to details was very important. For example, during construction of a diversion ditch a nest of turtles was discovered and construction stopped to relocate the five turtles to a new habitat.

For more information on Raven Run Nature Sanctuary, including hours of operation, public programs, school programs and trails, visit the website hosted by the Lexington-Fayette Urban County Government at <http://www.lexingtonky.gov/index.aspx?page=276>.

ANALYTICAL RESULTS

During construction, soil and surface water samples were collected and submitted to a laboratory for analysis of various parameters.

Soil

While excavating the former waste oil pits, a crushed 30-gallon steel drum was discovered on January 3, 2012. As the drum was moved during the excavation, a liquid leaked from the drum. One initial sample was collected from the area and analyzed for TCLP VOCs, TCLP SVOCs, TCLP RCRA Metals, PCBs, and flashpoint in order to characterize the waste and determine the proper disposal methods. There were no exceedances for TCLP VOCs, TCLP SVOCs, TCLP RCRA Metals, or PCBs, but the flashpoint result was 62° F. Roll-off containers were brought to the site to store the excavated material from that area until additional samples could be collected. Representative samples were collected from each roll-off container and all the analytical results were acceptable for disposal of the soil at a contained landfill. The material was transported to the Georgetown Landfill and properly disposed.

Previous sampling activities conducted in 1991 and 2002 indicated that elevated lead concentrations were contained in soil samples collected from the former waste oil pit areas. Samples were again collected in April 2006 to determine the status of the material. The results from the 2006 sampling activities verified that elevated lead concentrations were still present. Upon completion of excavation of the former waste oil pits during the recent closure activities, confirmatory soil samples were collected to verify that all impacted soil was removed. The excavation area was divided up into five areas. One composite soil sample was collected from each of the five areas and analyzed for lead. All soil samples collected from the former waste oil pit excavation area were below the EPA Region IX allowable level of 750 mg/Kg for industrial soil, confirming that all the contaminated material was removed. A total of 1,228.23 tons of soil, which includes the drum impacted material described above, were transported to the Georgetown Landfill for disposal. A copy of the contaminated soil disposal summary is attached.

On February 27, 2012, the water (7,600 gallons) that accumulated in the excavated pit was pumped into three vacuum trucks and transported to Waste Water Recyclers in Mount Sterling, Kentucky for disposal. No samples of the pit water were collected for analysis. The excavated area was then filled with soil obtained from an off-site borrow area and seeded with Buffalo Grass.

Leachate

During the removal and relocation of the municipal solid waste, leachate was encountered on January 30, 2012. A sample of the leachate was collected by the contractor (PECCO, Inc.) and submitted to the laboratory for cyanide, arsenic, cadmium, chromium, hexavalent chromium, copper, lead, nickel, silver, and zinc analyses. The analytical results indicated a lead concentration of 1.9 mg/L, which is above the allowable maximum contaminant level (MCL) for water of 0.015 mg/L and required off-site disposal at a treatment facility. All other analytical results were below the allowable limits. A total of 569,250 gallons of leachate were transported for treatment at the Town Branch Treatment Plant in Lexington, Kentucky. A follow-up sample by Tetra Tech was collected on February 10, 2012, and was analyzed for lead, BOD, PAH, TOC, TSS, TDS, chlorides, sulfate, ammonia, iron, sodium, and RCRA Metals. All analytical results were either below the allowable limits or below the detection levels and it was then deemed acceptable to discharge on-site. Because only the lead concentration contained in the January 30th sample exceeded the MCL, Tetra Tech collected a sample from the holding pond weekly in order to monitor the lead concentration to

ensure that on-site discharge continued to be acceptable. No elevated lead concentrations were contained in any of the post-January 30th samples collected by Tetra Tech. Sampling ceased after the leachate collection system and the bioswale were installed and functional.



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Est. 1970

DJ Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

Report Summary

Thursday February 02, 2012

Report Number: L558063

Samples Received: 01/31/12

Client Project:

Description: Ky Div of WM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Leslie Newton , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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REPORT OF ANALYSIS

February 02, 2012

DJ Bays
 PECCO, Inc.
 250 Etter Dr.
 Nicholasville, KY 40356

ESC Sample # : L558063-01

Date Received : January 31, 2012
 Description : Ky Div of WM

Site ID :

Sample ID : 001 LEACHATE WATER

Project # :

Collected By : DJ Bays
 Collection Date : 01/30/12 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide, free	BDL	0.0050	mg/l	4500CN-E	02/01/12	1
Cyanide	BDL	0.0050	mg/l	4500CN-E	02/01/12	1
Chromium, Hexavalent	BDL	0.010	mg/l	3500Cr-D	01/31/12	1
Mercury	0.00038	0.00020	mg/l	245.1	02/01/12	1
Arsenic	BDL	0.020	mg/l	200.7	01/31/12	1
Cadmium	0.015	0.0050	mg/l	200.7	01/31/12	1
Chromium	0.064	0.010	mg/l	200.7	01/31/12	1
Copper	0.56	0.020	mg/l	200.7	01/31/12	1
Lead	1.9	0.0050	mg/l	200.7	01/31/12	1
Nickel	0.16	0.020	mg/l	200.7	01/31/12	1
Silver	BDL	0.010	mg/l	200.7	01/31/12	1
Zinc	7.8	0.030	mg/l	200.7	01/31/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/02/12 09:21 Printed: 02/02/12 10:06

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L558063-01	WG576397	SAMP	Cyanide	R2021212	T2W
	WG576438	SAMP	Cyanide, free	R2021472	WT2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T2	(ESC) - Additional method/sample information: The laboratory analysis was from an unpreserved or improperly preserved sample.
W	(ESC)-The laboratory analysis was from a sample collected in an improper container

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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DJ Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

Report Summary

Monday February 06, 2012

Report Number: L558655

Samples Received: 02/03/12

Client Project: KY DWM

Description: Raven Run - Leachate Water

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Leslie Newton, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

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REPORT OF ANALYSIS

February 06, 2012

DJ Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

ESC Sample # : L558655-01

Date Received : February 03, 2012
Description : Raven Run - Leachate Water
Sample ID : 1 RAVEN RUN FRAC 1
Collected By : DJ Bays
Collection Date : 02/02/12 16:00

Site ID :
Project # : KY DWM

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	0.027	0.0050	mg/l	200.7	02/03/12	1
Zinc	0.37	0.030	mg/l	200.7	02/03/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 02/05/12 09:08 Revised: 02/06/12 09:34



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D J Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

Report Summary

Monday February 06, 2012

Report Number: L558901

Samples Received: 02/04/12

Client Project: KY DWM

Description: Raven Run - Leachate Water

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Leslie Newton, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
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REPORT OF ANALYSIS

February 06, 2012

D J Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

ESC Sample # : L558901-01

Date Received : February 04, 2012
Description : Raven Run - Leachate Water
Sample ID : #1 SPRING LEACHATE
Collected By : DJ Bays
Collection Date : 02/03/12 16:05

Site ID :
Project # : KY DWM

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	0.10	0.0050	mg/l	200.7	02/04/12	1
Zinc	1.2	0.030	mg/l	200.7	02/04/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 02/06/12 11:11 Printed: 02/06/12 11:33



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REPORT OF ANALYSIS

D J Bays
PECCO, Inc.
250 Etter Dr.
Nicholasville, KY 40356

February 06, 2012

Date Received : February 04, 2012
Description : Raven Run - Leachate Water
Sample ID : #2 POND LEACHATE
Collected By : DJ Bays
Collection Date : 02/03/12 16:10

ESC Sample # : L558901-02
Site ID :
Project # : KY DWM

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	0.060	0.0050	mg/l	200.7	02/04/12	1
Zinc	0.49	0.030	mg/l	200.7	02/04/12	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 02/06/12 11:11 Printed: 02/06/12 11:33



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REPORT OF ANALYSIS

February 06, 2012

D J Bays
 PECCO, Inc.
 250 Etter Dr.
 Nicholasville, KY 40356

ESC Sample # : L558901-03
 Site ID :
 Project # : KY DWM

Date Received : February 04, 2012
 Description : Raven Run - Leachate Water
 Sample ID : #3 DISCHARGE LEACHATE
 Collected By : DJ Bays
 Collection Date : 02/03/12 16:18

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	BDL	0.0050	mg/l	200.7	02/04/12	1
Zinc	0.063	0.030	mg/l	200.7	02/04/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 02/06/12 11:11 Printed: 02/06/12 11:33

B026



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Mt Juliet, TN 37122

Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Analysis/Container/Preservativ

Billing Information:
Accounts Payable
250 Etter Dr.
Nicholasville, KY 40356

Report to: D.J. Bays
Email to: djb@pecco.com.net
City/Site Collected: LEXINGTON KY
Client Project #: KY NJJM
ESC Key: 84332
Site/Facility ID#: DJ Bays
P.O.#: 84332

Collected by (signature): [Signature]
Collected by (signature): [Signature]
Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
Same Day... 200%
Next Day... 100%
Two Day... 50%
Three Day... 25%

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
#1 Spring LEACHATE	Comp	WW	N/A	2/3/12	16:05	1
#2 Pond LEACHATE	Comp	WW	N/A	2/3/12	16:10	1
#3 DISCHARGE LEACHATE	Comp	WW	N/A	2/3/12	16:18	1

TOTAL LEAD
TOTAL ZINC

CoCode PECCO (lab use only)
Template/Protocol
Shipped Via:

Remarks/Contaminant
Sample # (lab only)
Please RUSH
L55890101
CO2
-03

pH _____ Temp _____

Flow _____ Other _____

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: 9669 77463 9413

Condition: NO Fee (lab use only)
PH adjusted IN JE lab
CoC Seals Intact 09/0 N ✓ NA OK

Samples returned via: UPS
 FedEx Courier
Temp: 26°C
Bottles Received: 3
Date: 2-4-12
Time: 0900

Relinquished by: (Signature) [Signature]
Relinquished by: (Signature) [Signature]
Relinquished by: (Signature) [Signature]

Received by: (Signature) [Signature]
Received by: (Signature) [Signature]
Received for lab by: (Signature) [Signature]

Date: 2/3/12 Time: 17:32
Date: _____ Time: _____
Date: _____ Time: _____

Received by: (Signature) [Signature]
Received by: (Signature) [Signature]
Received for lab by: (Signature) [Signature]

Microbac

Microbac Laboratories, Inc.

KENTUCKY TESTING LABORATORY DIVISION
 3323 Gilmore Industrial Blvd. Louisville, KY 40213 502.962.6400 Fax: 502.962.6411
 Lexington 859.276.3506 • Paducah 270.898.3637 • Evansville 812.464.9000 • Hazard 606.487.0511



Chemical, Biological, Physical, Molecular, and Toxicological Services

CERTIFICATE OF ANALYSIS

1202-00719

TETRA TECH, INC.
 KEVIN CAREY
 800 CORPORATE DIVE
 SUITE 200
 LEXINGTON, KY 40503

Date Reported 02/17/2012
 Date Due 02/17/2012
 Date Received 02/10/2012
 Date Sampled 02/10/2012
 Invoice No. 12553
 Customer # C076
 Customer P.O.

RAVEN RUN P#12005559

Analysis	Out of Spec	Qualif	Result	Unit	Min	Max	Method	Cus Limit	Rpt Limit	Date	Time	Tech
Sample: 001 HOLDING POND										Sampled 02/10/2012 @ 14:20		
LEAD			<0.01	MG/L			EPA 200.7		0.010	02/14/12	11:25	EML
BOD, 5 DAY			<5	MG/L			SM 5210B		2.0	02/11/12	11:00	GTB
[Polynuc] Arom Hydrocarbon							SW846 8270C		0.15			
NAPHTHALENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
ACENAPHTHYLENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
ACENAPHTHENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
FLUORENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
FLUORACENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
PHENANTHRENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
FLUORANTHENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
PYRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(A)ANTHRACENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
CHRYSENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(B)FLUORANTHENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(K)FLUORANTHENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(A)PYRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
INDENO(1,2,3-C,D)PYRENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
DIBENZO(A,H)ANTHRACENE			<0.005	MG/L					0.005	02/14/12	10:34	LJC
BENZO(G,H,I)PERYLENE			<0.005	MG/L					0.010	02/14/12	10:34	LJC
[Surrogate Rec. - B/N]												
SR / NITROBENZENE-D5			58	%						02/14/12	10:34	LJC
SR / 2-FLUOROBIPHENYL			58	%						02/14/12	10:34	LJC
SR / P-TERPHENYL			58	%						02/14/12	10:34	LJC
DATE EXTRACTED PAH - 8270			COMPLETED	---			SW846 3510C			02/13/12	15:00	MSR
TOTAL ORGANIC CARBON			2.7	MG/L			SM 5310C		0.5	02/14/12	15:00	MSR
SOLIDS, TOTAL SUSPENDED			14	MG/L			I-3765-85		5	02/14/12	17:00	CJL
SOLIDS, DISSOLVED			530	MG/L			SM2540C		50	02/14/12	11:36	CJL
SOLIDS, TOTAL			580	MG/L			I-3750-85		10	02/14/12	15:52	CJL
CHLORIDE			<10	MG/L			EPA 300.0		10	02/15/12	23:41	ARW



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Chemical, Biological, Physical, Molecular, and Toxicological Services

CERTIFICATE OF ANALYSIS

1202-00719

TETRA TECH, INC.
KEVIN CAREY
RAVEN RUN P#12005559

Date Reported 02/17/2012
Date Received 02/10/2012
Date Sampled 02/10/2012

Analysis	Out of Spec	Qualif	Result	Unit	Min	Max	Method	Cus Limit	Rpt Limit	Date	Time	Tech	
Sample: 001 HOLDING POND										Sampled	02/10/2012	@ 14:20	
continued													
SULFATE			110	MG/L			EPA 300.0		10	02/15/12	23:41	ARW	
NITROGEN, AMMONIA			<0.25	MG/L			SM 4500-NH3 G		0.25	02/16/12	13:01	ARW	
[Total RCRA Metals]							SW846 6010C						
ARSENIC			<0.050	MG/L			SW846 6010C		0.050	02/14/12	10:34	EML	
BARIUM			0.077	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
CADMIUM			<0.010	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
CHROMIUM			<0.010	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
MERCURY			<0.0002	MG/L			SW846 7470A		0.0002	02/17/12	16:00	MSR	
SELENIUM			<0.050	MG/L			SW846 6010C		0.050	02/14/12	10:34	EML	
SILVER			<0.010	MG/L			SW846 6010C		0.010	02/14/12	10:34	EML	
			0.77	MG/L			EPA 200.7		0.010	02/14/12	10:34	EML	
SODIUM			7.2	MG/L			EPA 200.7		0.50	02/14/12	10:34	EML	

THIS REPORT HAS BEEN REVIEWED AND APPROVED FOR RELEASE: _____
LABORATORY DIRECTOR, KENTUCKY DIVISION

As regulatory limits change frequently, Microbac advises the recipient of this report to confirm such limits with the appropriate Federal, state, or local authorities before acting in reliance on the regulatory limits provided.
For any feedback concerning our services, please contact Andrew Clifton, the Laboratory Director at 502.962.6400. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at james.nokes@microbac.com

The data and other information contained on this, and other accompanying documents, represents only the sample(s) analyzed and is rendered upon the condition that it is not to be reproduced wholly or in part for advertising or other purposes without written approval from the laboratory.

Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

Lexington-Fayette Urban County Government



Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

October 16, 2020

PRESENTED TO

Lexington-Fayette Urban County Government
Division of Environmental Services
200 East Main Street, 9th Floor
Lexington, KY 40507

PRESENTED BY

Tetra Tech
424 Lewis Hargett Circle
Suite 110
Lexington, KY 40503

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tetratech.com

Prepared by:



10/16/2020

Chris Hale
Project Engineer

Date

Reviewed by:



10/16/2020

Herbert R. Lemaster, PE
Project Manager

Date

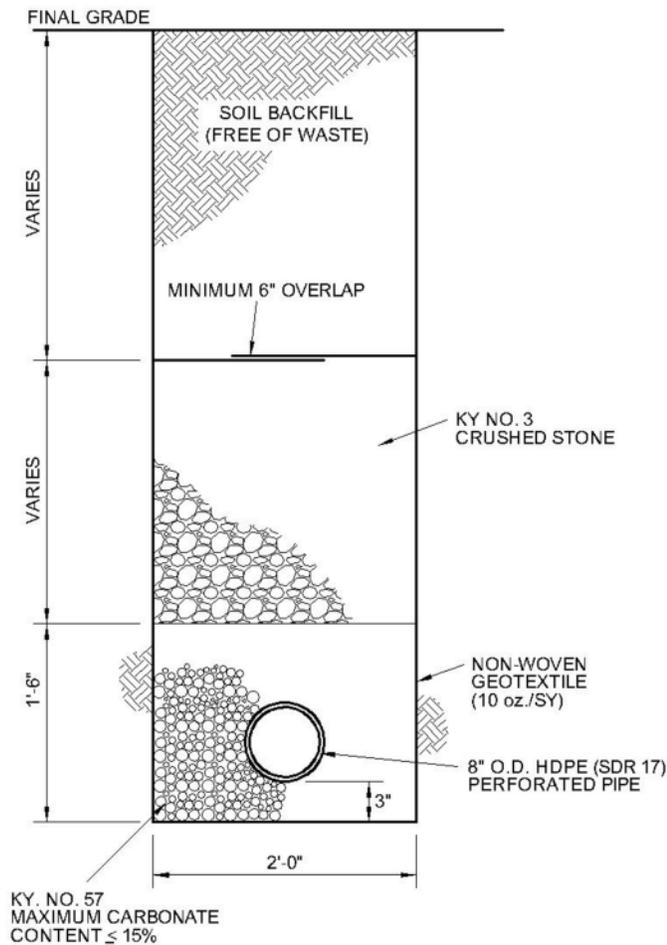
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3.0 CONCLUSION AND RECOMMENDATIONS	8

1.0 BACKGROUND

In the late 1960s and early 1970s, Fayette County operated the Jacks Creek Pike landfill. The landfill accepted household wastes, industrial wastes, and construction/demolition debris. The landfill stopped accepting waste after a fire in 1971 and was covered with soil and abandoned. The Kentucky General Assembly passed House Bill (HB) 174 in 2002 which included the creation of the Historic Landfill Program. Part of the program was to clean up abandoned landfills. The Jacks Creek Pike landfill was considered a priority for cleanup and closure.

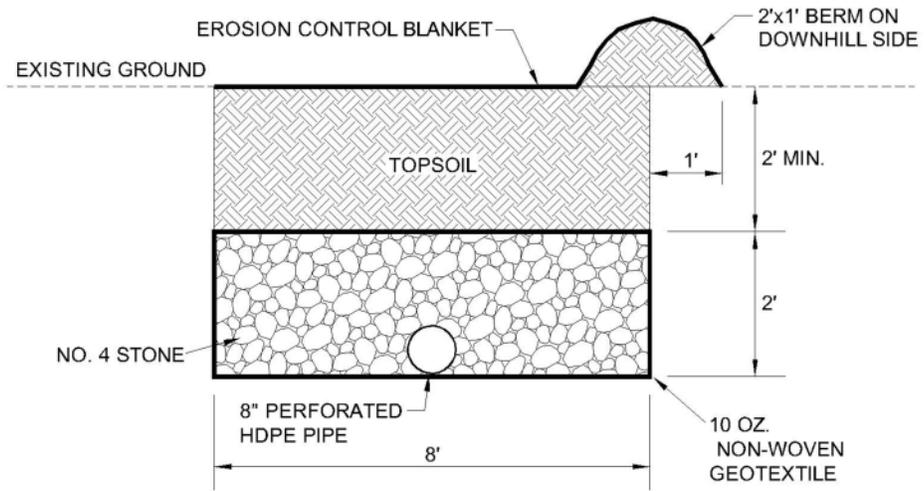
Tetra Tech, under contract to the Commonwealth of Kentucky, designed the cleanup and closure of the landfill. The design included consolidation of the waste into a smaller footprint, capping the waste with two feet of soil, planting native trees and grasses on the 2-foot cap for a phytoremediation system, installing a leachate collection system at the toe of the waste area, and construction of a bioswale. The leachate collection system consists of perforated pipe surrounded by crushed stone and wrapped with geotextile at the toe of the landfill, four manholes, solid pipe connecting the leachate collection system to the bioswale header, and four cleanouts for the bioswale. (See Leachate Line Trench Detail, Bioswale Header Detail, Cleanout Detail, and Site Plan.) Construction was completed in December of 2012.



