

REQUEST FOR BID

Sauk County Emergency Management, Buildings & Safety

Old Shooting Range Clean-up

Friday October 18th, 2013

- I. Point of contact: Tim Stieve
Sauk County Courthouse
510 Broadway
Baraboo, Wisconsin 53913
(608) 355-3200
- II. Bid Due Date: Bids must be received and date stamped no later than 2:00 p.m., Central Standard Time, October 31st, 2013. Faxes, email or electronic submissions are not acceptable. Bids or amendments received by Sauk County after that time will not be considered. Public Opening of Bids will be conducted at the Sauk County Courthouse – EMBS Meeting Room at 2:15 p.m., Wednesday October 31st, 2013 at 510 Broadway, Baraboo, Wisconsin 53913.
- III. **ALL BIDS MUST BE ADDRESSED TO:**

Sauk County Clerk
Sauk County West Square Building
505 Broadway
Baraboo, Wisconsin 53913

The words "**Shooting Range Clean-up**" must be marked on the sealed envelope.

PART ONE
INTRODUCTION AND GENERAL INFORMATION

1.0 INTRODUCTION

- 1.1 This document constitutes a request for competitive, sealed Bids from qualified vendors to complete a clean-up of the Old Sauk County Officers Shooting Range located at county owned property at E8795 Evergreen Lane, Baraboo, Wisconsin in accordance to the areas identified within Attachment A.

2.0 ORGANIZATION

- 2.1 This document, referred to as a Request for Bid (RFB), has been divided into the following parts for the convenience of the contractor:

Part One	- Introduction and General Information
Part Two -	- Scope of Work
Part Three	- General Requirement - Standard Terms & Conditions
Part Four	- Pricing & Information
Attachment A	Figures 1 – Excavation Areas Figure 2 – Sieve Areas – Old Officers Shooting Range Figure 3 – Sieve Areas – Current Shooting Range Figure INA-1 – Sand Particle Size – Inactive Range Figure INA-2 - Sand Particle Size – Inactive Range Figure ACT-1 – Sand Particle Size – Active Range Figure ACT-2 – Sand Particle Size – Active Range Figure INA-3 - Bullets/Fragments Particle Size – Inactive Range Figure ACT-3 - Bullets/Fragments Particle Size – Active Range

3.0 DEFINITIONS

- 3.1 For the purpose of this RFP the Vendor will be referred to as Vendor and Sauk County will be referred to as County.

4.0 BACKGROUND INFORMATION

- 4.1 Sauk County is one of 72 units of county government in the State of Wisconsin and is a municipal corporation existing pursuant to the authority of Chapter 59 of the Wisconsin Statutes. County operations currently include a skilled nursing facility, a human services department, a law enforcement agency, a state circuit court system, a highway department, a tax administration and collection effort, and other government related functions.

5.0 TENTATIVE SCHEDULE OF EVENTS

<u>EVENT</u>	<u>DATE</u>	<u>TIME</u>
Request for Bid released	October 17 th , 2013	
Bids Due	October 31 st , 2013	2:00 p.m.
Bids opened	October 31 st , 2013	2:15 p.m.
Approve Resolution awarding		
Contract to winning Vendor	November 5 th , 2013	3:30 p.m.
County Board Approval	November 12 th , 2013	6:00 p.m.

6.0 AMENDMENTS AND QUESTIONS:

- 6.1 Sauk County reserves the right to modify this RFB prior to the bid due date. Such modifications will be issued by Amendment to all RFP holders.
- 6.2 If Amendments are of such a nature as to require substantive changes in the scope of work or Bid price, the Bid due date may be postponed by such a time that will enable vendor to revise their Bids. In such case, the Amendment will include an announcement of the new Bid due date.
- 6.3 Interpretations or clarifications in response to questions received prior to the Bid due date may be issued by Addenda to all parties recorded as having received this RFB, if considered necessary by the County.
- 6.4 Questions received less than [5] five days prior to the Bid due date may not be answered.
- 6.5 Only formal written responses to questions issued by letter or addenda are binding. Oral and other interpretations or clarifications are not binding.

7.0 CONTRACT

- 7.1 Sauk County intends to award one contract for all work described in this Request for Bid.
- 7.2 Contract type shall be a single fixed-priced (lump sum) contract not to exceed. The lump sum shall include any necessary reimbursables.

PART TWO

SCOPE OF WORK

1.0 OVERVIEW

The Sauk County Range Officers Association utilized the "Old Officer Shooting Range" located on Sauk County Property at E8795 Evergreen Lane, Baraboo, WI. This property also contains the new Officers Shooting Range and the closed County owned Landfills. The Department of Natural Resources has ordered Sauk County to remediate the "Old Officers Shooting Range". Sauk County has hired TRC Environmental to assist in defining the scope of work necessary to properly remediate this site.

The following details the work that needs to be completed.

2.0 EXCAVATION

Approximately 600 cubic yards of soil from the six (6) identified areas (Figure 1) at the "Old Officer Shooting Range" will be excavated and transported to the current firing range. At specified areas (see Section 3.0) the soil will be sieved to remove lead bullets and lead fragments. After sieving, the excavated soils from all areas will then be transported to the current firing range, and spread, primarily on the current backstop area.

3.0 SIEVING

Based on the attached sieve analyses performed on the sand material from the project site, and the sieve analyses performed on the bullets and bullet fragments, it appears that a 0.25 inch sieve size will pass approximately 100 % of the sand material and retain from approximately 89 to 96 % of the bullets and bullet fragments. The vendor shall confirm sieve sizes with Sauk County prior to performing the work.

Old Officer Shooting Range

Approximately 245 cubic yards of the excavated soils from selected areas of the "Old Officer Shooting Range" will be sieved to recover lead from the "Old Officer Shooting Range" soils as shown on Figure 2. Lead will be containerized for the County to recycle with an appropriate lead recycler.

Current Shooting Range

Prior to transport and placement of excavated soils from the "Old Officer Shooting Range", sieve approximately 418 cubic yards of soils to recover lead from the current firing range backstop (Figure 3). Lead will be containerized on-site for the County to recycle with an appropriate lead recycler. Sauk County will supply containers.

4.0 SCHEDULE

The work included in this requests for Bid shall be completed no later than December 20, 2013, however, in the event of sustained snow cover the completion date may be negotiated with Sauk County

5.0 BID

This Request for Bid in its entirety shall be returned with signatures as noted along with all other requested information. Failure to do so will be cause to reject the bid.

