

03.01-01/17/96-00730

(804) 322-4778

5090
18222:RNS:clm

J 7 JAN 1996

U. S. Environmental Protection Agency
Region III
Attn: Mr. Robert G. Thomson, P.E.
Remedial Project Manager (3HW71)
VA/WV Superfund Federal Facilities Section
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Re: Response to Comments on the Draft Final Site
Screening Process (SSP) Report for Site Screening
Areas (SSAs) 2, 17, 18, and 19, Naval Weapons
Station Yorktown, Yorktown, Virginia

Dear Mr. Thomson:

The Navy is pleased to provide responses to comments for the
enclosed subject report.

If you have any questions concerning these responses to your
comments on the Draft Final SSP Report for SSAs 2, 17, 18, and
19, please contact Mr. Richard Stryker at (804) 322-4778.

Sincerely,

N. M. JOHNSON, P.E.
Head
Installation Restoration Section (North)
Environmental Programs Branch
Environmental Quality Division
By direction of the Commander

Enclosure

Copy to:
VDEQ (Mr. Steve Mihalko)
WPNSTA Yorktown (Mr. Jeff Harlow, Code 09E)
Baker Environmental, Inc. (Mr. Rich Hoff)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Office of Superfund
Robert Thomson, P.E.
Mail Code 3HW50

Direct Dial (215) 597-1110
FAX (215) 597-9890

Date: December 8, 1995

Mr. Richard Stryker
Atlantic Division, Naval Facilities Engineering Command
Environmental Quality Division
Code: 1822
Building N 26, Room 54
1510 Gilbert Street
Norfolk, Va 23511-2699

Re: Naval Weapons Station, Yorktown, Va.
Site-Screening Areas 2, 17, 18, and 19
Review of draft final *Site-Screening Progress Report*

Dear Mr. Stryker:

The U.S. Environmental Protection Agency (EPA) has reviewed the Navy's draft final *Site-Screening Progress Report* (SSP) for the investigation of Site-Screening Areas (SSAs) 2, 17, 18 and 19, located at the Naval Weapons Station-Yorktown (WPNSTA) NPL facility. Based upon that review, EPA has the following comments to offer on the draft final *Report*:

- 1) In accordance with Section 9.3(c)(1) of the Federal Facilities Agreement (FFA) for the Naval Weapons Station-Yorktown, Site Screening Process (SSP) Reports shall either (1) recommend a RI/FS for the SSA or (2) provide a basis that the SSA does not pose a threat or potential hazard to the environment, and be removed from further study. It is agreed that the current draft final *SSP Report* does not follow this specific SSP recommendation format as contained in the FFA, however the Navy is recommending an alternative format for the SSP Process for SSAs 2, 17, 18, and 19. Instead of recommending RI/FS activities for SSAs 2, 17, 18, and 19, the Navy suggests additional SSP activities that will be geared towards filling data gaps and/or performing non-time critical removal actions to mitigate potential risks to human health and the environment. As this deviation is a departure from the methodology listed in the FFA, EPA recommends that the Navy obtain the written consensus of the Parties to the FFA as to whether they agree to this change in the FFA procedure for evaluating SSAs. Once consensus is obtained from the Parties, the final *SSP Report* for SSAs 2, 17, 18, and 19 should document this departure from the FFA format. Additionally, there may need to be a change in the title of this final SSP Report to "*final Phase I SSP Report*" for SSAs 2, 17, 18, and 19. With regard to EPA's position on this departure from the SSP procedure set forth in the FFA, EPA concurs with the Navy's alternative suggestion.

In reviewing the draft final *SSP Report*, it is EPA's understanding that the following actions are recommended by the Navy to occur at SSAs 2, 17, 18 and 19:

- SSA 2 - No additional SSP efforts recommended
- SSA 17 - No additional SSP efforts recommended
- SSA 18 - Additional SSP efforts recommended
- SSA 19 - No additional SSP efforts recommended

2) Section 5 - Figures

Shouldn't the Figures in section 5 be re-titled "Contaminants of Concern" versus the current title of positive detections??