NOTE: IDENTIFICATION TAPE IS INSTALLED DIRECTLY ON TOP OF THE GEOTEXTILE OVERLAP ABOVE THE NO. 3 STONE IN ALL PIPE TRENCHES.

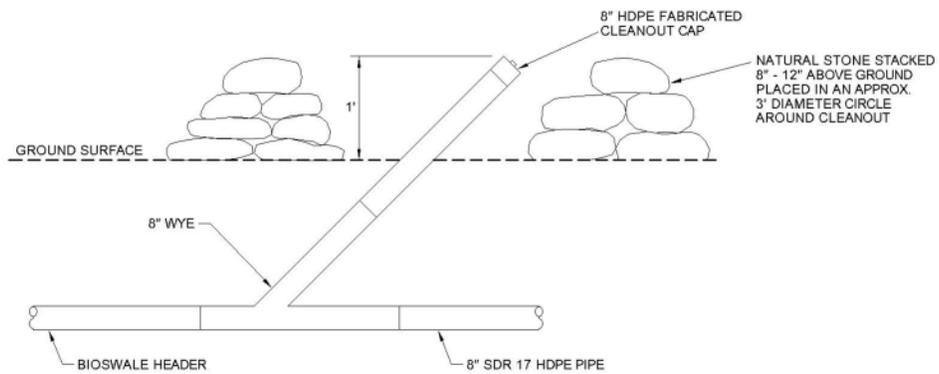
LEACHATE LINE TRENCH DETAIL

NOT TO SCALE



BIOSWALE HEADER DETAIL

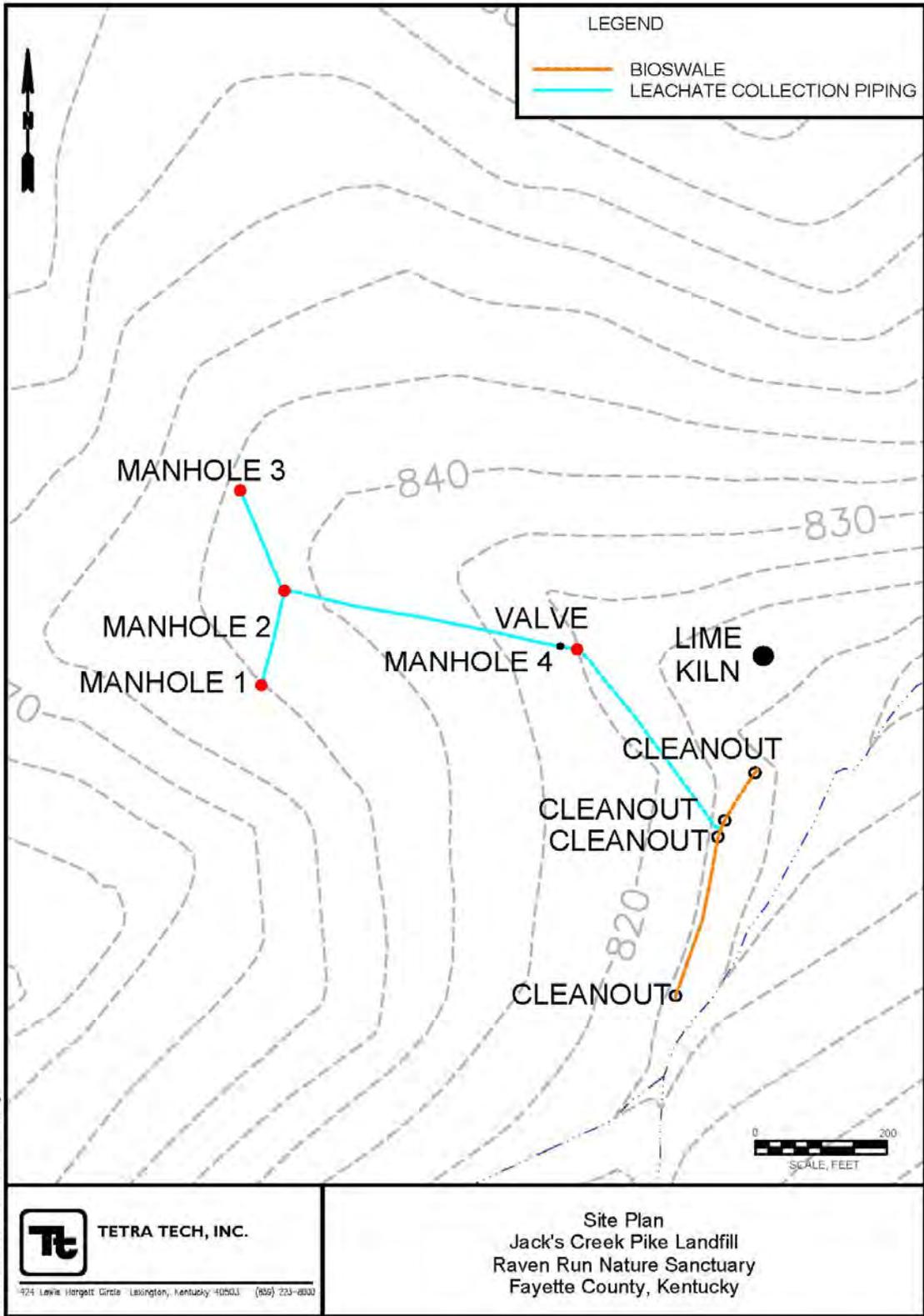
NOT TO SCALE



NOTE: NO. 4 STONE NOT SHOWN FOR CLARITY.

CLEANOUT DETAIL

NOT TO SCALE



After construction was concluded, the area has been inspected semi-annually by the Lexington-Fayette Urban County Government (LFUCG). During a recent inspection, it was noted that water was coming out of the vent pipe of Manhole No. 4. (See Photo No. 1.) LFUCG contacted Tetra Tech and a site visit was conducted on February 13, 2020. After some observation and discussion, the decision was made that cleaning of the leachate line and bioswale would be beneficial to optimize the performance of the system. LFUCG then issued a purchase order to Tetra Tech to coordinate the efforts of this project.



Photo 1
Manhole No. 4 (2/13/2020)

2.0 CLEANING ACTIVITIES

Cleaning activities commenced on June 26, 2020 by the means of jet rodding. Tetra Tech contracted with TPM Group, Inc. to provide a jetting/vacuum truck with trained operators to perform the services. The cleaning began at the two cleanouts in the middle of the bioswale header. Once the blind flange caps were removed, it was discovered that water was standing in the bioswale system to within six inches of the top of the cleanouts. The northeast section was jet rodded first and the standing water drained immediately, with some mud withdrawn during pull-back. The southwest section was then jet rodded. The northeast section was jet rodded one more time and the southwest section was jet rodded two more times. The bioswale could not be videoed because the camera could not make the 45-degree bend of the cleanouts. The jetting truck was out of water and had to return to the water loading station located at Fire Station No. 18 on South Cleveland Road to refill the tank.

After refilling, the truck returned to jet rod at Manhole No. 4. It was noted that water was no longer coming out of the vent pipe at Manhole No. 4. When the manhole cover was removed, it was observed that quite a bit of mud and

debris had accumulated in the manhole, but the system was flowing as a result of the jet rodding performed on the bioswale. (See Photo No. 2.) The manhole cover on Manhole No. 2 was removed to evaluate the leachate collection system at the toe of the landfill. Flow in the system was observed. Jet rodding continued from Manhole No. 4 to Manhole No. 2. No problems were encountered. After jet rodding this segment, a camera was deployed to investigate the integrity of the pipe. No issues were encountered, and the pipe was structurally sound.



Photo 2
Manhole No. 4 (6/26/2020)

After the camera work, the segment from Manhole No. 4 downstream to the cleanouts at the bioswale was jet rodded. Work progressed, but during retrieval, the jet rodder became lodged in the pipe. After significant effort, the jet rodder could not be removed. A decision was made by the operator to cut the jet rod hose and abandon the 2-inch hose and nozzle; leaving them inside the 8-inch solid HDPE pipe. As a result, no more jet rodding could be performed that day. Also, a camera could not be deployed down the pipe from Manhole No. 4 to the bioswale cleanouts because the abandoned hose would impede its maneuverability. Visual observations at the completion of the cleaning operations indicated that the flow within the system was significantly improved by these efforts.

On July 8, 2020, Tetra Tech met with LFUCG personnel on-site to observe and discuss the result of the cleaning operations. The manhole cover for Manhole No. 4 was removed to inspect the mud/debris. The decision was made that a second cleaning effort would be necessary.

On October 2, 2020, the jetting/vacuum truck mobilized for the second cleaning event. The priority for cleaning activities was to remove the mud and debris from Manhole No. 4. Work began with jetting and vacuuming the mud and debris from Manhole No. 4. (See Photo No. 3.) After vacuuming the manhole, all the mud and debris were removed. (See Photo No. 4.) The vacuum hose was removed and the pipes, downstream and upstream from the manhole, were jet rodded. This was done for approximately 50 feet both ways.



Photo 3
Manhole No. 4 Jetting/Vacuuming
(10/2/2020)



Photo 4
Manhole No. 4 After Jetting/Vacuuming
(10/2/2020)

The jetting/vacuum truck then relocated in order to jet rod the perforated leachate collection system pipes at the toe of the landfill. Jetting began at Manhole No. 1 and continued to Manhole No. 2 and then up to Manhole No. 3. With the two cleaning events, the entire system was jet rodded.

3.0 CONCLUSION AND RECOMMENDATIONS

Currently, the entire system is flowing with no issues. It is our understanding that this was the first significant maintenance performed on the system since construction was completed in December of 2012. There was a considerable amount of effort involved in the overall cleaning. It is recommended that this cleaning maintenance be performed every other year to keep the system functioning effectively.

Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

Lexington-Fayette Urban County Government



Report for the Cleaning of the Leachate Line/Bioswale at the Raven Run Nature Sanctuary

November 2021

PRESENTED TO

Lexington-Fayette Urban County Government
Division of Environmental Services
200 East Main Street, 9th Floor
Lexington, KY 40507

PRESENTED BY

Tetra Tech
424 Lewis Hargett Circle
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Lexington, KY 40503

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F +1-859-224-1025
tetratech.com

Prepared by:



11/18/2021

Chris A. Hale
Project Engineer

Date

Reviewed by:



11/18/2021

Herbert R. Lemaster, PE
Project Manager

Date

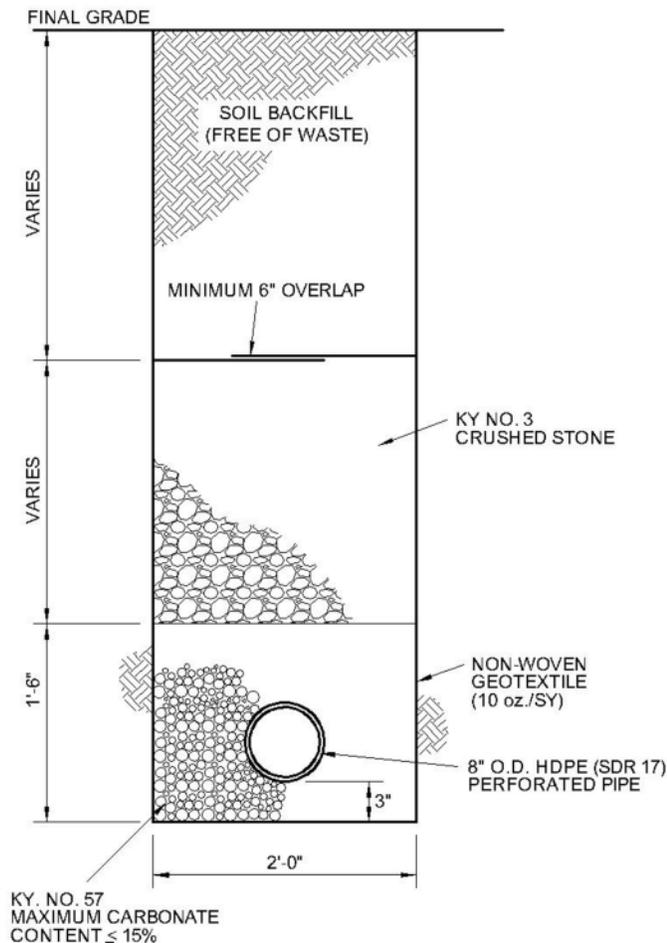
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1.0 BACKGROUND

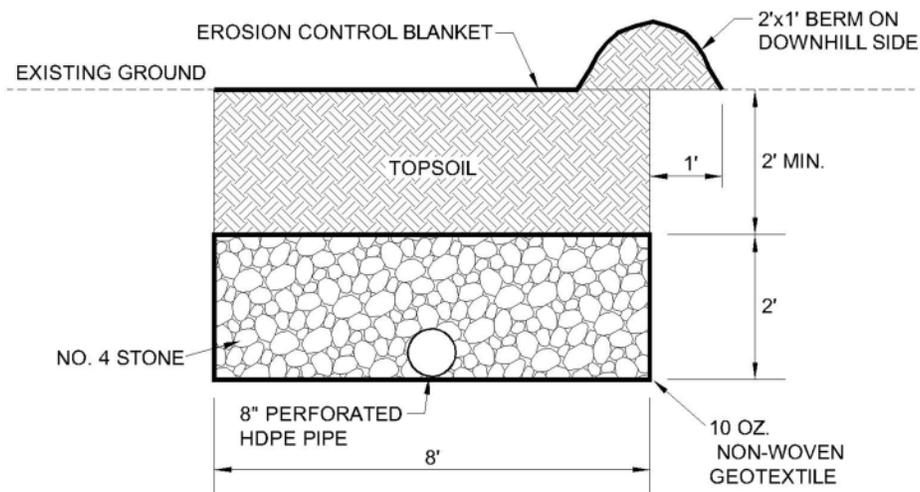
In the late 1960s and early 1970s, Fayette County operated the Jacks Creek Pike landfill. The landfill accepted household wastes, industrial wastes, and construction/demolition debris. The landfill stopped accepting waste after a fire in 1971 and was covered with soil and abandoned. The Kentucky General Assembly passed House Bill (HB) 174 in 2002 which included the creation of the Historic Landfill Program. Part of the program was to clean up abandoned landfills. The Jacks Creek Pike landfill was considered a priority for cleanup and closure.

Tetra Tech, under contract to the Commonwealth of Kentucky, designed the cleanup and closure of the landfill. The design included consolidation of the waste into a smaller footprint, capping the waste with two feet of soil, planting native trees and grasses on the 2-foot cap for a phytoremediation system, installing a leachate collection system at the toe of the waste area, and construction of a bioswale. The leachate collection system consists of perforated pipe surrounded by crushed stone and wrapped with geotextile at the toe of the landfill, four manholes, solid pipe connecting the leachate collection system to the bioswale header, and four cleanouts for the bioswale. (See Leachate Line Trench Detail, Bioswale Header Detail, Typical Cleanout Detail, and Site Plan.) Construction was completed in December of 2012.



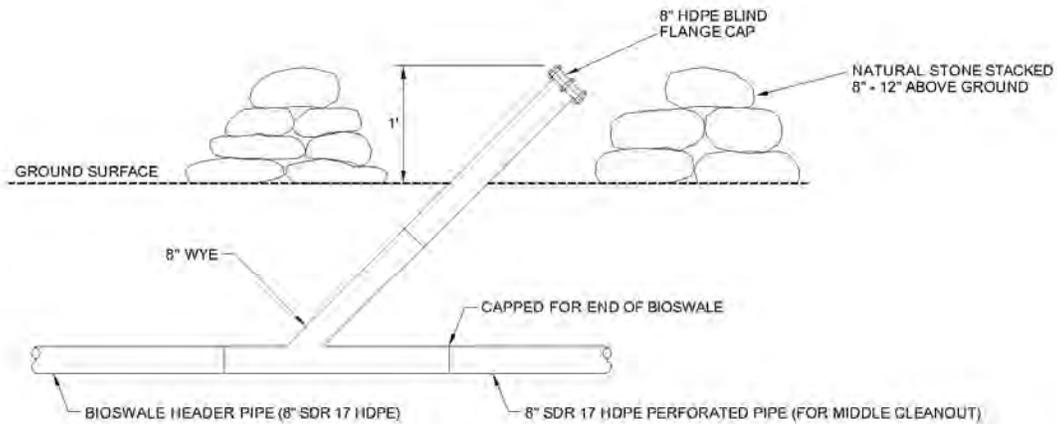
LEACHATE LINE TRENCH DETAIL

NOT TO SCALE



BIOSWALE HEADER DETAIL

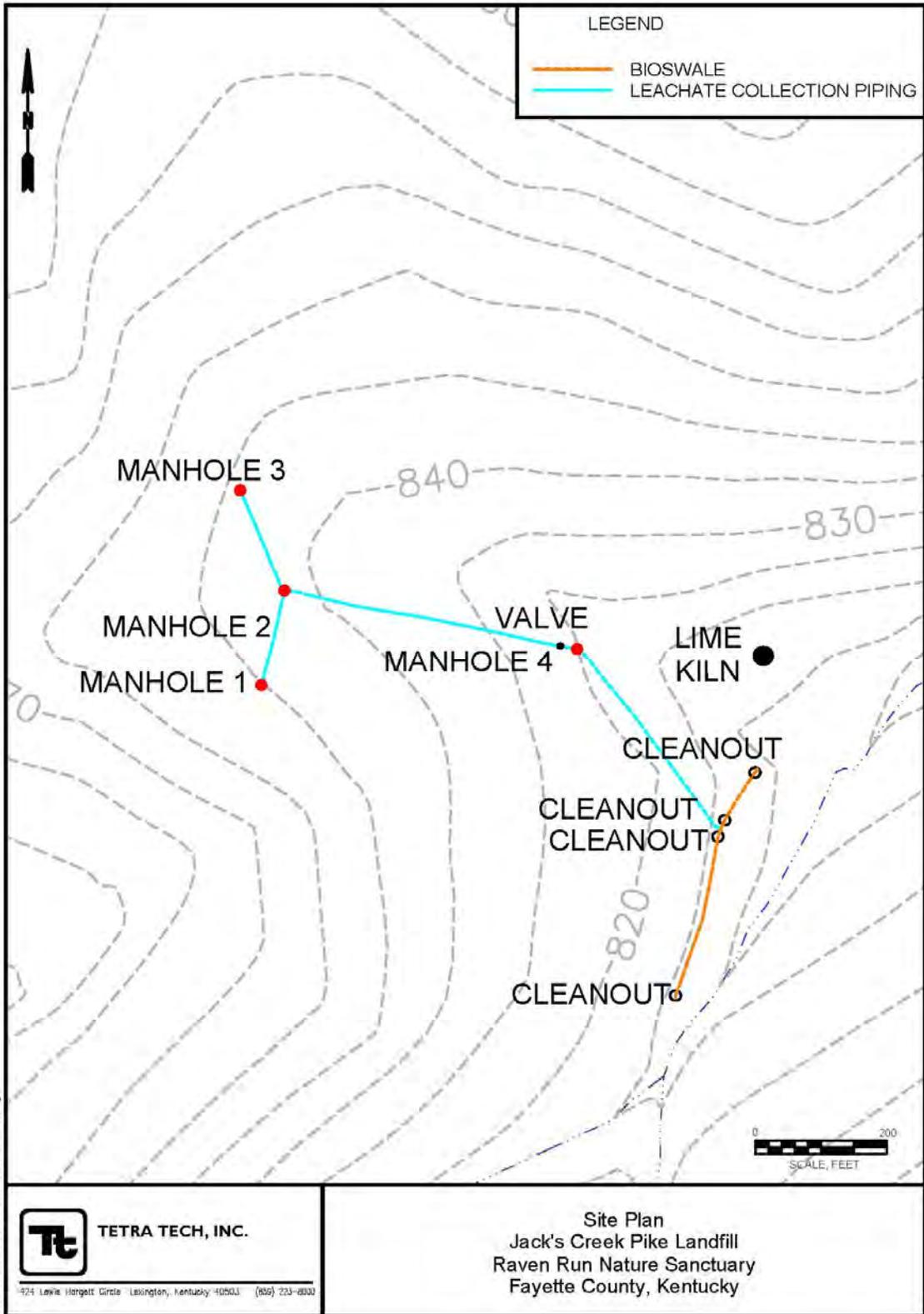
NOT TO SCALE



NOTE: NO. 4 STONE NOT SHOWN FOR CLARITY.