PART THREE
GENERAL REQUIREMENTS

STANDARD TERMS AND CONDITIONS (REQUESTS FOR BID)

- 1.0 SPECIFICATIONS:** The specifications in this request are the minimum acceptable. When specific manufacturer and model numbers are used, they are to establish a design, type of construction, quality, functional capability and/or performance level desired. When alternates are proposed, they must be identified by manufacturer, stock number, and such other information necessary to establish equivalency, Sauk County shall be the sole judge of equivalency. Bidders are cautioned to avoid Bid alternates to the specifications which may result in rejection of their Bid.
- 2.0 DEVIATIONS AND EXCEPTIONS:** Deviations and exceptions from terms, conditions, or specifications shall be described fully, on the bidder's letterhead, signed, and attached to the request. In the absence of such statement, the Bid shall be accepted as in strict compliance with all terms, conditions, and specifications and the bidders shall be held liable.
- 3.0 QUALITY:** If supplies are furnished, unless otherwise indicated in the request, all material shall be first quality. Items which are used, demonstrators, obsolete, seconds, or which have been discontinued are unacceptable without prior written approval by Sauk County.
- 4.0 QUANTITIES:** The quantities shown in this request for bid are based on estimated needs. The County reserves the right to increase or decrease quantities to meet actual needs.
- 5.0 PRICING AND DISCOUNT:** Sauk County qualifies for governmental discounts; unit prices shall reflect these discounts.
- 5.1 Unit prices shown on the Bid or contract shall be the prices per unit of sales (e.g., gal., cs., dos., ea., etc.,) as stated on the request or contract. For any given item, the quantity multiplied by the unit prices shall establish the extended price. If an apparent mistake exists in the extended price, the unit price shall govern in the Bid evaluation and contract administration.
- 5.2 Prices established in continuing agreements and term contracts may be lowered due to general market conditions, but prices shall not be subject to increase for ninety (90) calendar days from the date of award. Any increase proposed shall be submitted to the contracting agency thirty (30) calendar days before the proposed effective date of the price increase, and shall be limited to fully documented cost increases to the vendor which are demonstrated to be industry wide. The conditions under which price increases may be granted shall be expressed in Bid documents and contracts or agreements.
- 5.3 In determination of award, discounts for early payment will only be considered when all other conditions are equal and when payment terms allow at least fifteen (15) days, providing the discount terms are deemed favorable. All payment terms must allow the option of net 10.
- 6.0 ACCEPTANCE-REJECTION:** Sauk County reserves the right to accept or reject any or all Bids, to waive any technicality in any Bid submitted, and to accept any part of a Bid as deemed to be in the best interests of Sauk County.
- 6.1 Bids MUST be date stamped by Sauk County Clerk, 505 Broadway, Baraboo, WI 53913, on or before the date and time that the Bid is due. Bids dated and time stamped in another office will be rejected. Receipt of a Bid by the mail system does not constitute receipt of a Bid by the County Clerk's office.

- 6.2 Bids shall be submitted on company letterhead and signed by an officer of the company. Mark sealed envelope: **"SHOOTING RANGE CLEAN-UP"**
- 7.0 METHOD OF AWARD:** Award shall be made to the lowest responsible, responsive bidder unless otherwise specified. Sauk County reserves the right to award based upon the evaluation of the Bids, which the county deems to be in its best interest.
- 8.0 ORDERING:** Purchase order shall be placed directly to the vendor by an authorized agency. No other purchase orders are authorized.
- 9.0 PAYMENT TERMS AND INVOICING:** Sauk County normally will pay properly submitted vendor invoices within thirty (30) days of receipt providing goods and/or services have been delivered, installed (if required), and accepted as specified.
- 10.0 TAXES:** Sauk County and its agencies are exempt from payment of all federal tax and Wisconsin state and local taxes on its purchases except Wisconsin excise tax as described below which is accepted by State Statutes.
- 10.1 Sauk County, including all its agencies, is required to pay the Wisconsin excise or occupation tax on its purchase of beer, liquor, wine, cigarettes, tobacco products, motor vehicle fuel, and general aviation fuel. However, it is exempt from payment of Wisconsin sales or use tax on its purchases. Sauk County may be subject to other states' taxes on its purchases in that state depending on the laws of that state. Vendors performing construction activities are required to pay state use tax on the cost of materials.
- 11.0 ENTIRE AGREEMENT:** These Standard Terms and Conditions shall apply to any contract or order awarded as a result of this request except where special requirements are stated elsewhere in the request; in such cases, the special requirements shall apply. Further, the written contract and/or order with referenced parts and attachments shall constitute the entire agreement and no other terms and conditions in any document, acceptance, or acknowledgment shall be effective or binding unless expressly agreed to in writing by the contracting authority. The successful Bid/bidder will be required to sign the contract document attached hereto.
- 12.0 GUARANTEED DELIVERY:** Failure of the vendor to adhere to delivery schedules as specified or to promptly replace rejected materials shall render the vendor liable for all costs in excess of the contract price when alternate procurement is necessary. Excess costs shall include the administrative costs.
- 13.0 APPLICABLE LAW:** The vendor shall at all times comply with and observe all federal and state laws, local laws, ordinances, and regulations which are in effect during the period of this contract and which in any manner affect the work of its conduct. The Sauk County Circuit Court shall be the court of exclusive jurisdiction for any litigation between the parties arising out of the performance of this contract. This contract shall be interpreted in accordance with the laws of the State of Wisconsin.
- 14.0 ANTITRUST ASSIGNMENT:** The vendor and Sauk County recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by Sauk County (purchaser). Therefore, vendor hereby assigns to Sauk County any and all claims for such over charges as to goods, materials or services purchased in connection with this contract.
- 15.0 ASSIGNMENT:** No right or duty in whole or in part of the vendor under this contract may be assigned or delegated without the prior written consent of Sauk County.

16.0 SUBVENDORS: If sub-Vendors are planned to be used, this should be clearly explained in the Bid. However, the prime vendor will be responsible for contract performance whether or not sub-Vendors are used.

17.0 ARBITRATION/APEALS PROCESS: Notice of intent to protest and protests of any award made must be made in writing and filed with the Sauk County Clerk, 505 Broadway, Baraboo, WI 53913 within five (5) calendar days after discussion and recommendation of award. The provisions of Chapter 68 of the Wisconsin Statutes shall apply.

17.1 Any dispute arising after award as to performance, quality and/or quantity shall be subject to arbitration as provided under Chapter 788 of the Wisconsin Statutes.

17.2 Sauk County reserves the right to have claims, disputes, or other matters in question decided by litigation. If Sauk County waives its right to litigation, then the arbitration provisions stated in paragraph 17.1 shall apply.

18.0 NONDISCRIMINATION: In connection with the performance of work under this contract, the vendor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability, sexual orientation or national origin as defined in s. 51.01(5), Wis. Stats.. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; lay-off or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

18.1 Failure to comply with the conditions of this clause may result in the vendor becoming declared an "ineligible" vendor, termination of the contract, or withholding of payment.

19.0 SAFETY REQUIREMENTS: All employer practices, employee practices, materials, equipment, and supplies provided to Sauk County must comply fully with all safety requirements as set forth by the Wisconsin Administrative Code, Rules of the Industrial Commission on Safety, and all applicable OSHA Standards.

20.0 WARRANTY: Unless otherwise specifically stated by the Bid/bidder, equipment purchased as a result of this request shall be warranted against defects by the Bid/bidder for ninety (90) days from date of receipt. The equipment manufacturer's standard warranty shall apply as a minimum and must be honored by the vendor.

