

IR Site Inspections – 2nd Quarter 2007

St. Juliens Creek Annex, Chesapeake, Virginia

PREPARED FOR: Agnes Sullivan/NAVFAC Mid-Atlantic
Tim Reisch/NAVFAV Mid-Atlantic

INSPECTIONS CONDUCTED BY: Adrienne Jones/CH2M HILL

DATE: June 20, 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 June 18, 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. The areas will be monitored to ensure that vegetative re-growth is successful.

IDW resulting from sampling activities at Sites 2 and 4, conducted in April through June 2007, was located on the site in the vicinity of former Building 130. The IDW was stored on secondary containment, properly labeled, and is pending analysis and disposal. No signs of dumping of chemicals were observed. 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 currently in use and will be disposed of along with the IDW.

The flanges for the flush-mount well casing of monitoring well SJS02-MW12S are damaged, prohibiting bolts from functioning properly, and replacement will be considered in coordination with future site activities. The damage does not pose an immediate threat to the integrity of the well. Monitoring wells SJS02-MW05D, MW14S, MW15S, and MW16S were without locks at the time of the inspection, although new locks were been placed at

each of the wells on June 20, 2007. 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 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.

The steel drums observed in the parking lot east of Building 47 during the previous inspection have been removed from the site. Miscellaneous construction and wood debris was observed throughout the site, but is expected due to the industrial nature of the site.

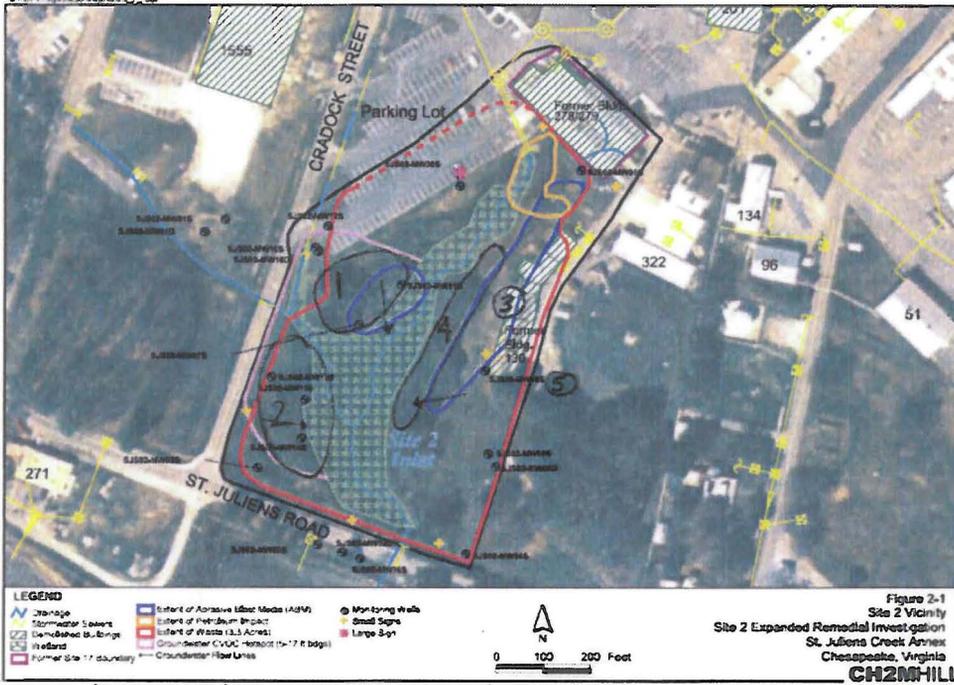
All site monitoring wells were in good condition. Furthermore, the signs indicating the site boundary were in good condition. Based on the RPM's request, sign patches were applied to cover up the phrase "No Access Allowed" on the site signs.

Site 2 - Waste Disposal Area B

St. Juliens Creek Annex, Chesapeake, Virginia

Description: Site 2 is an unlined waste disposal area, covering approximately 4.4 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.



