

ENCLOSURE

EPA ISSUES AT CLOSED, TRANSFERRED, AND TRANSFERRING MILITARY RANGES

During the last several years an increasing number of issues have arisen relative to UXO, hazardous contaminants, and military range cleanup. The following represents a description of the major EPA issues or concerns along with installations where we have encountered these problems. This list should not be construed as exhaustive.

1) Range Assessment and Investigation

a) Range investigations often lack sufficient site-specific information. The Services and the USACE generally are not adhering to CERCLA standards and procedures for assessment and cleanup. The PA/SI, RI/FS, Removal, Remedial, and NOFA processes need to be equivalent to those specified under CERCLA and the NCP. [For example, at the Black Hills Army Depot the PA/SI did not meet the minimum requirements set by EPA for assessment. The RI/FS workplans and all associated documents were based upon this deficient PA/SI and were also determined not to meet EPA minimum requirements. Other sites with similar issues include Savanna Army Depot, Badlands Bombing Range, Lowry Bombing Range, Fort Ritchie, Fort Meade, and the Nansemond Ordnance Depot.]

b) There has been an increasing tendency for UXO investigations to use statistical grid sampling methods. Although statistical grid sampling may yield additional information, extrapolation of these results often lead to inappropriate decisions. The statistical grid sampling approach used by the USACE would only be appropriate if one expected a relatively uniform distribution of UXO, which is not the case at military ranges. EPA believes that in order to achieve protection of human health and the environment, UXO investigations should be based on a combination of information such as historical data (e.g., archives, photos, interviews), range use information, visual site inspections, previous detection surveys, previous Explosives and Ordnance Demolition (EOD) Unit response actions, and the resultant knowledge of impact zones and “hot spots.” [For example, at the Lowry Bombing Range the USACE proposed and attempted to use the statistical sampling and extrapolation methodology. The State of Colorado has recently indicated that those methods significantly underestimated the amount of ordnance present (inert or live). Other sites that have similar issues are Savanna Army Depot, Fort Ord, Fort Ritchie, and the Nansemond Army Depot.]

c) Military ranges generally are not designated by the Services or the USACE as areas of concern (AOC) even when the installation is listed on the Superfund National Priorities List (NPL). EPA believes all areas at closed, transferred, and transferring bases with

known or suspected UXO are areas of concern and need to be evaluated in the CERCLA and NCP context. More recently, the Services and the USACE have unilaterally excluded UXO areas from proposed CERCLA Records of Decisions (RODs) or from RODs being implemented where UXO was included in the remedy (e.g., NAF Adak, Umatilla Army Depot) . [At the Umatilla Army Depot, the Army has indicated that they will not address UXO as specified in the ROD. This decision is now in dispute resolution. At NAF Adak, the Navy has recently indicated that they do not wish to proceed with a ROD for a separate UXO operable unit. At Savanna Army Depot, the entire depot (approximately 21 square miles) was initially utilized as a firing range. Activities up to 1997 were not directed at UXO assessment and response, rather they were directed in large degree toward open burning and disposal grounds and non-explosive chemical contamination. Up to this time, UXO in potential firing areas was not included within the realm of the potential cleanup, therefore, most UXO prone or suspected areas were not considered areas of concern. In 1998, the Army tentatively agreed to evaluate several options for assessing areas known or suspected to be contaminated with UXO. The USACE has proposed to use Sitestats/Gridstats which EPA believes is a very problematic analytical method (see 1b above). Other facilities that have ranges with similar issues include, but are not limited to: Jefferson Proving Ground, Lowry Bombing Range, Badlands Bombing Range, Fort Meade, Camp Bonneville, Fort Ord, Aberdeen Proving Ground, Tobyhanna Army Depot, NAF Adak, and Fort Ritchie.]

d) EPA is encouraged by DoD's recent shift to address ranges through a "risk management" strategy focusing on both range assessment and remediation for UXO and other constituents. DoD needs to continue to develop and ultimately implement this approach through the USACE and the Services. However, despite this recent change in strategy, EPA has noted at a number of ranges the USACE continues to apply statistical sampling and risk assessment methods which often lead to premature "informed risk management decisions." Since the proposed Range Rule process is heavily dependent upon accurate "informed risk management decision making," DoD needs to ensure that this revised strategy develops accurate information, reduces short-term risks, and sets the stage to achieve long-term risk reduction goals. The current approach utilized by the USACE generally does not address these goals. [For example, at Fort Ritchie, the Army had proposed to surface clear and provide contractor support in UXO areas that have been proposed by the LRA to include a residential area. Based in large degree upon the statistical sampling, the Army wanted to perform only a surface clearance, even though the DDESB standards recommend much more conservative clearance for residential land use. It is important to note that in many areas where UXO clearance is not performed to the frost line or sufficient depth, additional UXO is likely to surface via frost heaving or erosional processes (i.e., mortars have been found to surface on a golf course). These and other UXO-related issues require the Army develop a long-term UXO remedial strategy for this area. Other ranges with similar circumstances include Savanna Army Depot, Lowry Bombing Range, Fort Meade, Nansmond Army Depot, Fort Ord, Jefferson Proving Ground, and Badlands Bombing Range.]