21.0 HOLD HARMLESS: Vendor agrees to indemnify, hold harmless, and defend Sauk County, its officers, agents and employees from any and all liability including claims, demands, losses, costs, expenses and damages of every kind arising out of or in connection with services provided pursuant to this contract where such liability is founded upon or grows out of acts or omissions of any agents or employees of the vendor.

22.0 INSURANCE RESPONSIBILITY: The vendor performing services for Sauk County shall:

22.1 Maintain workers compensation insurance, as required by Wisconsin Statutes, for all employees engaged in the work.

22.2 Maintain general liability and owners and vendors protection in the following amounts. Sauk County shall be named as an additional named insured:

General Liability:

General Aggregate	\$1,000,000.00
Products-Comp/Op Agg	\$1,000,000.00
Personal & Adv. Injury	\$1,000,000.00
Each Occurrence	\$1,000,000.00

Automobile: (Combined single limit) \$1,000,000.00
Excess Liability: (Umbrella) \$5,000,000.00. (Each occurrence and aggregate.)

- 22.3 Provide policy, countersigned by an insurer licensed to do business in the State of Wisconsin, covering the period of the agreement/contract indicating that Sauk County is an additional named insured on public liability, professional liability and property damage insurance required above.
- 22.4 Provide insurance certificates indicating required coverage, countersigned by an insurer licensed to do business in Wisconsin, covering the period of the agreement/contract. The insurance certificate is required to be presented prior to the issuance of the purchase order or before commencement of the contract.
- 23.0 CANCELLATION:** Sauk County reserves the right to cancel any contract in whole or in part without penalty due to non-appropriation of funds, or for failure of the vendor to comply with the terms, conditions, and specifications of this contract.
- 24.0 TERMINATION FOR CONVENIENCE:** Sauk County reserves the right to terminate this contract for convenience upon 120 days notice.
- 25.0 TERMINATION FOR DEFAULT:** Sauk County reserves the right to terminate this contract for default if, after twenty days written notice to cure default, vendor fails to satisfactorily cure the default.
- 27.0 AUDIT:** During the term of the contract, the vendor shall, upon the request of the Sauk County Controller, make available at reasonable times and places, such information as may be required for the purpose of auditing submitted bills for the service provided under the contract.
- 28.0 INDEPENDENT VENDOR STATUS:** None of the officers, employees, or agents of the vendor are employees of Sauk County for any purpose, including but not limited to compensation, fringe benefits, or insurance coverage.
- 29.0 PUBLIC RECORDS ACCESS:** It is the intention of the county to maintain an open and public process in the solicitation, submission, review, and approval of procurement activities.
- 29.1 Bid openings are public unless otherwise specified. Records may not be available for public inspection prior to issuance of the notice of intent to award or the award of the contract.
- 29.2 If awarded this contract, Vendor shall assist Sauk county in complying with any open records request made under Wisconsin Law if the document.
- 30.0 PROPRIETARY INFORMATION:** Any restrictions on the use of data contained within a request must be clearly stated in the Bid itself. Proprietary information submitted in response to a request will be handled in accordance with applicable Sauk County procurement regulations and the Wisconsin public records law. Proprietary restrictions normally are not accepted. However, when accepted, it is the vendor's responsibility to defend the determination in the event of an appeal or litigation.
- 30.1 Data contained in a Bid, all documentation provided therein, and innovations developed as a result of the contracted commodities or services cannot be copyrighted or patented. All data, documentation, and innovations become the property of the Sauk County.
- 30.2 Any material submitted by the vendor in response to this request that the vendor considers confidential and proprietary information and which qualifies as a trade secret, as provided in s. 19.36(5), Wis. Stats., or material which can be kept confidential under the Wisconsin public records law, must be identified. Bid prices cannot be held confidential.

- 31.0 DISCLOSURE:** If a public official (s. 19.42, Wis. Stats.), a member of the public official's immediate family, or any organization in which a public official or a member of the official's immediate family owns or controls a ten percent (10%) interest, is a party to this agreement, and if this agreement involves payment of more than three thousand dollars (\$3,000.00) within a twelve (12) month period, this contract is voidable by the County unless appropriate disclosure is made according to s. 19.45(6), Wis. Stats., before signing the contract.
- 32.0 RECYCLED MATERIALS:** Sauk County desires to purchase products incorporating recycled materials whenever technically and economically feasible. Vendors/bidders are encouraged to Bid/propose products with recycled content which meet specifications.
- 33.0 PATENT INFRINGEMENT:** The vendor selling to Sauk County the articles described herein guarantees the articles were manufactured or produced in accordance with applicable federal labor laws. Further, that the sale or use of the articles described herein will not infringe any United States patent. The vendor covenants that it will at its own expense defend every suit which shall be brought against Sauk County (provided that such vendor is promptly notified of such suit, and all papers therein are delivered to it) for any alleged infringement of any patent by reason of the sale or use of such articles, and agrees that it will pay all costs, damages, and profits recoverable in any such suit.
- 34.0 MATERIAL SAFETY DATA SHEET:** If any item(s) on an order(s) resulting from this award(s) is a hazardous chemical, as defined under 29CFR 1910.1200, provide one (1) copy of Material Safety Data Sheet for each item with the shipped container(s) and one (1) copy with the invoice(s).
- 35.0 OPEN RECORDS.** Contractor agrees to assist the County in any requests made under the Wisconsin Open Records Law or Federal Freedom of Information Act.
- 36.0 OWNER'S REPRESENTATIVE.** The Owner's (County's) representative will be Tim Stieve
- 37.0 WAGE RATES.** Sauk County does not anticipate that State prevailing wage rates will be applicable.

The Vendor has examined and carefully prepared the Bid from the plans and specifications and has checked the same in detail before submitting the Bid to Sauk County, including the Standard Terms and Conditions. The Vendor has had the opportunity to view the installation site and had obtained all necessary information to properly complete this bid:

(Company Name/Firm)

(Witness)

(Company Representative)

(County Representative)

(Signature)

(Signature)

STATE OF WISCONSIN)

)ss.

SAUK COUNTY)

Personally came before me this _____ day of _____, 2010, the above named
_____ to me known to be the person who executed the
foregoing instrument and acknowledge the same.

Signature of Notary Public

Typed or Printed Name of Notary Public My Commission (expires) (is) _____

PART FOUR
EVALUATION INFORMATION

1.0 EVALUATION PROCESS

- 1.1 The award of a contract resulting from this Request for Bid shall be based on the most advantageous Bid received by the most responsive vendor.
- 1.2 Completeness of Bid. All requested information is included as noted.
- 1.3 Vendor shall provide as a separate attachment to this bid at least five (5) references where similar work has been completed.
- 1.4 In the event that only one Bid is received in response to this Request for Bid, Sauk County reserves the right to negotiate the terms and conditions, including the price, as proposed in the sole vendor's bid. In addition, as part of such negotiations, Sauk County reserves the right to require supporting cost, pricing and other data from the vendor in order to determine the reasonableness and acceptability of the Bid.
- 1.5 Provide proper documentation of OSHA 40 hour HAZWOPER certification to conduct work.
- 1.6 Sauk County reserves the right to reject any and all bids.

