

0125  
TA-00

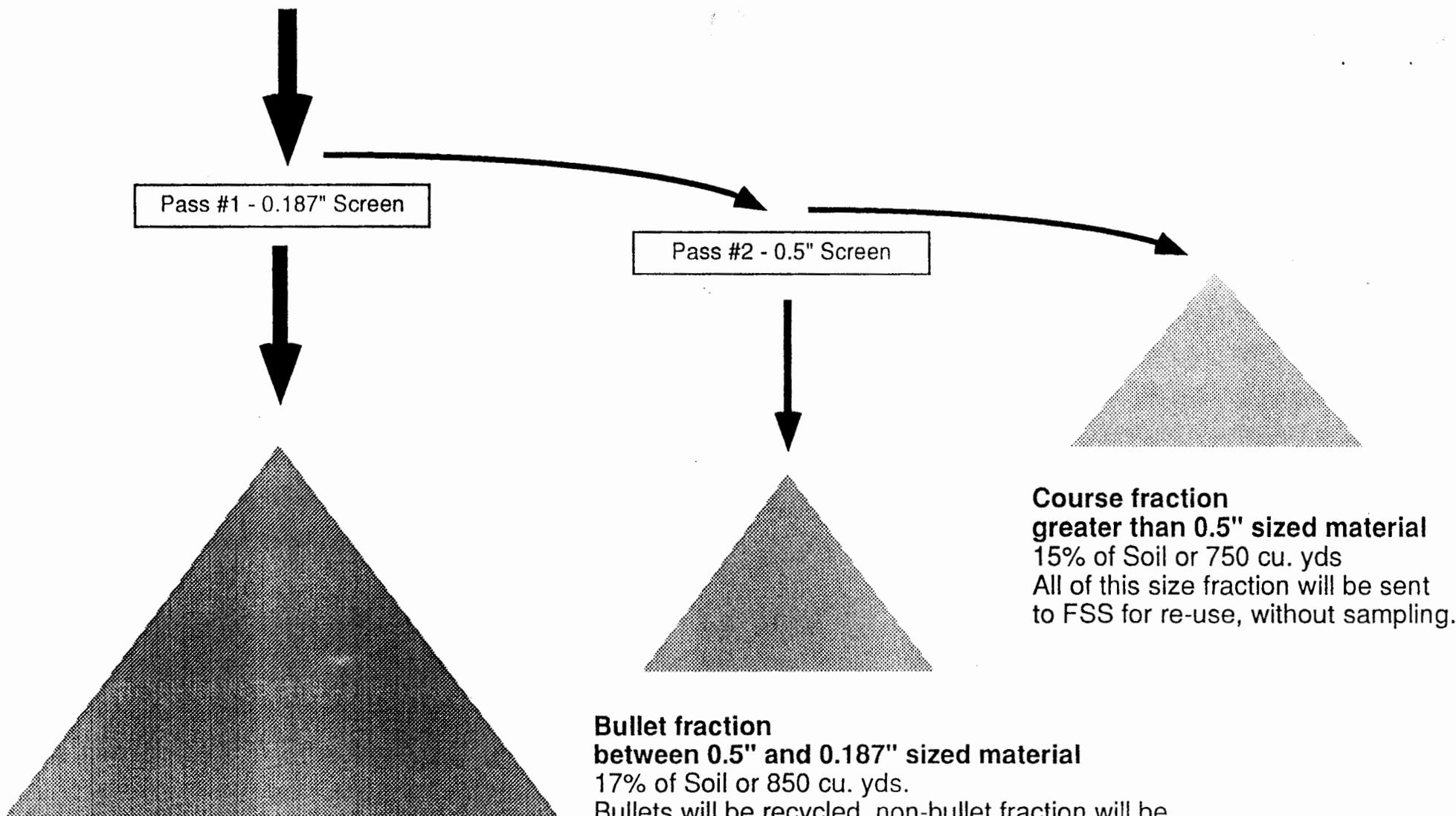
ADDITIONAL INFORMATION TO SUPPORT THE  
PROPOSED REMEDY,  
DESCRIPTION OF THE PROPOSED REMEDIAL ACTION, AND  
BASIS FOR USING XRF TO SEGREGATE  
SUSPECT HAZARDOUS WASTE  
SECTIONS OF THE  
VOLUNTARY CORRECTIVE ACTION PLAN  
POTENTIAL RELEASE SITE 0-016  
FIELD UNIT ONE, TA-00  
INACTIVE SMALL-ARMS FIRING RANGE

