

HEAVY PARTICLE CONCENTRATOR (HPC)

By: Bob Back



Overview

- ▣ Meeting with the Club
- ▣ Sampling
- ▣ Plan Location
- ▣ Running Material
- ▣ Selling Product
- ▣ Placement of Tails
- ▣ Recontouring of Berms and Shot Fields
- ▣ Rewards
- ▣ Liabilities

Introduction



Meeting with the Club

- ▣ Has it been cleaned before, and what were the results?
- ▣ Target counts (clubs usually keep track of targets shot)
- ▣ Has any farming been done on the property?
 - If yes, implement additional depth when sampling
- ▣ Possible permits required: Federal, State, County?
- ▣ Liability insurance requirements
- ▣ Settlement agreement

Sampling

- Walk the shot fall area
- Determine plan for sampling
- Sample

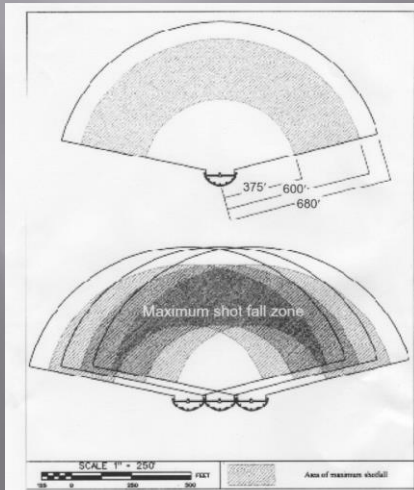


Figure 2-9. Theoretical shot fall zone and area of maximum shot fall at skeet fields. Single field shown at top; multiple adjacent fields shown at bottom (NSSF 1997).

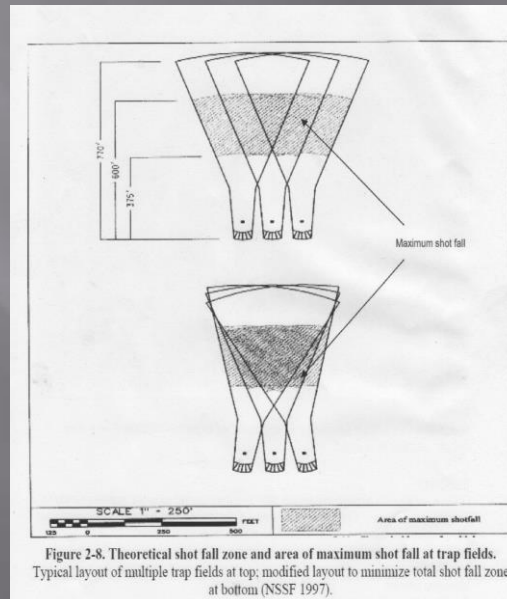


Figure 2-8. Theoretical shot fall zone and area of maximum shot fall at trap fields. Typical layout of multiple trap fields at top; modified layout to minimize total shot fall zone at bottom (NSSF 1997).

Plant Location

- ▣ Keep plant in contaminated shot fall zone
- ▣ Strip shot fall area
- ▣ Set plant as need for land application or pond use

Running of Material

- ▣ Screen material, get rid of vines, roots, large rocks, and sticks.
 - Get as close to product sizes as possible
- ▣ Product must be put into shippable container
 - Bag, or barrel



Selling of Product

- ▣ Shotgun shot normally weighs 2,900 to 3,000 lbs per 55 gal barrel. Bullets come in at 2,700 to 2,800
- ▣ Poly-Bags will hold 2,400 to 2,500 lbs of shotgun shots. I don't recommend poly bags for pistol or rifle bullets, because of the sharp edges.
- ▣ Brokers like 40,000 to 45,000 lbs per truck load.

Placement of Tails

- ▣ If a pond is used, clean silts from time to time, the silts and clays can be dried and put back in the contaminated zone. The circuit should include a sand screw, where the clean product can be put back into the contaminated area
- ▣ Land application, or no pond used.
 - Use natural terrain as much as possible
 - Control tail flows with the use of berms



Recontouring of Berms and Shot Fields

- ▣ Bullet Berms
 - Most bullet berms require removal, cleaning, and replacement
 - Berms must be put at an angle to reduce ricochet
- ▣ Shot Fields
 - Cleaned material should be contoured to the original terrain as much as possible
 - Seeded if that is part of the contract





Rewards

- ▣ Helping clubs establish a maintenance program to work along with the EPA for future generations to come.
- ▣ Remove 200K to 800K pounds of lead in various forms – How can that be bad?
- ▣ Financial gains for your company and the clubs as well

Liabilities

- ▣ Can be Huge!
- ▣ Please take time to properly sample, and understand the products you are going to create.
- ▣ Strictly stick with the approved plan.



Pictures Before Reclamation



Pictures After Reclamation



- ▣ Lead Remediation with EX TRAC-TEC HPC-30xp Video
 - http://www.youtube.com/watch?v=Z_vinnDpkNI

The End

Questions?