

IR Site Inspections – 3rd Quarter 2007

St. Juliens Creek Annex, Chesapeake, Virginia

PREPARED FOR: Tim Reisch/NAVFAV Mid-Atlantic
INSPECTIONS CONDUCTED BY: Adrienne Jones/CH2M HILL
DATE: October 9, 2007

Introduction

This technical memorandum summarizes the results of the inspections conducted at the active Installation Restoration (IR) sites at St. Juliens Creek Annex (SJCA) on September 27, 2007. The active IR sites include:

Site 2 – Waste Disposal Area B

Site 5 – Burning Grounds

Site 21 – Industrial Area

The following sections summarize the results of the inspections, identify the potential concerns observed, and provide recommendations for resolution by site. The site-specific inspection checklists are included as an attachment.

Site 2 – Waste Disposal Area B

At the time of the inspection, there were signs of intrusive activities, including vegetation removal and tire ruts, from the Triad Investigation conducted in April through June 2007. Vegetative re-growth was observed in those areas, and will continue to be monitored to ensure re-growth is successful.

No IDW or signs of dumping of chemicals were observed within the site or in the vicinity. However, concrete and wood debris, also observed during previous inspections, remain in the wooded areas of the site. A couch and two railroad ties, first noted during the first quarter 2007 inspection, were still present adjacent to the site, near the southeastern corner of previously demolished Building 130. The wooden pallet previously observed is no longer in use but remains on site, along with additional pallets used during the Triad Investigation. The pallets will be disposed of along with the IDW generated during the November 2007 Voluntary Groundwater Performance Monitoring at Site 4.

All of the Site 2 monitoring wells, including casings, bollards, and locks, were in good condition, with the exception of monitoring well SJS02-MW12S. The flanges for the flush-mount well casing of SJS02-MW12S are damaged, prohibiting bolts from functioning properly, and replacement will be considered in coordination with future site activities. The signs indicating the site boundary were in good condition.

Site 5 – Burning Grounds

At the time of the inspection, there were no signs of intrusive activities or dumping of chemicals, and no IDW storage was observed within the site or in the vicinity. A pallet and pile of soil were observed in the southwestern area of the site. These items have been observed at the site during previous site visits. All of the Site 5 monitoring wells, including casings, bollards, and locks, were in good condition. Furthermore, the signs indicating the site boundary were in good condition.

Site 21 – Industrial Area

At the time of the inspection, evidence of intrusive activities was observed within the site boundary. Two open excavations, also noted during previous site inspections, were present in the vicinity of former Building 201. The northern excavation (approximately 12' x 8' x 5'), noted during the first IR site inspections conducted during the second quarter 2005, and southern excavation (approximately 4' x 4' x 8'), first noted during the first quarter 2006 inspection, appeared to be in similar condition as during the previous inspection. Both excavations contained standing water. Facility Operations personnel have indicated that the excavations are a result of ongoing storm sewer line repairs and will be backfilled when repairs are complete. The extent of the northern excavation will not change, but the southern excavation will be extended approximately 20 feet west into the parking lot towards Building 1556 to repair the drop inlet and connected piping. The excavations are located in an area of potential groundwater contamination. The existing groundwater and storm water analytical data, and a comparison of the groundwater data to non-hazardous disposal criteria were provided to the NAVFAC Mid-Atlantic Remedial Project Manager (RPM). The RPM will coordinate with Facilities Operations as necessary through the remaining repair activities.

No signs of other intrusive activities, dumping of chemicals, or IDW storage were observed within the site or in the vicinity. Miscellaneous construction and wood debris was observed throughout the site, but is expected due to the industrial nature of the site. All of the Site 21 monitoring wells, including casings, bollards, and locks, were in good condition. Furthermore, the signs indicating the site boundary were in good condition.

Site 2 - Waste Disposal Area B

St. Juliens Creek Annex, Chesapeake, Virginia

Description: Site 2 is an unlined waste disposal area, covering approximately 5.7 acres, located at the corner of St. Juliens Drive and Cradock Street in the southwestern portion of the Annex. The waste disposal area began operating in 1921. Initially, refuse was burned onsite and was used to fill an adjacent swampy area. In 1942, an incinerator was installed and replaced the open burning practices. The waste disposal area was closed sometime after 1947. Garbage, acids, and waste ordnance were reportedly disposed of at Site 2. Site 2 also contains abrasive blast media (ABM) from ship overhaul and repair operations. In 1989, the site was used for storage of heavy equipment and machinery, including storage of tools, tires, and machinery in sheds and trailers. In the north, Site 2 encompasses the former Site 17, which consisted of a concrete storage pad located just outside Building 279. The building was used as a fork lift maintenance shop. Buildings 278/279 were demolished in 2003 and the concrete slab remains in-place.