LOS ALAMOS NATIONAL LABORATORY  
ENVIRONMENTAL RESTORATION PROJECT

March 15, 1996



6829



**Fine fraction**  
**smaller than 0.187" sized material**  
 68% of Soil or 3400 cu. yds.  
 Will require sampling for waste characterization  
 Sampling results will allow:

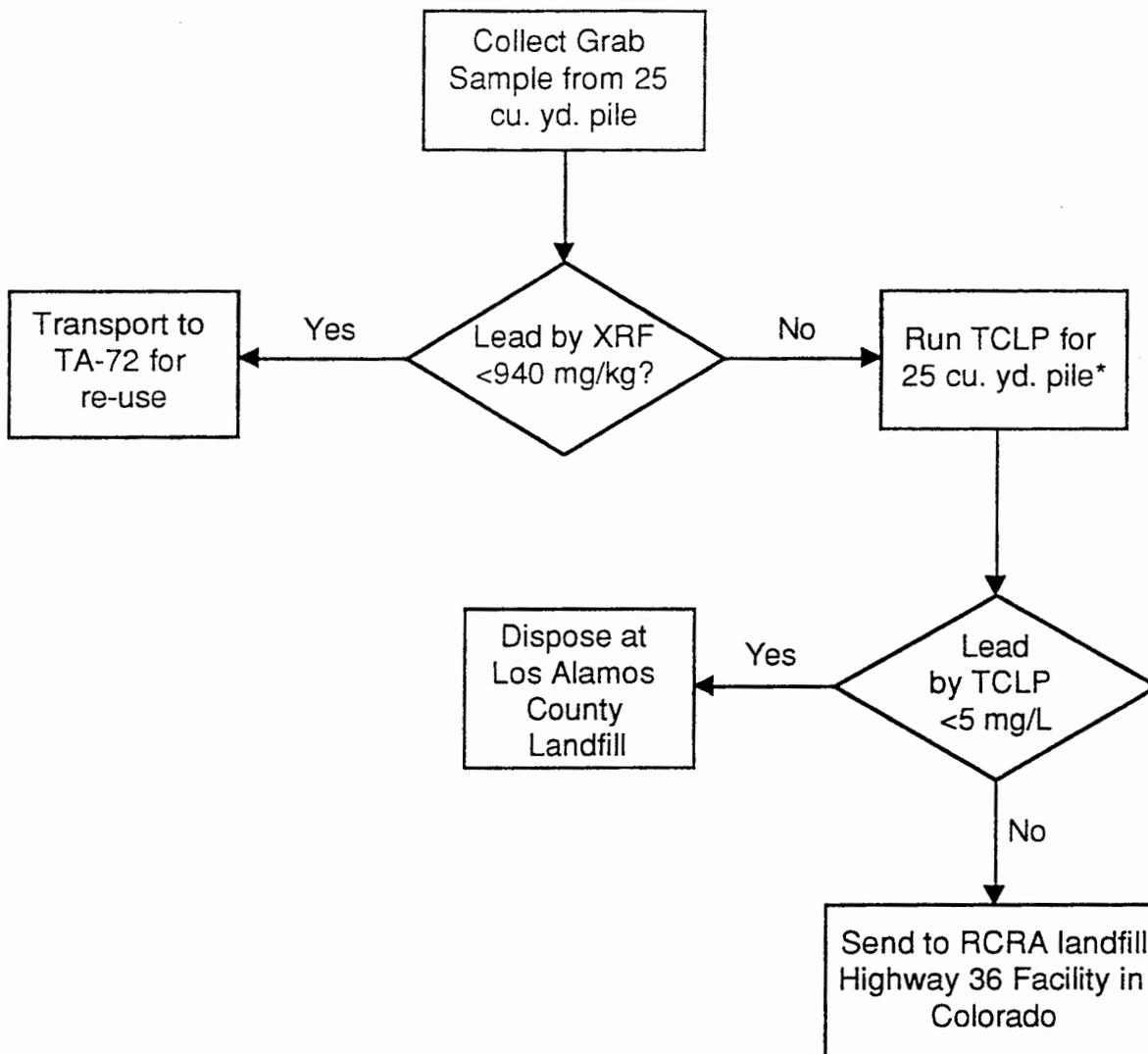
- 1) Re-use at TA-72
- 2) Disposal into Los Alamos County Landfill
- 3) Disposal to the Highway 36 TSDF

