

PRIVILEGED AND CONFIDENTIAL

Final

HISTORICAL OPERATIONS SUMMARY

FORMER LEE FIELD NAVAL AIR STATION

GREEN COVE SPRINGS, FLORIDA

PHR PROJECT: ITC.71/783147

PREPARED FOR:

IT CORPORATION
312 DIRECTORS DRIVE
KNOXVILLE, TN 37923-4799

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Executive Summary

The U.S. Navy operated Lee Field from 1940 to 1963. Industrial activities occurred on the base that may have contaminated the environment with petroleum products, solvents, PCBs, and other chemicals and hazardous materials.

From 1940 through 1943, Lee Field was a Naval Auxiliary Air Facility to the Naval Air Station at Jacksonville. In 1943, Lee Field was re-commissioned as Naval Auxiliary Air Station, Green Cove Springs. From 1940 through 1945, Lee Field was used to train aviators. Upon its re-commissioning in 1945 as a Naval Station, the Navy used the property to berth inactive vessels.

In 1963, acting through the General Services Administration, the U.S. Navy sold Lee Field to the city of Green Cove Springs, Florida. In 1965, Green Cove Springs sold the land to J. Louis Reynolds who later transferred the property to Clay County Port, Inc., DBA Reynolds Industrial Park (Reynolds). Reynolds continues to operate an industrial park, leasing out buildings from the original Lee Field and on the pier.

Introduction

The IT Group's Knoxville, Tennessee, office (IT) requested that PHR Environmental Consultants, Inc. (PHR) conduct historical research in support of IT's contract with the U.S. Army Corps of Engineers' Jacksonville District to provide remediation services at the former Lee Field.

The goal of this research was to provide documentary evidence of past and current industrial operations at the site that may have contributed to site contamination or may have impacted the site by the use, storage or disposal of hazardous materials. Records were reviewed for information, such as facility plans, inspection reports, photographs, correspondence and documents relating to:

- Building construction and modification relating to activities concerning chemical storage, hazardous material storage, chemical and hazardous waste use, and waste disposal;
- Chemical use, hazardous material use, and storage areas, inventories, and known releases at the base;
- Disposal practices and disposal areas on and off the base;
- People that might have knowledge of, or information about, the use, storage, or disposal of chemicals or hazardous material.

Sources and Research

PHR conducted research at the agencies and sources listed below for site-specific information relating to industrial activities that may have resulted in contamination at the former Lee Field, Green Cove Springs, Florida.

Washington, D.C. Area

National Archives and Records Administration, College Park, MD.
Maps, Photographs, and Navy and Agency Records
National Archives and Records Administration, Washington, D.C.
Navy Records
Naval Aviation History Office, Washington, D.C.
Naval Aviation Histories
Naval Historical Foundation, Washington, D.C.
Naval Command Histories

Atlanta, Georgia

National Archives and Records Administration, Regional Branch
6th and 7th Naval District Records; Naval Operational Training Records

Green Cove Springs, Florida

Clay County Museum
Historic Records and Photographs
Clay County Property Appraiser
Aerial Photographs
Green Cove Springs Public Works Department
Maps and Site Plans
Reynolds Industrial Park
Historic Records, Maps and Site Plans
Ted McGowan
Interview by Valery Garrett, April 2000
John Brown
Interview by Valery Garrett, April 2000
William Enos
Interview by Valery Garrett, April 2000
J. Paul Phillips
Interview by Valery Garrett, April 2000
World War II Information

Jacksonville, Florida

Jacksonville Naval Air Station
Historic Records and Photographs

Orange Park, Florida

Orange Park Library
Reference Materials

In addition to the above repositories and agencies, written and verbal requests for information related to various buildings and areas within the site were submitted to and documents or photographs were obtained from the following agencies:

Tallahassee, Florida

Department of Transportation
Aerial Photographs

Charleston, South Carolina

Naval Facilities Engineering Command, 6th Naval District
Historic Documents

Silver Spring, Maryland

National Oceanic and Atmospheric Administration
Map

PHR Staff

Dr. Valery Garrett, Manager, Government Research Projects, coordinated the research, conducted and supervised archival and field research, and wrote the draft report. Dr. Betsy Mendelsohn, Research Associate, conducted archival research. A.J. Gravel, Director of East Coast Operations and Dr. Greg Alcorn, Senior Research Associate, provided project oversight and quality assurance.

Limitations

The professional opinions presented herein apply to information acquired and on hand at the time of the investigation. This document was prepared for the sole use of The IT Group and the U.S. Army Corps of Engineers, Jacksonville District. PHR intends that this document be used only in its entirety. Others who draw conclusions based on information drawn from portions of this report should independently determine the adequacy of the information for their use.

The findings and recommendations included in this report reflect PHR's opinion based on the sources cited only, and should not be construed as legal opinions. Unless otherwise noted, these sources are believed, but are not guaranteed, to be reliable. PHR is not responsible for information withheld by agencies, client, or other sources.

Site Operations History

Lee Field, 1939-1945

In May 1939, the U.S. Naval Bureau of Aeronautics surveyed a graded plot of land approximately one mile south of Green Cove Springs, Florida and “fifteen miles almost due south of the Main Station, NAS, Jacksonville” [Exhibit 1] for its possible use as an outlying field of the Jacksonville Naval Air Station. The land was adjacent to the two-mile wide St. John’s River.¹ The city of Green Cove Springs, its population approximately 1,800,² used the property as a civilian landing field although it reportedly received little use. The Navy acquired the property through condemnation suits commencing in June 1940.³

On 4 November 1940, the U.S. Navy obtained title to 1,059.6 acres, known as the “original field.” On 10 July 1941, the Navy acquired title to an additional 18.87 acres, connecting the field to the Atlantic Coast Line railroad. On 23 August 1943, the Navy gained title to an additional 314.6 acres, resulting in a total of, according to one history, “1,116 acres of hard land and 277 acres of marsh, or swampland.” [Exhibits 2 and 3]

Construction began 15 August 1940.⁴ The original facility consisted of four 5,000-foot by 244-foot runways, and sixteen buildings, including two high explosive magazines, a small arms magazine, a landplane hangar with control tower, a station maintenance building, a utility building, a storehouse, and a power plant.⁵ In addition to the buildings, the construction contract specified funds for a Gasoline Storage and Distribution System.⁶ On 12 March 1941, the field was completed and dedicated as Benjamin Lee II Field, named after an aviator killed during World War I.⁷ Initially, the base was designated a Naval Auxiliary Air Facility (NAAF) to the Jacksonville Naval Air Station⁸ and its function was “to conduct flight training for student naval aviators.” Two squadrons were assigned to the field and flight operations began on 17 March 1941. According to a base history, the training program expanded and that expansion “required almost continual building and revision of facilities.”⁹ In 1943, the NAAF was re-

¹“History of NAAS, Green Cove Springs, 3 April 1939 - 7 October 1944,” pp. I, 71, Naval Aviation History Office, Washington, D.C. [NAH].

²“Excerpt from NAS, Jacksonville, Fla. Newsletter, 29 November 1940” in “History,” Page 2 – Appendix.

³“History,” pp. I, 72.

⁴“History,” p. I.

⁵R.N. Hunter to The Executive Officer, 10 October 1941 in “History,” Page 41 – Appendix.

⁶“Estimate of Cost, Naval Aviation Shore Facilities, Jacksonville, Florida, Contract NOy-4132, Revised Oct. 10, 1940” p. 2, National Archives and Records Administration, College Park, MD [NARA-CP], RG 71 Contract Correspondence, 1926-1942, Box 674, Folder NOY 4132, vol. 2.

⁷“History,” p. II.

⁸Hunter.

⁹“History,” pp. II, IV.

designated an U.S. Naval Auxiliary Air Station (NAAS) under the Operational Training Command.¹⁰

Originally planned as a small outlying field, the needs of the semi-independent NAAS quickly outgrew the original buildings. By October 1941, it was reported that more buildings were under construction, including a second landplane hangar, three officers quarters, and twenty-five enlisted men's housing units. Other facilities were reported as "strained" or, in the case of the landing field, "crowded both for parking and service space and for actual flight operations."¹¹

U.S. Naval Station, Green Cove Springs, 1945-1962

On 15 December 1945, the Navy disestablished Lee Field as a NAAS and immediately reestablished it as U.S. Naval Station (NS), Green Cove Springs.¹² Its new mission was the "accommodation of vessels of the inactive fleet."¹³ The runways were transferred to Jacksonville NAS "as an outlying field for limited training operations." The Commander of the Florida Group, Atlantic Reserve Fleet administered the inactive fleet while the Commander of the Sixth Naval District supervised the Naval Station which provided logistic support to the Reserve Fleet.¹⁴

The Navy acquired 20.34 acres of filled in lands and 91.10 acres of submerged lands for the fleet berthing. [Exhibit 3].¹⁵ Pilings for eleven permanent piers were driven in July 1946. Four months later, the first four piers were completed. By the end of December 1946, the Navy had moved 161 ships from their midstream moorings to their permanent berth. On 14 April 1947, the last of the moored ships were moved into permanent berths. At that time, the piers were complete except for power and water services.¹⁶

After being berthed, the "mothballing" process began, preserving the ships for future use. Reportedly as many as six hundred vessels were berthed at the piers.¹⁷ One newspaper article paraphrased officers as saying the fleet "probably represented the

¹⁰ *Ibid.*, p. 1-Z.

¹¹ Hunter.