PART FIVE
PRICING & INFORMATION

PRICING	PRICE
Shooting Range Clean-up	\$

Sauk County Provided Materials

Any materials and/or services that Sauk County will need to provide to the vendor to complete this project must be listed below.

The vendor hereby agrees to provide the services and/or items at the prices quoted, pursuant to the requirements of this document and further agree that when this document is countersigned by an authorized official of Sauk County, a binding contract, as defined herein, shall exist between the vendor and Sauk County.

VENDOR

AUTHORIZED SIGNATURE

Date

PRINTED NAME

Title

Tim Stieve, Administrator Sauk County EMBS

Date

ATTACHMENT A


- MAPS NOTING AREAS TO BE EXCAVATED / SEIVED**
- SIEVE ANALYSES**

TRC - GIS



BASE MAP IMAGERY FROM ESRI/BING, "WORLD IMAGERY", WEB SERVICE LAYER, 2011.

LEGEND

 AREAS TO BE EXCAVATED



0 80 160
1" = 80'
1:960
FEET



708 Heartland Trail
Suite 3000
Madison, WI 53717
Phone: 608.826.3600

SAUK COUNTY LANDFILL FIRING RANGE

EXCAVATION SITE MAP

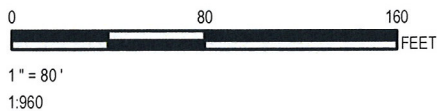
DRAWN BY:	RHODE B
APPROVED BY:	TMO
PROJECT NO:	196287
FILE NO.	196287-006.mxd
DATE:	OCTOBER 2013

FIGURE 1

TRC - GIS



BASE MAP IMAGERY FROM ESRI/BING, "WORLD IMAGERY", WEB SERVICE LAYER, 2011.



LEGEND

 LEAD SIEVING AREAS



708 Heartland Trail
Suite 3000
Madison, WI 53717
Phone: 608.826.3600

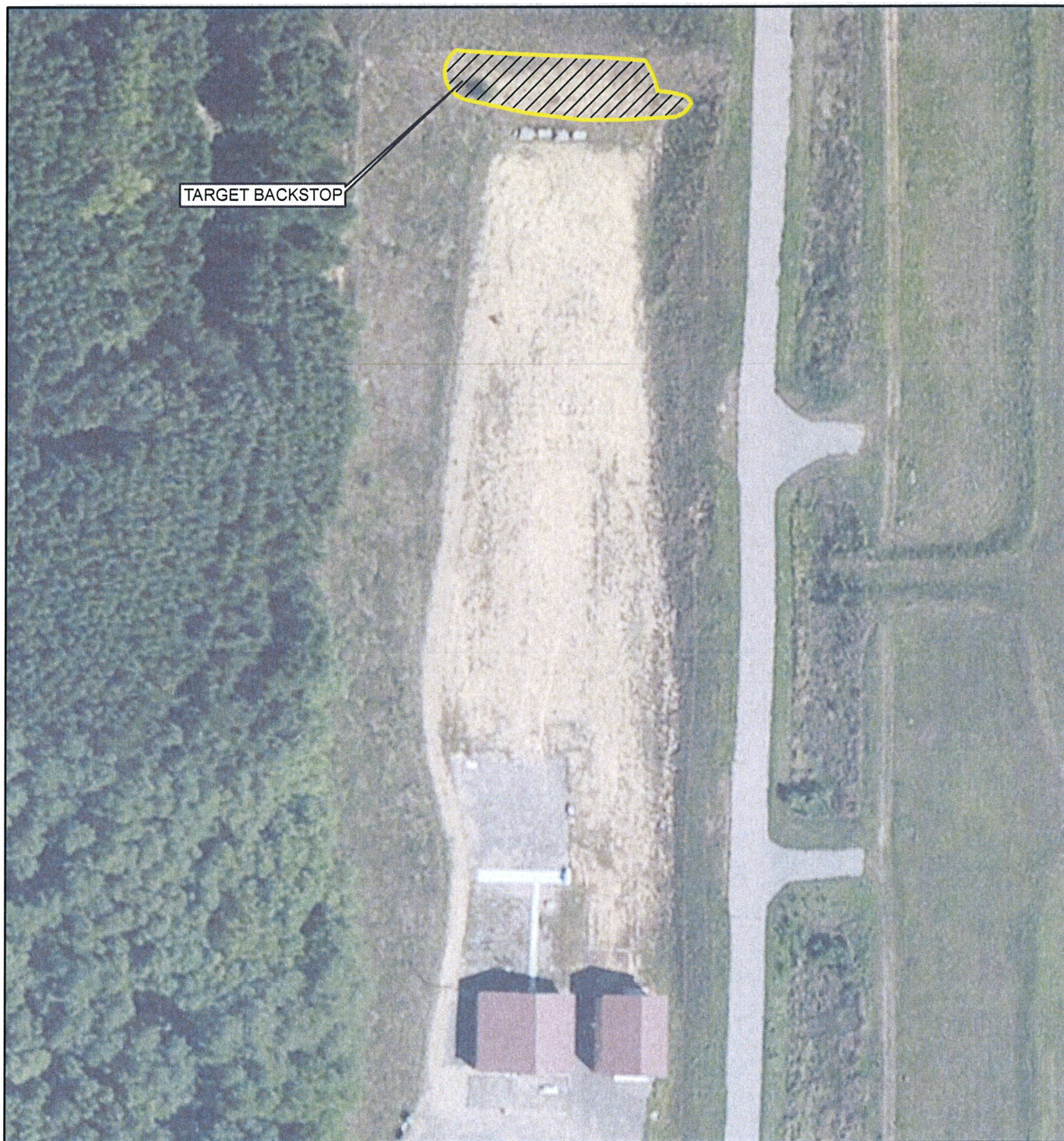
SAUK COUNTY LANDFILL FIRING RANGE

SIEVE SITE MAP

DRAWN BY:	RHODE B
APPROVED BY:	TMO
PROJECT NO:	196287
FILE NO.	196287-007.mxd
DATE:	OCTOBER 2013

FIGURE 2

TRC - GIS




BASE MAP IMAGERY FROM ESRI/BING, "WORLD IMAGERY", WEB SERVICE LAYER, 2011.