**Bullet fraction**  
**between 0.5" and 0.187" sized material**  
 17% of Soil or 850 cu. yds.  
 Bullets will be recycled, non-bullet fraction will be  
 sampled to determine if it is a hazardous waste.  
 Sampling results will allow:

- 1) Re-use at TA-72
- 2) Disposal into Los Alamos County Landfill
- 3) Disposal to the Highway 36 TSDF

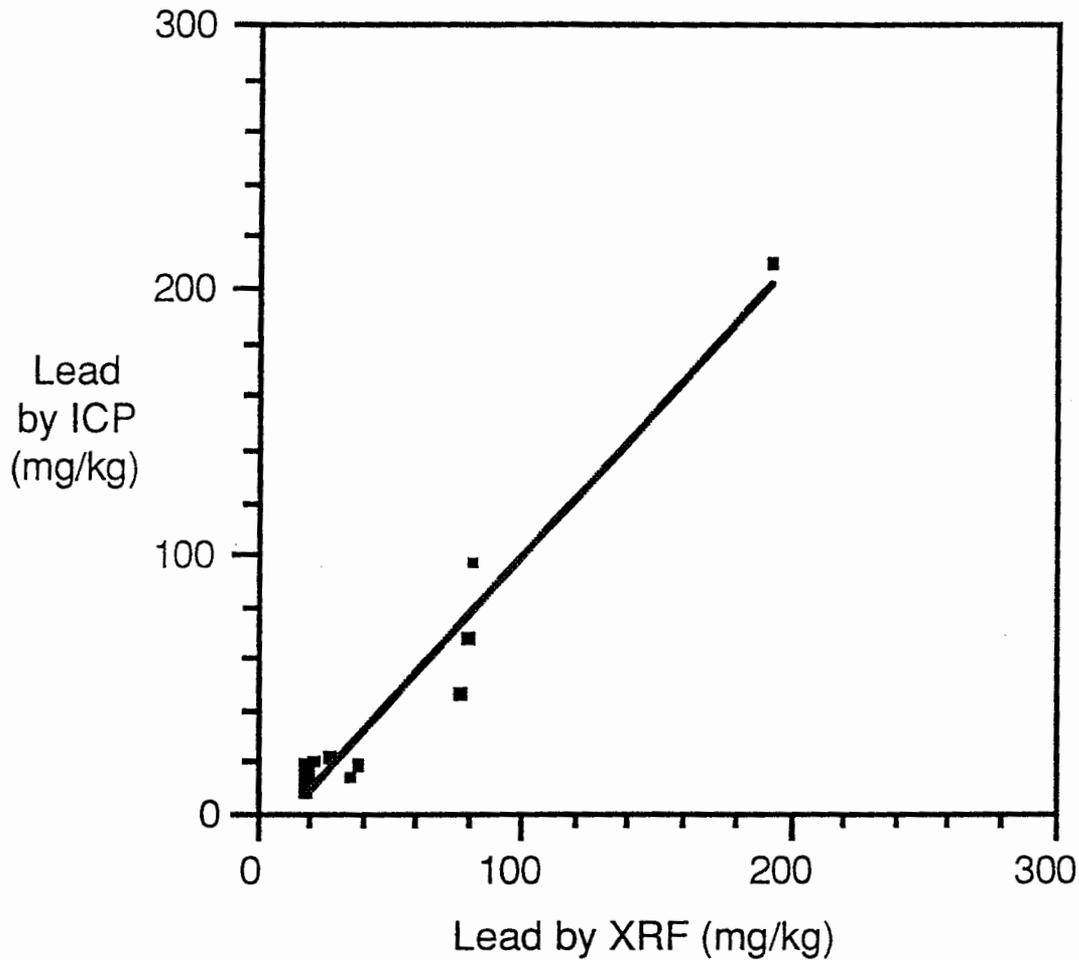
**Course fraction**  
**greater than 0.5" sized material**  
 15% of Soil or 750 cu. yds  
 All of this size fraction will be sent  
 to FSS for re-use, without sampling.

## Waste Segregation Flow Chart



\* Decision to analyze by TCLP all soil piles which had XRF >940 mg/kg will be revisited if more than four such piles are identified. The additional information on the XRF and TCLP correlation will help determine if additional TCLP analyses are warranted.