¹² "Aviation Planning Directive 111-NN-45," 23 October 1945, NARA-CP, RG 72, Entry 62, Box 3390 Folder NA29 1945.

¹³ "Narrative of United States Naval Station, Green Cove Springs, Florida, 15 December 1945 through 30 September 1946," p. 349, Naval Historical Foundation, Washington, D.C. [NHF].

¹⁴ "Aviation Planning Directive."

¹⁵ Acquisition Data, Civil No. 1416-J, 27 May 1948.

¹⁶ "Narrative"; "Quarterly Summary of the United States Naval Station, Green Cove Springs, Florida, 1 October 1946 – 1 April 1947," p. 256 NHF; and "Quarterly Summary of the United States Naval Station, Green Cove Springs, Florida, 1 April 1947 – 1 July 1947," p. 235, NHF.

¹⁷ James Forrestal to Senator Walsh, 27 February 1946, NARA-CP, RG 38, General Correspondence, July 1945-June 1946, Box 1179, Folder NS 27 to NS 28/N1-12.

largest collection of ships at one place in naval history.” It was reported that in the early 1950s, the Florida Group recommissioned over 175 ships for the Korean War.¹⁸

As early as 1955, the Navy began exploring the possible disposal of various portions of excess property in Green Cove Springs.¹⁹ At that time, the Jacksonville Naval Air Station still used Lee Field as an outlying field, finding it “useful as a standby facility for Field Carrier Landing Practice.”²⁰ The pier area and most of the property on the south side of State Highway 16 were used by the Florida Group²¹ while the Bureau of Naval Weapons had some “management control” of a “portion of Benjamin Lee Field.”²² In preparation for declaring all of the Navy-owned property excess in Green Cove Springs, the Chief of Naval Operations disestablished the Naval Station effective 31 December 1959 and on 1 January 1960 transferred all Station “functions and properties” to the Florida Group, Atlantic Reserve Fleet.²³ The target date for disestablishing the Florida Group was 30 June 1962.²⁴

Post-Naval Facility, 1963-2000

On 17 September 1963, the U.S. General Services Administration sold the former Lee Field and “improvements thereon” to the City of Green Cove Springs. The Quitclaim Deed specified that “Airport traffic shall not exceed 150 landings/takeoffs per any one month.”²⁵

¹⁸“Huge GCS ‘Mothball Fleet’ Had Start In 1941 Air Station,” The Clay County Crescent, 15 May 1958, REYNOLDS; Hank Drane, “‘Gray Ghost’ Fleet Gone at Last,” Times-Union, [1962] REYNOLDS.

¹⁹Chief of Naval Operations to Commanding Officer, U.S. Naval Station, Green Cove Springs, Florida, Subj: Retention of Real Property, 28 December 1955, NARA-CP, RG 72, Records Relating to Inactive Air Stations (“Real Estate Files”), 1943-1959, Box 6, Folder Green Cove Springs, Benjamin Lee Field, Florida.

²⁰Chief, Bureau of Aeronautics to Chief of Naval Operations, Subj: Real Property declared excess to U.S. Naval Station, Green Cove Springs, Florida, retention of, 13 February 1956, NARA-CP, RG 72, Inactive Stations, Box 6, Folder Green Cove Springs.

²¹Commandant, Sixth Naval District to Commander, Naval Air Bases, Sixth Naval District, U.S. Naval Air Station, Jacksonville, Florida, Subj: Proposed disposal of Benjamin Lee Field, Green Cove Springs, Florida (U), 18 January 1960, NARA-CP, RG 72, Inactive Stations, Box 6, Folder Green Cove Springs.

²²Commander Florida Group, Atlantic Reserve Fleet, Green Cove Springs, Florida to Commander Naval Air Bases, Sixth Naval District, Subj: Disposition of property excess to the requirements of Commander Florida Group, Atlantic Reserve Fleet, Green Cove Springs, Florida (U), 26 April 1960, NARA-CP, RG 72, Inactive Stations, Box 6, Folder Green Cove Springs.

²³Commander, Naval Air Base, 6ND, NAS, Jacksonville 12, Florida to Commander Florida Group, Atlantic Reserve Fleet, Green Cove Springs, Florida, 25 January 1960, NARA-CP, RG 72, Inactive Stations, Box 6, Folder Green Cove Springs.

²⁴J. Henry Etter, Capt. CEC USN to General Services Administration, 14 November 1961, NARA-CP, RG 72, Inactive Stations, Box 6, Folder Green Cove Springs.

²⁵“Quitclaim Deed,” 17 September 1963, Clay County Port, Inc./Reynolds Industrial Park [REYNOLDS].

On 6 July 1965, the City of Green Cove Springs sold the property to J. Louis Reynolds and assigned several leases to the new owner. Those leases included thirteen residential units as well as the following commercial enterprises: Marine Manufacturing Corporation, Climate Conditioning Company, Southern Motor and Supply Company, Green Cove Springs Yard Company, and Troy Lumber Company.²⁶

According to one newspaper report referring to the early 1980s, there were a few tenants at the industrial park, “but what was visible from the highway was a rather depressing sign of deteriorating frame barracks buildings (circa the early 1940’s), abandoned housing projects, rusting Quonset huts, a defunct power plant, two hangars, overgrown lots and 12 empty piers.”²⁷ Conditions at the industrial park soon began to change. In 1981, J. Louis Reynolds transferred the property to Clay County Port, Inc, a corporation that continues doing business as Reynolds Industrial Park (Reynolds).²⁸ On 21 August 1984, Reynolds agreed to allow Green Cove Springs to annex its industrial park and port, bringing the private property within city limits.²⁹ With city assistance of upgraded and expanded water, sewage, and electric services, the industrial park began to grow. Reynolds promoted its services as “Light/Heavy Industrial, Manufacturing and Warehousing,” claiming 1500 acres of “prime industrial property,” four 5,000 foot runways, six miles of an in-plant railroad and an inland fresh water port with twelve 1,800 foot concrete piers. In addition to leasing out Navy-era buildings, Reynolds constructed approximately twenty-five additional structures since 1978 and demolished many older buildings.³⁰ [Exhibit 4]

²⁶Contract for Sale between The City of Green Cove Springs, Florida and J. Louis Reynolds, 6 July 1965; and Assignment of Leases between The City of Green Cove Springs, Florida and J. Louis Reynolds, 7 September 1965, REYNOLDS.

²⁷Elaine Williamson, “Clay County Port, Inc. offers land space, rail, water, and air services,” The Clay County Crescent, 19 September 1991, REYNOLDS.

²⁸Excerpt of Draft “Attorney-Client Communication,” page 5, REYNOLDS.

²⁹Annexation Agreement between the City of Green Cove Springs and Clay County Port, Inc., a Virginia corporation, d/b/a Reynolds Industrial Park, 21 August 1984, REYNOLDS.

³⁰Ibid.; Advertisement in Clay Today Progress ’87, 29 April 1987, REYNOLDS; Clay County Port, Inc. “Building Address List,” 26 July 1999, REYNOLDS.

Potential Contamination of Sites and Facilities

Documentary evidence collected indicates that the following areas and facilities, built and used by the Navy, were involved in the use, storage or disposal of chemicals or other hazardous materials and may have caused or been impacted by contamination.

Fuel Storage and Distribution

Aviation Fuel

An October 1941 facility description noted a fuel system consisting of eight 25,000-gallon underground storage tanks (USTs) that delivered two octane gradings of gasoline to twenty service pits at the warming-up platform.³¹ [Exhibits 5 & 6] The USTs were located southwest of Linderman Avenue and Fowler Street (now Reynolds Boulevard and Roland Avenue) and later shown on base maps as Buildings 336-343. [Exhibits 7 & 8] A 1959 Index of Structures listed Tanks 336 and 337 as gasoline storage, and Tanks 338 through 343 as inactive. The 1961 Index of Structures listed all eleven tanks as “A/C ready Fuel Storage.” [Exhibits 9 & 10]

Drawings depict three earth-covered aboveground storage tanks (ASTs) with 250,000-, 100,000- and 50,000- gallon capacities, located south of the USTs. [Exhibits 11 & 12] Completed in 1943,³² the new tanks were listed on indices and maps by 1956 as Buildings 290, 291, and 292. [Exhibit 13] A 1958 Index of Structures reported the following uses: Tank 290 (250,000 gallons) “Contaminated Marine Diesel Oil Storage”; Tank 291 (100,000 gallons) “Inactive”; and Tank 292 (50,000 gallons) “Diesel Oil Storage.” [Exhibit 14]

One map showing the ASTs also depicted a pump house, a fence surrounding the tank farm, a “disposal pit” located at the southeast corner of the fence, and a “1 Line 4” Loose-Jointed Farm Drain Tile 200” leading from the “disposal pit.” [Exhibit 11] PHR found no information regarding the nature of the “disposal pit” or “drain,” including any substances that might have been disposed.

Base maps from 1944 through 1950 depict the entire fenced tank farm as “Building 39” and label it a “Gasoline Storage” facility. [Exhibits 15, 16, 17, 18 & 19] A line on the 1950 base map appears to indicate that Building 39, still labeled a “Gasoline Storage” facility, is one structure, north of the USTs, in the approximate location of the pump house. [Exhibit 19] The 1956 Index lists Building 39 as a “Gasoline Pump House” and the 1958 Index notes it as an inactive “Gasoline Pump House.” [Exhibits 13 & 14]

³¹Hunter.