- ① Soil borings & tire ruts evident from Triad Investigation activities - Question 1. Concrete & wood debris - Question 3.
- ② Soil borings & tire ruts evident from Triad Investigation activities - Question 1. Concrete & wood debris - Question 3.
- ③ IDW staging area: Drums staged on secondary containment area & properly labeled - Question 2.
- ④ Soil borings & tire ruts evident from Triad Investigation activities - Question 1. Concrete & wood debris - Question 3.
- ⑤ Concrete & wood debris - Question 3.
- ⑥ RWIS, HWIS, MWIS, & MWSP need new locks. MWIS needs new well flanges.

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.

| | |
|--------------------------|-------------------------------------|
| Yes | No |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- 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:

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

Investigative Derived Waste
Purge water from Site 2
January 28, 2003
Do not handle, analysis pending
Contact Agnes Sullivan, NAVFAC MID LANT, (757) 444-4120
- 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"/> |

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).

| | |
|--------------------------|-------------------------------------|
| Yes | No |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- 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.

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

Inspection performed by: (Print and sign) Alicia Jones
 Date: 6/18/07

Site 5 - Burning Grounds

St. Juliens Creek Annex, Chesapeake, Virginia

Description: Site 5 is the former Burning Grounds consisting of approximately 21 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

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.

| Yes | No |
|-----|----|
| 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:

| Yes | No |
|-----|----|
| X | |

Investigative Derived Waste
 Puige water from Site 5
 January 28, 2003
 Do not handle, analysis pending
 Contact Agnes Sullivan, NAVFAC MID LANT, (757) 444-4120

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 |
|-----|----|
| 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).

| Yes | No |
|-----|----|
| 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 activiv coordinator.

| Yes | No |
|-----|----|
| X | |

Inspection performed by: (Print and sign) Adrienne Jones Adrienne Jones

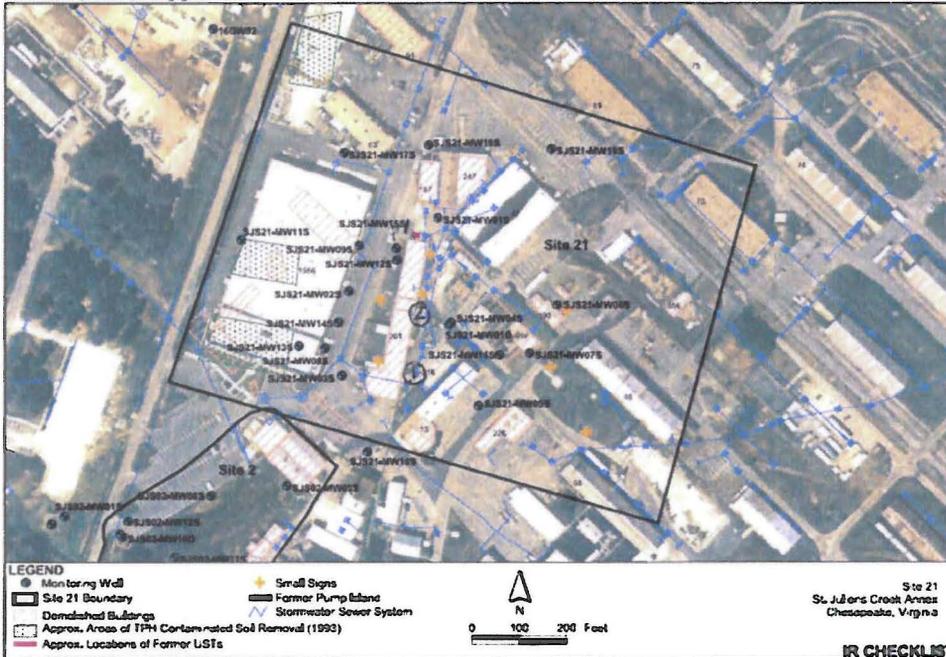
Date: 10/18/07

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'x8', with standing water, appears abandoned - Question 1.
- ② Storm sewer excavation: 12'x7'x5', 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, 2003
Do not handle, analysis pending
Contact Agnes Sullivan, NAVFAC MID LANT, (757) 444-4120
- 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 |
|-----|----|
| | X |

| | |
|---|--|
| X | |
|---|--|

| | |
|---|--|
| 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)
- 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 | |
|---|--|

| | |
|---|--|
| X | |
|---|--|

Inspection performed by: (Print and sign) Adrienne Jones Adrienne Jones
 Date: 6/18/07