- 3) SSA 2 - EPA is awaiting independent sampling results performed at SSA 2 before concurring or nonconcurring with the recommendations of the draft final SSP Report. Additionally, pages 2-1/2-2 of the draft final SSP Report indicate that SSA 2 is a closed range. The range was closed because the operation of the site as a range was considered incompatible with the surrounding environment, i.e. concerns about the possibility of range operations causing forest fires in the wooded area bordering the Naval Weapons Station. In accordance with Section 8 of the FFA for the Naval Weapons Station-Yorktown, EPA must consider RCRA issues as well as CERCLA issues in concurring with selected remedies at NPL federal facilities. EPA believes the draft RCRA military munitions rule may apply to SSA 2 with respect to the possibility of "live" ordnance being present. The rule was published 11/8/95 under 60 FR 56468-95. Thus, any ordnance or ordnance fragments remaining at SSA 2 could be considered a solid waste under RCRA.

Also, the HI value for unfiltered groundwater at SSA 2 was 3.4. Does groundwater discharge to surface water at or near SSA 2?

- 4) SSA 17 - In accordance with Section 8 of the FFA for the Naval Weapons Station-Yorktown, EPA must consider RCRA issues as well as CERCLA issues in concurring with selected remedies at NPL federal facilities. The calculated HI value for groundwater at SSA 17 was 11 (Table 6-18). In order to provide for adequate protection for human health and the environment, EPA recommends that any final SSP Report for SSA 17 contain the requirement that the Base Master Plan for the Naval Weapons Station-Yorktown be modified to include language so as to restrict groundwater use at SSA 17 (40 CFR § 280.66). Additionally, is there the possibility that groundwater from SSA 17 discharges to surface water?

When issuing a final SSP Report for SSA 17, please include a copy of the final removal action report for SSA 17 as an Appendix. Only one copy of the SSA 17 final SSP Report needs this Appendix for the official file.

- 5) SSA 18 - Additional SSP investigations are recommended for SSA 18 by the Navy. EPA concurs with this recommendation.
- 7) SSA 19 - It is incorrect to state that SSA 19 poses a minimal risk to human health and the environment, given the data reported in the draft final SSP Report. The HI for unfiltered groundwater at SSA 19 is 34 along with an ILCR of 3.2×10^{-3} . Filtered groundwater presents an HI of 1.9, with dissolved antimony comprising 84% of the HI. More importantly, silver in surface water presented an EI of 260 at SSA 19. Of concern to EPA is that the silver detection in surface water at SSA 19 occurred at Pond 11A, which could discharge surface water off-base. In light of the sampling results presented, EPA is concerned over two pathways at SSA 19; (1) groundwater discharge to surface water, and (2) surface water leaving the Naval Weapons Station. Both concerns surround risk to the environment.

Additionally, in accordance with Section 8 of the FFA for the Naval Weapons Station-Yorktown, EPA must consider RCRA issues as well as CERCLA issues in concurring with selected remedies at NPL federal facilities. The EOD range is a RCRA Subpart X unit (40 CFR § 264.600, et al), and as such should be managed in such a way that minimizes any releases that may have adverse effects on human health or the environment. Periodic monitoring is required for RCRA subpart X units in order to determine if human health and the environment are being protected from releases from such units. Thus, while the EOD range itself can and should continue to operate at the Naval Weapons Station-Yorktown, it is important to monitor the environment around the EOD range to determine if contamination is migrating from the EOD range into the environment, i.e. into ponds, streams, and

other wetland areas. Given the analytical data and ecological risk calculations contained in the draft final SSP Report, it is evident that the environment immediately surrounding the EOD range has been impacted by range activities. COCs identified at SSA 19 include: antimony, benzo(a)pyrene, cadmium, chlordane, chromium, copper, fluoranthene, iron, lead, mercury, nickel, pyrene, selenium, silver, vanadium, and zinc.