Site 2 is currently a swampy area covered with brush, trees, and grass. A water body directly connected to St. Juliens Creek is located in the center of Site 2. This inlet from the creek is tidally influenced and drains surface water from adjoining land, including Site 2, into the creek. Construction debris (concrete and brick), as well as ABM, are visible at the site. There are signs posted around the perimeter of the site.

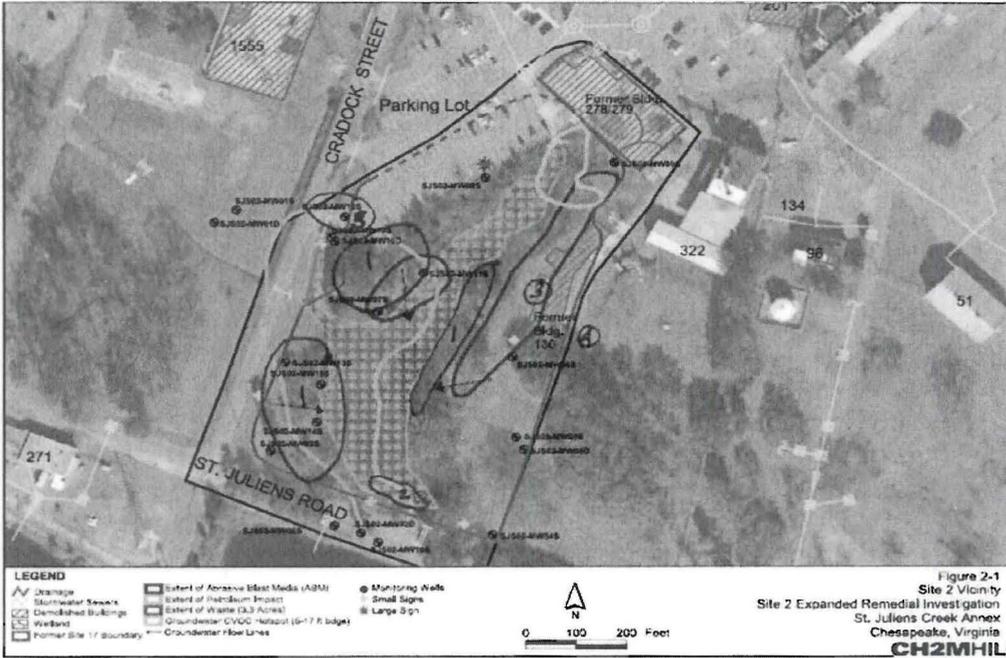


Figure 2-1
Site 2 Vicinity
Site 2 Expanded Remedial Investigation
St. Juliens Creek Annex
Chesapeake, Virginia
CH2MHILL

Comments: (Provide related question number for each comment)

- ① Five mts & vegetation removal evident from Triad Investigation activities - Question 1
(concrete & wood debris present - Question 3)
- ② Concrete present - Question 3
- ③ Wood pallets present - Question 3
- ④ Couch & 2 railroad ties discarded adjacent to site boundary - Question 3
- ⑤ MW12s needs new well flanges - Question 4

General Questionnaire

- 1 Is the area free of any indication of recent and/or current intrusive activities within the site boundary, as depicted on the figure, or in the immediate vicinity of the site? If no, mark location of intrusive activities on figure, note extent and purpose.
- 2 Is the area free of storage of any investigative derived waste (IDW) on site? If no, mark location of IDW on figure, note its condition in the comment section above, and notify activity coordinator. Indicate if IDW is properly labeled, per example below:
Investigative Derived Waste
Purge water from Site 2
January 28, 2007
Do not handle, analysis pending
Contact Tim Reisch, NAVFAC MID LANT, (757) 444-8890
- 3 Is the area free of identifiable concerns, such as, signs of dumping of chemicals or debris, with regards to this site? If no, annotate these concerns in the comments section above, mark location of concern on map, and notify activity coordinator.

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Site Specific Questionnaire

- 4 Are site monitoring wells, as depicted on the figure, in good condition and appear to be locked? (i.e. damaged protective posts and/or well head/casing). If no, describe condition of the deficient monitoring well(s), mark location of deficient monitoring well(s).
- 5 Are the signs, in good condition (letters visible, and standing upright)? If no, describe condition of the signs, mark location(s) on map, and notify activity coordinator.