0 80 160
FEET
1" = 100'
1:1,200

LEGEND

 LEAD SIEVING AREAS



708 Heartland Trail
Suite 3000
Madison, WI 53717
Phone: 608.826.3600

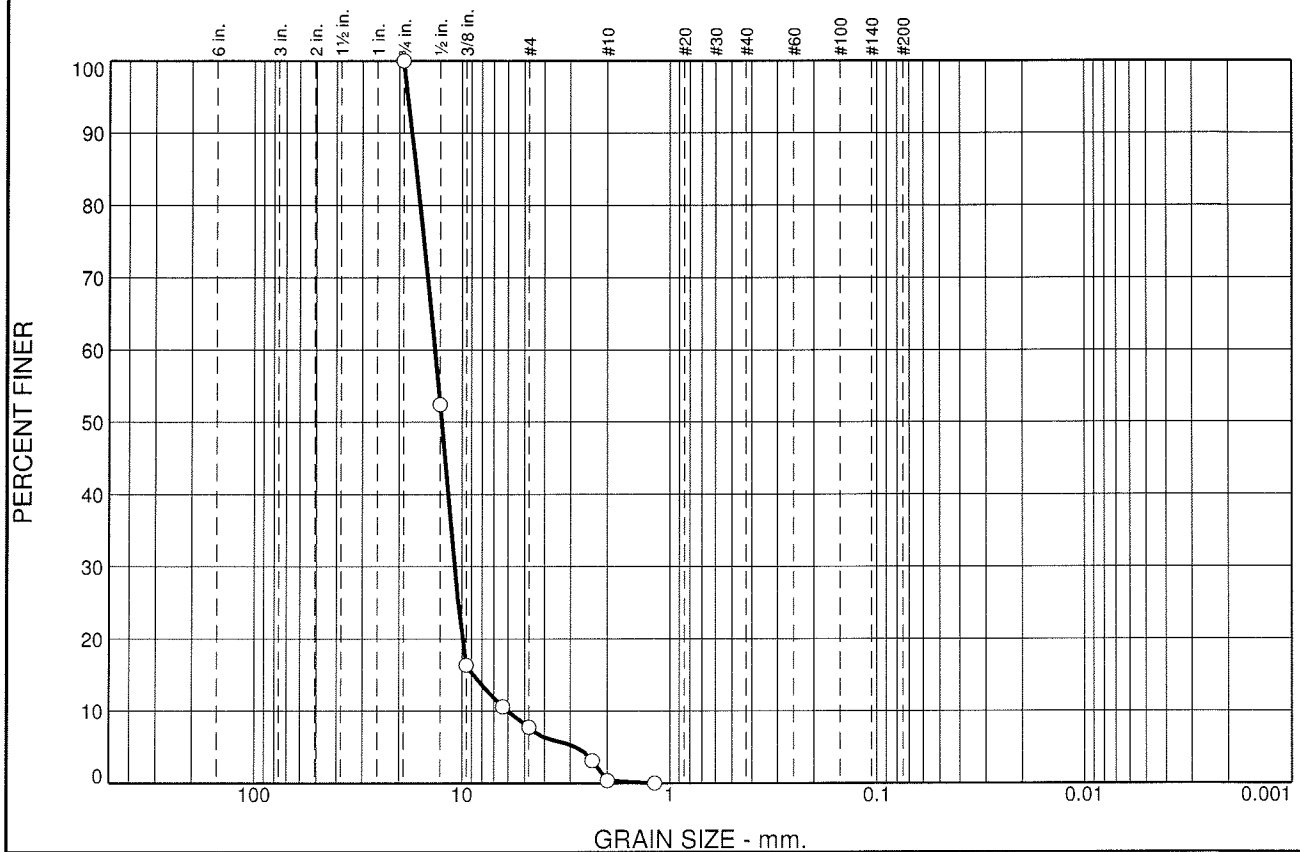
SAUK COUNTY LANDFILL FIRING RANGE

SIEVE SITE MAP

DRAWN BY:	RHODE B
APPROVED BY:	TMO
PROJECT NO:	196287
FILE NO.	196287-008.mxd
DATE:	OCTOBER 2013

FIGURE 3

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	92.3	7.3			0.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75	100.0		
0.50	52.4		
0.375	16.3		
0.25	10.6		
#4	7.7		
#8	3.1		
#10	0.4		
#16	0.0		

* (no specification provided)

Material Description

PL= Atterberg Limits LL= PI=

Coefficients
D₉₀= 17.3618 D₈₅= 16.5885 D₆₀= 13.4431
D₅₀= 12.4823 D₃₀= 10.8119 D₁₅= 8.7727
D₁₀= 6.0057 C_u= 2.24 C_c= 1.45

USCS= Classification AASHTO=

Remarks

Bullets and fragments were approximately 4.8% of the total dry weight.

Source of Sample: Active Range
Sample Number: Lead Composite

Date: 09-24-13

TRC Environmental Corp.

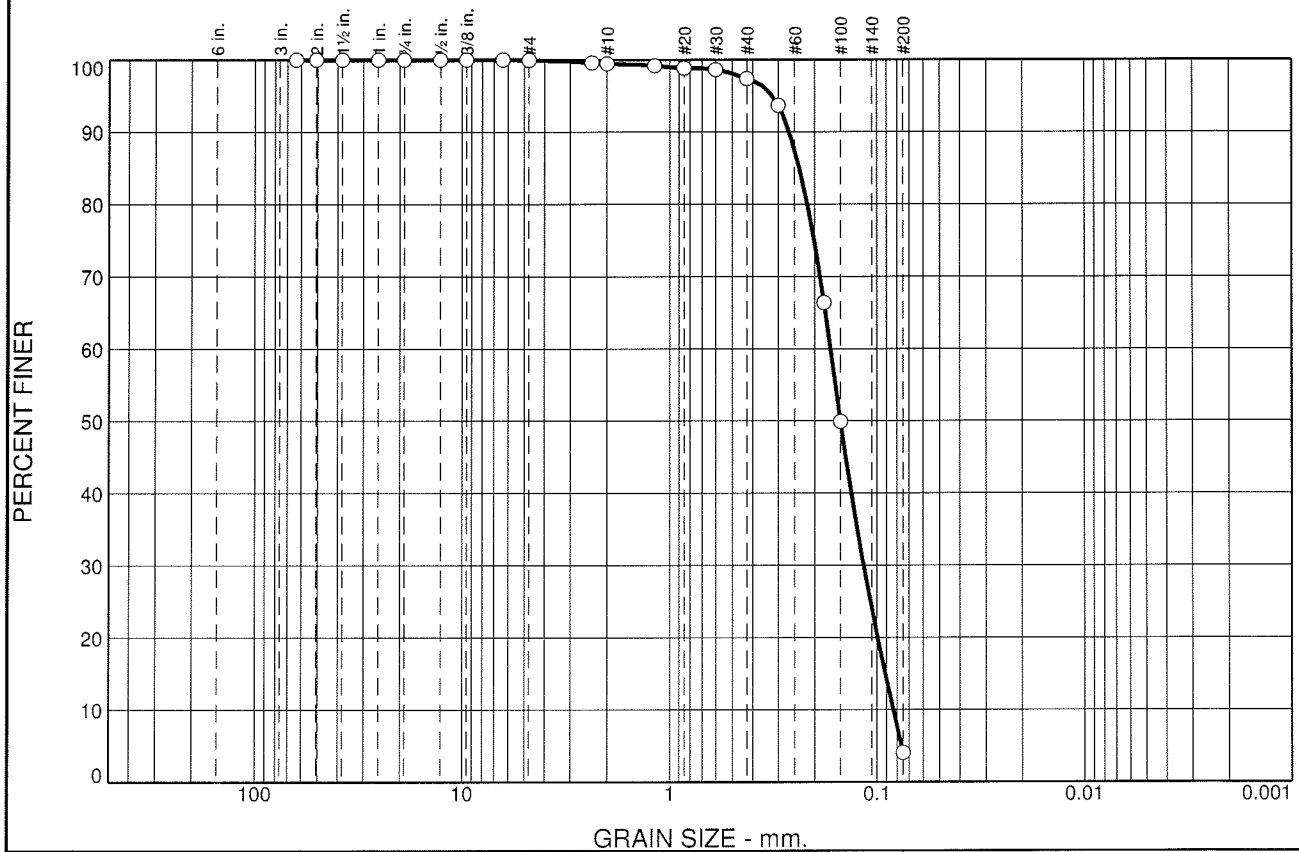
Client:
Project: Sauk County Shooting Range