³²“History,” p. 143.

As early as February 1941, there were plans to add service pits to the warming-up platform [Exhibit 20] and in 1943 the Navy hired a contractor to extend the gasoline distribution system. Specifications and drawings indicate pipeline extensions to thirty-two new service pits to be located on an expanded warming-up platform. [Exhibits 21 & 22] The contract required black steel piping, a system that “shall be arranged so that two kinds of gasoline can be delivered (simultaneously or separately) to the service pit,” and designed for “a flow of from 20 to 100 gallons of low or high octane aviation gasoline per minute at a pressure not to exceed 70 psi.”³³

Tank trucks initially delivered the gasoline, but as early as 1941 there were plans to build a railroad spur, allowing rail shipment to the storage tanks.³⁴ The 1943 contract specification stated that Lee Field was “served by the Atlantic Coast Line Railroad with a spur track extending into the Field.”³⁵ A February 1944 drawing of a gasoline fill line from the dock depicts a track immediately north of the USTs. [Exhibit 23] The completion of the fill line from Pier Alpha on the St. Johns River to the storage tanks [Exhibit 24] allowed for barge delivery of aviation fuel beginning in November 1944.³⁶ Gasoline allocations indicate that at least once in 1944, Lee Field requested 865,000 gallons of aviation fuel for the month.³⁷

PHR found no documents, including site inspections, that discussed breaks or leaks in the fuel distribution system during the Navy’s ownership of the site.

A 1988 Environmental Sciences and Engineering, Inc. (ESE) study completed for the U.S. Army Corps of Engineers (COE) found that the USTs “contained residual amounts of petroleum and water.” The study also noted the disposal pit and a drain field located in the northeast corner of the tank storage facility.³⁸

The COE contracted with Douglass Environmental Services, Inc. (Douglass) to dismantle and remove, or clean and close the USTs, ASTs, pipelines, and forty-one service pits. Douglass reported the decontamination, removal, and disposal of eight 20,000-gallon USTs, the decontamination and in-place closure of 50,000-, 100,000-,

³³Contract No. NOy-7335, Specification No. 12178 between Aqua Systems, Inc. and the U.S. Navy, Bureau of Yards and Docks, 1 July 1943, pp. 8, 10, 11, NARA-CP, RG 71, Entry 44, Bound Volume NOy-7335.

³⁴Hunter.

³⁵Contract No. NOy-7335.

³⁶“History,” 87, 145.

³⁷J. B. Ricketts, Captain, to Southeastern Oil, 2 October 1944, National Archives and Records Administration, Southeast Region, Atlanta, Georgia [NARA-SE], RG 181, Entry 2191, Box 25, Folder JJ6 Gasoline 1944.

³⁸Environmental Science and Engineering, Inc., “Final Engineering Report for Confirmation Study at Former U.S. Naval Station, Lee Field, Green Cove Springs, Florida”, vol. I, Contract No. DACA01-86-D-0041, March 1988, p. 2-5, The IT Group, Knoxville, Tennessee [IT].

and 250,000-gallon ASTs, in-situ closure of piping associated with the tanks, and the in-place closure of service pits located on the airstrip. Douglass stated that the work had been completed on 21 December 1993.³⁹ According to later COE correspondence, it was discovered in 1944 that the eastern end of the pipeline, near Pier Alpha, had not been closed. COE contracted Rust Environmental Infrastructure (Rust) to seal that end of the pipeline. Rust reported that on 14 October 1994, the pier end of the pipeline was sealed with cement grout.⁴⁰ In 1997, American Compliance Technologies, Inc. removed and treated 27.9 tons of petroleum-contaminated soil from the abandoned pipeline area near the pier.⁴¹

PHR found no evidence explaining why fewer service pits were decontaminated than shown on base specifications.

Non Aviation Fuel and Storage Located South of State Highway 16

According to base maps and indices of structures, the following buildings, all located on the south side of State Highway 16, used or stored chemicals or hazardous products:

Power Plant (Building 16) and Fuel Oil Tanks (Buildings 324-328)

The Power Plant (Building 16), located north of Linderman (now Roland) and west of Fowler (now Reynolds), was constructed by October 1941. It had three boilers until a 1946 expansion added two more. Extension plans show interior fuel oil tanks, oil pumps, and oil heaters. [Exhibits 25 & 26] For a two-month period in 1945, it was reported that the Power Plant received 55,032 gallons of fuel oil via six tank cars.⁴²

Base maps indicate that two fuel oil tanks were installed adjacent to the Power Plant about 1941. [Exhibit 27] Maps dated 1945 and 1946 illustrate three 15,000-gallon tanks at that site. [Exhibits 15 & 16] A 1948 map depicts two additional 14,000-gallon tanks. [Exhibit 18] The five tanks had a combined capacity of 73,000 gallons. A 1957 description states that the five fuel oil tanks, located west

³⁹Douglass Environmental Services, Inc., "Underground Storage Tank Removal, U.S. Army Corps of Engineers, Jacksonville District, Clay County Port, DBA Reynolds Industrial Park, Formerly Lee Field, Green Cove Springs, Florida, Contract Number DACA17-93-C-0015," 4 February 1994, REYNOLDS

⁴⁰Richard E. Bonner, Deputy District Engineer, to Timothy J. Dohaney, 1 April 1998, REYNOLDS.

⁴¹American Compliance Technologies, Inc., "Initial Remediation Action Report Prepared for Former Lee Field Naval Air Station, Green Cove Springs, Florida, FDEP #109300836," 30 January 1998, IT.

⁴²"Supplement to the Station History of U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida," 1 November 1945, NAH.

of Building 16, were not diked.⁴³ By 1959, these tanks were numbered Buildings 324 and 325 (14,000 gallons each), and Buildings 326, 327, and 328 (15,000 gallons each). [Exhibit 9].

The Power Plant was scheduled for asbestos abatement and building removal by 31 December 1987, according to a letter sent by a Reynolds' manager to the Florida Department of Environmental Regulation.⁴⁴ A RealCo Wrecking Company drawing indicated that the work included "Demolition and removal of Bldgs. and contents including smokestack and related slabs, pits adjacent to Bldg. (not to include (5) above ground fuel tanks).⁴⁵ The Power Plant does not appear on current maps [Exhibit c. 1991] or post-1991 Clay County Port "Business Address Lists." [Exhibit 28].

PHR found no documentary evidence that the five ASTs associated with the Power Plant were removed.

Bulk Propane Gas

Base maps depict a "Bulk Gas Unit" consisting of a Bulk Gas Vaporizer House (Building 65), Bulk Gas Pump House (Building 66), and Bulk Gas Storage Tank (Building 67), located south of Linderman Avenue (now Roland Avenue), north of Building 38. [Exhibit 17] Base maps suggest that this unit was built in 1946 or 1947. A 1953 distribution systems map depicts a pipeline from the Bulk Gas Pump House to housing units north of the Golf Course. [Exhibit 29] The 1956 Index of Structures lists the three structures as inactive propane gas buildings. [Exhibit 13] In 1957, the Bureau of Yards and Docks authorized the demolition of a propane gas facility,⁴⁶ and subsequent maps and indices do not include the three buildings comprising the bulk gas unit. [Exhibits 9 & 14]

Building 46 (Service Station)

Building 46, located on the northwest corner of Fowler Street and Linderman Avenue (now Reynolds Boulevard and Roland Avenue), [Exhibit 30] was designated a Filling Station as early as 1943. [Exhibit 31] A later Index of Structures listed the building as an Automotive Hobby Shop. [Exhibit 13] COE also reported that one 1,200-gallon and two 900-gallon capacity USTs were

⁴³Jos. R. Brahenev to Chief of Naval Operations, Subj: Report of Fire Protection Engineering Survey, U.S. Naval Station, Green Cove Springs, Florida; forwarding of, 11 December 1959, p. 13, NARA-SE, RG 181 Entry 61A0738, Box 2, Folder N27 1957.

⁴⁴E.T. Stewart to Michael A. Reutter, 16 June 1986, REYNOLDS.

⁴⁵"Drawing A, Demolition Work by Realco Wrecking Co.," Contract dated 9/21/87, REYNOLDS.

⁴⁶J. R. Brahenev to Coastal Butane Gas Corporation, 4 February 1957, NARA-SE, RG 181, Entry 61A0736, Box 1, Folder J4 1957.

removed from under a paved area at the northwest corner of Reynolds Boulevard and Roland Avenue. COE also reported that the Florida Department of Environmental Protection (FEDP) “recommended additional site assessment and necessary cleanup in accordance with 62-770 FAC for contaminated soil and groundwater remaining at this site.”⁴⁷

Building 9 (Hangar) Area

PHR found no historical evidence indicating USTs or piping on the western side of Hangar 9. COE reported the removal of three 500 gallon USTs and associated piping from under the concrete runway apron near the western end of Building 9 and the intersection of Bunker Avenue and Sturdevant Street (now known as Louis Street). Further, COE reported that “FDEP recommended additional site assessment and necessary cleanup in accordance with 62-770 FAC for contaminated soil and groundwater remaining at this site.” The report also noted that the pipes, discovered during the removal of the USTs, should be investigated further to determine their origin and contents.⁴⁸

Non Aviation Fuel and Storage Located North of State Highway 16

Building 351 (Gasoline Service Station)

Building 351, a Gasoline Service Station, is depicted on a 1955 base map, located south of Piers 7 and 8, west of Jarvis Field, and adjacent to a parking lot that fronts Fowler Street. [Exhibit 32] COE later reported that two 10,000- gallon USTs, associated piping, and one filling station island were removed from the northeast corner of Reynolds Boulevard and State Highway 16. The USTs, according to that report, were located in a grassy area adjacent to Building 351. COE also reported that “FDEP recommended additional site assessment and necessary cleanup in accordance with 62-770 FAC for contaminated soil and groundwater remaining at this site.”⁴⁹

Building 528 (Diesel Fuel Oil Storage Tank)

Building 528 was listed on the 1961 Index of Structures as a Diesel Fuel Oil Storage Tank and is depicted on 1961 and 1966 maps, located between Piers 2 and 3, at the end of a wood railroad pier. [Exhibits 10, 33 & 34] PHR found no evidence that this tank was removed.