Therefore, EPA recommends that the Navy develop a groundwater/surface water monitoring program to (1) satisfy 40 CFR 264.602; to (2) determine if there is a source(s) for the silver detected in surface water, i.e. is the detection a single event, or does it occur repeatedly; and to (3) determine if any contamination is leaving the Naval Weapons Station via groundwater/surface water. In addition, the ecological risk, i.e. EI of 260, needs to be addressed in the final SSP Report.

8) Appendix Title Sheets

Enclosed, please find Appendices A through E replacement title sheets that were forwarded to EPA along with replacement pages for the draft final SSP Report for SSAs 2, 17, 18, and 19. EPA is not certain if these replacement Appendix title sheets are correct or not, as they appear to contradict the contents of each Appendix. Please clarify.

This concludes EPA's comments on the review of the Navy's draft final *Site-Screening Progress Report* for the investigation of SSAs 2, 17, 18 and 19, located at the WPNSTA NPL facility. If you have any questions, please feel free to call me at (215) 597-1110,

Sincerely,



Robert Thomson, PE
Superfund Federal Facilities (3HW50)

cc: Jeff Harlow (WPNSTA, Code 09E32)
Stephen Mihalko (VDEQ, Richmond)
Andy Rola (BVWST, Phila.)
Bruce Rundell (USEPA, 3HW13)
Nancy Rios (USEPA, 3HW13)
Bob Davis (USEPA, 3HW13)
Chuck Rafkind (DOI-NPS, Yorktown)

**RESPONSE TO COMMENTS SUBMITTED BY US EPA
ON THE DRAFT FINAL SITE SCREENING PROCESS REPORT
SITE SCREENING AREAS 2, 17, 18, AND 19
NAVAL WEAPONS STATION YORKTOWN
YORKTOWN, VIRGINIA**

COMMENT LETTER DATED DECEMBER 8, 1995

- 1) The recommendations for SSAs 2, 17 and 19 follow the SSP recommendation format by providing a basis that each SSA does not pose a threat or potential hazard to the environment and can be removed from further study under the Installation Restoration Program.

In the case of SSA 18, the recommendation will be revised to propose a RI/FS for this SSA. In conjunction with this, the text will clearly state that the data generated during this investigation will be fully utilized in the upcoming RI/FS process. The RI may involve focused sampling and FS efforts. The results of this investigation will be used as the basis for developing Work Plans for future RI/FS activities at SSA 18.

- 2) The Final SSP Report submittal will be made in the form of replacement pages. Only pages of text and figures that change from the Draft Final to the Final versions will be submitted. Although "Contaminants of Concern" may more accurately describe the nature of the figures in Section 5, contaminants of concern are selected as part of the risk assessment section. Titling figures in Section 5 in this fashion may cause confusion when contaminants of potential concern (COPCs) are identified later in the report and figures are not all inclusive.
- 3) It is acknowledged that EPA is awaiting independent sampling results at SSA 2.

Although the Draft Final SSP Report describes SSA 2 as a "closed" range, this terminology may be misleading. SSA 2 is "closed" in the sense that ordnance destruction activities do not currently take place there. There has been no official "closure" of this range. Note also that SSA 2 is partially located within the borders of SSA 19, the active EOD range. The text will be revised to describe SSA 2 as an inactive ordnance destruction range.

The comment regarding the Draft RCRA military munitions rule (60 FR 56468-95) is noted. The munitions rule is still very much proposed, and therefore, would be inappropriate for use within this agreement, since we do not know what the final version will state. The preamble does, however, suggest that designation of waste ordnance on military ranges as solid waste is inappropriate, see, e.g., 60FR 56476-77. Additionally, the Draft Final Removal Action Closeout Report for SSA2 (prepared by OHM) incorrectly stated that 11 "live" pieces of ordnance were removed from SSA2. A recent conversation with the OHM-EOD specialist confirmed that OHM was not able to confirm the presence of high explosives in the ordnance items that they removed. The Final Closeout report for SSA 2 will refer to the ordnance items as "suspected-live". Additionally, the Navy EOD Officer-in Charge (OIC) at Yorktown stated that the ordnance items that were delivered to his detachment for disposal from SSA 2 were inert with the exception of a few (possibly two or three) fuses which still contained the booster and/or detonator. The preponderance