Madison, Wisconsin

Project No: 196287.0000

Figure ACT-3

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.5	2.1	93.3	4.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2.5	100.0		
2.0	100.0		
1.5	100.0		
1.0	100.0		
.75	100.0		
.5	100.0		
.375	100.0		
.25	100.0		
#4	100.0		
#8	99.6		
#10	99.5		
#16	99.2		
#20	98.8		
#30	98.6		
#40	97.4		
#50	93.7		
#80	66.4		
#100	49.9		
#200	4.1		

* (no specification provided)

Material Description

Poorly graded sand

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 0.2657

D₈₅= 0.2370

D₆₀= 0.1676

D₅₀= 0.1502

D₃₀= 0.1161

D₁₅= 0.0912

D₁₀= 0.0835

C_u= 2.01

C_c= 0.96

Classification

USCS= SP

AASHTO=

Remarks

Bullets and bullet fragments removed.

Source of Sample: Active Range
Sample Number: Active Range 1

Date: 09-23-13

TRC Environmental Corp.

Client:

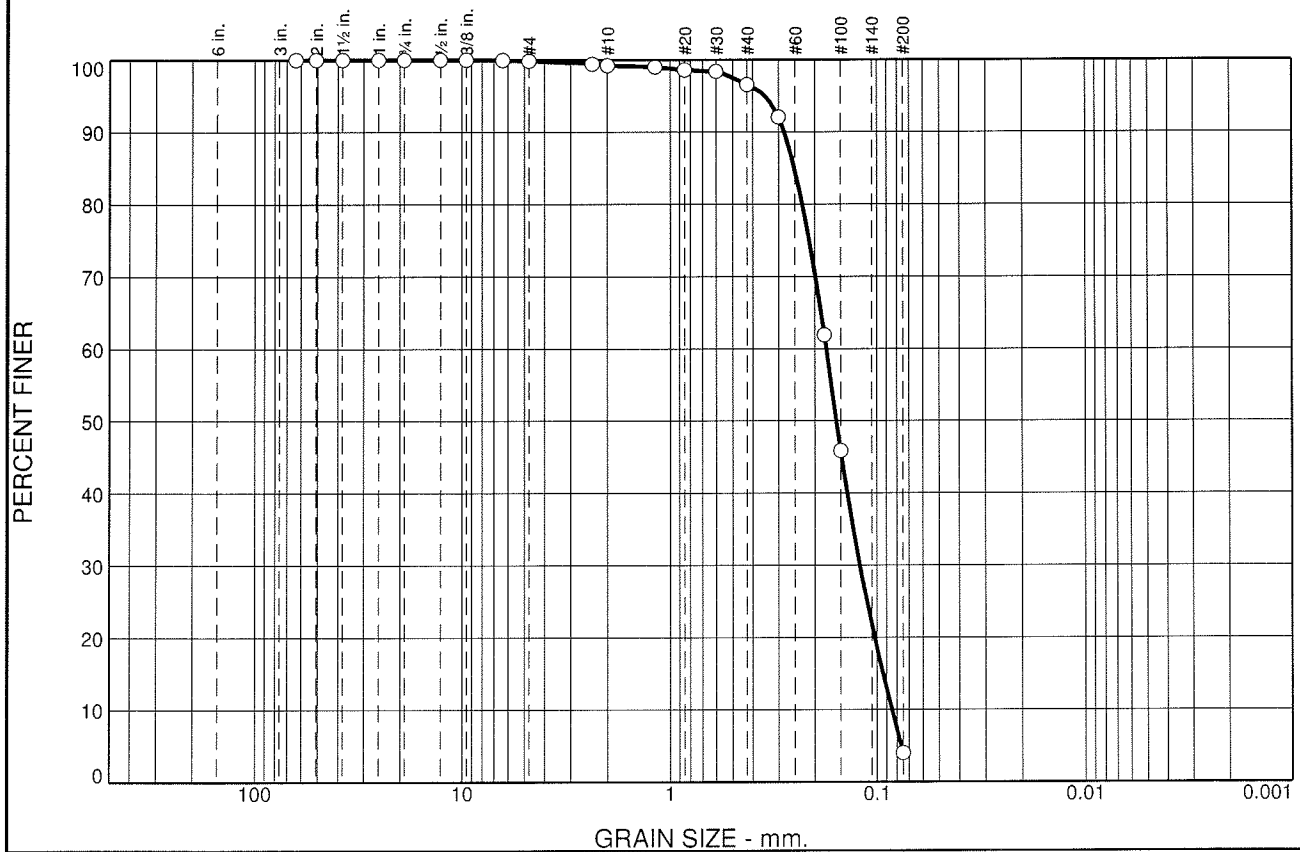
Project: Sauk County Shooting Range

Madison, Wisconsin

Project No: 196287.0000

Figure ACT-1

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.2	0.6	2.7	92.5	4.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2.5	100.0		
2.0	100.0		
1.5	100.0		
1.0	100.0		
.75	100.0		
.5	100.0		
.375	100.0		
.25	99.9		
#4	99.8		
#8	99.4		
#10	99.2		
#16	99.0		
#20	98.6		
#30	98.4		
#40	96.5		
#50	92.0		
#80	61.9		
#100	45.9		
#200	4.0		

* (no specification provided)

Material Description

Poorly graded sand

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.2817 D₈₅= 0.2513 D₆₀= 0.1761
D₅₀= 0.1574 D₃₀= 0.1212 D₁₅= 0.0936
D₁₀= 0.0848 C_u= 2.08 C_c= 0.98

Classification

USCS= SP AASHTO=

Remarks

Bullets and bullet fragments removed.

Source of Sample: Active Range
Sample Number: Active Range 2

Date: 09-23-13

TRC Environmental Corp.