⁴⁷ Army Corps of Engineers, “Summary of CON-HTRW and HTRW Sites at Clay County Port, Inc., Reynolds Industrial Park (Formerly Lee Field Naval Air Station) Green Cove Springs, FL,” [c. 1999], IT.

⁴⁸ Ibid.

⁴⁹ Ibid.

Airplane Operations and Maintenance Area

Two hangars and a warming-up platform were erected south of Jones Avenue to house and service airplanes. [Exhibit 35] In July 1942, eight engine stands were ordered for the approximately 140 airplanes then stationed at Lee Field.⁵⁰ The number of planes eventually reached “nearly 400,” according to a base history. In March 1943, FM-2 and F4U aircraft were attached to Lee Field. In 1945, the FM-2’s were transferred out and replaced by Corsairs.⁵¹ In 1944, plans were drawn for “Prefab. Shelters (Type MT-144)” for “Aircraft Maintenance Trainers,” [Exhibit 36] to be located north of Building 38 at the southwest corner of Linderman and Campbell (now Roland and Reynolds), but PHR found no documentation to confirm that these structures were erected.⁵²

Available documents indicate that the following activities were performed in or near the hangars or on the warming-up platform:

- General aircraft maintenance
- Engine overhauls and changes
- Fueling Service (see “Fuel Storage and Distribution” above)
- Tire and tube maintenance
- Bullet Sealing Fuel Storage
- Oil Storage
- Flammable liquid drum storage
- Storage of Equipment removed from airplanes⁵³

Building 9 (Hangar 9)

Building 9 (Hangar 9) was one of the sixteen original structures completed by October 1941.⁵⁴ According to a base history, “engineering duties and maintenance” for airplanes were conducted in Hangar 9 until the completion of the second hangar eight months later.⁵⁵ One floor plan, labeled “Hangars No. 9 & 19,” depicts a

⁵⁰H. Sosnoski, Lieutenant Commander to Mr. Heckman, 25 July 1942, NARA-SE, RG 181, Entry 2191, Box 2, Folder L24 Resources and Facilities.

⁵¹“Supplement,” 1 November 1945, p. 23.

⁵² See Exhibit 36.

⁵³A.C. McFall, Rear Admiral, to Commanding Officer, N.A.A.S., Green Cove Springs, Florida, Subj: Aircraft Maintenance Inspection --Report on, 24 August 1944, NARA-SE, RG 181, Entry 2191, Box 25, Folder L5(5) Aircraft Maintenance Inspections, 1943-1946; Jos. R. Brahenev to Chief of Naval Operations, Subj: Report of Fire Protection Engineering Survey, U.S. Naval Station, Green Cove Springs, Florida; forwarding of, 11 December 1957, p. 4.

⁵⁴Hunter.

⁵⁵“History,” p. 104.

carpenter shop, storerooms, and offices. [Exhibit 37] The hangar became a warehouse for shipboard supplies and construction equipment after the war ended and the base was converted into a support station for the inactive fleet.⁵⁶ A 1957 report noted that compressed gas cylinders were stored inside Building 9 and “in open storage on the East side of Hangar No. 9.”⁵⁷ Also reported outside the hangar, “on a concrete apron about 100 feet east of Hangar 9,” were flammable liquid drums that “radiate[d] moderate exposure.”⁵⁸

For post-Naval use, see Clay County Port, Inc. “Building Address List.” [Exhibit 28] All friable asbestos was scheduled to be removed from the building by 31 December 1988.⁵⁹

Building 19 (Hangar 19)

Building 19 (Hangar 19), when completed in May 1942, “was used exclusively by Engineering maintenance.”⁶⁰ One floor plan, labeled “Hangars No. 9 & 19,” depicts a carpenter shop, storerooms, and offices. [Exhibit 37] A 1944 request for additional storage noted that “a small temporary building north of Hangar 19 is used by the Aviation Training Department as paint and dope storage.”⁶¹ The hangar became a warehouse for shipboard supplies and construction equipment after the war ended and the base was converted into a support station for the inactive fleet.⁶² A 1957 report listed the hangar as one of several structures conducting vehicle maintenance.⁶³ Another 1957 report noted that a “considerable number of oxygen bottles” were stored in Hangar 19.⁶⁴

For post-Naval use, see Clay County Port, Inc. “Building Address List.” [Exhibit 28] All friable asbestos was scheduled to be removed from the building by 31 December 1988.⁶⁵

⁵⁶“Narrative,” p. 359.

⁵⁷Department of the Navy, “FY60 Military Construction Program – Item Justification Data for Compressed Gas Storehouse,” 10 October 1957, NARA-SE, RG181 Entry 61A0736, Box 1, Folder A3 1957.

⁵⁸Brahenev, 11 December 1957, p. 4.

⁵⁹E.T. Stewart Manager to Michael A. Reutter, Department of Environmental Regulation, 16 May 1986, REYNOLDS.

⁶⁰“History,” p. 104.

⁶¹W.H. Ashford, Jr. Commander, to Chief of the Bureau of Aeronautics, Subj: Paint and Oil Storehouse; request for, 25 March 1944.

⁶²“Narrative,” p. 359.

⁶³Brahenev, 11 December 1957, p. 4.

⁶⁴Department of the Navy, “FY60 Military Construction Program – Item Justification Data for Automotive Vehicle Maintenance Facility,” 10 October 1957, NARA-SE, RG 181 Entry 61A0736, Box 1, Folder A3 1957.

⁶⁵E.T. Stewart Manager to Michael A. Reutter, Department of Environmental Regulation, 16 May 1986, REYNOLDS.

Airfield and Warming-Up Platform

The field itself consisted of four asphalt runways, 5,000 feet by 244 feet, and a warming-up platform (also called a warm-up platform or warming apron) [Exhibit 38] with fuel service pits (See “Fuel Storage and Distribution). When not in use, airplanes were tied to the warming apron and, according to one request for an addition to the platform, serviced there.⁶⁶ A member of the wartime crash crew stated that all plane crashes necessitated the spraying of foam to retard gas explosions and to neutralize the live ammunition carried onboard. According to this crewmember, crashes were frequent, particularly on take-off and at night, and often occurred near the end of the runways.⁶⁷ A base history stated that the Fire Department “answered an average of six to eight calls per week due to emergency landings on the field” and noted that there were fires from “gasoline on the ground which has flowed from a pierced tank or broken gasoline line.”⁶⁸

Maintenance, Storage and Service Facilities

The maintenance, storage and service facilities built during the air training years (1940-1945) were concentrated within the boundaries of the streets now known as Reynolds Boulevard, Roland Avenue, J. Louis Street, and Worthington Avenue (originally Fowler Street, Linderman Avenue, Sturdevant Street, and Homer Avenue). [Exhibit 30] Buildings 5 (Maintenance), 6 (Storage), 8 (Utility), 9 (Hangar), and 16 (Power Plant) were completed by 10 October 1941.⁶⁹ Building 20 (Paint Storehouse) was depicted on a February 1942 base map. [Exhibit 39] The June 1943 base map depicted Buildings 37 (Fire Station and Garage), 45 (Equipment Shelter), and 50 (Paint and Oil Storehouse). [Exhibit 31] By 1944, these facilities served both Lee Field and several outlying activities, including six additional fields and four bomb targets.⁷⁰

During the NS years (1945-1962), the maintenance, storage and service area added the following buildings: 57 (Storehouse), 86 (Automotive Paint Shop), 87 (Heavy Equipment Shelter), 220 (Utilities Storage), 250 (Maintenance Tools), 255 (Public Works Storehouse), 329 (Grease Ramp), and 355 (Lubrication Service Building). [Exhibit 30] Additionally, in 1946, a series of Quonset huts (Buildings 51-56) were erected fronting the west side of Sturdevant Street (now J. Louis Street) where it intersects with Linderman Avenue (now Roland). [Exhibits 16 & 30] Also built on the south side of

⁶⁶J.D. Price to Chief of the Bureau of Aeronautics, Subject: Provision of additional aviation facilities, Naval Air Station, Jacksonville, Florida, [20 December 1942], p. 5, NARA-SE, RG 181 Entry 2191, Box 1, Folder A1-1 Building Programs #3 thru 31 Dec. 1942.

⁶⁷Interview with J. Paul Phillips, Green Cove Springs, Florida, 25 April 2000.

⁶⁸“History,” pp. II, 80, 87.

⁶⁹Hunter.

⁷⁰History,” p. 74.

State Road 16 during the NS years was Building 88 (Locomotive Shelter), located southeast of Roland Avenue and Reynolds Boulevard, at the end of the railroad track and alongside the fuel tank farm [Exhibit 30].