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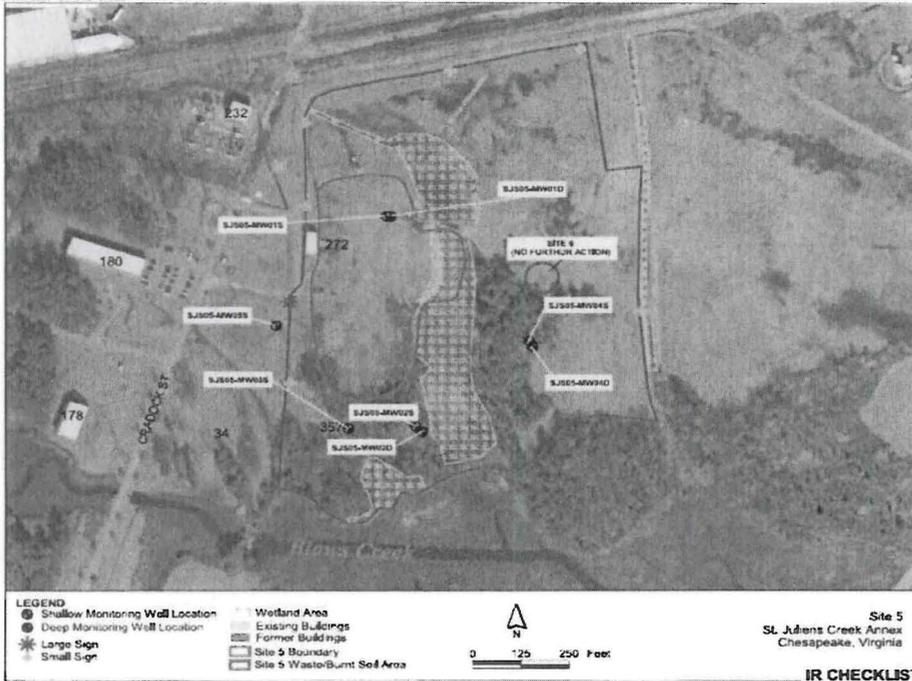
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Inspection performed by: (Print and sign) Adrienne Jones
Date: 9/27/07

Site 5 - Burning Grounds
St. Juliens Creek Annex, Chesapeake, Virginia

Description: Site 5 is the former Burning Grounds consisting of approximately 23 acres adjacent to Craddock Street in the northern portion of the Annex. The site is located on fill material that reportedly originated from the Southern Branch of the Elizabeth River. The exact start and closure dates of the Burning Grounds are unknown, although it reportedly operated between the 1930s and 1970s, during which time waste ordnance materials were disposed by open burning. In 1977, the ground surface at Site 5 was burned with straw, diced, and burned again in an effort to remediate the soil. Wastes disposed include ordnance materials such as black powder (mixture of charcoal, nitrate, and sulfur), smokeless powder (nitrocellulose), Explosive D (ammonium picrate), Composition A-3 (contains RDX and wax), tetryl, trinitrotoluene (TNT), and fuzes. Other wastes consisted of carbon tetrachloride, trichloroethene, paint sludge, pesticides, and various types of refuse. The amount of ordnance disposed of varied from year to year and there is insufficient information to calculate waste volume.

The site currently consists of an open field with the central portion overgrown with phragmites. A significant portion of the southwest area of the site is covered with a layer of gravel. Surface water at Site 5 drains either naturally or through unlined shallow man-made drainage ditches to tidally influenced Blows Creek, which eventually meets with the Southern Branch of the Elizabeth River. There are signs posted around the perimeter of the site.



Comments: (Provide related question number for each comment)

General Questionnaire

- | | Yes | No |
|---|-----|----|
| 1 Is the area free of any indication of recent and/or current intrusive activities within the site boundary, as depicted on the figure, or in the immediate vicinity of the site? If no, mark location of intrusive activities on figure, note extent and purpose. | X | |
| 2 Is the area free of storage of any investigative derived waste (IDW) on site? If no, mark location of IDW on figure, note its condition in the comment section below, and notify activity coordinator. Indicate if IDW is properly labeled, per example below:
Investigative Derived Waste
Purge water from Site 5
January 28, 2007
Do not handle, analysis pending
Contact Tim Reich, NAVFAC MID LANT, (757) 444-6890 | X | |
| 3 Is the area free of identifiable concerns, such as, signs of dumping of chemicals or debris, with regards to this site? If no, annotate these concerns in the comments section above, mark location of concern on map, and notify activity coordinator. | X | |