TYPICAL CLEANOUT DETAIL

NOT TO SCALE



After construction was concluded, the area has been inspected semi-annually. During an inspection in early 2020, it was noted that water was coming out of the vent pipe of Manhole No. 4. The Lexington-Fayette Urban County Government (LFUCG) contacted Tetra Tech and the decision was made to clean the leachate line and bioswale. LFUCG contracted with Tetra Tech to coordinate the efforts of this project.

The leachate system was cleaned using a jet rod on June 26, 2020. After cleaning, it was observed that quite a bit of mud and debris had accumulated in Manhole 4. The manhole was cleaned with a vacuum truck on October 2, 2020. The leachate lines were jet rodded after vacuuming the manhole. At that time, the entire system was flowing with no issues.

During mid-June of 2021, LFUCG personnel observed Manhole 4 overflowing again. (See Photo No. 1.) LFUCG contracted with Tetra Tech to coordinate the efforts to clean the bioswale and leachate lines in order to increase flow in the system.



Photo No. 1
Manhole No. 4
(06/17/2021)

2.0 CLEANING ACTIVITIES

Cleaning activities were conducted on October 19, 2021 by the means of jet rodding. Tetra Tech utilized PECCO, Inc. to provide jet rodding and vacuuming services. Upon arrival, Manhole No. 4 was observed to still be overflowing. The cleaning began at the two cleanouts in the middle of the bioswale header. In order to access the bioswale, the blind flange caps were removed. It was noted that some of the flange bolts were very tight and difficult to remove. During removal of the blind flange caps, water poured from the cleanouts. (See Photo No. 2.)



Photo No. 2
Cleanout Flange Cap Removal
(10/19/2021)

The northeast section was jet rodded first all the way to the end. This section was jet rodded twice. The southwest section was then jet rodded twice all the way to the end.

After jet rodding the bioswale, personnel relocated to Manhole No. 4. It was observed that water was no longer overflowing from Manhole No. 4. When the manhole cover was removed, the system was seen flowing in the manhole trough as a result of the jet rodding performed on the bioswale. The pipe from Manhole No. 4 to the bioswale was then jet rodded twice. (See Photo No. 3.) No mud or debris was seen within the manhole. Since water was seen flowing through the manhole trough, it was determined that system upstream of Manhole No. 4 was functioning properly and no more jet rodding was performed.



Photo No. 3
Jet Rodding at Manhole No. 4
(10/19/2021)

The blind flange caps were placed back on the cleanouts. The bolts were not tightened as much as they were previously to make removal easier should they need to be accessed at a later date.

3.0 CONCLUSION AND RECOMMENDATIONS

After the cleaning on October 19, 2021, the entire system was flowing with no issues. Tetra Tech will observe the system during their inspection scheduled for December 2021.

There are concerns related to the blockage of flow within the system less than one year since the previous cleaning and jet rodding. It is assumed that the bioswale media has become clogged with silt and sediment causing restriction of flow. The jet rodding helps but is only able to clear silt/sediment a short distance from the perforations of the bioswale pipe.

It is recommended to check the system at least quarterly and jet rod as needed. However, this may be a short-term solution as silt and sediment will continue to build up. A longer-term solution would be to remove the existing bioswale media and replace with clean crushed stone and new non-woven geotextile. While this work is being performed, it would be suggested to replace the middle cleanouts of the bioswale system with a manhole. Replacing the middle cleanouts with a manhole would allow for better access for maintenance, such as jet rodding, in the future.



16 December 2014

DELIVERED ELECTRONICALLY

Mr. Dann Dettman
Environmental Compliance Coordinator
Lexington-Fayette Urban County Government
200 East Main Street, 9th Floor
Lexington, KY 40507

Re: Landfill Site Visit Report Form
November 20, 2014 Site Visit
Former Jacks Creek Pike Landfill, Raven Run Nature Sanctuary
3885 Raven Run Way, Lexington, Kentucky
AI # 52010, Solid Waste Permit No. 034-00003, AIN ARM20110002
Geographic Coordinates: 37.888, -84.395
AMEC Project Number 7362-14-2145

Dear Mr. Dettman:

AMEC Environment & Infrastructure, Inc. (AMEC), a wholly owned subsidiary of AMEC Foster Wheeler, plc, is submitting the attached Site Visit Report Form for the former Jacks Creek Pike Landfill. The attached form was developed by AMEC as a means of documenting the post-closure site visits required by the Kentucky Division of Waste Management (KDWM) in their letter to LFUCG dated June 12, 2014. The form and attachments have been completed for our initial site visit with LFUCG personnel on November 20, 2014.

We appreciate the opportunity to be of service to LFUCG and look forward to working with you on this and future projects.

Sincerely,
AMEC Environment & Infrastructure, Inc.

A blue ink signature of Dean A. Duncan, written in a cursive style.

Dean A. Duncan, P.E.
Associate Engineer

A blue ink signature of Alison L. Dunn, written in a cursive style.

Alison L. Dunn, P.G.
Associate Hydrogeologist / Project Manager

Attachment:
Landfill Site Visit Report Form, November 20, 2014 and attachments

Correspondence:
AMEC Environment & Infrastructure, Inc.
2456 Fortune Drive, Suite 100
Lexington, Kentucky 40509-4241
Tel +1 (859) 255-3308
Fax +1 (859) 254-2327

www.amecfw.com

Landfill Site Visit Report Form
Jack's Creek Pike Landfill
Raven Run Nature Sanctuary, Lexington, Kentucky
Solid Waste Permit No. 034-00003
Agency Interest No. 52010

See Attached Annotated Site Map and Photolog

Year	2014
Date of Observation	November 20, 2014

Observers: Steve Williams (SGW), AMEC
 Dean Duncan (DAD), AMEC

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
General:				
Do trails/natural barriers control unauthorized access?	Yes	If No, provide location and description	Lack of trails provides limited access, honey suckle provides barricade on path from barn, sign at access point on southwest corner says "Authorized Personnel Only."	SGW/DAD
Is there evidence of activities (such as off-road vehicles, cattle) causing erosion or penetration of the cap?	No	If Yes, provide location the type of damage		SGW/DAD
Are access roads being maintained appropriately?	N/A	If No, provide location and description	There are no access roads, past the short access road at southwest corner.	SGW/DAD
Is sediment coming on to the landfill/ditches from up-slope?	No	If Yes, provide location and description		SGW/DAD
Are diversion ditches clear of debris/sediment?	Yes	If No, provide location and description		SGW/DAD
Is the sediment control pond on the downstream end of combined drainage ditch properly maintained?	Yes	If No, provide location and description		SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

November 20, 2014

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Landfill Cap:				
Is there growth of indigenous trees and grasses?	Yes	If No, provide location and description		SGW/DAD
Are invasive woody plant species (such as bush honeysuckle) present?	No	If Yes, provide location and description		SGW/DAD
Are the erosion control berms functioning as intended?	No	If No, provide location and description	Erosion ditches forming on eastern slope of landfill over leachate line near Manhole 2.	SGW/DAD
Is surface erosion visible (deeper than 6 inches)?	Yes	If Yes, provide location and description	Erosion ditches mentioned above are 6"- 12" deep, and up to 18" deep in some spots.	SGW/DAD
Are there visible leachate outbreaks?	No	If Yes, provide location and description		SGW/DAD
Is there visible distress of vegetative cover from outbreaks?	No	If Yes, provide location and description		SGW/DAD
Is settlement or standing water on the cap evident?	No	If Yes, provide location and description		SGW/DAD
Is positive drainage of the cap being maintained?	Yes	If No, provide location and description		SGW/DAD
Is there evidence of activity (excavation, drilling, grading) or structures that could have disturbed integrity of cap since last visit?	No	If Yes, provide location the type of damage		SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation November 20, 2014

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Surface Water Drainage and Erosion Control System:				
Is the existing condition consistent with design?	Yes	If No, provide details		SGW/DAD
Is there visible erosion occurring in the drainage ditches?	Yes	If Yes, provide location and description	Vertical erosion in North ditch of up to 12 inches deep on slope near intersection with South ditch.	SGW/DAD
Is standing water evident in drainage ditches?	No	If Yes, provide location and description		SGW/DAD
Are there any obstructions or structural damages?	No	If Yes, provide location and description		SGW/DAD
Is there sediment buildup in the drainage ditches?	No	If Yes, provide location and description		SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation November 20, 2014

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Leachate Collection and Treatment System:				
Are bioswales and associated structures (drainage lines, manholes, cleanouts) in good condition?	Yes	If No, provide details		SGW/DAD
Are the cleanouts and manholes accessible and intact?	Yes	If No, provide details		SGW/DAD
Is the stone protection around the cleanouts intact?	Yes	If No provide details		SGW/DAD
Are any pipes or valves leaking?	No	If Yes, Provide Details		SGW/DAD
Is there evidence of overflow/outbreaks?	Yes	If Yes, provide location and description	There is overflow emerging from the ground surface near Cleanout 4.	SGW/DAD

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

November 20, 2014

Observations

General Comments or Observations (inc. weather):

Sunny, 40's.
LFUCG personnel who attended the site visit with AMEC included Laurie Thomas, Park Naturalist Raven Run, Division of Parks and Recreation and Dann Dettman, Environmental Compliance Coordinator, Division of Environmental Services. Alison Dunn of AMEC also attended.

Observed by:

Steve Williams

Typed or Printed Name



Signature

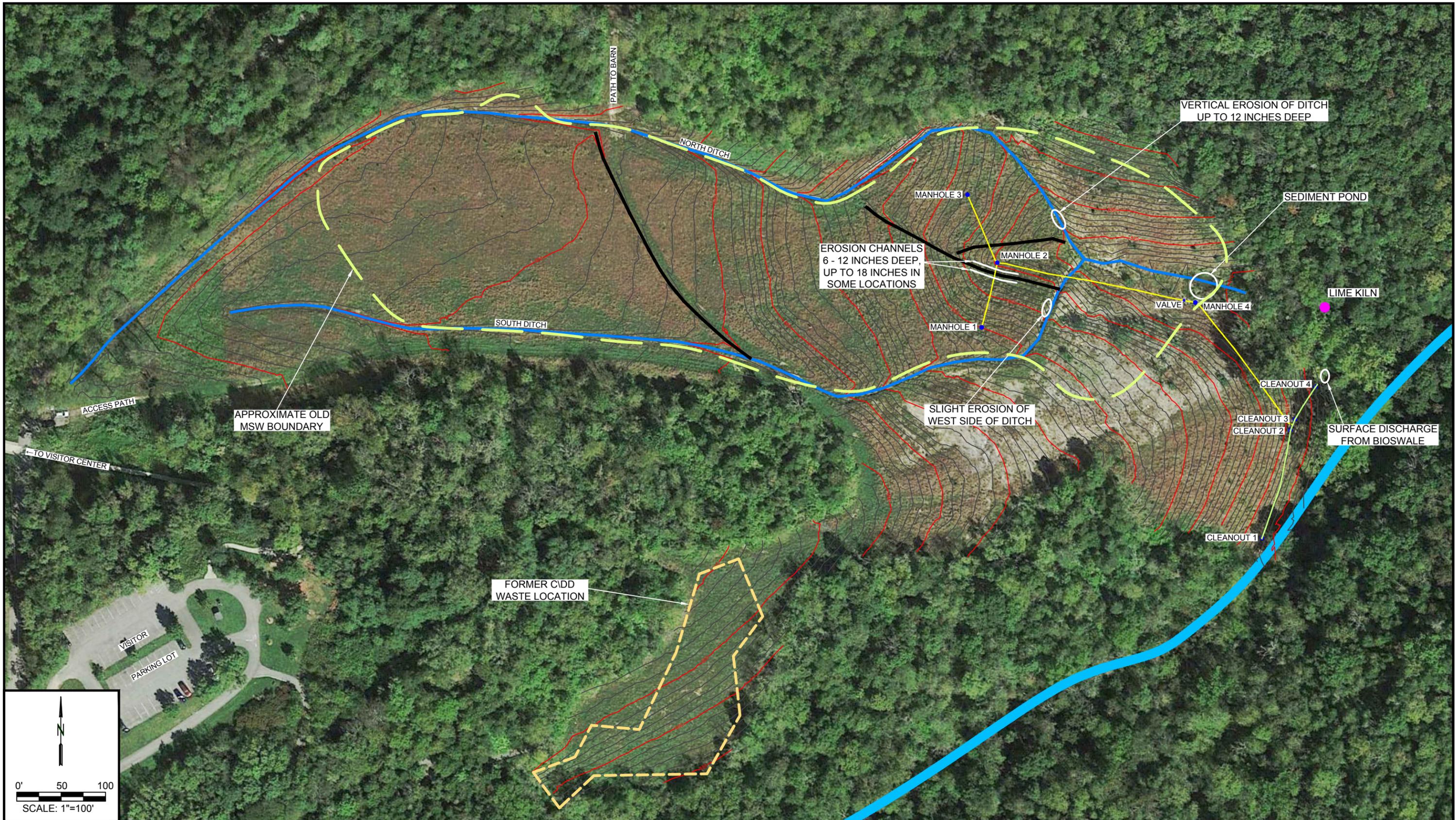
Reviewed by:

Dean Duncan

Typed or Printed Name



Signature



LEGEND	
	INTERMEDIATE CONTOUR
	INDEX CONTOUR
	900
	DRAINAGE DITCH
	DRAINAGE BERM
	LEACHATE COLLECTION PIPE
	BIOSWALE



Amec Foster Wheeler
 2456 Fortune Drive, Suite 100
 Lexington, Kentucky 40509
 Phone: (859) 255-3308

JACK'S CREEK PIKE LANDFILL AT
 RAVEN RUN NATURE SANCTUARY
 LEXINGTON, KENTUCKY

LANDFILL SITE PLAN WITH OBSERVATION NOTES
NOVEMBER 20, 2014
JACK'S CREEK PIKE LANDFILL
 PROJECT NUMBER: 7362142145

SCALE	1" = 100'
DATE	12/16/2014
DRAWN BY	CSR/P
APPROVED BY	DAD

FIG. 1



PHOTO 1:
Access path at southwest corner of landfill.



PHOTO 2:
Bare rock exposed on southeast slope of landfill site.



PHOTO 3:

Typical tree planted as part of landfill closure.



PHOTO 4:

View of South Ditch facing West with slight erosion.



PHOTO 5:

Valve marker.



PHOTO 6:

Valve box with marker



PHOTO 7:

Manhole 4, yellow vent pipe in foreground.



PHOTO 8:

Interior of Manhole 4,
flow from upper right
(west) to left
(southeast).



PHOTO 9:

Cleanouts 2 and 3 in center of bioswale.



PHOTO 10:

Looking up at bioswale level (persons standing) from stream level.



PHOTO 11:

Stream at base of slope.



PHOTO 12:

Cleanout 4 at north end of bioswale.



PHOTO 13:

Flow discharging east from north end of bioswale, below cleanout 4, flowing to stream at toe of slope.



PHOTO 14:

Flow discharging east from north end of bioswale, below cleanout 4, flowing to stream at toe of slope.



PHOTO 15:

Cleanout 1 at south end of bioswale.



PHOTO 16:

Rock dam on lower end of combined drainage ditch, below sedimentation pond.



PHOTO 17:

Looking south at sediment control pond on downstream end of combined drainage ditch.



PHOTO 18:

Looking west along northern perimeter slope of landfill.



PHOTO 19:

Looking west along
centerline of landfill.



PHOTO 20:

Looking west-
southwest across
landfill.



PHOTO 21:

Looking south.



PHOTO 22:

Looking south at valve
box marker.



PHOTO 23:

North ditch, erosion logs placed during construction have been undercut by water flow in ditch.



PHOTO 24:

Looking upstream along north ditch.



PHOTO 25:

Eroded banks along north ditch.



PHOTO 26:

North ditch, looking downstream (east), eroded bank in foreground.

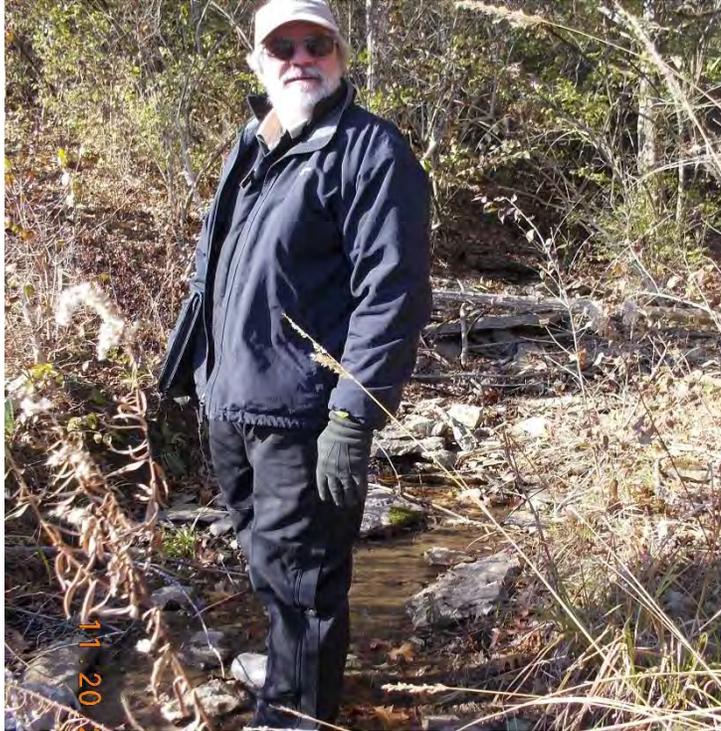


PHOTO 27:

Stream flowing into
north ditch from north
valley wall.



PHOTO 28:

Inside of Manhole 3
(no flow).



PHOTO 29:

Inside Manhole 2. Flow entering from top (south) and bottom (north) and exiting left (east).



PHOTO 30:

Manhole 1, no visible flow. Drains to left (north).



PHOTO 31:

Looking upstream
along erosion feature
on steep slope just
south of Manhole 2.



PHOTO 32:

Looking north
along path leaving landfill
area, toward Barn.
Path has been blocked
with cut brush.

Landfill Site Visit Report Form
Jack's Creek Pike Landfill
Raven Run Nature Sanctuary, Lexington, Kentucky
Solid Waste Permit No. 034-00003
Agency Interest No. 52010

Year

Date of Observation

See Attached Site Map and Photolog

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
General:				
Do trails/natural barriers control unauthorized access?	Yes	If No, provide location and description	There is an "Authorized Personnel Only" sign posted. Recommend periodically trimming around the sign.	Chris Hale and Shann Easterling
Is there evidence of activities (such as off-road vehicles, cattle) causing erosion or penetration of the cap?	No	If Yes, provide location the type of damage	None.	Chris Hale and Shann Easterling
Are access roads being maintained appropriately?	Yes	If No, provide location and description	Mowed Trail to landfill - No public access	Chris Hale and Shann Easterling
Is sediment coming on to the landfill/ditches from up-slope?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Are diversion ditches clear of debris/sediment?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Is the sediment control pond on the downstream end of combined drainage ditch properly maintained?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

December 15, 2021

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Landfill Cap:				
Is there growth of indigenous trees and grasses?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Are invasive woody plant species (such as bush honeysuckle) present?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Are the erosion control berms functioning as intended?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Is surface erosion visible (deeper than 6 inches)?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Are there visible leachate outbreaks?	Yes	If Yes, provide location and description	Minor at toe of landfill - no flow	Chris Hale and Shann Easterling
Is there visible distress of vegetative cover from outbreaks?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Is settlement or standing water on the cap evident?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Is positive drainage of the cap being maintained?	Yes	If No, provide location and description	None.	Chris Hale and Shann Easterling
Is there evidence of activity (excavation, drilling, grading) or structures that could have disturbed integrity of cap since last visit?	No	If Yes, provide location the type of damage	None.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation December 15, 2021

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Surface Water Drainage and Erosion Control System:				
Is the existing condition consistent with design?	Yes	If No, provide details	None.	Chris Hale and Shann Easterling
Is there visible erosion occurring in the drainage ditches?	Yes	If Yes, provide location and description	Minimal and not significant. Ditches at toe of landfill.	Chris Hale and Shann Easterling
Is standing water evident in drainage ditches?	Yes	If Yes, provide location and description	Minimal and not significant. Ditches at toe of landfill.	Chris Hale and Shann Easterling
Are there any obstructions or structural damages?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling
Is there sediment buildup in the drainage ditches?	No	If Yes, provide location and description	None.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

December 15, 2021

Observations	YES/NO	Instructions	Comments/Recommendations	Observed By
Leachate Collection and Bioswale System:				
Are bioswales and associated structures (drainage lines, manholes, cleanouts) in good condition?	Bioswale is questionable. Yes to everything else.	If No, provide details	There were some rocks and debris in manholes 1, 2, and 3. Manhole 4 has standing water. Water surfacing at North Cleanout.	Chris Hale and Shann Easterling
Are the cleanouts and manholes accessible and intact?	Yes	If No, provide details	None.	Chris Hale and Shann Easterling
Is the stone protection around the cleanouts intact?	Yes	If No provide details	None.	Chris Hale and Shann Easterling
Are any pipes or valves leaking?	No	If Yes, Provide Details	The valve was closed and opened (26 turns, each way). The valve wrench was left next to the valve.	Chris Hale and Shann Easterling
Is there evidence of overflow/outbreaks?	Yes	If Yes, provide location and description	Water surfacing at North Cleanout. Soggy soil.	Chris Hale and Shann Easterling

Landfill Site Visit Report Form

Jack's Creek Pike Landfill, Raven Run Nature Sanctuary, Lexington, Kentucky

Date of Observation

December 15, 2021

Observations

General Comments or Observations (inc. weather):

December 15, 2021 - 63°, Cloudy

Manhole No. 4 has standing water, meaning water is getting backed up from the bioswale. Also, water is surfacing at the north cleanout.