Building 5 (Maintenance)

Building 5 was listed on maps and indices as “Maintenance,” “Station Maintenance,” and “Public Works Shops and Offices.” [Exhibits 13,14,15, 16 & 19] A 1942 drawing depicts a building extension. [Exhibit 40] One report stated that Building 5 included Carpenter, Machine, and Electric shops as well as a paint storage room.⁷¹ In 1952, there were plans to install a Sawdust Blower and Collector System in the Carpenter Shop. [Exhibit 41]

For post-Naval use, see Clay County Port, Inc. “Building Address List.” [Exhibit 28] All friable asbestos was scheduled to be removed from the building by 31 December 1988.⁷²

Building 6 (General Storehouse)

Building 6, the General Storehouse, was used by every department during the war years, according to a request for more storage space.⁷³ Plans for adding mezzanines [Exhibit 42] in 1944 indicate that additional space was needed in part to store “surplus spare airplane parts and equipment.” At that time, existing areas included a squadroom workshop, battery room, transformer room and switch room. Additionally, one 10’ x 15’ fireproof room was used for the storage of 55-gallon drums of 65 and 73 octane gasoline, kerosene, mineral spirits, lubricating oil, and #1 fuel oil.⁷⁴ This function probably ceased in 1945 when the Paint and Oil Storehouse (Building 50) was erected.⁷⁵

For post-Naval use, see Clay County Port, Inc. “Building Address List.” [Exhibit 28] All friable asbestos was scheduled to be removed from the building by 31 December 1988.⁷⁶

⁷¹John P. Doherty to Departments Concerned, Subj: Commanding Officer’s Weekly Material Inspection; report of, [1957], NARA-SE, RG 181, Entry 61A0736, Box 2, Folder L5, 1957.

⁷²Stewart.

⁷³W.H. Ashford, Jr. to Chief of the Bureau of Aeronautics, Subj: Proposed alterations to Bldg. #6-General Storehouse, 4 January 1944, NARA-CP, RG 72, Entry 470, Box 2988, Folder 1944 N6/NA29 vol. 3.

⁷⁴E.A. Cobey to Chief, BuDocks, Subj: Paint and Oil Storehouse, 2 January 1945, NARA-SE, RG 181 Entry 2547, Box 1, Folder A1-3 (10b) Building Programs – Green Cove Springs, 1945.

⁷⁵Doherty.

⁷⁶Stewart.

Building 8 (Utility, Assembly and Repair, Garage)

Building 8, originally a utility building, [Exhibits 43 & 44] by 1943 had become an Assembly and Repair Shop. A 1943 floor plan [Exhibit 45] shows a Heat Treating Shop with three furnaces, an Engineering Shop with a sander, spot welder, grinder, drill and file, a Machine shop with a lathe, drill and grinders, plus other unidentified work shops with machines such as a buffer, oven, grinder, lathe, and mill. An aircraft maintenance inspection stated that “the Utility Building has more and better equipment” than the hangar and should be extended fifty feet to accommodate aircraft repair.⁷⁷ PHR found no building-specific information concerning the type of machinery that may have been used for aircraft maintenance or repair. Building 8 was depicted on a 1948 base map as a garage. [Exhibit 18] A 1952 blueprint shows plans for a hydraulic hoist and shelter associated with the garage, to be located northwest of the building. [Exhibit 46] No other maps indicate that the hydraulic hoist and shelter were built or numbered as a structure. A 1957 report stated that the Transportation Division used Building 8 for the following functions: automotive repair shops, lawn mower shop, small engine, bus and compressor shop, and parts storeroom.⁷⁸ According to indices of structures, Building 8 remained a garage/auto shop through at least June 1961. [Exhibit 10]

For post-Naval use, see Clay County Port, Inc. “Building Address List.” [Exhibit 28] All friable asbestos was scheduled to be removed from the building by 31 December 1988.⁷⁹

Building 20 (Paint Storehouse and Plumbing Shop)

Building 20, depicted on 1942 and 1943 base maps as a Paint Storehouse, was located near Linderman Avenue, south of Building 6 and east of Building 8. [Exhibits 31 & 39]. A January 1945 request for a Paint and Oil Storehouse stated that Building 20 was a contractor’s field shack and approved its demolition.⁸⁰ Another January 1945 letter approved the location of the new Paint and Oil Storehouse, “contingent upon the removal of Building No. 20 presently used as a paint mixing shack.”⁸¹ The 1945 and 1946 base maps depict Building 20 as a “Storehouse.” [Exhibits 15 & 16] The 1947 and 1948 base maps indicate it was a

⁷⁷McFall, 24 August 1944.

⁷⁸Department of the Navy, “FY60 Military Construction Program – Item Justification Data for Automotive Vehicle Maintenance Facility,” 10 October 1957, NARA-SE, RG181 Entry 61A0736, Box 1, Folder A3 1957.

⁷⁹Stewart.

⁸⁰Cobey.

⁸¹C.L. Strain to Officer in Charge of Construction, 15 January 1945, NARA-CP, RG 72, Entry 62, Box 3103, Folder N19/NA29 1945.

“Plumbing Shop” [Exhibits 17 & 18] The 1950 base map lists it as a “Paint Shop.” [Exhibit 19] By 1953, maps no longer listed Building 20, but by that date Building 50 (see below) had grown to encompass the area formerly occupied by Building 20. [Exhibit 47]

Building 37 (Fire Station and Garage)

Building 37 was a Fire Station and Garage until at least 1958. Prior to its construction, an investigation noted the need for a fire station large enough for two fire trucks, a pumping unit, miscellaneous fire equipment, and dormitories as well as a garage large enough to accommodate “a maximum of 40 vehicles with shop, greasing, and office facilities.”⁸² Drawings of the building indicate several garage units, an area for car washing, and a grease pit and ramp. [Exhibits 48 & 49] In June 1943, the station’s Transportation Department, located in Building 37, reported a total of 57 vehicles, exclusive of scooters and bicycles. By November 1944, the number of station vehicles reached 122.⁸³ A 1960 site inspection lists the building as Public Works Offices and Shop Stores.⁸⁴ PHR found no evidence of installed fuel tanks.

Building 45 (Equipment Shelter)

Building 45 was listed as an “Equipment Shelter” on maps and indices from 1943 through 1956. [Exhibits 13, 16 & 31]

Building 50 (Paint and Oil Storehouse)

Building 50, completed by June 1945 according to a base map, [Exhibit 15] was constructed to store large amounts of paint (reportedly needed to maintain station buildings and runway lines and numbers), dope, low grade gasoline (65 and 73 octane), kerosene, mineral spirits, lubricating oil, and #1 fuel oil.⁸⁵ A map of a proposed building extension [Exhibit 50] indicated that the facility included a paint shop with a wet wash spray booth, a sign shop, a general shop space in which furniture was refinished, and paint storage/mixing. By 1953, the building expanded, encompassing the area formerly occupied by Building 20. (See Building 20 above) [Exhibit 47] A 1957 fire report stated that “Spray painting of parts, furniture, etc. is conducted in a water wash booth in Building No. 50 which

⁸²Chas. G. Shone to The Public Works Officer, 18 May 1942 in “History,” Page 47 Appendix.

⁸³“History,” pp. 98-99.

⁸⁴Lt. F.P. Swett, Jr. “Zone No. Two (2) Inspection,” [1960], NARA-SE, RG 181 Entry 62A1237, Box 5, loose documents.

⁸⁵Ashford, 25 March 1944.

is nonsprinklered. Electrical equipment therein is being replaced by explosion proof equipment.”⁸⁶

For post-Naval use, see Clay County Port, Inc. “Building Address List.” [Exhibit 28]

Buildings 51-56 (Storehouses)

Buildings 51-56 [Exhibit 30] were Quonset huts erected about 1946 as temporary structures for Storage. They are listed as “Storehouses” on base maps and indices from 1946 through 1961. [Exhibits 9, 10, 13, 14, 16, 17, 18, 19, 47] In 1957, Buildings 52 and 53 were reported to be structurally inadequate, without an automatic sprinkler system or fire walls, and “excessive heat generated within the buildings by the semi-tropical weather conditions, combined with inadequate ventilation, resulting in an accumulation of gases and fumes which are hazardous to personnel.”⁸⁷ Two 1957 reports indicate that the buildings were used as follows:

- Building 51: garage for materials handling equipment
- Buildings 52 and 53: storage of flammable materials
- Building 54: general stores materials, storage of special electronics equipment, and storage of compressed gas cylinders
- Building 55: general stores material, lumber storage
- Building 56: shipping, packing and crating shop⁸⁸

For post-Naval use, see Clay County Port, Inc. “Building Address List.” [Exhibit 28]

Building 57 (Storehouse, Automotive Shop, and Heavy Equipment Repair)

Building 57 was listed as a Storehouse on the 1947 base map. [Exhibit 17] By 1948, it was listed “Automotive Shops Stores.” [Exhibit 18] A 1957 report stated that Building 57 contained automotive shops stores, a machine shop, and tractor and electric welding machine repair shop.⁸⁹ A 1958 index listed the building as a “Shop Store and Heavy Equipment Repair Shop.” [Exhibit 14]

⁸⁶Brahenev, 11 December 1957, p. 13.

⁸⁷Ibid.