Site Specific Questionnaire

- | | | |
|--|---|--|
| 4 Are site monitoring wells, as depicted on the figure, in good condition and appear to be locked? (i.e. damaged protective posts and/or well head/casing) If no, describe condition of the deficient monitoring well(s), mark location of deficient monitoring well(s). | X | |
| 5 Are the signs, in good condition (letters visible, and standing upright)? If no, describe condition of the signs, mark location(s) on map, and notify activity coordinator. | X | |

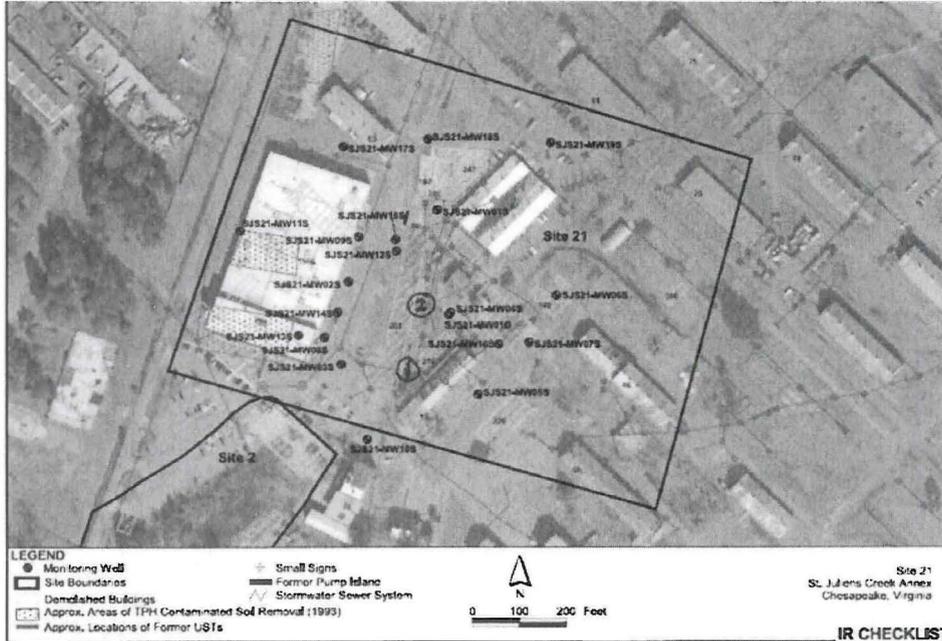
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Site 21 - Industrial Area

St. Juliens Creek Annex, Chesapeake, Virginia

Description: Site 21 is located in a former industrial area in the central portion of the annex. Buildings at Site 21 were historically used as machine, vehicle, and locomotive maintenance shops, electrical shops, and munitions loading facilities. Outdoor areas at Site 21 were used for equipment and chemical storage. Several of these buildings and/or their surrounding areas were designated as former IR sites. Additionally, a fuel service station was previously located just south of Building 187. The existing buildings and the Site 21 area are currently used for storage and maintenance activities. Building 1556 was constructed in 1992 and is currently used as the MARMC warehouse. Many of the older buildings at the site have been demolished. A storm sewer system runs through the site and drains to a downstream inlet (IR Site 2) to St. Juliens Creek.

The site currently consists of an industrial area, primarily asphalt-paved. Elevated concentrations of TCE are present in shallow groundwater and storm water in the Site 21 vicinity. There are signs posted around the perimeter of the unpaved areas of the site.



Comments: (Provide related question number for each comment)

- ① Storm sewer excavation: 5'x5'x 8', with standing water, appears abandoned - Question 1
- ② Storm sewer excavation: 12'x7'x 5', with standing water, appears abandoned - Question 1

General Questionnaire

- 1 Is the area free of any indication of recent and/or current intrusive activities within the site boundary, as depicted on the figure, or in the immediate vicinity of the site? If no, mark location of intrusive activities on figure, note extent and purpose.
- 2 Is the area free of storage of any investigative derived waste (IDW) on site? If no, mark location of IDW on figure, note its condition in the comment section above, and notify activity coordinator. Indicate if IDW is properly labeled, per example below:
Investigative Derived Waste
Purge water from Site 21
January 28, 2007
Do not handle, analysis pending
Contact Tim Reisch, NAVFAC MID LANT, (757) 444-6890
- 3 Is the area free of identifiable concerns, such as, signs of dumping of chemicals or debris, with regards to this site? If no, annotate these concerns in the comments section above, mark location of concern on map, and notify activity coordinator.

Yes	No
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