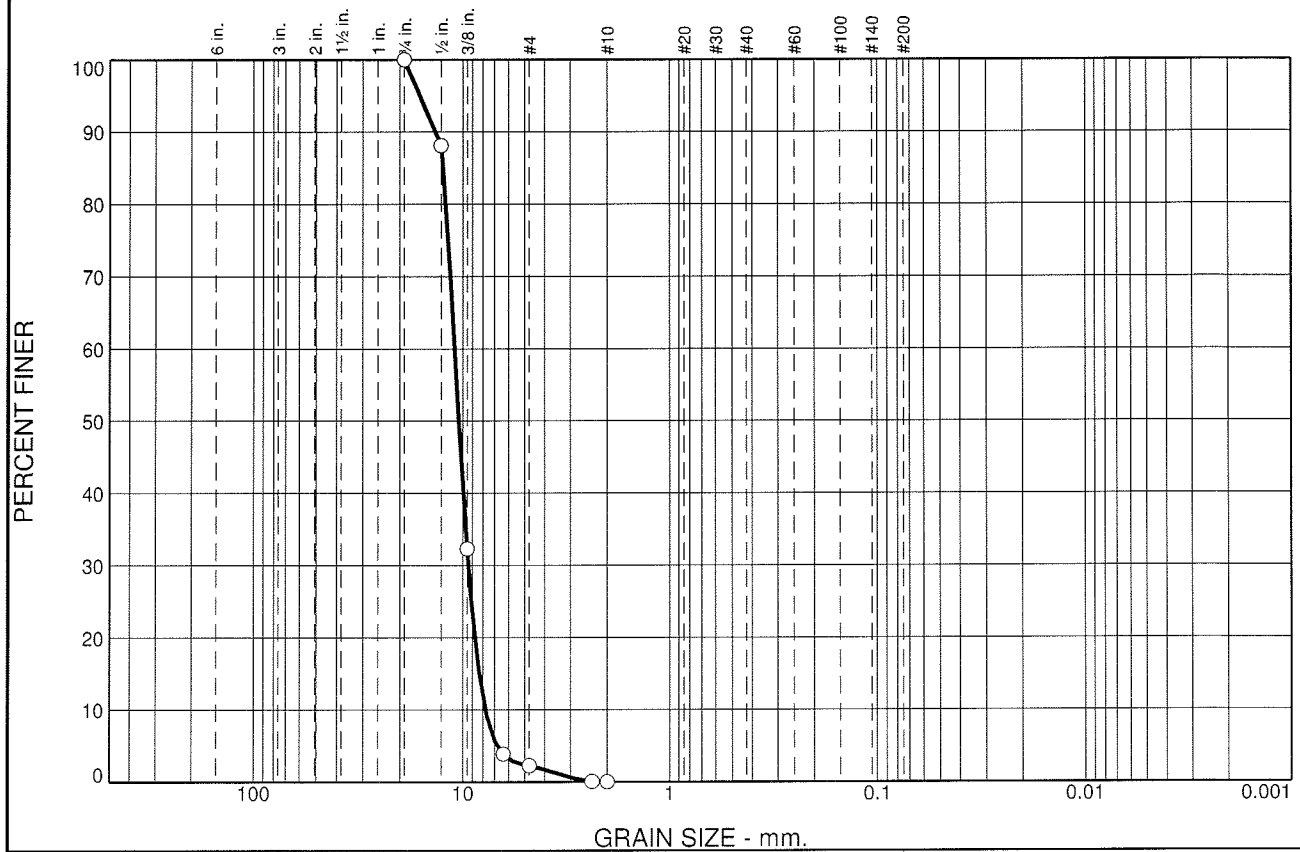
Client:
Project: Sauk County Shooting Range

Madison, Wisconsin

Project No: 196287.0000

Figure ACT-2

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	97.7	2.3			0.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75	100.0		
0.5	88.1		
0.375	32.3		
0.25	3.9		
#4	2.3		
#8	0.1		
#10	0.0		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 13.5325 D₈₅= 12.4426 D₆₀= 10.9434
D₅₀= 10.4401 D₃₀= 9.3932 D₁₅= 8.3061
D₁₀= 7.7554 C_u= 1.41 C_c= 1.04

Classification

USCS= AASHTO=

Remarks

Bullets and fragments were approximately 2.9% of the total dry weight.

Source of Sample: Inactive Range
Sample Number: Lead Composite

Date: 09-24-13

TRC Environmental Corp.

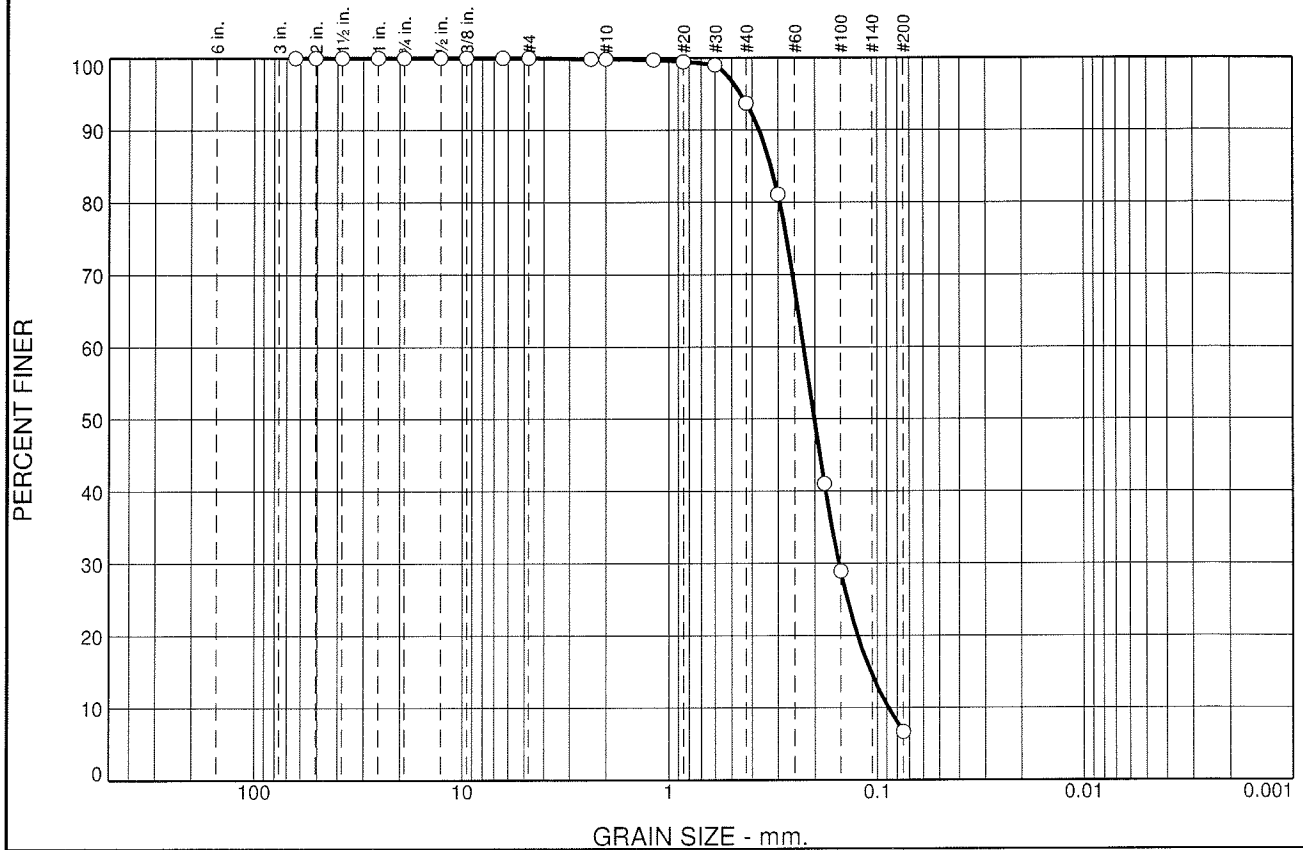
Client:
Project: Sauk County Shooting Range