⁸⁸Ibid. and Department of the Navy, FY60 Military Construction Program – Item Justification Data for Flammables Storehouse, 10 October 1957, NARA-SE, RG181 Entry 61A0736, Box 1, Folder A3 1957; Department of the Navy, FY60 Military Construction Program – Item Justification Data for Compressed Gas Storehouse, 10 October 1957, NARA-SE, RG181 Entry 61A0736, Box 1, Folder A3 1957.

⁸⁹“Automotive Vehicle Maintenance Facility.”

For post-Naval use, see Clay County Port, Inc. "Building Address List."
[Exhibit 28]

Building 86 (Automotive Paint Shop)

Building 86 was listed as an Automotive Paint Shop on base maps and indices from 1950 through 1961. [Exhibits 10, 13, 19 & 47] A 1957 report claimed that it was a "temporary building . . . constructed for storage purposes" and that the building was unsuitable for current use as a paint shop.⁹⁰ A 1962 Bureau of Yards and Docks letter stated that Building 86 contained a spray paint booth with an estimated value of \$9,980.00.⁹¹

A 1988 "Final Engineering Report" by ESE reported no evidence of a spray-booth and that the building "was reportedly used for touch-up and spot-painting in the period of DOD ownership." ESE further reported two floor drains, "but the direction and destination of drainage could not be determined." At that date, the building was used to store automotive and maintenance equipment.⁹²

For post-Naval use, see Clay County Port, Inc. "Building Address List."
[Exhibit 28]

Building 87 (Heavy Equipment Shelter and Vehicle Maintenance)

Building 87 was originally listed as a Heavy Equipment Shelter. [Exhibit 19] By 1956, it was designated "Heavy Equipment and Material Repair." [Exhibit 13] A 1957 report stated that, "Building No. 87 and Adjacent Sheds" were unsuitable for current use which included: "Construction, materials handling and weight handling repair shop, wheel alignment, battery shop, tire repair shop, body and fender shop, inspection center, undercoating shop, outside painting, outside lubrication rack, and steam cleaning section."⁹³ Another 1957 report noted that the battery rack used in battery charging operations was not hooded or vented.⁹⁴

ESE's 1988 report noted that Building 87 had been demolished in late 1986, but the foundation was still in place. ESE stated that the building contained four service bays, a sump, purpose unknown, in the second service bay, floor drains in at least two of the service bays, and a ten-foot wide concrete pad. The sump,

⁹⁰Ibid.

⁹¹A.F. Meeks, CDR CEC USN to General Services Administration, 21 May 1962, NARA-CP, RG72, Inactive Stations, Box 6, Folder Green Cove Springs.

⁹²"Final Engineering Report," p. 2-6.

⁹³"Automotive Vehicle Maintenance Facility."

⁹⁴Brahenev, 11 December 1957, p. 13.

floor drains, and concrete pad were still in place at the time of the ESE report. ESE found no evidence of elevated levels of soil contamination at the site.⁹⁵

Building 329 (Grease Rack)

Building 329, located northwest of Building 8, was listed on the 30 June 1956 base map as a Grease Ramp and on the March 1959 Index of Structures as an "Auto. Grease Ramp." [Exhibit 9 & 13] A 1960 site inspection notes that this structure was a Public Works Department grease rack.⁹⁶ A photograph accompanying a 1957 report may contain a portion of this structure alongside Building 8. [Exhibit 51]

ESE's 1988 report described the Grease Rack as "a pair of concrete ramps onto which vehicles were driven for servicing. Waste oil was reportedly discharged to a drain between the ramps. The drainpipe reportedly emptied into an adjacent drainage ditch with concrete sides and grass bottom. A 6-inch-diameter pipe, sealed with concrete at the time of sampling, enters the ditch from the direction of the Grease Rack. An 18-inch-diameter pipe on the south side of the ditch appears to discharge stormwater." [Exhibit 52] ESE detected "several acid and base neutral extractable organic compounds" in the soil, "indicating potential contamination by petroleum products." ESE found no evidence that the ditch had been used since the U.S. Naval Station closed and concluded "contamination in the Grease rack Ditch appears to be a DOD responsibility."⁹⁷

Two subsequent samplings were taken of the Grease Rack Ditch. In 1992, Dames & Moore found that "Concentrations of organic contaminants in the ground water samples did not exceed the Florida ground water guidance concentrations. However, arsenic was detected in a ground water sample from [a] downgradient monitoring well."⁹⁸ Results of the 1998 sampling by Joseph Newton were unavailable.⁹⁹

Hazardous materials may have been used or placed in the following buildings located on the south side of State Highway 16. However, PHR has found no site-specific information related to activities at these building:

- Building 88 – Locomotive Shelter [Exhibit 8]

⁹⁵"Final Engineering Report," pp. 2-4 to 2-5, 5-2.

⁹⁶Lt. F.P. Swett, Jr. "Zone No. Two (2) Inspection," [1960], NARA-SE, RG 181 Entry 62A1237, Box 5, loose documents.

⁹⁷"Final Engineering Report," pp. 2-6, 5-2.

⁹⁸Dames & Moore, "Preliminary Contamination Evaluation Report, Former U.S. Naval Air Station, Lee Field, Green Cove Springs, Florida," vol. 1, December 1992, IT.

⁹⁹Joseph Newton to Clay County Port, Inc, 21 September 1998, IT.

- Building 220 – Utility and Pest Control Storage [Exhibit 30]
- Building 250 – Maintenance Tools [Exhibit 47]
- Building 255 – P. W. (Public Works) Storehouse [Exhibit 30]
- Building 355 – Lubrication Service Building [Exhibit 30]

Ordnance

PHR found no documents, such as supply records or inspection reports, indicating the amount of ordnance materials kept at the following sites or their disposal. In addition, PHR found no evidence that ordnance material was decommissioned or buried at the base.

Magazines

Buildings 13, 14, and 15

Buildings 13, 14, and 15 were among the first structures finished. In 1941, it was reported that completed buildings included two high explosive magazines and one small arms magazine, shown on maps as Detonators (Buildings 13 and 14) and a Small Arms Magazine (Building 15).¹⁰⁰ These magazines fronted Jones Avenue (now Bunker) east of Fowler Street (now Reynolds). A 1956 Index [Exhibit 13] and a 1957 Bureau of Ordnance report indicate that Building 15 became the Station Armory and contained “ordnance” material. At that time, no materials were reportedly stored in Buildings 13 and 14.¹⁰¹ A 1958 Index of Structures [Exhibit 14] lists Buildings 13 and 14 as inactive. The latest available Index of Structures (1961) [Exhibit 10], lists all three buildings as Magazine Detonators, giving areas of Buildings 13 and 14 as 211 square feet and Building 15 as 1,368 square feet.

Buildings 35 and 36

Buildings (Pigeon Storage) and 36 (Magazine) first appear on a map dated 30 June 1943 [Exhibit 31] and disappear from maps by 1946. [Exhibit 16] associated with an area labeled “Skeet & Trap Range,” these buildings were located near St. Johns River, due north of the North-South Runway.

¹⁰⁰Hunter.

¹⁰¹Navy Department, Bureau of Ordnance, Subject: Report of Stowage, Distribution of, and available space for Ammunition, Explosives, and Inert Ordnance material for the month ending Sep 20 1957,” 3 October 1957, NARA-SE, RG 181, Entry 61A0736, Box 4-6, Folder X1-2 Types of Ammunition.

Buildings 75, 76, 77, 78, and 79

A 1942 list of projects explained the need for more magazines “to provide service and adequate storage and facilities for bombs and high explosives used in operational training for the units at Lee Field.”¹⁰² A May 1943 site plan [Exhibit 53] detailed five structures to be located near the southwest corner of the North-South and East-West runways. Those buildings were:

Building 75 (Inert Magazine)

The building layout [Exhibit 53] specified that the Inert Magazine would be 800 square feet. Base maps and indices listed this structure as an Inert Magazine from 1943 through 1956. [Exhibits 13 & 31] By October 1957, Building 75 was used exclusively for the storage of compressed gas cylinders, according to a report outlining the need for a centralized compressed gas storage facility close to Hangar 9.¹⁰³ The latest available Index of Structures (1961) [Exhibit 10] lists Building 75 as a Compressed Gas Storehouse.

Building 76 (Pyrotechnic Magazine)

The building layout [Exhibit 53] specified that the Pyrotechnic Magazine (later named Building 76) would be 100-square feet. This building was listed on maps and indices as a Pyrotechnic Magazine from 1943 through the latest Index of Structures (1961). [Exhibits 15, 16, 17, 18, 19, 31 & 47]

Building 77 (Small Arms Magazine)

The building layout specified that the Small Arms Magazine (later named Building 77) would be 1,250-square feet. [Exhibit 53] This building was listed on maps and indices as a Pyrotechnic Magazine from 1943 through the latest Index of Structures (1961). [Exhibits 15, 16, 17, 18, 19, 31 & 47]

Building 77 was listed on the 1991 Clay County Port “Business Address List” [Exhibit 28] as a “PCB Bunker.” A COE Site Summary notes that Douglass Environmental Services removed “Out-of-service transformers and 55-gallon drums of PCB contaminated oil in an

¹⁰²J.D. Price to Chief of the Bureau of Aeronautics, Subject: Provision of additional aviation facilities, Naval Air Station, Jacksonville, Florida., 19 December 1942, NARA-CP, RG 72, Entry 62, Box 3391, Folder NA29 vol. 9 “43.”