## 0-016 Small Arms Range

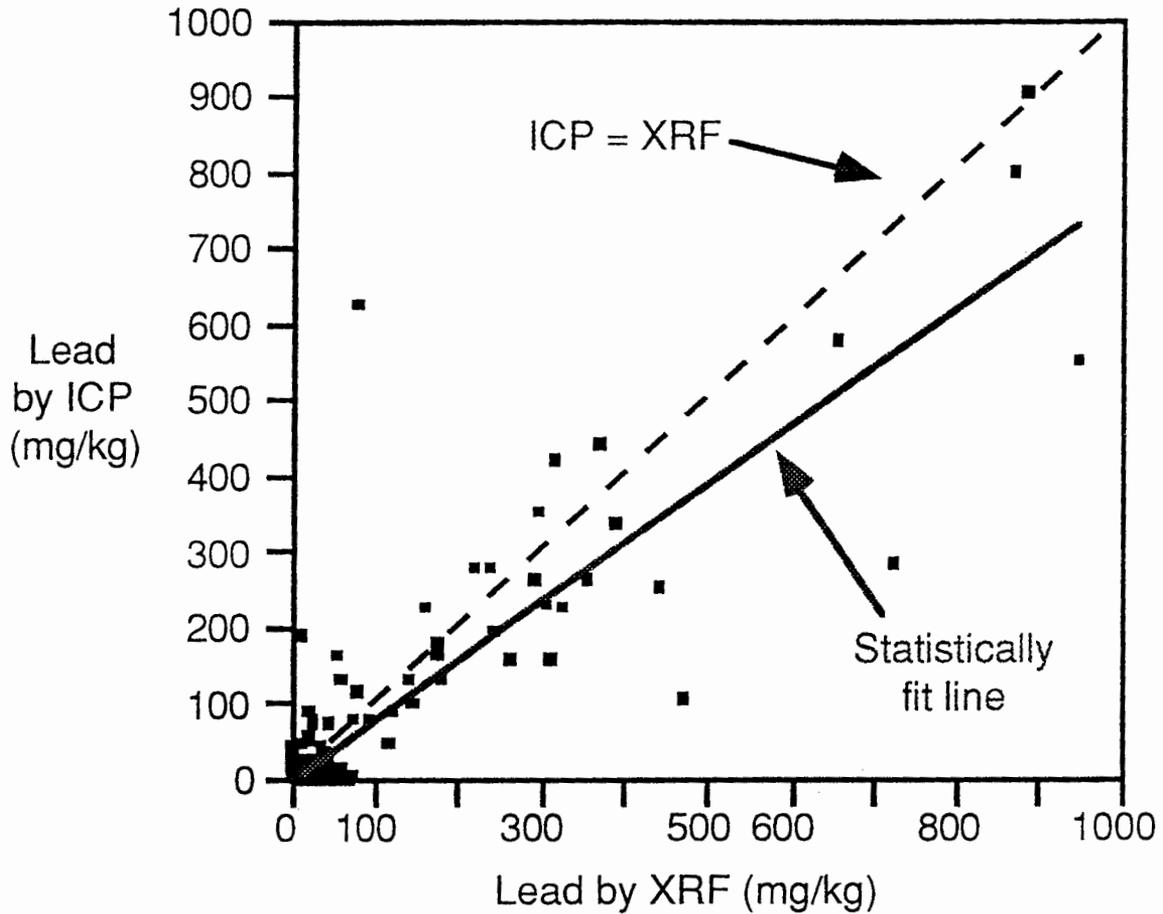


Correlation between lead measured by two methods from grab samples collected in PRS 0-016.

There were 14 soil samples analyzed by both methods and a linear regression analysis yielded the following formula:

$ICP = -11.2 + 1.11 * XRF$ , where the correlation coefficient is 0.976, which is highly significant.