The bioswale was jet rodded on October 19, 2021. After the jet rodding, the flow through Manhole No. 4 and the system was normal. It is assumed that the jet rodding is clearing the pipe perforations and a minimal area of the stone media outside the perforations. Silt and sediment appear to be clogging the bioswale again; either pipe perforations, stone media, or both.

It is recommended to check the system at least quarterly and jet rod/vacuum as needed. However, this may be a short-term solution as silt and sediment will continue to build up. A longer-term solution would be to remove the existing bioswale media, replace with clean crushed stone and new non-woven geotextile, and clean the perforations in the pipe.

Observed by:

Chris Hale

Typed or Printed Name

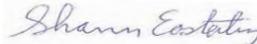


Signature

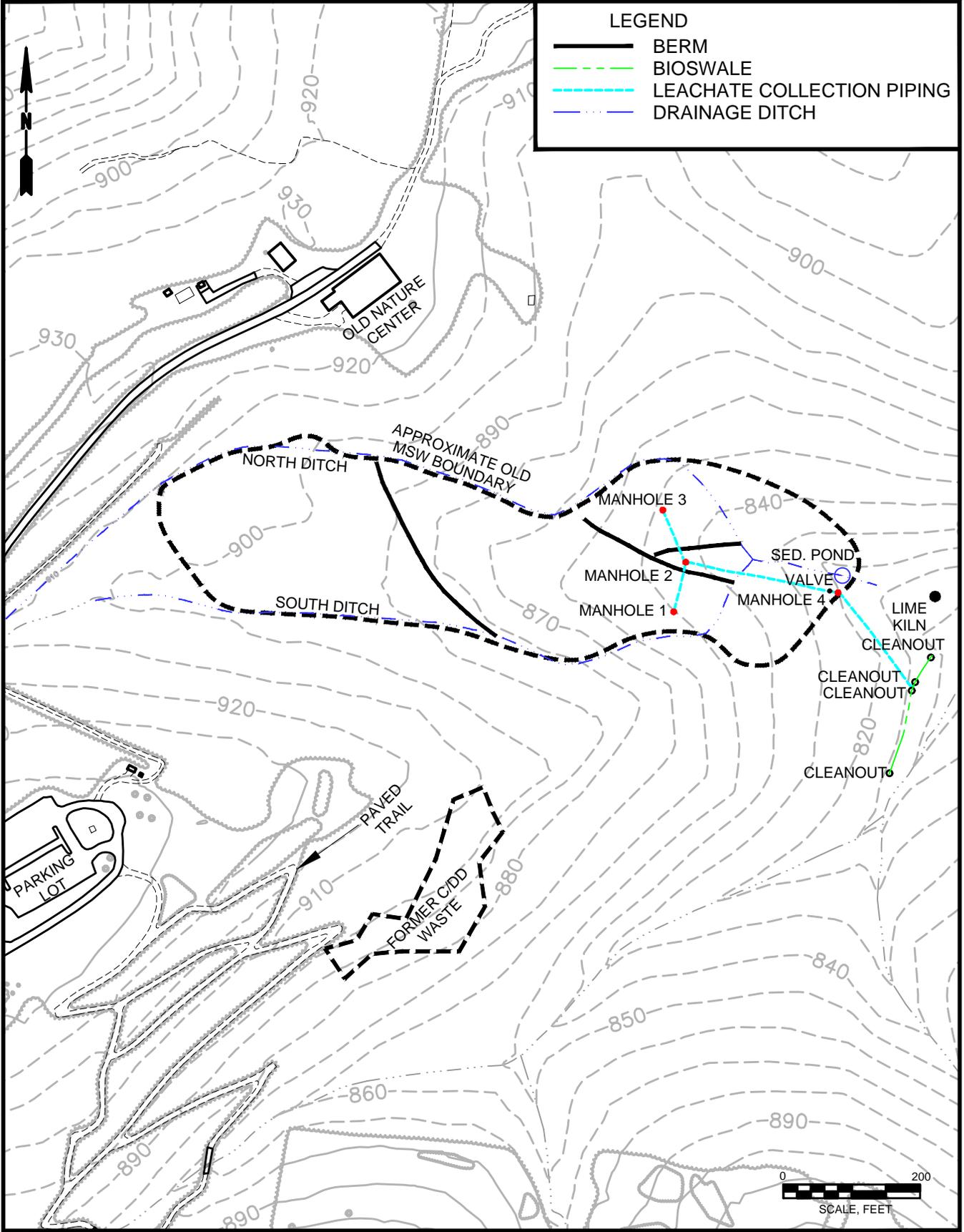
Reviewed by:

Shann Easterling

Typed or Printed Name



Signature



200-11681-21006-Raven Run Site.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

Site Inspection Map - December 2021
 Jack's Creek Pike Landfill
 Raven Run Nature Sanctuary
 Fayette County, Kentucky



North Drainage Ditch at Toe of Landfill



South Drainage Ditch at Toe of Landfill



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



Landfill Vegetated Cap



Bioswale Cleanouts

200-11681-21006-Photo.dwg



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SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



North Bioswale Cleanout



South Bioswale Cleanout

200-11681-21006-Photo.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



Manhole No. 1



Manhole No. 2

200-11681-21006-Photo.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky



Manhole No. 3



Manhole No. 4

200-11681-21006-Photo.dwg



TETRA TECH, INC.

424 Lewis Hargett Circle Lexington, Kentucky 40503 (859) 223-8000

SITE PHOTOGRAPHS - DECEMBER 2021

Jack's Creek Pike Landfill
Raven Run Nature Sanctuary
Fayette County, Kentucky

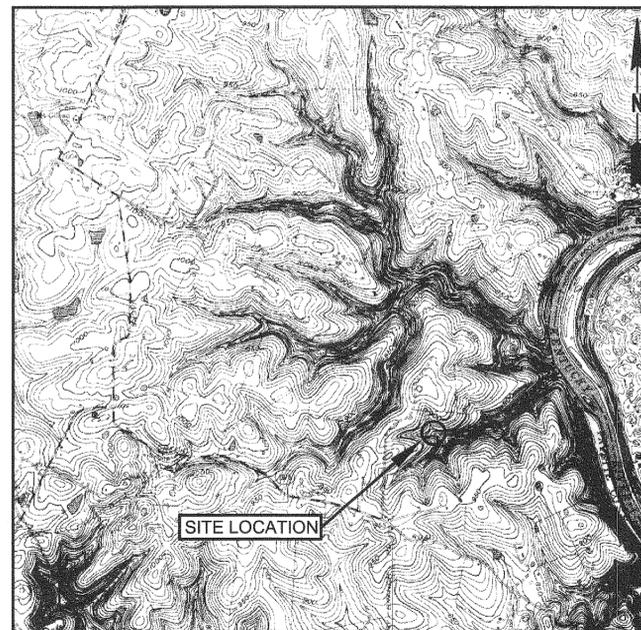
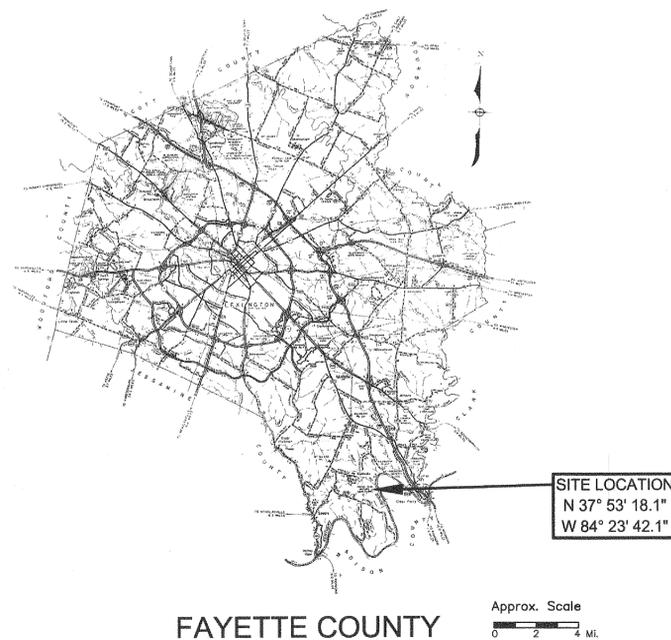
RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY

KENTUCKY DIVISION OF WASTE MANAGEMENT

PROJECT ACCOUNT NUMBER C5WZ-129-DWM-XX78-00
SEPTEMBER 2011

COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DEPARTMENT FOR FACILITIES AND SUPPORT SERVICES
DIVISION OF ENGINEERING AND CONTRACT ADMINISTRATION
FRANKFORT, KENTUCKY

STEVEN L. BESHEAR, GOVERNOR



Adopted from USGS Topographical Map
Coletown, KY Quadrangle
Scale: 1" = 2000'

INDEX OF DRAWINGS

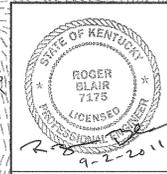
- Sheet G-1 Cover Sheet and Location Map
- Sheet C-1 Existing Conditions
- Sheet C-2 Site Plan
- Sheet C-3 Profile
- Sheet C-4 Miscellaneous Details
- Sheet C-5 Leachate Collection Toe Drain
- Sheet C-6 Revegetation Plan
- Sheet C-7 Storm Water Pollution Prevention Plan

		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
		RECORD DATE COVER SHEET & LOCATION MAP	DRAWING NO. G-1
DRAWN BY CAH		COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	
CHECKED BY HRL		REVIEWED DIV. OF ENGR. <i>Rap</i>	
A&E FILE NO. 05559		TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	
DATE September 2011		ACCOUNT NO. C5WZ-129-DWM-XX78-00	
AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING		DATE 9-14-11 DATE 9-19-11	
REVISIONS 1 2 3 4 5 6 7 8 9		APPROVED FOR PROGRAM CONCEPT ONLY APPROVED FOR PROGRAM CONCEPT ONLY	

A1A-0103

SURVEY CONTROL INFORMATION			
POINT NO.	NORTHING	EASTING	ELEV.
1	139,060.49	1,596,177.30	964.16
2	140,008.38	1,596,013.01	978.20
4	144,199.21	1,596,036.23	942.81
5	142,575.48	1,596,842.27	949.28
6	140,949.94	1,601,237.64	928.08
9	143,649.60	1,603,163.46	783.14

MAPPING PERFORMED BY GRW AERIAL SURVEYS, INC. ON FEBRUARY 1, 2006. THE CONTROL NETWORK IS BASED UPON NAD83 HORIZONTAL AND NAVD88 VERTICAL DATUM, KENTUCKY STATE PLANE COORDINATE SYSTEM. THE CONTOUR INTERVAL IS 2'.



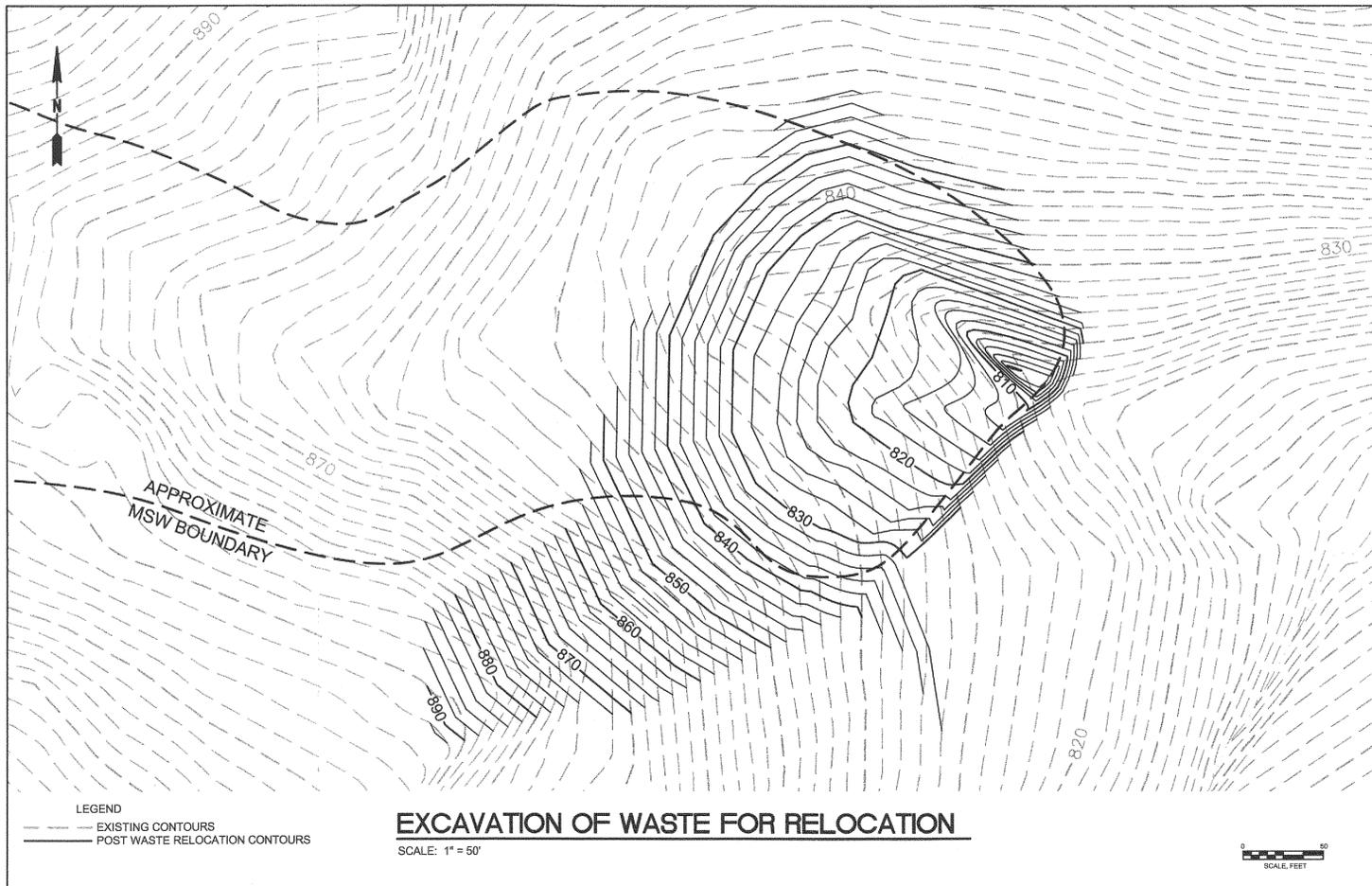
RAVEN RUN - LANDFILL CLOSURE
FAYETTE COUNTY, KENTUCKY

RECORD DATE	EXISTING CONDITIONS	DRAWING NO.
DRAWN BY CAH	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	C-1
CHECKED BY HRL	TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	REVIEWED DIV. OF ENGR.
A&E FILE NO.		RCP <small>FOR REVIEW ONLY</small> ACCOUNT NO. CSW2-125-DWM- XX78-00
REVISIONS	DATE	DATE
1		
2		
3		
4		
5		
6		
7		
8		
9		

AGENCY AUTHORIZED AGENT: *[Signature]* DATE: 9-14-11
 DIVISION OF ENGINEERING: *[Signature]* DATE: 9/29/11

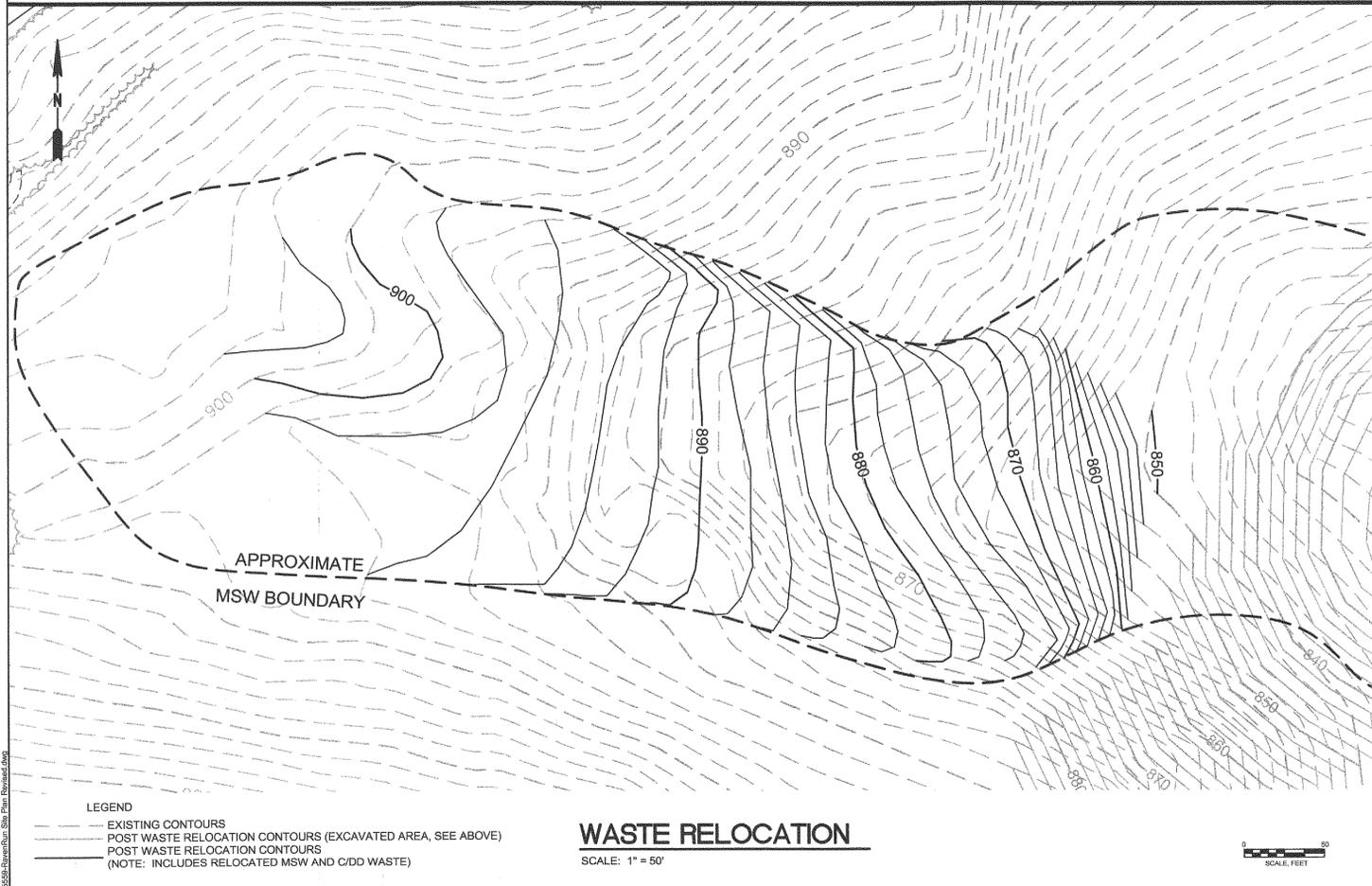
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A2A-0104