e) DoD is generally not applying the best available technologies to assess and remediate UXO. In most cases, there appears to be a standard approach to default to the traditional methods known as “mag and flag”. Yet, according to the USACE and others, application of these methods often results in more expensive, slower, and less accurate UXO detections than other demonstrated technologies. DoD needs to begin using better technologies earlier to achieve the most protective level of UXO cleanup, while continuing to examine the capabilities, uncertainties, and acceptabilities of the various detection approaches. [For example, at Fort Ritchie only surface clearance is proposed for areas known to be contaminated with UXO that will be used for residential and commercial purposes. When asked what measures would be used during excavation, the Army indicated they would only have personnel on-site with a magnetometer. At Badlands Bombing Range, the artillery impact area was surveyed using mag and flag but this location would have been suitable for using multiple towed array sensor methods that have yielded more reliable results at other similar locations at Badlands.]

f) In those cases where UXO investigations at ranges (or UXO sites) have been performed, the general approach has been to limit investigation to known ranges/ UXO sites only. Investigations should not be limited to within the “fenceline,” especially when information suggests that UXO problems are more extensive. [Although Aberdeen Proving Ground has agreed to perform additional clearance ¼ mile around the existing facility, no additional investigation is being performed off-site (e.g., especially in the adjacent rivers or in the Chesapeake Bay). Other sites with similar issues include the Badlands Bombing Range, Savanna Army Depot, Tooele Army Depot, Lowry Bombing Range, Jefferson Proving Ground, and NAF Adak.]

2) Non-Compliance with Regulatory Authorities

a) DDESB 6055.9 Standards for depth of clearance generally are not being followed. [For example, at Fort Ritchie a surface clearance is proposed for a residential area. DDESB 6055.9 Standards (Chapter 12) specifies that default depths of clearance to 10 feet should be used unless an alternative is justified and approved by the DDESB based on detailed site-specific information. As no detailed investigations have taken place over the range areas at Fort Ritchie, a default clearance depth of 10 feet should be used (unless bedrock is shallower). Please note that EPA views Chapter 12 as critical due to the nature of explosives safety issues. In addition, many other range situations have already been documented to have uncontrolled listed wastes (and/or hazardous substances) and may present an imminent and substantial endangerment to human health and the environment. Other ranges with similar problems include: Savanna Army Depot, Fort Meade, Fort Ord, Badlands Bombing Range, Lowry Bombing Range, Umatilla Army Depot, Camp Bonneville, Jefferson Proving Ground, Nansemond Ordnance Depot, Tooele Army Depot, and NAF Adak.]

b) Current EPA environmental regulations, including, but not limited to, RCRA and CERCLA, are applicable, but generally are not being followed. [This is particularly relevant to the depth of clearance of UXO. Many UXO-contaminated areas at closed, transferred, or transferring military ranges are: 1) not being investigated, or 2) when discovered, are not being addressed consistent with human health, environmental, or explosives safety regulations. These types of situations have been noted at many ranges including: Savanna Army Depot, Fort Meade, Fort Ord, Badlands Bombing Range, Lowry Bombing Range, Umatilla Army Depot, Camp Bonneville, Jefferson Proving Ground, Nansemond Ordnance Depot, Tooele Army Depot, and NAF Adak. Other information pertinent to this issue is presented in 1(a) above, and 4(a) below.]

3) Communication, Coordination and Dissemination of Information

Efforts by the Services and the USACE to communicate the scope, nature, and extent of UXO response activities have not always been successful. In some cases, there has been little or no effort. Regulators and the public need to be better informed during all stages of the efforts to address military ranges. The over-reliance on time-critical response actions also tends to reduce coordination with the regulators and other non-DoD parties. [For example, the regulators and the public have been discouraged by the USACE lack of cooperation at the Black Hills Army Depot. Adequate information and answers concerning investigations and cleanup activities have not been provided to these parties. At Fort Wingate there has been little or no public involvement concerning UXO issues. At BRAC RAB meetings only cursory information is presented on the USACE activities. Neither the State, Tribes, or the general public have received sufficient documentation on the USACE UXO activities at Fort Wingate that has both BRAC and FUDS properties. Another example is with the proposed transfer of property at Fort McClellan. The Army has been in the process of negotiating a transfer of UXO contaminated property with the U.S. Fish and Wildlife Service (USFWS). It appears that State and Federal regulatory agencies have not been contacted to participate in these negotiations. Similar situations have been noted at the Badlands Bombing Range, Lowry Bombing Range, Jefferson Proving Ground, Fort Ord, and Fort Ritchie.]