## TA-15 High Explosive Firing Site

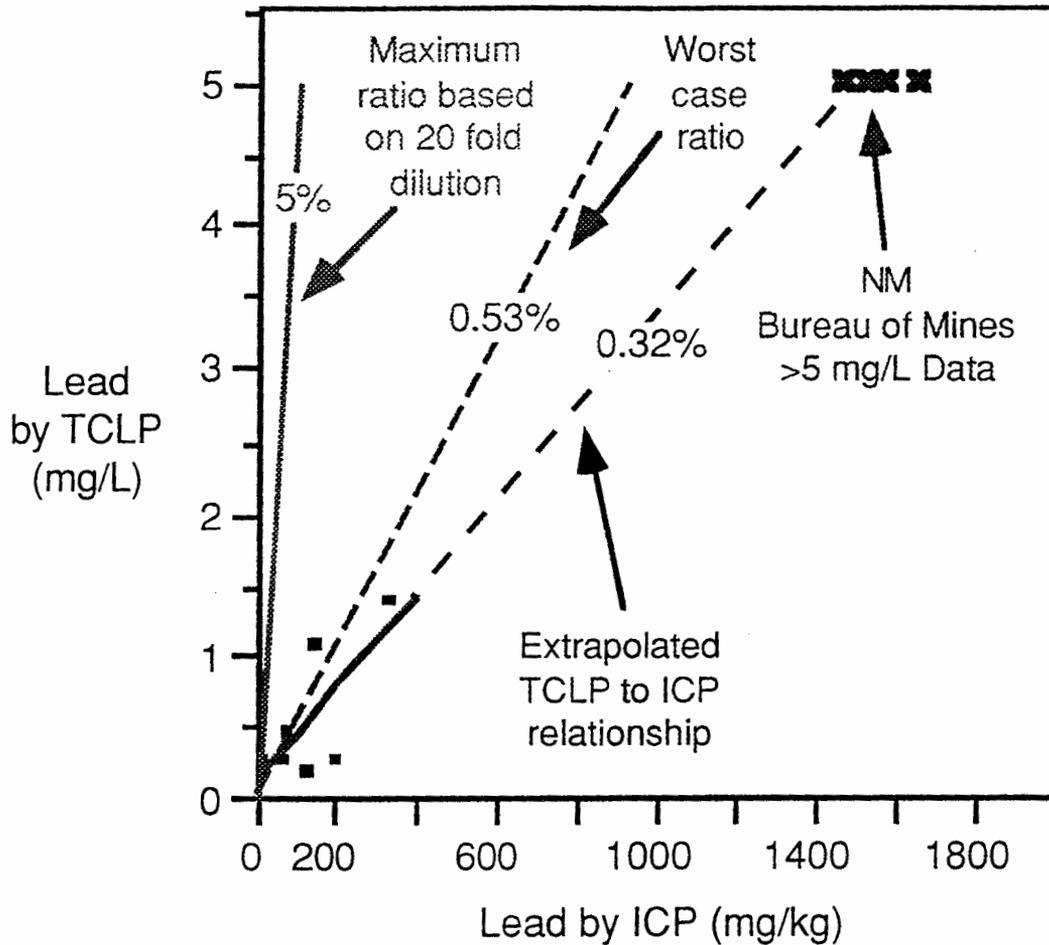


Correlation between lead measured by two methods from grab samples collected at TA-15. TA-15 is a firing site in LANL Field Unit 2.

There were 165 soil samples analyzed by both methods and a linear regression analysis yielded the following formula:

$ICP = 4.8 + 0.77 * XRF$ , where the correlation coefficient is 0.865, which is highly significant.

## 0-016 Small Arms Range



Correlation between lead measured by ICP and TCLP from grab samples collected in PRS 0-016.

There were 10 soil samples analyzed by both methods and a linear regression analysis yielded the following formula:

$TCLP = 0.163 + 0.00322 * ICP$ , where the correlation coefficient is 0.729.