isolated discoveries of fuses are probably indicative of "kick-outs" as the result of former EOD operations and not as the result of widespread dumping. Over three dump-truck loads of metal was removed from SSA 2. Although not all of the magnetic anomalies were prosecuted it would be unreasonable to assume that "live-ordnance" remains at the site which would pose a current or future hazard to human health. A conference-call and/or site visit may clarify unanswered questions with SSA 2. The Navy maintains that no additional site related activities are warranted at SSA 2.

There is the potential for groundwater at SSA 2 to discharge to surface water, most likely Pond No. 11. Refer to Section 4.3.1 of the SSP Report.

- 4) Agreed. The Final SSP Report will contain the requirement that the Base Master Plan for WPNSTA Yorktown be modified to include language so as to restrict groundwater use at SSA 17.

There are no established surface water bodies in the immediate vicinity of SSA 17.

A copy of the final removal action report for SSA 17 will be included with the Final SSP Report as an appendix.

- 5) Comment acknowledged. Additional RI/FS activities will be proposed for SSA 18 in the Final SSP Report.
- 6) There is no Comment No. 6.
- 7) The ICR value for unfiltered groundwater exceeds USEPA's generally acceptable target risk range because of the presence of arsenic (4.8 µg/L). Arsenic concentrations in unfiltered SSA 19 groundwater fall below the MCL value of 50 µg/L. Furthermore, arsenic was not detected in filtered SSA 19 groundwater. Arsenic was also detected in 6 of 18 background wells. Unfiltered background groundwater samples exhibited concentrations of arsenic ranging from 3.5 µg/L to 36.4 µg/L; therefore, the presence of arsenic in SSA 19 groundwater is not considered to be SSA-related, but may be associated with naturally occurring station-wide conditions.

The HI value for unfiltered groundwater exceeds 1.0 because of the presence of antimony (14.3 µg/L) and arsenic which account for approximately 82 percent of the HI value of 34. Antimony is present in a background well at a concentration of 16.4 µg/L, suggesting that the presence of antimony in SSA 19 groundwater is attributable to the presence of suspended solids in the matrix.

The Ecological Index (EI) for surface water at SSA 19 has been re-evaluated. The EI presented in the Draft Final SSP Report was calculated in an overly conservative manner. It was assumed that silver had a high potential for bioaccumulation, and, according to BTAG guidance, the EI was multiplied by the modification factor of 10 (from 26 to 260). The assumption that silver has a high potential for bioaccumulation was based on the Biological Concentration Factor (BCF) presented for "silver and compounds" in the 1986 US EPA Quality Criteria for Water (US EPA 440/5-86-001). The BCF presented in this document is 3080. The BCF in the most recent US EPA Region III BTAG screening levels for silver is 150. Additionally, the BCF for silver published by US EPA Region IV is 0.5.

Based on this BCF data and the sporadic occurrence of silver in surface water at SSA 19, the EI will not be multiplied by 10 in the Final SSP Report. The EI will be 26, not 260.

The results of the SSP at SSA 19 have demonstrated that there is no source for the silver detected in surface water and that there is no evidence of contamination leaving SSA 19 via groundwater/surface water. This is based on the following information:

- Silver is not expected to be a constituent of ordnance that is destroyed during site operations at SSA 19.
- Silver was detected in only one of 13 surface water samples collected at SSA 19 (refer to Table 6-13).
- Silver was detected in both surface and subsurface soil samples at concentrations that fall within their respective background ranges (refer to Tables 6-10 and 6-11).
- Silver was not detected in either total or dissolved groundwater samples (refer to Table 6-12).

Based on the existing SSA 19 environmental data, there is no source of silver contamination at SSA 19. No further SSP activities, including monitoring, are proposed for this SSA.

- 8) Appendices were presented in a different order in the Draft Final. Appendix title sheets will be resubmitted to ensure that they match the contents of each appendix.