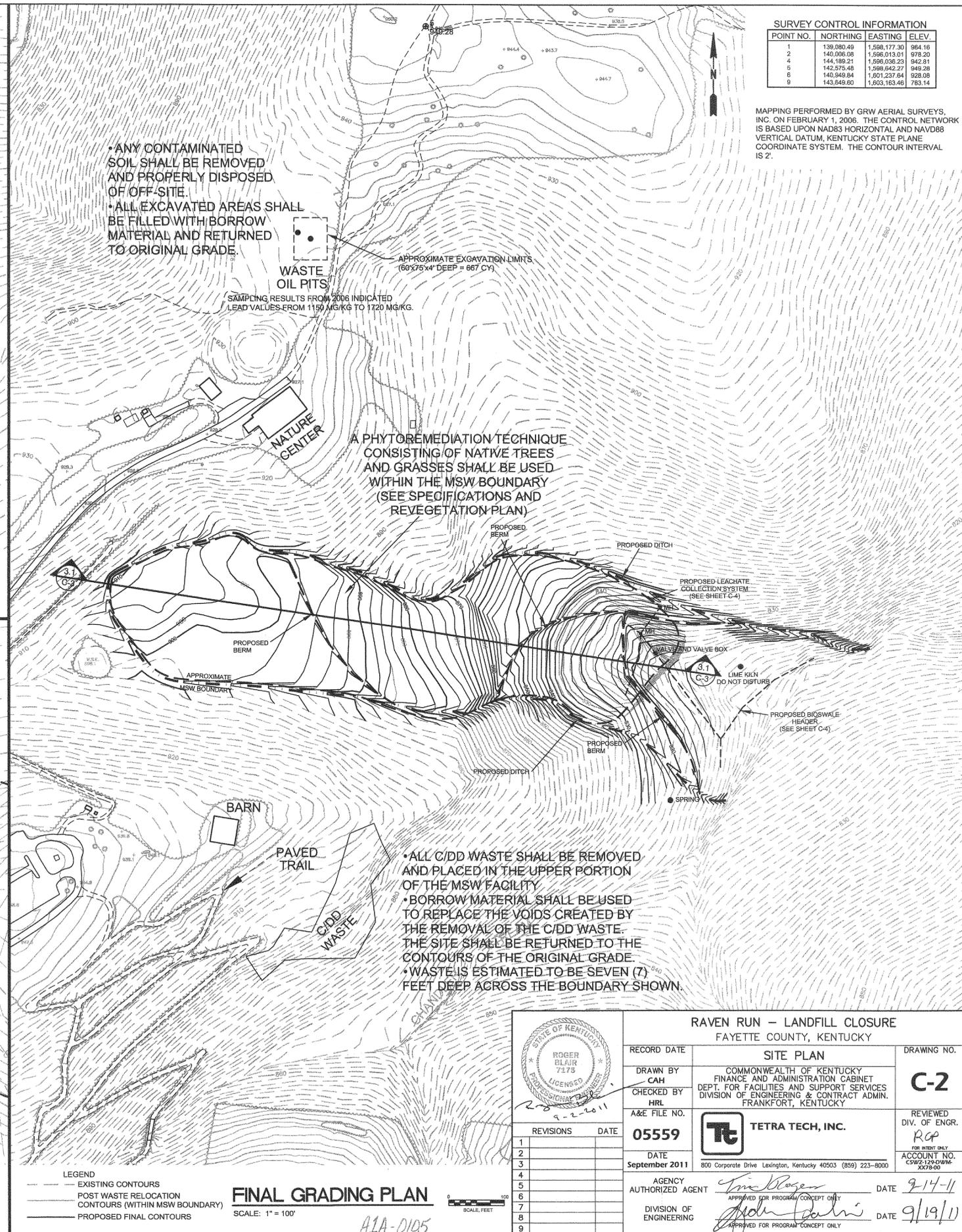
EXCAVATION OF WASTE FOR RELOCATION

SCALE: 1" = 50'



WASTE RELOCATION

SCALE: 1" = 50'



FINAL GRADING PLAN

SCALE: 1" = 100'

SURVEY CONTROL INFORMATION			
POINT NO.	NORTHING	EASTING	ELEV.
1	139,080.49	1,598,177.30	964.16
2	140,006.08	1,596,013.01	978.20
4	144,189.21	1,596,036.23	942.21
5	142,575.48	1,598,942.27	949.28
6	140,949.84	1,601,237.84	928.08
9	143,649.80	1,603,163.46	763.14

MAPPING PERFORMED BY GRW AERIAL SURVEYS, INC. ON FEBRUARY 1, 2006. THE CONTROL NETWORK IS BASED UPON NAD83 HORIZONTAL AND NAVD88 VERTICAL DATUM, KENTUCKY STATE PLANE COORDINATE SYSTEM. THE CONTOUR INTERVAL IS 2'.

- ANY CONTAMINATED SOIL SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
- ALL EXCAVATED AREAS SHALL BE FILLED WITH BORROW MATERIAL AND RETURNED TO ORIGINAL GRADE.

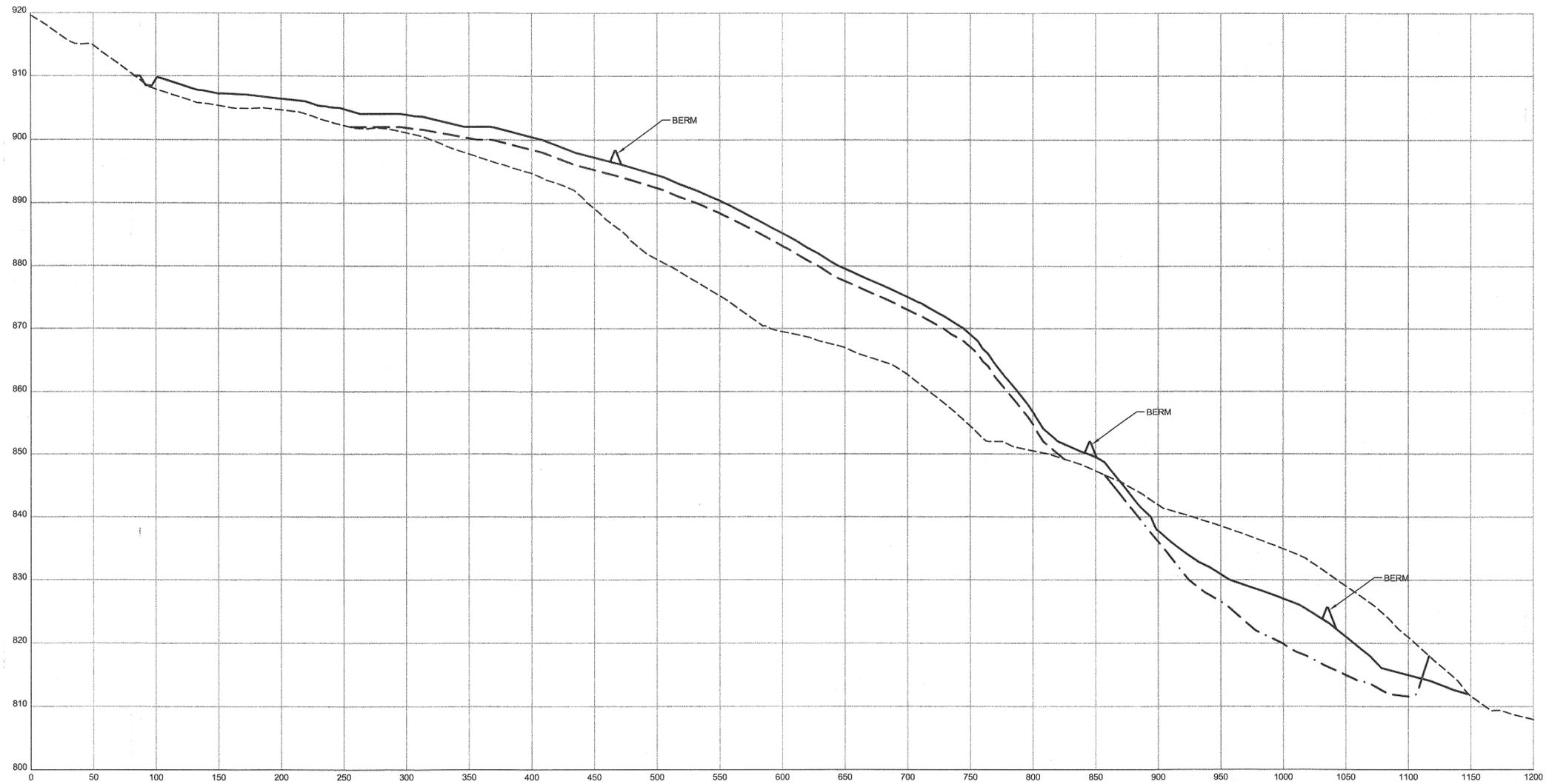
A PHYTOREMEDIATION TECHNIQUE CONSISTING OF NATIVE TREES AND GRASSES SHALL BE USED WITHIN THE MSW BOUNDARY (SEE SPECIFICATIONS AND REVEGETATION PLAN)

- ALL C/DD WASTE SHALL BE REMOVED AND PLACED IN THE UPPER PORTION OF THE MSW FACILITY.
- BORROW MATERIAL SHALL BE USED TO REPLACE THE VOIDS CREATED BY THE REMOVAL OF THE C/DD WASTE. THE SITE SHALL BE RETURNED TO THE CONTOURS OF THE ORIGINAL GRADE.
- WASTE IS ESTIMATED TO BE SEVEN (7) FEET DEEP ACROSS THE BOUNDARY SHOWN.

	RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY		RECORD DATE DRAWN BY CHECKED BY A&E FILE NO. DATE AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING	SITE PLAN COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	DRAWING NO. C-2 REVIEWED DIV. OF ENGR. <i>RCP</i> FOR INTENT ONLY ACCOUNT NO. CSW2-TXW-000-0078-00
	REVISIONS 1 2 3 4 5 6 7 8 9	DATE 9-2-2011 September 2011	TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	APPROVED FOR PROGRAM CONCEPT ONLY <i>Tim Rogers</i> APPROVED FOR PROGRAM CONCEPT ONLY <i>John Palmer</i>	DATE 9/14/11 9/19/11

05650 Statewide Site Plan - 09/14/11.dwg

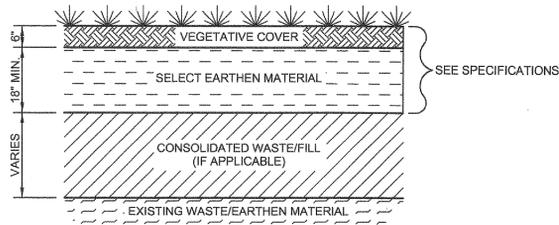
LEGEND
 - - - - - EXISTING GROUND
 - - - - - EXCAVATED WASTE
 - - - - - RELOCATED WASTE
 - - - - - PROPOSED FINAL GRADE



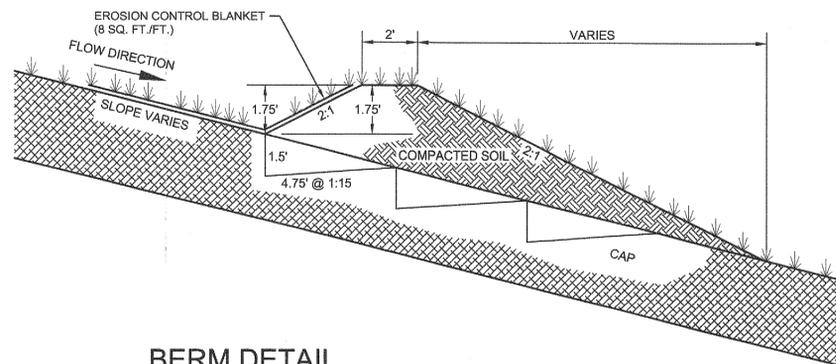
PROFILE 3.1
 SCALE: 1" = 50' H
 1" = 10' V
C-2

A1A-0106

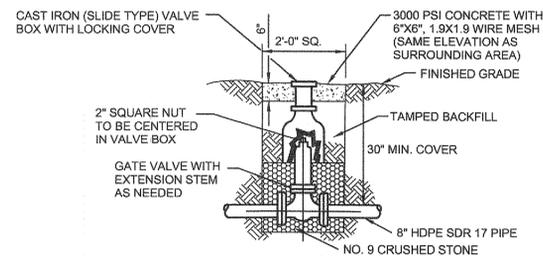
		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
		RECORD DATE PROFILE	DRAWING NO. C-3
DRAWN BY CAH		COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET	
CHECKED BY HRL		DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN.	
A&E FILE NO. 05559		FRANKFORT, KENTUCKY	
DATE September 2011		TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	
AGENCY AUTHORIZED AGENT <i>[Signature]</i>		DATE 9-14-11	REVIEWED DIV. OF ENGR. <i>[Signature]</i>
DIVISION OF ENGINEERING <i>[Signature]</i>		DATE 9/19/11	ACCOUNT NO. CSWZ-128-DWMA-XX78-00
REVISIONS 1 2 3 4 5 6 7 8 9		DATE	



WASTE AREA CAP DETAIL
NOT TO SCALE

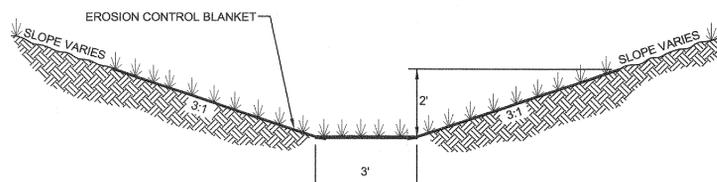


BERM DETAIL
NOT TO SCALE

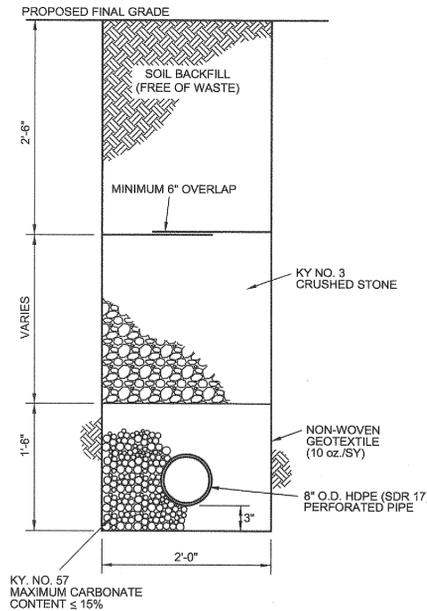


NOTE: A VALVE BOX MARKER SHALL BE PLACED AT EVERY VALVE BOX.

VALVE BOX
NOT TO SCALE

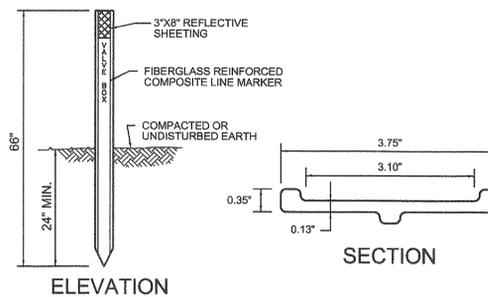


VEGETATED DITCH DETAIL
NOT TO SCALE



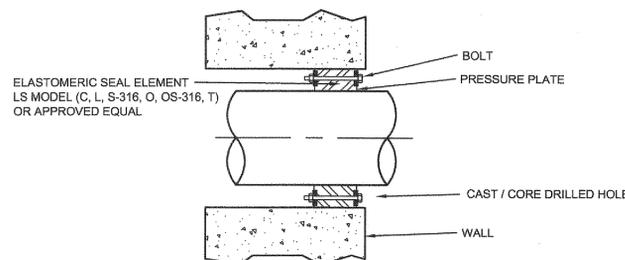
NOTE: IDENTIFICATION TAPE, PER THE SPECIFICATIONS, SHALL BE INSTALLED DIRECTLY ON TOP OF THE GEOTEXTILE OVERLAP ABOVE THE NO. 3 STONE IN ALL PIPE TRENCHES.

LEACHATE LINE TRENCH DETAIL
NOT TO SCALE



NOTE: INSTALL VALVE BOX MARKER ADJACENT TO ALL VALVE BOXES.

VALVE BOX MARKER DETAIL
NOT TO SCALE



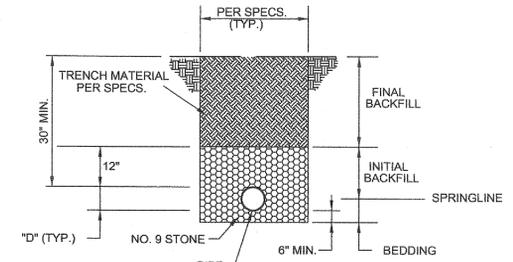
LS Model	Seal Element	Bolts/Nuts	Pressure Plate
C	EPDM (Black)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
L	EPDM (Blue)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
O	Nitrile	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
T	Silicone	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Steel Zinc Dichromate
(C,L,O)+S-316 (see model options)		316 Stainless Steel	Reinforced Nylon Polymer

Sleeve Model Description Material
 CS Century-Line Sleeve HDPE
 WS Steel Wall Sleeve Steel

© MODULAR SEALS WITH CAST OR CORE DRILLED WALL OPENING
 MANUFACTURED BY PIPELINE SEAL & INSULATOR, INC. OR APPROVED EQUAL.
 HOUSTON, TEXAS, U.S.A. TEL: 800-423-2410 E-MAIL: INFO@PSIPSI.COM

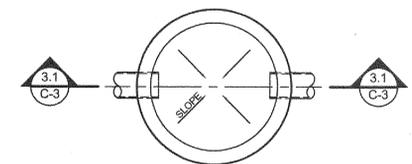
DETAIL OBTAINED VIA INTERNET FROM LINK-SEAL AT WWW.LINKSEAL.COM

PIPE SEAL SYSTEM DETAIL
NOT TO SCALE

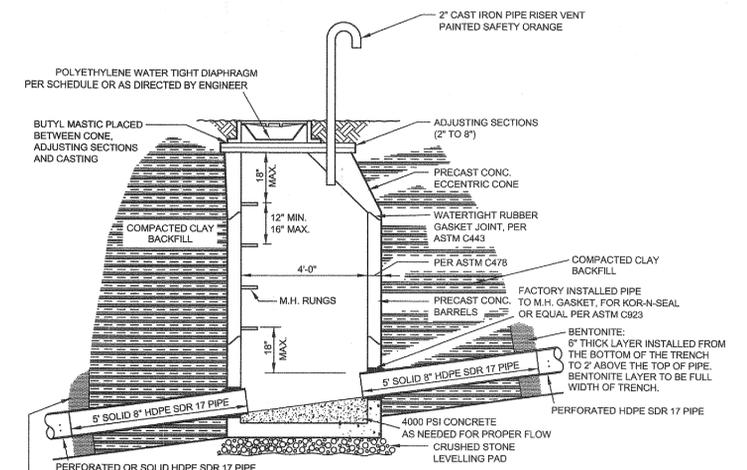


NOTE: IDENTIFICATION TAPE, PER THE SPECIFICATIONS, SHALL BE INSTALLED DIRECTLY ON TOP OF THE INITIAL BACKFILL IN ALL PIPE TRENCHES.