¹⁰³“Compressed Gas Storage.”

abandoned earth-covered corrugated steel-plate-arch bunker (igloo) which sat on a concrete slab.”¹⁰⁴ In its November 1995 report, Rust Environment & Infrastructure confirmed that there was contamination on the bunker’s concrete floor, outside the bunker (where transformers had been stored), and in the groundwater.¹⁰⁵ About 1997, according to the COE summary, Shah & Prasad Contractors removed the bunker and “excavated, transported and disposed of approximately 1,035 cubic yards of PCB contaminated soil.”¹⁰⁶ Beginning in 1998, Building 77 was no longer listed on the Clay County Port’s “Building Address List.” [Exhibit 28]

Building 78 (Fuse and Detonator Magazine/H.E. Magazine)

The building layout specified that the Fuse and Detonator Magazine would be 100-square feet. [Exhibit 53] This structure was labeled “2HC4” on maps from 1943 through 1947 [Exhibits 15, 16, 17 & 31] and by 1948 was listed as Building 78. [Exhibit 18] That 1948 map and subsequent maps and indices list the building as a “H.E. Magazine.” [Exhibits 10, 13, 14, 18, 19 & 31]

The 1988 ESE report noted that thirty-seven paint cans had been abandoned adjacent to Building 78, under dense vegetation. ESE inspected the containers and determined that most cans contained marine paint products and probably had been abandoned within the previous ten years. According to the ESE report, the cans were “resealed, numbered with orange spray paint, and transferred to” Building 78 for temporary storage.”¹⁰⁷ Building 78 has not been listed on any Clay County “Building Address List” since the first available list (1991). [Exhibit 28]

Building 79 (H.E. Magazine/Fuse and Detonator Magazine)

The building layout specified that the H.E. Magazine would be 1,250 square feet. [Exhibit 53] This structure was labeled “2BTS” on maps from 1943 through 1947 [Exhibits 15, 16, 17 & 31] and by 1948 was listed as Building 79. [Exhibit 18] That 1948 map and subsequent maps and indices through 1956 list the building as a “Fuse and Detonator Magazine.” [Exhibits 13, 18 & 19] The latest available Index of

¹⁰⁴“Summary of CON-HTRW and HTRW Sites at Clay County Port, Inc., Reynolds Industrial Park,” [1999], p.2, IT.

¹⁰⁵Rust Environment & Infrastructure, “Report of Phase II Investigation, Former Lee Field Naval Air Station, Green Cove Springs, Florida,” November 1995, pp. 1-1, 4-1.

¹⁰⁶“Summary of CON-HTRW and HTRW Sites,” p. 2.

¹⁰⁷“Final Engineering Report,” pp. 2-5, 2-6, 4-21 through 4-25.

Structures (1961) [Exhibit 10] lists Building 79 as a Compressed Gas Storehouse.

Armory

In addition to Building 15 (see above), two other structures were listed as armories: Buildings 44 and 272. Building 44 was listed as the Brig on base maps and indices from 1943 to 1947 [Exhibits 15, 16, 17 & 31], as an Armory from 1948 [Exhibit 18] until 1958 [Exhibit 14] when it was listed as a Radio Hobby Shop. Building 44 was located on Sturdevant Street (J. Louis Street) north of Knox (now Cary Avenue). Building 272, located adjacent to Building 44, was listed as Armory Storage on a 1953 map [Exhibit 47] and by 1956 [Exhibit 13] was listed as an inactive Sentry House.

Small Arms Firing Range

The Fixed Gun Firing Range (now called the Small Arms Firing Range) was planned in 1943 to be parallel to and south of the North-East Runway. Plans specified an asphalt taxiway at the end of and perpendicular to the North-West Runway, leading to a concrete firing circle with a curb and firing station. Plans detail a forty foot “sand or earth bunker” with deflection guards, to be erected 1,000 feet from the firing station. [Exhibits 54 & 55] According to one document, the purpose of the range was “to provide facilities for bore sighting and test firing fixed machine guns of planes.” By 1956, a Skeet Range House (Building 353) had been erected northeast of the nearby bunker and at the end of a road paralleling the Fixed Gun Firing Range. [Exhibit 13] A circa 1957 base map [Exhibit 56] lists both a Pistol Range and Skeet Range at that site. The 1961 base map and Index of Structures [Exhibit 10 & 33] continue to display the Fixed Gun Firing Range and Skeet Range, but not Building 353.

Landfills

PHR found no documents, such as inspection reports, which discussed the use of specific landfill areas or maps depicting landfill sites prior to 1950. However, a 1945 Lee Field history noted seven fires were extinguished at the “Station dump” during a two-month period.¹⁰⁸ According to the 1992 Dames & Moore report, a civilian employee stated in 1946 that materials not needed on ships were burned in an open-air incinerator or “disposed at either the main dump or in an area between the incinerator and the main dump.” The Dames & Moore report cited another civilian employee who said that “the electric shop at Lee Field had a policy to dispose of all waste materials at either the main dump or the smaller dump located south of the firing range” and “it was his belief that

¹⁰⁸“Supplement,” 1 November 1945, p. 21.

other shops at the base operated under the same policy.” The employee stated that dumping stopped at the small dump in 1955, and only the main dump was used thereafter.¹⁰⁹

Landfill No. 1 (Sanitary Yard Dump)

A “Sanitary Yard Dum” [sic] is depicted on the 1950 base map. [Exhibit 19] A “Sanitary Yard Dump” is depicted inside a rectangular fence on the 1953 base map and is listed on a 1958 Index of Structures. [Exhibits 14 & 47] A 1961 map continues to depict the fence, but not the dump. [Exhibit 33] An outline of this dump appears on aerial photos from 1958 through 1993. [Exhibits 57,58,59,60,61,62,63,64,65,66]

The 1988 ESE report describes Landfill No. 1 as an approximately 6.2 acre site, located southwest of the skeet range, bordered by the station boundary road and Three Mile Swamp. The report states that dumping occurred primarily during and immediately following World War II, although some unauthorized dumping was reported until the early 1980s. More recently, the current site owner and tenants have deposited building demolition debris and fiberglass product waste at Landfill No. 1. The report noted the landfill was barren of vegetation with visible debris. ESE detected elevated lead levels in the ground water and soil, and silver and phthalate in the surface water.¹¹⁰ A Dames & Moore study completed four years later reported that “Concentrations of contaminants detected in ground water samples from this area did not exceed” the Florida Ground Water Guidance Concentration (FGGC).¹¹¹

Landfill No. 2

The area currently known as Landfill No. 2, is located between the western end of the runway and State Highway 16. The 1988 ESE report describes Landfill No. 2 as approximately 7.5 acres, located about 700 feet west of Runway 9.¹¹² The 1950 base map labels this area as “P.W. Storage,” [Exhibit 19], and the circa 1957 [Exhibit 56] and 1966 [Exhibit 34] maps depict Building 518, Public Works Storage, within a fenced area designated as “P. W. Storage.” The outline of this area appears on a 1958 aerial photograph, [Exhibit 57] appears less distinct in 1971 and 1973 photographs, [Exhibits 59 & 60] and no boundaries are discernable by 1979. [Exhibit 62] In 1988, ESE reported that until recently the landfill was covered with mature, planted pine trees. ESE noted that the landfill was covered with dense undergrowth and that no debris was visible. ESE detected low levels of lead contamination in the soil at this

¹⁰⁹Dames & Moore, “Preliminary Contamination Evaluation Report, Former U.S. Naval Air Station, Lee Field, Green Cove Springs, Florida,” December 1992, pp. 1-2.

¹¹⁰“Final Engineering Report,” pp. 2-4, 5-1 through 5-2.

¹¹¹“Preliminary Contamination Evaluation,” 24.

¹¹²“Final Engineering Report,” p. 2-4.

site.¹¹³ The 1992 Dames & Moore report states that “Concentrations of contaminants detected in ground water samples from this area did not exceed the FGGC.”¹¹⁴

Landfill No. 3

The circa 1957 map depicted a “Sanitary Land Fill” on the south side of Three Mile Swamp, near State Highway 16. [Exhibit 56] This map is the earliest documentation depicting the area currently known as Landfill No. 3, described in the 1988 ESE report as approximately 4 acres in size, located off State Road 209 (State Highway 16). The landfill continues to be depicted on maps through 1966. [Exhibit 34] The land appears distressed in 1958, 1969 and 1971 aerial photographs, [Exhibits 67, 68 & 69] although later photographs indicate the area was covered with vegetation. [Exhibits 70, 71 & 73] The 1988 ESE report noted that the area was covered by a stand of planted pine trees, there were small amounts of visible debris on the surface, and lead and chromium contamination was detected in the ground water.¹¹⁵

Drum Burial Area

During a 1992 site investigation, Dames & Moore found drums, contents unknown, in an area between Landfill No. 1 and the Small Arms Firing Range. [Exhibit 73] Through an electromagnetic survey and visual observations, Dames & Moore identified the probable drum burial area as “a 135 foot wide strip with an approximate length of 315 feet, generally aligned in a north/south direction.” [Exhibit 74]¹¹⁶

Pyridine Area

In October 1988, [Exhibit 73] a bulldozer struck something that “emitt[ed] a nauseating odor” in an area between Landfill No. 1 and the Small Arms Firing Range. Soil samples indicated pyridine and methylpyridine, recounted a later report. The Florida Department of Environmental Regulation required Reynolds to conduct a clean-up and contaminated soil was removed. A 1992 Dames & Moore investigation found that the area was covered with debris from the incinerator and hypothesized that it probably was a secondary dump, but that “the pyridine-incident area is outside the probable drum burial area.” [Exhibit 74] Dames & Moore found no evidence relating to the specific use or disposal of pyridine, but learned from Joel Murphy, Naval Facilities Engineering Command, Southern Division, Charleston, South Carolina, that Navy “solvents were typically disposed of through the industrial sewer system at the air station, or were buried in the ground along with other hydrocarbons.” After contacting several more people

¹¹³Ibid., p. 2-4, 5-2.