4) Remedy Selection and Implementation

a) EPA believes some range UXO detection/clearance operations may not be appropriate for CERCLA removal nor RCRA emergency situations. To further complicate matters is the Service/USACE preference to implement “CERCLA-like” accelerated actions. Some of these actions may not be consistent with CERCLA and the NCP and generally result in less regulator and public oversight/involvement. Using time-critical/emergency responses as the sole response paradigm should not be a default approach for the Services/USACE, especially for range problems that are well beyond the scope of such actions. [For example, at Fort Ord clearance was conducted for several years as a time-critical removal action. Similar circumstances are noted at Jefferson Proving Ground, Umatilla Army Depot, and Fort Meade.]

b) There is a general over-reliance on institutional controls as the principal remedy component or as the only remedy to ensure protectiveness. Where employed, the institutional controls may not be adequately defined, roles and responsibilities are left unclear and ultimately they may not prevent future incidents where UXO is encountered. The Services and the USACE are not always implementing adequate access controls (e.g., fencing, posting of guards, patrols, etc.) where needed. In addition, periodic inspections need to be performed at many locations where UXO has been identified, is suspected, or may have surfaced via erosion or frost heaving at previously cleared areas. [For example, at NAF Adak institutional controls are proposed for vast areas outside the town where UXO will generally not be cleared, nor has the area been adequately investigated despite DoD records indicating potentially extensive UXO contamination. This appears to be a problem because the recent reuse proposals to expand the town's uses are expected to lead to an increase in the population (primarily members of the Aleut Tribe, especially children). At Tobyhanna Army Depot, a 20,000 acre UXO area is now a State park where only signs were posted. The park was closed in 1997 when 53 unexploded 37 mm shells were found and a recent removal action has found significant additional UXO. Other examples of access problems have been noted at Camp Elliott (Tierrasanta), Camp Bonneville, Jefferson Proving Ground, Lowry Bombing Range, Badlands Bombing Range, Fort Ritchie, Fort Wingate, and Nansemond Army Depot.]

c) Effective regulatory and DoD oversight is an important aspect of remedy implementation. When it is not implemented, the risk of incidents increase. [For example, the UXO from the Fort Irwin cleanup was mistaken for clean scrap and transported to a scrap yard for recycling (in violation of RCRA – the UXO went to a non-permitted facility without manifest). An employee was killed when he attempted to cut live UXO with welding equipment. Other examples of where better oversight was needed include, Fort Ord, Jefferson Proving Ground, and Fort Meade where UXO contaminated areas were inappropriately slated for transfer.]

5) Transfer of UXO Contaminated Land

a) EPA believes DoD generally should retain ownership and/or control of UXO areas that are not yet assessed and/or cleaned up as determined by DoD, the appropriate regulatory agencies and the public (e.g., “permanently duded” impact areas; UXO burial sites; sites not yet scheduled to be remediated). Federal land management agencies generally want DoD to complete all environmental restoration prior to any transfer to them. Present land transfer practices by DoD indicate that UXO contaminated lands continue to be transferred. [At Fort McClellan the transfer of approximately 10,000 acres of UXO contaminated land has been proposed. The area has not been adequately assessed and UXO contamination not yet addressed. The proposed transfer is to the USFWS who do not appear to have sufficient resources to address UXO contamination of this magnitude. At Jefferson Proving

Ground, a portion of UXO contaminated property north of the firing line was proposed for transfer to the USFWS. The area was proposed to be used for recreational purposes, but it has not been thoroughly assessed and UXO not addressed. It has also been mentioned that the USFWS has since decided not to proceed with the transfer. At Nomans Land Island, although the fed-to-fed transfer has already taken place, DoD has a continuing obligation to address UXO safety issues there, as does the USFWS (i.e., to secure the property against trespassers, per the transfer agreement). Although the area is planned to be used as a wildlife refuge, it is known to be frequented by boating enthusiasts, and UXO safety issues remain because storm events and other processes (freeze/thaw) will continue to expose UXO in areas where only surface clearance has been performed. At Fort Wingate, two closed test ranges containing UXO are slated for transfer to the DOI. The land may then be re-developed for residential, commercial, open space, and subsistence farming/ranching uses. Much of these lands are proposed to be transferred to the DOI. Another example is the UXO contaminated areas transferred to the State at the Tobyhanna Army Depot.]

b) In some cases, the Services and the USACE have performed only a cursory investigation (see # 1). Based upon limited information, property has been and is being transferred. Rather than sufficiently assessing sites and making the property safe for use or transfer, the DoD and the Services appear to be transferring the land and then waiting for others to identify problems for DoD response. [For example, DoD is contacted periodically about newly found UXO at a number of transferred sites. This has been noted at the Aberdeen Proving Ground, Raritan Arsenal, Morgan Depot, White Sands Missile Range, Lowry Bombing Range, Badlands Bombing Range, Fort Ritchie, Tobyhanna Army Depot, Fort Ord, Fort Meade (i.e., Tipton Air Field), Jefferson Proving Ground, Raritan Arsenal, Morgan Depot, and at EPA private sites such as the Cohen Property Site in Massachusetts. Although the EOD units have a good response record, their responses tend to be limited to the newly found UXO, with generally no further investigation performed to determine the nature and extent of any additional UXO. This EOD “house call” type follow-up cannot substitute for adequate investigations.]