TRENCHING, BEDDING, AND BACKFILL
NOT TO SCALE



PLAN



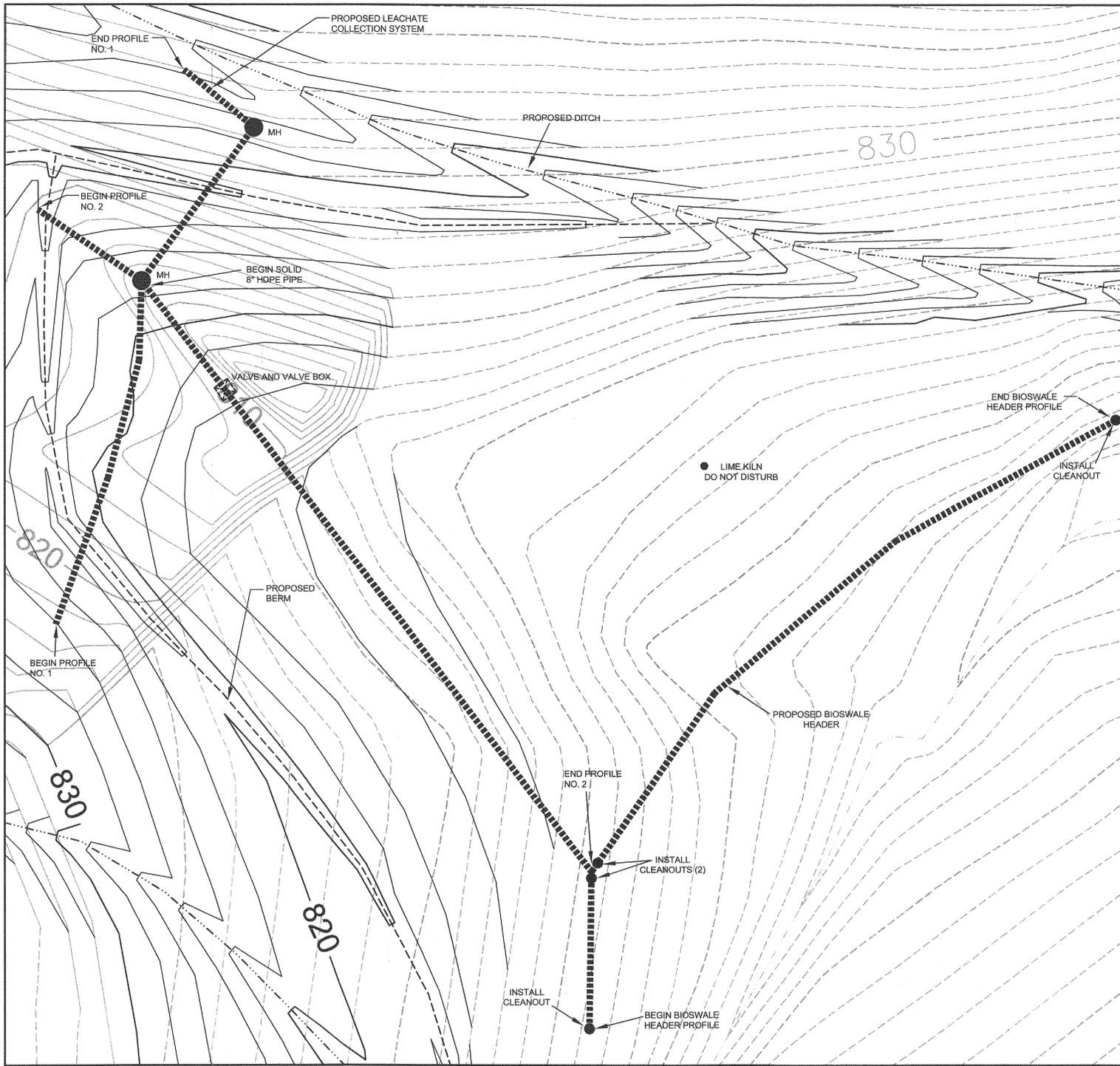
SECTION

BENTONITE: 6\"/>

STANDARD MANHOLE
NOT TO SCALE

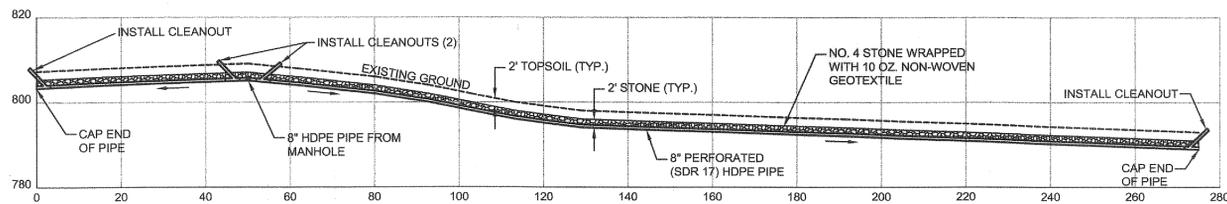
		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
		MISCELLANEOUS DETAILS	
RECORD DATE DRAWN BY CHECKED BY A&E FILE NO.	05559 September 2011	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	DRAWING NO. C-4
REVISIONS 1 2 3 4 5 6 7 8 9	DATE	TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000	REVIEWED DIV. OF ENGR. FOR INTENT ONLY ACCOUNT NO. CSWZ-129-DW/M-007608
AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING		DATE 9-14-11 DATE 9-19-11	APPROVED FOR PROGRAM CONCEPT ONLY

ALA-0107



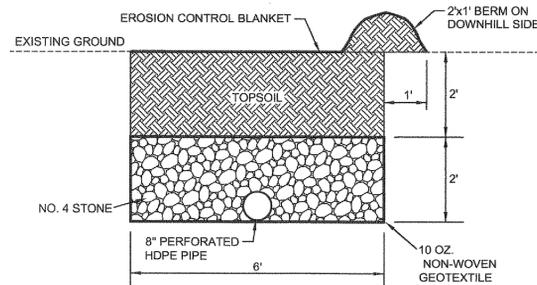
LEACHATE COLLECTION TOE DRAIN SITE PLAN

SCALE: 1" = 20'



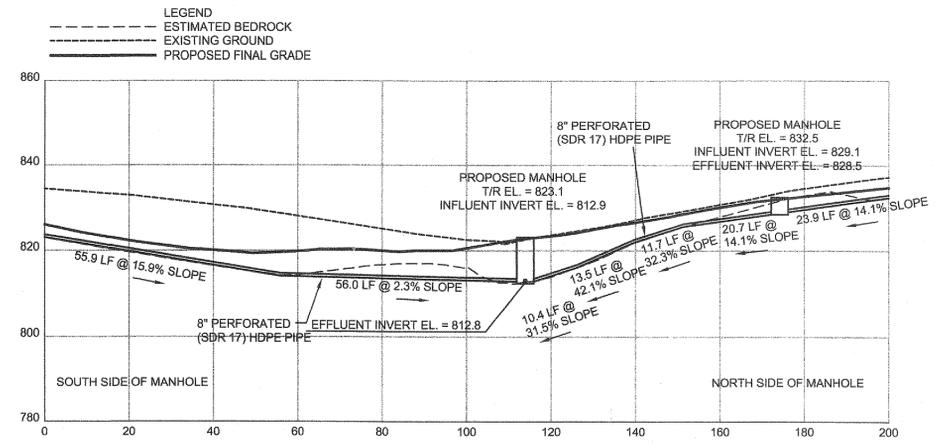
BIOSWALE HEADER PROFILE

SCALE: 1" = 20' H&V



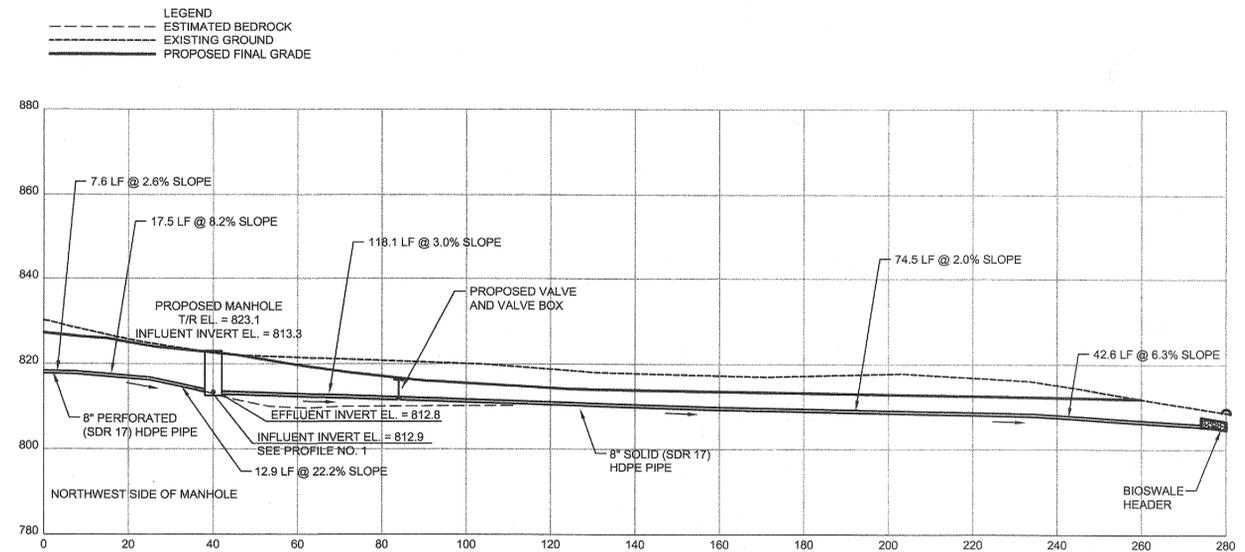
BIOSWALE HEADER DETAIL

NOT TO SCALE



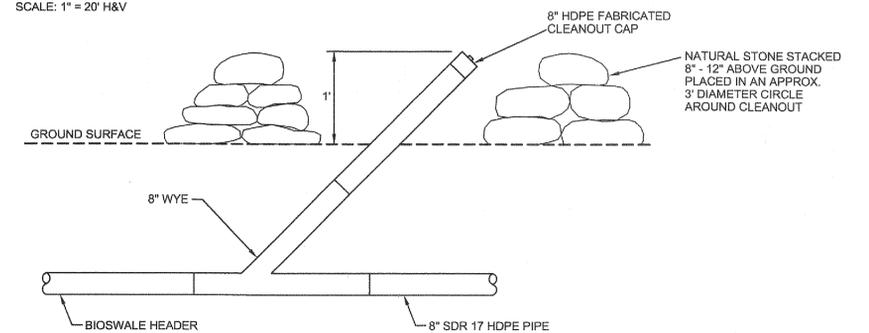
LEACHATE COLLECTION TOE DRAIN PROFILE NO. 1

SCALE: 1" = 20' H&V



LEACHATE COLLECTION TOE DRAIN PROFILE NO. 2

SCALE: 1" = 20' H&V



CLEANOUT DETAIL

NOT TO SCALE

RAVEN RUN - LANDFILL CLOSURE
 FAYETTE COUNTY, KENTUCKY

LEACHATE COLLECTION TOE DRAIN

RECORD DATE: 05559

DRAWN BY: CAH

CHECKED BY: HRL

A&E FILE NO.:

REVISIONS:

DATE: September 2011

AGENCY AUTHORIZED AGENT: [Signature]

DIVISION OF ENGINEERING: [Signature]

APPROVED FOR PROGRAM CONCEPT ONLY

DATE: 9-14-11

DATE: 9/19/11

DRAWING NO. C-5

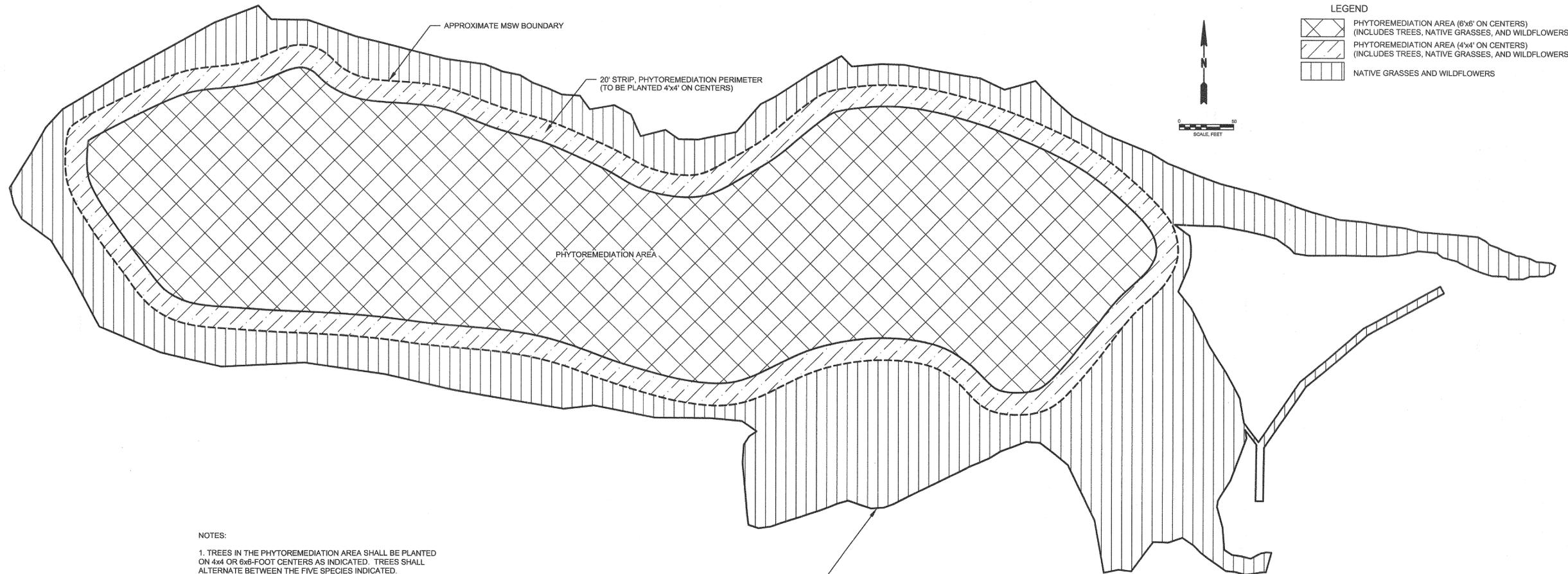
REVIEWED DIV. OF ENGR. [Signature]

ACCOUNT NO. CSW2-129-DWM-XX78-00

TETRA TECH, INC.
 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000

05559-Raven Run Profiles Revised.dwg

A1A-0108



LEGEND

	PHYTOREMEDIATION AREA (6x6' ON CENTERS) (INCLUDES TREES, NATIVE GRASSES, AND WILDFLOWERS)
	PHYTOREMEDIATION AREA (4x4' ON CENTERS) (INCLUDES TREES, NATIVE GRASSES, AND WILDFLOWERS)
	NATIVE GRASSES AND WILDFLOWERS

NOTES:

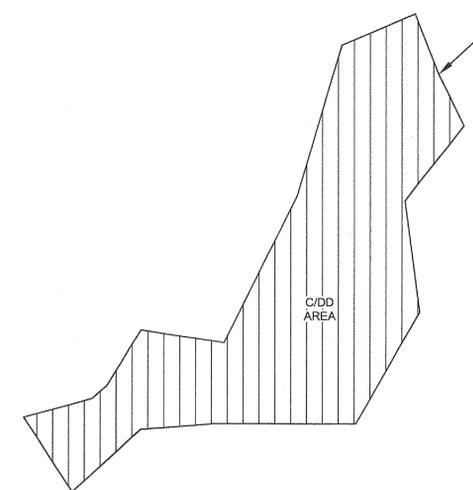
- TREES IN THE PHYTOREMEDIATION AREA SHALL BE PLANTED ON 4x4 OR 6x6-FOOT CENTERS AS INDICATED. TREES SHALL ALTERNATE BETWEEN THE FIVE SPECIES INDICATED.
- EACH 4x4 OR 6x6-FOOT GRID SHALL CONTAIN A MINIMUM OF ONE BALLED AND BURLAPPED OR CONTAINER GROWN TREE.

NATIVE GRASS SCHEDULE FOR DISTURBED AREAS AROUND WASTE OIL PITS

SEED SPECIES	SEEDING RATES (POUNDS PER ACRE OF PURE LIVE SEED)
BUFFALOGRASS (<i>Buchloe dactyloides</i>)	150.0

NATIVE GRASS AND WILDFLOWER SCHEDULE PHYTOREMEDIATION AREA AND OTHER DISTURBED AREAS

SEED SPECIES	SEEDING RATES (POUNDS PER ACRE OF PURE LIVE SEED)
BIG BLUESTEM (<i>Andropogon gerardi</i>)	4.0
LITTLE BLUESTEM (<i>Schizachyrium scoparium</i>)	6.0
SWITCHGRASS (<i>Panicum virgatum</i>)	2.0
INDIANGRASS (<i>Sorghastrum nutans</i>)	6.0
CANADA WILD RYE (<i>Elymus canadensis</i>)	10.0
PARTRIDGE PEA (<i>Chamaecrista fasciculata</i>)	2.0
ANNUAL RYE GRASS (<i>Lolium multiflorum</i>)	25.0
BLACK-EYED SUSAN (<i>Rudbeckia hirta</i>)	0.5
LANCELEAF COREOPSIS (<i>Coreopsis lanceolata</i>)	0.5
COMMON MILKWEED (<i>Asclepias syriaca</i>)	0.5
WILD BERGAMOT (<i>Monarda fistulosa</i>)	0.5
BUFFALOGRASS (<i>Buchloe dactyloides</i>)	25.0



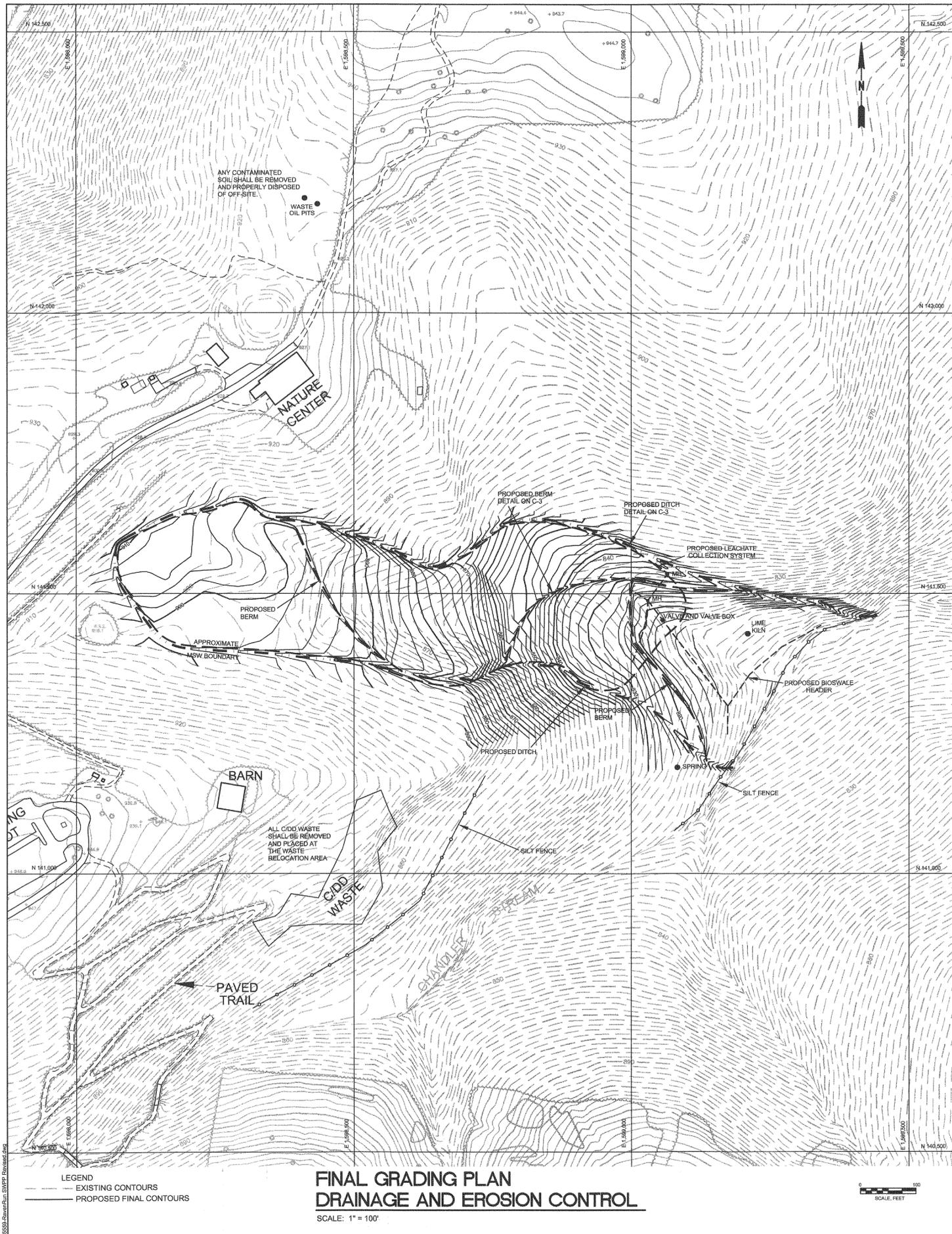
TREE SCHEDULE PHYTOREMEDIATION AREA

ESTIMATED QUANTITY	BOTANICAL NAME	COMMON NAME	FORM	UNIT AND SIZE	PLANTING RATIO
1,605	<i>Carya laciniosa</i>	Shellbark Hickory	Tree	See Note Below	20% of Trees
1,605	<i>Quercus bicolor</i>	Swamp White Oak	Tree	See Note Below	20% of Trees
1,605	<i>Populus deltoids</i>	Eastern Cottonwood	Tree	See Note Below	20% of Trees
1,605	<i>Acer nigrum</i>	Black Maple	Tree	See Note Below	20% of Trees
1,605	<i>Aesculus octandra</i>	Yellow Buckeye	Tree	See Note Below	20% of Trees

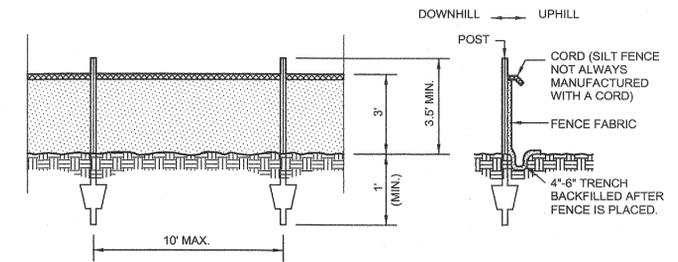
NOTE: Twenty five percent of the quantity shall be balled and burlapped or container grown and the remaining seventy five percent shall be seedlings. The balled and burlapped or container grown trees shall have at least a one inch caliper size.

	RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
	RECORD DATE DRAWN BY CHECKED BY A&E FILE NO. DATE REVISIONS	REVEGETATION PLAN COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY TETRA TECH, INC. 800 Corporate Drive Lexington, Kentucky 40503 (859) 223-8000
1 2 3 4 5 6 7 8 9	05559 September 2011 AUTHORIZED AGENT DIVISION OF ENGINEERING	DATE 9-14-11 DATE 9/19/11

A1A-0109

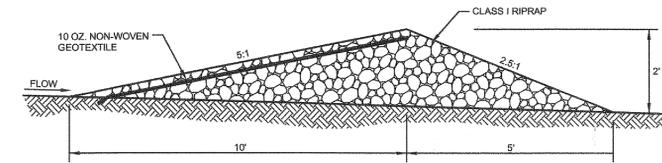


**FINAL GRADING PLAN
DRAINAGE AND EROSION CONTROL**
SCALE: 1" = 100'



- INSTALLATION PROCEDURE:**
1. FENCE POSTS CONSISTING OF EITHER STEEL OR WOOD ARE INSTALLED 6' TO 10' APART ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUN-OFF SOURCE.
 2. A TRENCH 4" TO 6" DEEP IS DUG ALONG THE UPHILL SIDE OF THE FENCE LINE.
 3. THE SILT FENCE IS UNROLLED AND LAID OUT ALONG THE FENCE LINE.
 4. BUILT-IN ATTACHMENT CORD RUNS THROUGHOUT THE FULL LENGTH OF EACH 150 LINEAR FOOT ROLL. ONE END OF THE ROLL HAS APPROXIMATELY 5' OF CORD. THE OTHER END HAS APPROXIMATELY 20' OF CORD. THE END WITH 5' OF CORD IS WRAPPED AROUND THE FIRST POST AND SECURED.
 5. THE FENCE IS PULLED TO THE NEXT POST AND A 1.5" SLIT IS MADE IN THE HEM DIRECTLY ABOVE THE CORD. THE CORD IS PULLED OUT OF THE HEM AND PULLED TAUT FROM THE PRECEDING POST AND WRAPPED TWICE AROUND THE POST.
 6. THE SLITTING OF THE HEM AT EACH POST IS REPEATED UNTILL THE FINAL POST IS REACHED AT WHICH TIME THE MATERIAL IS WRAPPED AROUND THE LAST POST AND SECURED WITH THE ENCLOSED CORD.
 7. AT THIS TIME THE LOWER 4" TO 6" OF THE FENCE IS LAID IN THE TRENCH AND CURLED TOWARD THE EROSION SOURCE.
 8. THE TRENCH IS THEN FILLED WITH ANY AVAILABLE SOIL.

SILT FENCE DETAIL
NOT TO SCALE



NOTE:
ROCK CHECK DAM LOCATIONS ARE NOT SHOWN ON THE PLAN, BUT SHALL BE CONSTRUCTED AS NEEDED OR AS DIRECTED BY THE ENGINEER.

ROCK CHECK DAM DETAIL
NOT TO SCALE

- NOTES:**
1. THE CONTRACTOR SHALL ACQUIRE A STORM WATER GENERAL PERMIT BY SUBMITTING A NOTICE OF INTENT (NOI) TO THE DIVISION OF WATER. CONSTRUCTION CANNOT BEGIN UNTIL NOTIFICATION OF COVERAGE FROM THE KENTUCKY DIVISION OF WATER HAS BEEN RECEIVED.
 2. THE CONTRACTOR SHALL KEEP ON SITE A MAINTENANCE LOG OF ALL EROSION CONTROL FEATURES AND SHALL INSPECT, CLEANOUT, REPLACE, OR MODIFY ALL FEATURES DURING THE COURSE OF THE PROJECT AS THEY RESPOND TO WEATHER AND STORM WATER.
 3. THE CONTRACTOR SHALL SUBMIT A SITE PHASING PLAN OR OTHER RELATED DOCUMENTS THAT MAY INFLUENCE OR AFFECT THE PERFORMANCE OF THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
 4. THE CONTRACTOR SHALL KEEP COPIES OF THE NOI, GENERAL PERMIT, SWPPP WITH RELATED DOCUMENTS, AND A MAINTENANCE LOG BOOK ON SITE.
 5. UPON COMPLETION OF THE PROJECT, AND ONCE FINAL VEGETATIVE COVER HAS BEEN ESTABLISHED TO THE SATISFACTION OF THE ENGINEER, THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL DEVICES, RESTORE THE DISTURBED PORTIONS TO THE FINAL GRADE, AND SUBMIT A NOTICE OF TERMINATION TO THE DIVISION OF WATER.
 6. THOUGH NOT SHOWN ON THIS PLAN, EROSION CONTROL DEVICES SHALL BE USED AS NECESSARY IN THE BORROW AREA. ALL PARTS OF THIS STORM WATER POLLUTION PREVENTION PLAN APPLY TO THE BORROW AREA AS WELL AS THE CONSTRUCTION AREA.

REVISIONS		DATE
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		RAVEN RUN - LANDFILL CLOSURE FAYETTE COUNTY, KENTUCKY	
		SWPP PLAN	
RECORD DATE DRAWN BY CHECKED BY A&E FILE NO.	DATE September 2011	COMMONWEALTH OF KENTUCKY FINANCE AND ADMINISTRATION CABINET DEPT. FOR FACILITIES AND SUPPORT SERVICES DIVISION OF ENGINEERING & CONTRACT ADMIN. FRANKFORT, KENTUCKY	DRAWING NO. C-7
TETRA TECH, INC.	800 Corporate Drive Lexington, Kentucky 40503 (859) 223-9000	REVIEWED DIV. OF ENGR. 	DATE 9-14-11
AGENCY AUTHORIZED AGENT DIVISION OF ENGINEERING		APPROVED FOR PROGRAM CONCEPT ONLY	DATE 9/19/11

11A-010



Lexington-Fayette
Urban County
Government



AMERICAN RESCUE PLAN ACT

AMERICAN RESCUE PLAN ACT

CERTIFICATION OF COMPLIANCE FOR AMERICAN RESCUE PLAN ACT EXPENDITURES

The Lexington-Fayette Urban County Government (“LFUCG”) may classify the subject matter of this bid as an expenditure under the American Rescue Plan Act of 2021. Expenditures under the American Rescue Plan Act of 2021 require evidence of the contractor’s compliance with Federal law. Therefore, by the signature below of an authorized company representative, you certify that the information below is understood, agreed, and correct. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

The bidder agrees and understands that in addition to all conditions stated within the attached bid documents, the following conditions will also apply to any Agreement entered between bidder and LFUCG, if LFUCG classifies the subject matter of this bid as an expenditure under the American Rescue Plan Act. The bidder further certifies that it can and will comply with these conditions, if this bid is accepted and an Agreement is executed:

1. Any Agreement executed as a result of acceptance of this bid may be governed in accordance with 2 CFR Part 200 and all other applicable Federal law and regulations and guidance issued by the U.S. Department of the Treasury.
2. Pursuant to 24 CFR 85.43, any Agreement executed as a result of acceptance of this bid can be terminated if the contractor fails to comply with any term of the award. This Agreement may be terminated for convenience in accordance with 24 CFR 85.44 upon written notice by LFUCG. Either party may terminate this Agreement with thirty (30) days written notice to the other party, in which case the Agreement shall terminate on the thirtieth day. In the event of termination, the contractor shall be entitled to that portion of total compensation due under this Agreement as the services rendered bears to the services required. Either party may terminate this Agreement for good cause shown with forty-five (45) days written notice, which shall explain the party’s cause for the termination. If the parties do not reach a settlement before the end of the 45 days, then the Agreement shall terminate on the forty-fifth day.
3. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:
 - (1) Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
 - (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
 - (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other

employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

- (4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part, and the contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Provided, however, that in the event a contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

4. If fulfillment of the contract requires the contractor to employ mechanic's or laborers, the contractor further agrees that it can and will comply with the following:

- (1) *Overtime requirements: No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such a workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such a workweek.*
- (2) *Violation: liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which*

such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

- (3) *Withholding for unpaid wages and liquidated damages. LFUCG shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.*
- (4) *Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower-tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.*

5. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

6. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.

7. The contractor shall include these requirements in numerical paragraphs 5 and 6 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funding.

8. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

9. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.

10. The contractor shall include these requirements in numerical paragraphs 8 and 9 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funds.

11. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

12. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency regional office.

13. The contractor shall include these requirements in numerical paragraphs 11 and 12 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funds.

14. The contractor shall include this language in any subcontract it executes to fulfill the terms of this bid: “the sub-grantee, contractor, subcontractor, successor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury’s Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract (or agreement). Title VI also includes protection to persons with ‘Limited English Proficiency’ in any program or activity receiving

federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this contract or agreement."

15. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency. Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier, up to the recipient. The required certification is included here:

- a. The undersigned certifies, to the best of his or her knowledge and belief, that:
 - (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
 - (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
- b. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Richard W. Walker

Signature

April 11, 2022

Date



Lexington-Fayette
Urban County
Government



TETRA TECH'S AFFIRMATIVE ACTION PLAN

PRIVILEGED AND CONFIDENTIAL

**AFFIRMATIVE ACTION PROGRAM
FOR
WOMEN & MINORITIES**

Tetra Tech, Inc



AFFIRMATIVE ACTION PROGRAM
FOR
WOMEN & MINORITIES

Contractor: Tetra Tech, Inc.

EEO Manager: Janet Brunner

CONFIDENTIAL TRADE SECRET MATERIALS

(Not for distribution except on a need-to-know basis.)

This affirmative action program contains confidential information that is subject to the provision of 18 U.S.C. 1905, *Chrysler Corp. v. Brown*, 441 U.S. 281, 19 FEP 475 (1979). Furthermore, release of any trade secret, confidential statistical or commercial information is considered arbitrary and capricious and is in violation of the Administrative Procedure Act. See *CNA Financial Corp. v. Donovan* 830 F.2nd 1132, 1144 and n. 73 (D.C. Cir.) certiorari denied, 485 U.S. 977 (1988). Copies of this affirmative action program and all related appendices, documents, and support data are made available on loan to the U.S. Government upon the request of said Government on the condition that the Government holds them totally confidential and does not release copies to any persons whatsoever. This affirmative action program and its appendices and other supporting documents contain much confidential information that may reveal, directly or indirectly, plans for business or geographical expansion or contraction. Pursuant to the Freedom of Information Act, this affirmative action program is exempt from disclosure, reproduction and distribution upon the grounds, among others, that such material constitutes 1) personnel files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, and that are exempt from disclosure under 5 U.S.C. 552(b) (6); 2) confidential, commercial or financial information, which is exempt from disclosure under 5 U.S.C. 552(b) (4); 3) investigatory records compiled for law enforcement purposes, the production of which would constitute an unwarranted invasion of personal privacy, and that are exempt from disclosure under 5 U.S.C. 552(b) (7) (C); and 4) matters specifically exempted from disclosure by statute, which are exempt from disclosure under 5 U.S.C. 552(b) (3). Notice is hereby given of a request that this Program be kept confidential.

Tetra Tech, Inc wishes to make it clear that it does not consent to the release of any information whatsoever contained in this affirmative action program under the Freedom of Information Act or otherwise. If the U.S. Government, or any agency or subdivision thereof, is considering breaching the conditions under which this affirmative action program was loaned to such government, or is considering a request of this Program under the Freedom of Information Act, request is hereby made that the Government immediately notify Tetra Tech, Inc and its counsel of any and all Freedom of Information Act requests by the government or any other contemplated release of this Program by the Government that relates to information obtained by the Government. Tetra Tech, Inc further requests that everyone who has any contact with this affirmative action program and its supporting appendices, documents and other data treats such information as totally confidential and that such information not be released to any person whatsoever. Retention or disclosure of information relating to identifiable individuals may also violate the Privacy Act of 1974.

INTRODUCTION

Tetra Tech, Inc develops an annual affirmative action program as one of several tools to implement the affirmative action policies effectively. The form, language and analysis of the program necessarily complies with the requirements of 41 CFR 60-2, et seq. (affirmative action programs) and other regulations established pursuant to the provisions of Executive Order 11246 and all other civil rights related laws and regulations that have or may be enacted, as amended. Accordingly, terminology such as "problem areas" and "utilization analysis" appearing in this affirmative action program is that which the organization is required to use by these regulations. The criteria used in relation to these terms are those specified by the Government. These terms have no independent legal or factual significance whatsoever. Although Tetra Tech, Inc uses this terminology and methodology in connection with this affirmative action program and the affirmative action policies, such usage does not necessarily signify that the organization agrees that these terms properly apply to any particular factual situation.

Information regarding identifiable individuals is private and confidentially maintained. Everyone who has official access to confidential data will exercise every precaution to protect this information.

DESIGNATION OF RESPONSIBILITY

41 CFR Section 60-2.17(a), 60-2.10(b)(2)(i)

Dan Batrack, CEO, has overall responsibility for implementation of the Equal Employment Opportunity Policy. Janet Brunner, Equal Employment Opportunity Manager, assumes the responsibility for the development, implementation and monitoring of the affirmative action program, which includes all those positions located in subordinate and/or lower-level establishments for which the selection decisions are made at the corporate level.

Responsibility for the implementation and monitoring of the affirmative action program rests with the EEO Manager, whose responsibilities include but are not limited to the following:

1. Developing policy statements and affirmative action programs.
2. Developing internal and external communication procedures when appropriate.
3. Developing an internal audit and reporting system that:
 - a. Identifies areas that require remedial action, and develops programs to correct those problem areas.
 - b. Determines the degree to which the goals and objectives are reached.
4. Monitoring the following internal practices:
 - a. Proper display of EEO posters and policies.
 - b. Full participation of minority, female, and disabled employees in all Tetra Tech, Inc sponsored educational, training, recreational, and social activities.
5. Assisting management in solving any identified problems. It is the responsibility of department heads, managers, and supervisors to provide the EEO Manager with such information and/or statistical data as is necessary to measure progress toward the attainment of goals and to assure good faith efforts to implement the affirmative action program. Such information and/or statistical data are used to set reasonable placement goals.
6. Keeping management informed of the latest developments in the equal employment opportunity area.
7. Assisting employees in solving problems and resolving EEO complaints.
8. Serving as a liaison between Tetra Tech, Inc and appropriate women and minority groups.
9. Serving as a liaison between Tetra Tech, Inc and appropriate EEO enforcement agencies.

IDENTIFICATION OF PROBLEM AREAS

41 CFR Section 60-2.17(b)

As part of the monitoring practice, an analysis of personnel matters is conducted. The following items are considered:

1. Composition of the workforce by minority group and sex. Good faith placement goals are established where necessary.
2. Composition of applicant flow by minority group and sex. Corrective action is taken when appropriate whenever the referral ratio of women and minorities indicates a significantly higher percentage is being rejected as compared to non-minority and male applicants.
3. Compensation system. Tetra Tech, Inc evaluates its compensation system to determine whether there are gender, race or ethnicity-based disparities. The purpose of the analysis is to identify potential areas where impediments to equal employment opportunity may exist. Disparities alone do not necessarily indicate a problem area; there may be many non-discriminatory reasons for a disparity.
4. Selection process. The selection process includes: position descriptions, titles, application forms, pre-employment forms, interview procedures, test validity and administration, referral procedures, final selection process and similar factors. The application and related pre-employment forms are in compliance with federal guidelines, and position descriptions accurately reflect actual duties and responsibilities.

The following areas are reviewed annually to ensure the success of this affirmative action program:

- Transfer and promotion practices,
- Facility and Tetra Tech, Inc sponsored recreational, social and educational events,
- EEO posters,
- Policy statements,
- Training Programs, and
- Suitable housing and transportation does not inhibit recruitment efforts and employment of minorities.

ORGANIZATIONAL PROFILE

41 CFR Section 60-2.11

Organizational Display

The Organizational Display is a detailed presentation of the Tetra Tech, Inc. organizational structure. It identifies each organizational unit and shows the relationship to other organizational units.

An organizational unit is any component part of the Tetra Tech, Inc. corporate structure. It might be a department, division, section, branch, group, project team, job family, or similar component. This includes an umbrella unit (such as a department) that contains a number of subordinate units, and it separately includes each of the subordinate units (such as sections or branches).

For each organizational unit, the organizational display includes the following:

1. The name of the unit;
2. The job title, gender, race, and ethnicity of the unit supervisor(s) (if the unit has a supervisor);
3. The total number of male and female incumbents; and
4. The total number of male and female incumbents in each of the separate minority groups.

The total number of incumbents in each minority classification is given for each job title. All job titles, including all managerial job titles, are listed.

WORKFORCE BY JOB GROUP
41 CFR Sections 60-2.12, 60-2.17(b)(1)

The Job Group Analysis groups jobs with similar content, wage rates, and opportunities into job groups. This analysis includes a list of the job titles that constitute each job group.

PLACEMENT OF INCUMBENTS IN JOB GROUPS

41 CFR Section 60-2.13

Tetra Tech, Inc states separately the percentage of minorities and the percentage of women it employs in each job group established pursuant to Sec. 60-2.12.

WORKFORCE BY JOB GROUP - ANNOTATIONS

41 CFR Section 60-2.1e

Tetra Tech, Inc. prepares a separate Job Group Annotations report, which lists employees who are included in an affirmative action program for an establishment other than the one in which the employees are located, and identifies the actual location of such employees.

EVALUATION OF PERSONNEL ACTIVITY
41 CFR Section 60-2.17(b)(2)

Tetra Tech, Inc. evaluates personnel activity to determine whether there are selection disparities.

DETERMINING AVAILABILITY

41 CFR Section 60-2.14

Availability is an estimate of the number of qualified minorities or women available for employment in a given job group, expressed as a percentage of all qualified persons available for employment in the job group. The purpose of the availability determination is to establish a benchmark against which the demographic composition of the incumbent workforce can be compared in order to determine whether barriers to equal employment opportunity may exist within particular job groups.

Tetra Tech, Inc. separately determines the availability of women and minorities for each job group. To determine availability, Tetra Tech, Inc. considers the following factors:

1. The percentage of minorities or women with requisite skills in the reasonable recruitment area. The reasonable recruitment area is defined as the geographical area from which the contractor usually seeks or reasonably could seek workers to fill the positions in question. 41 C.F.R. 60-2.14(c)(1).

Factor 1a considers the percent of women and minorities with requisite skills in a local recruitment area. The most current U.S. Census data is used to derive the availability of women and minorities. If this factor is used, it is because Tetra Tech, Inc. recruits, and many of its applicants live within the local recruitment area, or because we plan on recruiting in this region in the future. Any recruitment practices unique to a job group are noted on the Availability Analysis.