Madison, Wisconsin

Project No: 196287.0000

Figure INA-3

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.2	6.1	87.0	6.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2.5	100.0		
2.0	100.0		
1.5	100.0		
1.0	100.0		
.75	100.0		
.5	100.0		
.375	100.0		
.25	100.0		
#4	100.0		
#8	99.8		
#10	99.8		
#16	99.7		
#20	99.5		
#30	99.0		
#40	93.7		
#50	81.1		
#80	41.0		
#100	28.9		
#200	6.7		

* (no specification provided)

Material Description

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.3689 D₈₅= 0.3234 D₆₀= 0.2264
 D₅₀= 0.2013 D₃₀= 0.1528 D₁₅= 0.1075
 D₁₀= 0.0882 C_u= 2.57 C_c= 1.17

Classification
 USCS= AASHTO=

Remarks
 Bullets and bullet fragments removed.

Source of Sample: Inactive Range
 Sample Number: Inactive Range 1

Date: 09-23-13

TRC Environmental Corp.

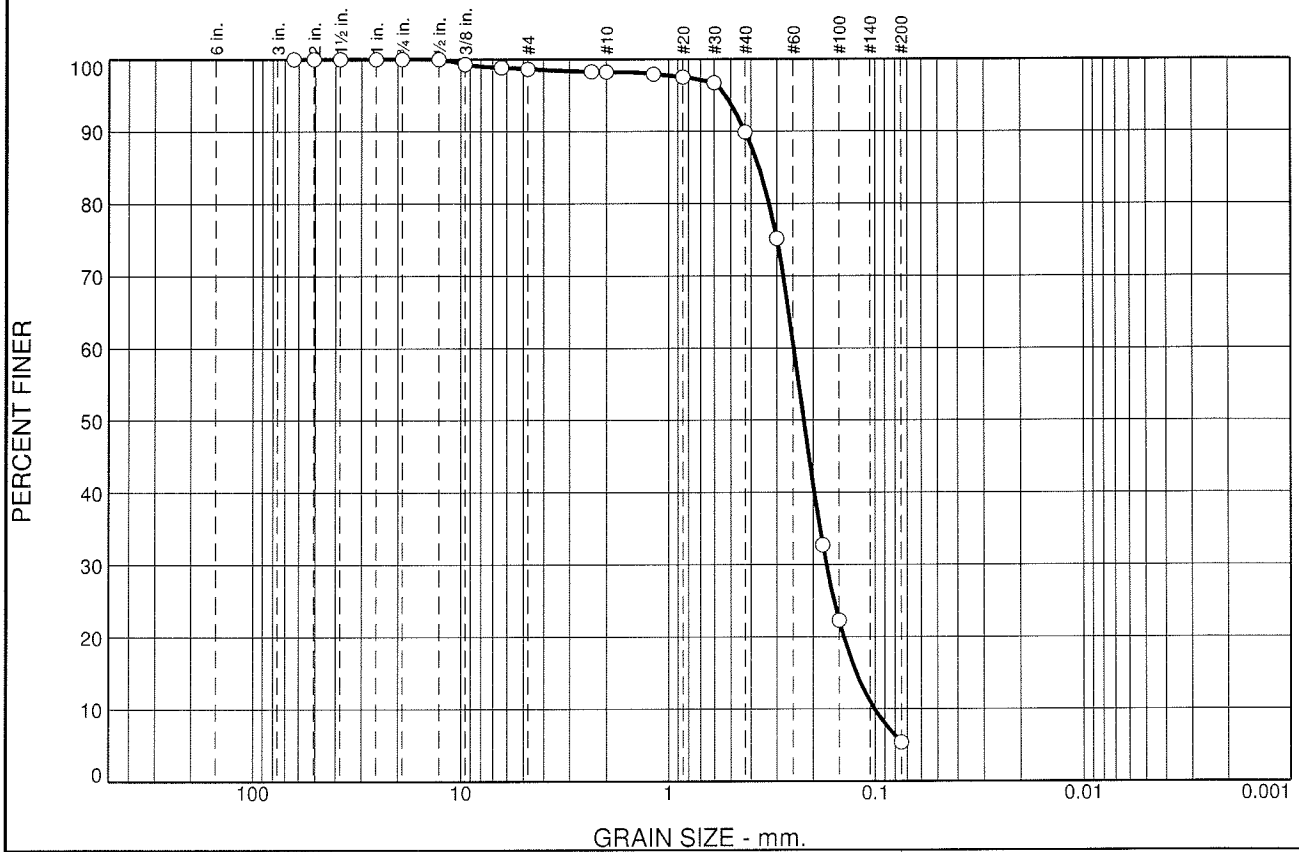
Client:
 Project: Sauk County Shooting Range

Madison, Wisconsin

Project No: 196287.0000

Figure INA-1

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.4	0.4	8.3	84.5	5.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2.5	100.0		
2.0	100.0		
1.5	100.0		
1.0	100.0		
.75	100.0		
.5	100.0		
.375	99.3		
.25	98.8		
#4	98.6		
#8	98.3		
#10	98.2		
#16	97.9		
#20	97.5		
#30	96.7		
#40	89.9		
#50	75.1		
#80	32.7		
#100	22.3		
#200	5.4		

* (no specification provided)

Material Description

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.4269 D₈₅= 0.3648 D₆₀= 0.2479
 D₅₀= 0.2219 D₃₀= 0.1729 D₁₅= 0.1237
 D₁₀= 0.1010 C_u= 2.46 C_c= 1.19

Classification
 USCS= AASHTO=

Remarks
 Bullets and bullet fragments removed.

Source of Sample: Inactive Range
 Sample Number: Inactive Range 2

Date: 09-23-13

TRC Environmental Corp.

Client:
 Project: Sauk County Shooting Range

Madison, Wisconsin

Project No: 196287.0000

Figure INA-2