

**NATIONAL RIFLE ASSOCIATION OF AMERICA
RANGE TECHNICAL TEAM
RANGE DEPARTMENT
FIELD OPERATIONS DIVISION**

Final Report

Range Evaluation Report

Case #: PA-1722-11
Subject: Range Evaluation
Date: May 2, 2011

STATEMENT REGARDING INFORMATION IN THIS REPORT

Nothing in the information that follows should be considered "requirements" of the NRA. The informational items are "suggestions". The range operator may or may not choose to act upon any or all of these suggestions. It should not be interpreted by anyone that a failure on any part of the range operator to accept and/or implement any of the suggestions set forth herein as evidence of a "cavalier attitude" regarding health and/or safety. A range operator may otherwise be very safety and health conscious without having to resort to any or all of these suggestions.

Report prepared by
Joe Westfield
NRA Range Technical Team Advisor
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Signature

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Executive Summary

Opening Statement

Thanks so much for taking time on Saturday the 23rd of April, 2011 to meet with me at the West Goshen Township Police Firearms Range. Though the weather was frightful, it was much appreciated and most helpful to meet with you and to understand your concerns. Additionally, please thank Det. Darren Sedlak, Sgt. Michael Carroll, and Officer Rob Gilbert for also braving the weather to share their concerns. Their input was appreciated and needed.

Background

This range has been used by the Police Department for the last 20 plus years. It is not open to the general public.

The old range was nothing more than an earthen backstop of about 18' to 20' in height with no side berms or side walls.

Range was voluntarily closed in February of this year to review the safety issues and to implement range improvements. This action was taken because of complaints from local residents. Noise is the main issue,

but safety was also addressed by a few of the citizens. Their concern, was a 20 year old range design safe? No litigation is pending at the present time.

Observations

It is my understanding that you were the driving force behind the objective evaluation of the range from a safety viewpoint. The proposals to improve the range meet or exceed nationally recognized designs. Which include proposals for overhead baffles, side walls, increasing the height of the backstop and installing a bullet catcher.

I did not visit the range in its old configuration and was only able to evaluate current conditions and improvements of the range as of April 23, 2011.

RANGE CONDITIONS

The range is safe to use in its current configuration, based on the improvements made since February of this year. Additional fencing and sound abatement are also planned.

These improvements include:

OVERALL RANGE LAYOUT

The range will be enclosed with concrete sidewalls, height to the backstop will be increased to 30 feet, three (3) sets of overhead baffles will be installed and a horizontal bullet catcher will be placed at the top of the backstop. A stockade fence with sound abatement measures is to be constructed on the right side and extend from the side wall to the property line of the sewage facility. Recommend design be sent to an acoustical engineer to make a determination if design will work. (see Range_layout.pdf)

SIDE WALLS

Concrete blocks 3 foot thick by 3 foot high will be stacked and staggered the length of the range to a height of 9 feet on each side. Recommend the footing is down below the frost line or built according to local building codes. Footing must be constructed to support the weight of the wall without tipping over. (see Range_wall.pdf)

OVERHEAD BAFFLES

Top of baffle will be 12 feet high, with an 8 foot clear from the bottom of the baffle to the ground. Three baffles will be placed and supported by 4 foot by 4 foot posts, sandwiched with 2" x 6" boards, and then filled with an aggregate to prevent projectiles from leaving the range. Recommend you check with the building department to ensure that the baffle design meets or exceeds the design for the wind load in your area. Baffles should be tested with the same ammunition used on the range to ensure that projectiles will not penetrate. (see Range_Baffle.pdf)

HORIZONTAL BULLET CATCHER

The horizontal bullet catcher will constructed at the top of the 30 foot high backstop as an added safety factor. (see Range_Horiz_Bullet_Catcher .pdf)

Recommendations

Conclusion

The range is safe to use in its current configuration. However, no range can meet all safety requirements if it is not used in a manner for which it was designed. Safety is not a function of design alone, but rather one of proper range use and operational procedures. Should you decide to change the lines of fire or introduce training procedures recommend you reevaluate the range to make the determination if the range in its current configuration will allow you to conduct the new training exercises.

EXHIBIT A

Includes:

Range_layout.pdf
Range_wall.pdf
Range_Baffle.pdf
Range_Horiz_Bullet_Catcher .pdf