2. The percentage of minorities or women among those promotable, transferable, and trainable within the contractor's organization. Trainable refers to those employees within the contractor's organization who could, with appropriate training that the contractor is reasonably able to provide, become promotable or transferable during the AAP year. 41 C.F.R. 60-2.14(c)(2).

Factor 2a considers the percentage of women and minorities promotable and transferable within the contractor's organization. If this factor is chosen, it is because we fill positions by recruiting from within the workforce either through promotions or transfers. Internal applicants normally apply for these positions. Any recruitment practices unique to a job group are noted on the Availability Analysis.

PLACEMENT GOALS - COMPARING INCUMBENCY TO AVAILABILITY

41 CFR Section 60-2.15

Tetra Tech, Inc compares the percentage of women and minorities in each job group determined pursuant to Sec. 60-2.13 with the availability for those job groups determined pursuant to Sec. 60-2.14. When the percentage of minorities or women employed in a particular job group is less than would reasonably be expected given their availability percentage in that particular job group, a placement goal is established in accordance with Sec. 60-2.16.

PLACEMENT GOALS

41 CFR Section 60-2.16

Placement goals serve as objectives or targets reasonably attainable by means of applying every good faith effort to make all aspects of the entire affirmative action program work. Placement goals are also used to measure progress toward achieving equal employment opportunity.

The establishment of a goal under Sec. 60-2.15 is neither a finding nor an admission of discrimination.

Where, pursuant to Sec. 60-2.15, a placement goal for a particular job group is established, a percentage goal is equal to the availability figure derived for women or minorities, as appropriate, for that job group.

In establishing placement goals, the following principles from Sec 60-2.16(e) also apply:

1. Placement goals are neither rigid or inflexible quotas, nor are they considered to be either a ceiling or a floor for the employment of particular groups.
2. All employment decisions are made in a nondiscriminatory manner. Placement goals are not used to extend a preference to any individual, select an individual, or adversely affect an individual's employment status on the basis of that person's race, color, religion, sex, sexual orientation, gender identity, or national origin.
3. Placement goals do not create set-asides for specific groups, nor are they intended to achieve proportional representation or equal results.
4. Placement goals are not used to supersede merit selection principles.

ACTION ORIENTED PROGRAMS

41 CFR Section 60-2.17(c)

Tetra Tech, Inc develops these action-oriented programs to correct any problem areas identified in the Identification of Problem Areas 41 C.F.R. Section 60-2.17(b) and to attain established goals and objectives.

THE SELECTION PROCESS

1. At least annually, a detailed analysis of position descriptions is conducted to ensure that they accurately reflect position functions.
2. Job requirements are validated by division, department, location or other appropriate organizational units. Special attention is given to academic, experience, physical, and skill requirements to ensure that the requirements themselves do not constitute inadvertent discrimination. Job specifications are free from bias in regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disabled or veteran status, except where there is a bona fide occupational qualification. Job requirements are validated when the number of individuals from a particular race or gender group is disproportionately selected as determined by Impact Ratio studies.
3. Position descriptions and specifications are distributed to recruiting sources and members of management involved in the recruiting, screening, selection, and promotion processes.
4. Selection processes are evaluated at least annually to ensure that they are nondiscriminatory.
5. Individuals who have a role in the selection process are chosen with special care given to their qualifications for such roles and are provided any necessary ongoing training to ensure that the selection processes remain nondiscriminatory.

RECRUITMENT

Any one or all of the following techniques are used to improve recruitment and increase the flow of minority or female applicants:

1. Linkage with recruiting sources, which may include briefing sessions, plant tours, presentations by minority and female employees, and full descriptions of appropriate job openings and the selection process;
2. Encouragement of minority and female employees to refer qualified applicants;
3. Inclusion of women and minorities on the personnel staff;
4. Minority and female participation in career days, youth motivation programs and other similar programs in the community;
5. Minority and female participation in "job fairs;"
6. Active recruiting at various training institutions, especially those that have high minority and female enrollments; and
7. Expansion of help-wanted advertising to include the minority news media and women's interest media.

PROMOTIONS

Any one or all of the following techniques are used to improve promotional opportunities for minority and female employees:

1. Posting or general announcement of all appropriate job openings;
2. Assessment of current female and minority employees' academic, skill and experience levels;
3. Provision of job training and work-study programs;
4. Completion of performance appraisals;
5. Validation of job specifications;
6. Justification by supervisors when apparently qualified minority or female employees are passed over;
7. Establishment of career counseling programs, which may include attitude development, education aid, job rotations, buddy systems and similar programs;
8. Ongoing review of seniority practices in clauses and contracts to ensure that they are nondiscriminatory;
and
9. Review of all company-sponsored recreational and social activities to ensure that they are desegregated.

INTERNAL AUDIT AND REPORTING SYSTEMS

41 CFR Section 60-2.17(d)

Monitoring and reporting procedures are developed to evaluate the extent to which the goals of the affirmative action program are being met. Tetra Tech, Inc takes the following measures:

1. Information on race and sex is obtained when an application for a position is submitted.
2. An Adverse Impact (Impact Ratio) Analysis is performed when sufficient data exists on applicants, hires, promotions, and terminations to ensure compliance with the Uniform Employment Selection Guidelines.
3. Any training programs are analyzed regularly to eliminate potential discrimination in participation rates.
4. Any tests administered are routinely analyzed to uncover potential discrimination in grading scores or test results.
5. Compensation practices are reviewed at least annually for wage discrepancies.
6. The Availability Analysis for women and minorities is reviewed and good faith placement goals are established when necessary.
7. Progress toward established goals is reviewed at least annually for possible adjustments to employment practices.
8. Internal reporting is prepared as needed to determine why goals were not met.
9. Results of the affirmative action program are reviewed with all levels of management.
10. Top management is informed on a regular basis of the effectiveness of these policies and any recommendations for improvement.

GOALS PROGRESS
41 CFR Section 60-2.16, 60-2.17(d)

Tetra Tech, Inc. monitors progress toward goals.

RELIGION AND NATIONAL ORIGIN DISCRIMINATION GUIDELINES

41 CFR Section 60-50

Tetra Tech, Inc reaffirms its policy to afford equal employment opportunity to all individuals. Neither national origin nor religion is a factor in recruitment, selection, promotion, transfer, termination, or participation in training. The following activities are undertaken to ensure that religion and national origin are not used as a basis for employment decisions:

1. Employment practices are reviewed to ensure that members of particular religious and/or ethnic groups are given equal employment opportunities.
2. All employees, including supervisors, managers, and executives are informed of our commitment to provide equal employment opportunity without regard to religion or national origin.
3. Recruitment sources are informed of our commitment to provide equal employment opportunity without regard to religion or national origin.
4. Internal procedures exist to implement equal employment opportunity without regard to national origin or religion.

ACCOMMODATION FOR RELIGIOUS OBSERVANCE AND PRACTICE

41 CFR Section 60-50.3

The religious observances and practices of employees are accommodated by Tetra Tech, Inc, except where such accommodation would cause undue hardship on the conduct of business. The accommodation offered is determined by considering business necessity, financial expense and any personnel coverage problems that may result.

NONDISCRIMINATION

41 CFR Section 60-50.5

Tetra Tech, Inc does not discriminate against any qualified employee or applicant because of race, color, sex, sexual orientation, gender identity, age, disabled, or veteran status in implementing the policy concerning nondiscrimination based on religion or national origin



Lexington-Fayette
Urban County
Government



WORK FORCE ANALYSIS PLAN

WORKFORCE ANALYSIS FORM

Name of Organization: Tetra Tech, Inc.

Categories	Total	White (Not Hispanic or Latino)		Hispanic or Latino		Black or African- American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Administrators	1524	932	352	55	24	21	20	2	1	53	31	3	1	18	11	1084	440
Professionals	4781	2296	1307	213	159	122	106	5	3	233	157	13	6	90	71	2972	1809
Superintendents																	
Supervisors																	
Foremen																	
Technicians	1304	677	190	114	31	102	21	3	2	61	27	10	1	48	17	1015	289
Protective																	
Para-																	
Office/Clerical	891	72	259	45	110	59	229	1	2	9	43	0	4	12	45	199	692
Skilled Craft	52	34	1	8	0	2	0	0	0	4	0	2	0	1	0	51	1
Service/Maintena	2327	517	253	124	60	550	640	7	3	42	25	13	8	52	33	1305	1022
Total:	10879	4528	2362	560	384	856	1016	18	11	402	283	41	20	221	177	6626	4253

Prepared by: Shelley Schmidt, Human Resources Generalist Date: 04 / 11 / 2022

(Name and Title)

Revised 2015-Dec-15



Lexington-Fayette
Urban County
Government



AFFIDAVIT

AFFIDAVIT

Comes the Affiant, Richard W. Walker, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Richard W. Walker and he/she is the individual submitting the proposal or is the authorized representative of Tetra Tech, Inc., the entity submitting the proposal (hereinafter referred to as "Proposer").

2. Proposer will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.

3. Proposer will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.

4. Proposer has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.

5. Proposer has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Proposer will not violate any provision of the campaign finance laws of the Commonwealth.

6. Proposer has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."

Continued on next page

7. Proposer acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

Richard W. Walker

STATE OF Kentucky

COUNTY OF Fayette

The foregoing instrument was subscribed, sworn to and acknowledged before me

by Richard W. Walker on this the 6th day

of April, 2022

My Commission expires: April 24, 2024



Mary L. Corbitt

NOTARY PUBLIC, STATE AT LARGE



Lexington-Fayette
Urban County
Government



EQUAL OPPORTUNITY AGREEMENT

EQUAL OPPORTUNITY AGREEMENT

Standard Title VI Assurance

The Lexington Fayette-Urban County Government, (hereinafter referred to as the "Recipient") hereby agrees that as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78Stat.252, 42 U.S.C. 2000d-4 (hereinafter referred to as the "Act"), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, (49 CFR, Part 21) Nondiscrimination in Federally Assisted Program of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the "Regulations") and other pertinent directives, no person in the United States shall, on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from the U.S. Department of Transportation, including the Federal Highway Administration, and hereby gives assurance that will promptly take any necessary measures to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the Regulations.

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- Section 503 of the Rehabilitation Act of 1973 states:

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.

- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.
- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.

Richard W. Walker

Signature

Tetra Tech, Inc.

Name of Business



Lexington-Fayette
Urban County
Government



**NOTICE OF REQUIREMENT
FOR AFFIRMATIVE ACTION TO
ENSURE EQUAL EMPLOYMENT
OPPORTUNITIES AND DBE
CONTRACT PARTICIPATION**

**DIRECTOR, DIVISION OF CENTRAL PURCHASING
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 EAST MAIN STREET
LEXINGTON, KENTUCKY 40507**

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITIES AND DBE CONTRACT PARTICIPATION

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs. The Lexington Fayette Urban County Government also has set a goal that not less than three percent (3%) of the total value of this Contract be subcontracted to Veteran-owned Small Businesses. The goal for the utilization of Disadvantaged Business Enterprises as well Veteran –owned Small Businesses as subcontractors is a recommended goal. Contractor(s) who fail to meet such goal will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

Sherita Miller, MPA, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507
smiller@lexingtonky.gov

Firm Submitting Proposal: Tetra Tech, Inc.

Complete Address: 424 Lewis Hargett Circle, Suite 110, Lexington, KY 40503
Street City Zip

Contact Name: Herbert E. Lemaster, PE Title: Senior Project Manager

Telephone Number: 859.514.8749 Fax Number: 859.223.8000

Email address: herbert.lemaster@tetrattech.com



Lexington-Fayette
Urban County
Government



MWDBE PARTICIPATION GOALS



LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # 17-2022

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately. **Failure to submit a completed form may cause rejection of the bid.**

MWDBE Company, Name, Address, Phone, Email	MBE WBE or DBE	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1. Third Rock Consulting 2526 Regency Road Suite 180 Lexington, KY 40503 859.977.2000 mforee@thirdrockconsultants.com	DBE/SB/WBE	Environmental Permitting	TBD	10%
2. Salt River Engineering 108 West Poplar Street Harrodsburg, KY 40330 859.734.2334 connie@saltrivereng.com	Veteran Owned Small Business (VOSB)	Cost Analysis	TBD	3%
3.				
4.				

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Tetra Tech, Inc.
Company

April 11, 2022
Date

Richard W. Walker
Company Representative

Vice President
Title



LFUCG MWDBE SUBSTITUTION FORM
Bid/RFP/Quote Reference # 17-2022

The substituted MWDBE and/or veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1. N/A					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Tetra Tech, Inc.
 Company

April 11, 2022
 Date

Richard W. Walker
 Company Representative

Vice President
 Title



MWDBE QUOTE SUMMARY FORM

Bid/RFP/Quote Reference # 17-2022

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project. Failure to submit this form may cause rejection of the bid.

Company Name Tetra Tech, Inc.	Contact Person Richard W. Walker, PE
Address/Phone/Email 424 Lewis Hargett Circle, Suite 110 Lexington, KY 40503 P: 859.514.8749 E: richard.walker@tetrattech.com	Bid Package / Bid Date RFP # 17-2022 Former Jacks Creek Pike Landfill Improvement Project Raven Run Nature Sanctuary April 11, 2022

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female	Veteran
N/A								

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Tetra Tech, Inc.
Company

April 11, 2022
Date

Richard W. Walker
Company Representative

Vice President
Title



LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. The LFUCG also has a 3% goal plan adopted by cited council to increase the participation of veteran owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE and Veteran contractors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # 17-2022

Total Contract Amount Awarded to Prime Contractor for this Project _____

Project Name/ Contract #	Work Period/ From: _____ To: _____
Company Name:	Address:
Federal Tax ID:	Contact Person:

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date
N/A							

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

Tetra Tech, Inc.
Company

Richard W. Walker

Company Representative

April 11, 2022
Date

Vice President

Title

LFUCG STATEMENT OF GOOD FAITH EFFORTS

Bid/RFP/Quote # 17-2022

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE and Veteran-Owned business enterprises on the project and can supply the appropriate documentation.

Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.

Included documentation of advertising in the above publications with the bidders good faith efforts package

Attended LFUCG Central Purchasing Economic Inclusion Outreach event

Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities

Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses

Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).

Contacted organizations that work with MWDBE companies for assistance in finding certified MWBDE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.

Provided the interested MWBDE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.

Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items

into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce

_____ Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

_____ Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

_____ Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

_____ Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

_____ Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

_____ Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to approval by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Tetra Tech, Inc.

Company
April 11, 2022

Date

Richard W. Walker

Company Representative
Vice President

Title



Lexington-Fayette
Urban County
Government



GENERAL PROVISIONS

GENERAL PROVISIONS

1. Each Respondent shall comply with all Federal, State & Local regulations concerning this type of service or good.

The Respondent agrees to comply with all statutes, rules, and regulations governing safe and healthful working conditions, including the Occupational Health and Safety Act of 1970, *29 U.S.C. 650 et. seq.*, as amended, and KRS Chapter 338. The Respondent also agrees to notify the LFUCG in writing immediately upon detection of any unsafe and/or unhealthful working conditions at the job site. The Respondent agrees to indemnify, defend and hold the LFUCG harmless from all penalties, fines or other expenses arising out of the alleged violation of said laws.

2. Failure to submit ALL forms and information required in this RFP may be grounds for disqualification.
3. Addenda: All addenda and IonWave Q&A, if any, shall be considered in making the proposal, and such addenda shall be made a part of this RFP. Before submitting a proposal, it is incumbent upon each proposer to be informed as to whether any addenda have been issued, and the failure to cover in the bid any such addenda may result in disqualification of that proposal.
4. Proposal Reservations: LFUCG reserves the right to reject any or all proposals, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by a Respondent in the preparation of proposals.
6. Changes/Alterations: Respondent may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the proposal, and received by LFUCG prior to the scheduled closing time for receipt of proposals, will be accepted. The proposal, when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of proposal".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from a Respondent.
8. Bribery Clause: By his/her signature on the bid, Respondent certifies that no employee of his/hers, any affiliate or Subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.

9. Additional Information: While not necessary, the Respondent may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the Respondent's response. Additional documentation shall not serve as a substitute for other documentation which is required by this RFP to be submitted with the proposal,
10. Ambiguity, Conflict or other Errors in RFP: If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting this proposal, the Respondent agrees that it has carefully examined the specifications and all provisions relating to the work to be done attached hereto and made part of this proposal. By acceptance of a Contract under this RFP, proposer states that it understands the meaning, intent and requirements of the RFP and agrees to the same. The successful Respondent shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to Respondent shall be authorized for services or expenses reasonably covered under these provisions that the proposer omits from its Proposal.
12. Cancellation: If the services to be performed hereunder by the Respondent are not performed in an acceptable manner to the LFUCG, the LFUCG may cancel this contract for cause by providing written notice to the proposer, giving at least thirty (30) days notice of the proposed cancellation and the reasons for same. During that time period, the proposer may seek to bring the performance of services hereunder to a level that is acceptable to the LFUCG, and the LFUCG may rescind the cancellation if such action is in its best interest.

A. Termination for Cause

- (1) LFUCG may terminate a contract because of the contractor's failure to perform its contractual duties
- (2) If a contractor is determined to be in default, LFUCG shall notify the contractor of the determination in writing, and may include a specified date by which the contractor shall cure the identified deficiencies. LFUCG may proceed with termination if the contractor fails to cure the deficiencies within the specified time.
- (3) A default in performance by a contractor for which a contract may be terminated shall include, but shall not necessarily be limited to:
 - (a) Failure to perform the contract according to its terms, conditions and specifications;
 - (b) Failure to make delivery within the time specified or according

- to a delivery schedule fixed by the contract;
- (c) Late payment or nonpayment of bills for labor, materials, supplies, or equipment furnished in connection with a contract for construction services as evidenced by mechanics' liens filed pursuant to the provisions of KRS Chapter 376, or letters of indebtedness received from creditors by the purchasing agency;
 - (d) Failure to diligently advance the work under a contract for construction services;
 - (e) The filing of a bankruptcy petition by or against the contractor; or
 - (f) Actions that endanger the health, safety or welfare of the LFUCG or its citizens.

B. At Will Termination

Notwithstanding the above provisions, the LFUCG may terminate this contract at will in accordance with the law upon providing thirty (30) days written notice of that intent, Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.

13. **Assignment of Contract:** The contractor shall not assign or subcontract any portion of the Contract without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
14. **No Waiver:** No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this Contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
15. **Authority to do Business:** The Respondent must be a duly organized and authorized to do business under the laws of Kentucky. Respondent must be in good standing and have full legal capacity to provide the services specified under this Contract. The Respondent must have all necessary right and lawful authority to enter into this Contract for the full term hereof and that proper corporate or other action has been duly taken authorizing the Respondent to enter into this Contract. The Respondent will provide LFUCG with a copy of a corporate resolution authorizing this action and a letter from an attorney confirming that the proposer is authorized to do business in the State of Kentucky if requested. All proposals must

be signed by a duly authorized officer, agent or employee of the Respondent.

16. **Governing Law:** This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this Contract, the Parties agree that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division. All parties expressly consent to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to this Contract or any rights or obligations arising thereunder. Service of process may be accomplished by following the procedures prescribed by law.
17. **Ability to Meet Obligations:** Respondent affirmatively states that there are no actions, suits or proceedings of any kind pending against Respondent or, to the knowledge of the Respondent, threatened against the Respondent before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of Respondent to perform its obligations under this Contract, or which question the legality, validity or enforceability hereof or thereof.
18. Contractor understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Contractor is an independent contractor at all times during the performance of the services specified.
19. If any term or provision of this Contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.
20. Contractor [or Vendor or Vendor's Employees] will not appropriate or make use of the Lexington-Fayette Urban County Government (LFUCG) name or any of its trade or service marks or property (including but not limited to any logo or seal), in any promotion, endorsement, advertisement, testimonial or similar use without the prior written consent of the government. If such consent is granted LFUCG reserves the unilateral right, in its sole discretion, to immediately terminate and revoke such use for any reason whatsoever. Contractor agrees that it shall cease and desist from any unauthorized use immediately upon being notified by LFUCG.



Signature

April 11, 2022

Date

424 Lewis Hargett Circle, Suite 110, Lexington, KY 40503
859.223.8000 | www.tetrattech.com

