



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAR 08 2018

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE  
NOW THE  
OFFICE OF LAND AND  
EMERGENCY MANAGEMENT

Ms. Maureen Sullivan  
Deputy Assistant Secretary of Defense  
Environment, Safety and Occupational Health  
3400 Defense Pentagon  
Room 5C646  
Washington, D.C. 20301

Dear Deputy Assistant Secretary Sullivan,

The Environmental Protection Agency's (EPA) Office of Resource Conservation and Recovery is embarking on an effort to study the procedures that have been or are being used to remediate and/or clean close open burning and open detonation (OB/OD) units. We are requesting your assistance in obtaining relevant information on military sites.

Currently, the EPA has no national guidance on recommended procedures to assess, monitor, and clean up OB/OD sites, nor metrics to achieve clean closure of OB/OD units. This lack of standardized procedures may lead to more challenging and costly closures. Considering that more than 50% of the RCRA OB/OD units have been or are being cleaned up and closed, we feel this situation is ripe for gathering information to help inform the development of recommended procedures. In particular, we seek information on the procedures used to assess the extent of contamination, to clean up the contamination, and the criteria to determine clean closure has been achieved.

To this end, we are requesting your assistance to help locate records and plans associated with Department of Defense (DoD) OB/OD sites that are in the process of closing, or that have been closed. We are working with individual states and EPA Regions to obtain information available through RCRA permits. However, certain types of information are only located within DoD's Environmental offices, Base Realignment and Closure offices, Installation Management offices, and Army Corps of Engineers Headquarters or District offices. Thus, our primary purpose in contacting you is to request your assistance in identifying points of contact for the offices that maintain Remediation/Closure Work Plans, After-Action Reports, and any other documents containing relevant information.

We have developed an initial list (Attachment A) of 10 potential DoD sites in which we are interested. For this effort, we would like to assess the cleanup/closure of isolated OB/OD sites (rather than sites co-located with other sources of contamination – e.g., burials, ranges), or sites where the major cleanup effort is associated with contaminants from OB/OD. We would appreciate it if DoD

can help us to identify additional sites beyond the 10 we have listed. The specific information we seek to obtain from the plans and reports is included in Attachment A.

As mentioned previously, we anticipate the results of our project will be used to document and study the procedures, techniques, and criteria that have been used to assess, clean up, and close OB/OD units/sites. Our hope is that this will be a collaborative effort to gather and assess this information, and that DoD will share input as to which procedures work best. Our goal is to provide information that will enable future site closures to be conducted in a more efficient and standardized manner.

In addition to this OB/OD assistance request, I wanted to make you aware that in the next few months we will be reaching out to request a meeting with you and/or the appropriate contacts to discuss progress at DoD facilities towards the 2020 goals for RCRA Corrective Action (EPA Government Performance and Results Act Measures); and to promote cleanup at these facilities.

Should you have any questions or would like to discuss logistics for sharing information, feel free to contact me at [johnson.barnes@epa.gov](mailto:johnson.barnes@epa.gov) or at 703-308-8635, or have your staff contact Sasha Gerhard of my staff at [gerhard.sasha@epa.gov](mailto:gerhard.sasha@epa.gov) or at 703-879-8501.

Thank you in advance for your assistance.

Sincerely,

A handwritten signature in black ink that reads "Barnes Johnson". The signature is written in a cursive, flowing style.

Barnes Johnson, Director  
Office of Resource Conservation and Recovery

Enclosure

cc: Doug Maddox, Federal Facilities Restoration and Reuse Office

## Attachment A: OB/OD Closure Information Sought

1. Documentation of historical operations at the unit, e.g., types and amounts of wastes, frequency, and years of operations.
2. OB/OD site location maps, including information on other adjacent or on-site activities that would contribute similar contaminants (e.g., burials, ranges).
3. Procedures and techniques used to dismantle and remove components of the unit (e.g., any platforms, pans, pads, and liners), and disposition.
4. Procedures and techniques used to identify the 3-dimensional extent and character of any residuals and contaminants, including fallout (particulate, products of incomplete combustion), kick-out (UXO, fragments, explosive chunks), and contamination (including heavy metals, RDX, HMX, TNT, perchlorate and other explosives) in the soil, surface water, and ground water.
  - Such procedures and techniques could include: visual records during and after the OB/OD events, and wind records, to inform where fallout and debris/kick-out went (areas to be evaluated); geophysical efforts to identify anomalies and the extent and depth of UXO and metallic fragments/debris.
5. Sampling procedures used to identify the extent and depth of contamination in the unit and surrounding soils, including:
  - Visual; discrete, composite, and incremental soil sampling methods; grid, random, spokes, meandering way, line trenching, and other unit/soil sampling procedures; surface and core drilling samples.
6. Ground water sampling procedures.
7. Cleanup procedures and techniques used, including:
  - Intrusive anomaly resolutions; unit and contaminated soil excavation/trenching and sieving and other physical or chemical/biological treatment; confirmation sampling, i.e., how it was determined the extent of the unit/contamination was reached (in 3 dimensions); ground water counter-pumping and purging (pump and treat), and other methods used to clean up contaminated ground water.
8. Criteria/metrics used to determine clean closure was achieved for the intended future land use(s).
9. Closure to less than clean closure and basis (e.g., habitat management, recreational, industrial uses, land use controls/institutional controls in place; closure like a landfill).
10. Costs to achieve clean closed status: total cost to date to remediate the site, or total cost to achieve closed status.

To aid in identification of appropriate offices and points of contact, here is an initial list of 10 OB/OD sites we are currently researching. We anticipate adding more sites to our study, but have not yet identified them. Any suggestions for additional remediation/closure sites with such information would be appreciated, especially those uniquely OB/OD sites (i.e., those that are not co-located with other sources of contamination or where the major cleanup effort is associated with contaminants from OB/OD) that did an exemplary cleanup and achieved clean closure.

PUEBLO ARMY DEPOT  
FORT STEWART  
US ARMY GARRISON FORT KNOX  
IOWA ARMY AMMUNITION PLANT  
FORT WINGATE ARMY DEPOT  
SENECA ARMY DEPOT  
UMATILLA ARMY DEPOT  
SIERRA ARMY DEPOT  
RED RIVER ARMY DEPOT  
US ARMY GARRISON FORT BELVOIR