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LETTER AND COMMENTS FROM THE TEXAS COMMISSION FOR ENVIRONMENTAL
QUALITY REGARDING DRAFT SAMPLING AND ANALYSIS PLAN FOR SMALL ARMS
RANGES NAS CORPUS CHRISTI TX

08/28/2008
SIEGEL, C

Grim, Kenneth

From: Chris Siegel [CSiegel@tceq.state.tx.us]
Sent: Thursday, August 28, 2008 3:01 PM
To: dalton.shaughnessy@navy.mil; helen.lockard@navy.mil; Grim, Kenneth
Cc: Mayer.Richard@epa.gov
Subject: Draft Sampling And Analysis Plan
Attachments: TCEQ.andEPA.comments.nascc.SAP.small.arms.ranges.doc

Ms. Lockard,

Please see the attached comments for the Draft Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Small Arms Ranges, Naval Air Station Corpus Christi, Texas, May 2008. If you have any questions about these comments, please contact me at 512-239-2992 or reply to this email.

Chris Siegel

Christopher Siegel
Texas Commission on Environmental Quality
Environmental Cleanup Section II
Phone: (512) 239-2992
Fax: (512) 239-2346
Email: csiegel@tceq.state.tx.us

TCEQ Review Comments on the Draft Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Small Arms Ranges, Naval Air Station Corpus Christi, Texas, May 2008

1. Please ensure the procedures provided in TRRP are followed to determine if a groundwater investigation is necessary if the site inspection will be used to determine if no further action is needed. Adequate data and/or justification will be required to show contaminants have not and will not migrate to groundwater.
2. A visual sampling plan (VSP) software tool was used to determine number of soil samples assuming lead was the primary concern. More information will be needed to justify the use of this software for critical decisions (i.e. no further action determination). Also, TRRP requires a minimum number of eight samples for statistical methods.
3. Worksheet 15: It is noted the "Project Action Limits" are the lowest of TRRP residential PCLs (dated June 26, 2007), USEPA Region 6 residential human health media-specific screening levels (dated 2008), and USEPA ecological screening levels (several dates) or Texas Natural Resource Conservation Commission screening levels for sediment (dated 2001). Please note that on pages 3 and 4, the TRRP values for several chemicals are not accurate (reported low, usually by a decimal point).
4. Worksheet 17, page 3: Please clarify if up to 18 samples total, or per range, will be collected to determine soil properties. The procedure for sample "consolidation" and "separation" is not appropriate. Soil samples must be representative of site conditions and of total concentrations of chemical of concern (COC) in the media. This can be done either by not removing leads shot and clay shards from samples prior to analysis or to have them removed in such a way that the mass of the removed material can be added to the analytical results to calculate a true representative value. TCEQ requires total values of a particular COC be compared to media-specific concentrations (MSCs). Removing any mass in the field or by sieving in the laboratory does not produce total COC results and is not representative of what is left in place if no remedial action is performed.
5. For several of the ranges, please ensure consistency between the number of samples to be collected per the text and that shown on Figures 17-1 through 17-6, on subworksheets 11.1 through 11.6, on subworksheets 18.1 through 18.6, and on Worksheet 20.
6. Worksheet 17, page 5, Please clarify why the fan up to the installation boundary (green line) is not scheduled to be sampled.
7. It is unclear if any surface drainages dissect any of the ranges. If drainages exist, they should be investigated for impacts as lead shot and clay fragments would tend to concentrate in them.
8. Air Blast & Synchronized Gun Range: It does not appear the area of investigation is large enough for the types of munitions used. Page 59 of Appendix A states aircraft would fire towards a wooden target 1000 feet away (a backstop berm was located about 20 feet behind the target),

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yet per Figure 17-3 the berm is only 100 feet from the firing line. This may result in an incomplete investigation. Per page 63 of Appendix A, clay skeet fragments were identified within the range boundary (possibly from other ranges). As such, PAHs should be included in the analytical suite at this range.

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Mr. J. David ...
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EPA Review Comments on the Draft Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Small Arms Ranges, Naval Air Station Corpus Christi, Texas, May 2008

9. General Comment: The investigation also needs to take soil samples at the firing point/line locations for each range where explosive propellants were used. The samples need to be analyzed for the appropriate constituents. The U.S. Army Corps of Engineers did some sampling at small arms ranges around the U.S. and found the munitions constituents nitroglycerin (NG) and 2,4-DNT. The study found that NG was present at each firing range with the concentrations ranging into the hundreds of mg/kg.
10. General Comment: EPA recommends a multi-increment soil sample be collected at each firing point/line where munitions constituents (considered a hazardous substance/constituent) would have been used. In fact, each firing point should be considered a decision unit where a multi-increment sample would be taken from.
11. General Comment: The multi-increment soil samples should be taken within 10 meters of the firing line, except 20 meters for machine gun ranges. The Air Blast and Synchronized Gun Range may need to have samples taken at different distances.