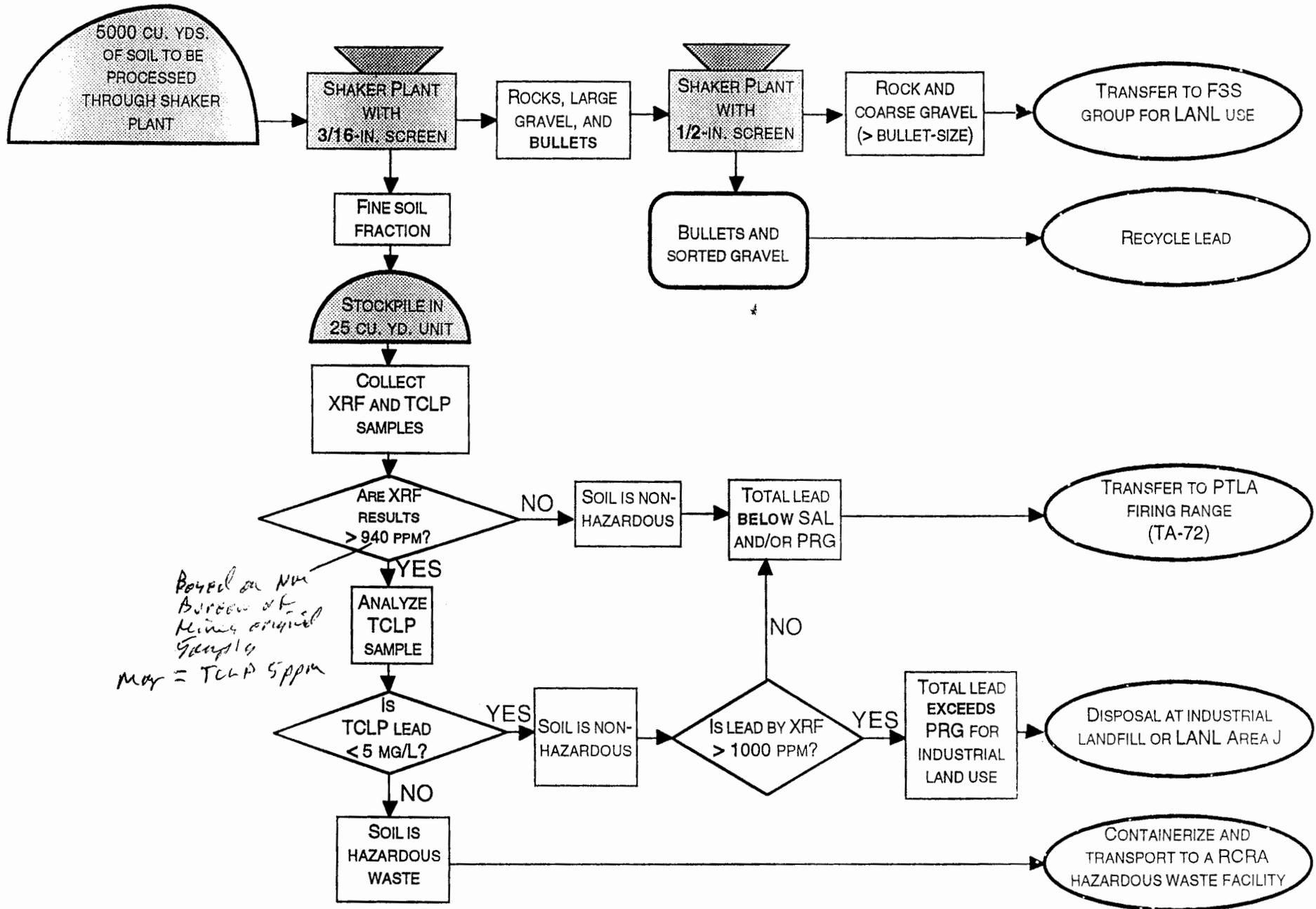
This correlation is highly significant.

**Summary of Results for  
PRS 0-016 "Back Area" Composite Samples  
that were Analyzed by XRF, ICP and TCLP**

<b>Sample ID</b>	<b>Location ID</b>	<b>Lead by XRF</b>	<b>Lead by ICP</b>	<b>Lead by TCLP</b>	<b>TCLP-XRF ratio</b>	<b>TCLP-ICP ratio</b>
AAA6677	00-1427	251	201	1.99	0.79%	0.99%
AAA6678	00-1428	80	84	0.0478	0.06%	0.06%
AAA6679	00-1429	988	867	0.869	0.09%	0.10%
AAA6680	00-1430	635	616	0.413	0.07%	0.07%
AAA6681	00-1431	849	365	3.00	0.35%	0.82%
Average					0.27%	0.41%

# SHAKER PLANT PROCESS

Inactive Firing Range, PRS 0-016



**Meeting with NMED, 3/15/96, 10:00 A.M.**  
**AGENDA for SWMU 0-016, VCA Plan**

- Introduction and Executive Overview - Bonnie Koch  
(5 minutes)
- Shaker Plant Design and Pilot Test - Carl Newton and  
Andy Crowder  
(5 minutes)
- VCA Plan, Section 3.2, Correlation and Use of Screening  
Instrument - Randy Ryti  
(10 minutes)
- Working Session - NMED VCA Plan Comments  
(35 minutes)
- Action Item Summary - Bonnie Koch  
(5 minutes)