¹¹⁴“Preliminary Contamination Evaluation,” 24.

¹¹⁵“Final Engineering Report,” p. 2-4, 5-2.

¹¹⁶“Preliminary Contamination Evaluation,” pp. 10, 23.

about possible pyridine use and disposal, Dames & Moore speculated that the Navy could have disposed of pyridine until 1954 or 1955. Dames & Moore also noted that the area was not secure, and illegal dumping could have occurred after the U.S. sold the land.¹¹⁷

Salvage Yard

Base maps indicate that as early as 1953, a Salvage Yard structure (Building 237) associated with a fenced area was located north of Homer Avenue and west of Sturdevant, abutting a railroad track. Additionally, maps show a Supply Salvage structure (Building 238) in an open area northwest of the Salvage Yard. [Exhibit 47] The 1958 Index of Structures depicts the fenced area as expanded, Building 238 no longer existed, and a new structure, called a Salvage Material Storehouse (Building 497), was erected within the fence. Buildings 237 and 497 are included on the 1966 base map [Exhibit 34 & 75]

Pier Service and Maintenance Area

The riverside of the highway was not developed for industrial use during the NAAF/NAAS years, 1940-1945. In 1945, the only features were Pier Able and the associated gasoline line, Naval residential quarters, and a Skeet and Trap Range. From 1946 through 1959, the pier area added dozens of structures dedicated to servicing and preserving the inactive fleet.

Preservation of the inactive fleet reportedly included cleaning, overhauling, and painting the ships, covering equipment with petroleum compounds, placing cocoons of sheet metal or plastic over outside machines and armaments, installing dehumidification machines inside ships, and sealing all ship openings.¹¹⁸ Photographs of these operations illustrate metal welding and sandblasting. [Exhibit 76] Maps depict the location of the Reserve Fleet operations, and the location and plot plan of the Sand Blasting Operation, and sections designated for painting, repair, stripping, and sandblasting. [Exhibits 78 & 79]

Fire Fighters School

A Fire Fighters School was located southwest of Pier 1 in Buildings 260, 261 and 323. [Exhibits 9, 32 & 47] Buildings 260 and 261 were shown on a 1953 base map. By 1955, Building 323, the largest structure, was the only Fire Fighters School building shown on the base map. By 1958, three storage units had been erected: Building 350 (Fire Hose Storage), Building 447 (Fire Fighting Equipment Storage),

¹¹⁷Ibid., pp. 2-3, 5-6, 23-24, 29.

¹¹⁸Larry Hirsch, "Ships Don't Rust in Peace at Green Cove," The Florida Times-Union, 22 August 1954; "A Sailor's Constant Job - - Keeping Reserve Fleet Ships Ready to Go," The Clay County Crescent, n.d.

and Building 448 (Foul Weather Storage Gear). A photo in a 1957 fire safety week scrapbook illustrates a fire demonstration purportedly at Green Cove Springs NS, but the exact location of the photo is unclear [Exhibit 79]. A photo taken in April 2000, illustrates a circular area, one of three in the vicinity of the former Fire Fighters School, which appears to be concrete and cracked from excessive heat [Exhibit 80].

According to the 1988 ESE site investigation, fire-fighter training consisted of extinguishing diesel and oil fires staged in an open tank filled with water and fuel, or in a ship's scrapped gun housing. ESE detected several acid and base neutral extractable organic compounds in the soil, indicating potential petroleum product contamination. The report speculates that fire-training activities "could have resulted in spillage or leakage of petroleum products," and that "soil contamination in the former Fire Training area appears to be a DOD responsibility."¹¹⁹

The 1992 Dames & Moore site investigation found that "concentrations of inorganic contaminants in the ground water sample did not exceed the Florida ground water guidance concentration," but detected elevated levels of 1,2-dichloroethene."¹²⁰

For post-Naval use, see Clay County Port, Inc. "Building Address List." [Exhibit 28]

A 1993 study conducted for Offshore Shipbuilding, Inc., a Reynold's tenant leasing the former Fire Fighter's Training area during the early 1990s stated that:

- Volatile inorganic compounds were in concentrations less than regulatory guidance standards;
- Concentration of total or unfiltered lead exceeded state regulatory guidance levels in two wells but dissolved fractions were less than regulatory standards;
- Soil in the vicinity of prior grit blasting activities would not be classified as hazardous wastes;
- An "oval shaped plume of contaminated soil emitting organic vapors has been detected to the east of the dry dock area," believed to be associated with the former Fire Fighting Training area;
- The presence of trichloroethylene, p-xylene, and a variety of semi-volatile organic compounds were present in soils near the dry dock and in the

¹¹⁹Final Engineering Report," p. 2-6 through 2-7, 5-3.

¹²⁰Preliminary Contamination Evaluation," p. 30

center of the organic plume. The xylene and semi-volatile compounds were believed to be related to releases of fuels, perhaps used in fire fighter training. The level of trichloroethylene was very low, and no potential source of the compound was known. Based on groundwater testing results, the trichloroethylene had not affected shallow groundwater.¹²¹

Miscellaneous Buildings

The following buildings north of State Highway 16 have been identified, but there is no further available information regarding the use or storage of chemicals or hazardous materials:

- Buildings 81 and 82: Fleet Storehouses
- Buildings 83 and 84: Generator Houses
- Building 218: Maintenance Tools
- Building 226: Engineering Supply Storage
- Building 227: Paint Locker and Damage Control
- Building 228: Carpenter Shop
- Building 229: Storage and Bunk Room
- Building 230: Ship Fitters, Pipefitters
- Building 231: Machine Shop
- Building 232 Machine Shop, Diesel Repair, Engine Repair
- Building 233 Electric Shop
- Building 240: Air Compressor Building
- Building 243: Boat Paint Shop, Boat Service, Radio Repair, Dehumidification Sealing Material
- Building 247: Fertilizer Storage
- Building 250: Maintenance Tools
- Building 265: Transit Shed Facilities
- Building 267: Hobby Shop
- Building 286 Fleet Paint Storage
- Building 289: Paint Storage
- Building 355: Lubrication Service Building
- Building 358: Fleet Welding Shop
- Building 492: Acetylene Cylinder Storage
- Building 493: Oxygen Cylinder Storage
- Building 494: Boat Hobby Shop #2
- Building 495: Machine Shop
- Building 517: Contaminated Oil Storage Tank [Exhibits 13, 14, 18, 19,30 & 33]

¹²¹ibid., p. 17

Sanitary Sewer System

The original Sanitary Sewage Distribution System [Exhibit 81] expanded to accommodate activities associated with servicing and preserving the inactive fleet. Plans dated 1946 show new sanitary sewage lines, connections to the piers, and a sewage treatment plant located south of Pier 3. [Exhibits 82 & 83] The structures comprising the treatment plant included a Raw Sewage Lift Station (Building 59), Sludge-drying Beds (Building 60), Chlorination Plant (Building 61), Primary sedimentation Tank (Building 62), and Digester Tank and Control House (Building 63). In addition to the lift station at the treatment plant, Sewage Lift Station No. 2 (Building 69) was placed south of piers 6 and 7 and Sewage Lift Station No. 3 was erected south of Pier 12 and State Highway 16. [Exhibit 17]

Base maps indicate that about 1953, the treatment plant added a Gas Burner (Building 258), Grit Chamber (Building 259), and Sewage Lift Station No. 4 (Building 266). [Exhibit 47] Emergency medical reports show that in 1961 several civilian employees were exposed to gas fumes from a leaking chlorine bottle in Building 61.¹²²

Storm Drainage System

Base plans indicate that the storm sewage system consisted of a series of open ditches and concrete pipes leading to outfalls at Three Mile Swamp and St. Johns River [Exhibits 84, 85, 86, 87 & 88].

¹²²“Emergency Medical Care Reports,” 21 September 1961, NARA-SE, RG 181, Entry 62A1237, Box 1, Folder “Emergency Medical Care Only.”

Recommendations for Further Research

PHR recommends that additional research be conducted on the following topics:

- Some potentially relevant 6th Naval District and Florida Group, Atlantic Reserve Fleet records may be held at the Federal Records Centers in Suitland, Maryland and Kansas City, Kansas. Time restraints prevented a review during this phase of the research. However, similar records have included contracts for disposal of waste solvents and other materials.
- Minimal day to day operational information relating to the hazardous materials disposal was found during this research. However, base histories and camp rosters may provide the names of individuals who had knowledge of this activity. This material should be reviewed to identify personnel who, if located and interviewed, may recall information pertaining to waste disposal activities.

Exhibits

1. U.S. Naval Air Station, Jacksonville, Florida, "Ambulance Routes to Outlying Fields," GMT-624, n.d.
2. "Proposed Additions to Lee Field," n.d.
3. "Acquisition Data, Benjamin Lee Field, Green Cove Springs"
4. Clay County Port, Inc., "Reynolds Industrial Park," post-1991
5. U.S. Naval Air Station, Jacksonville, Florida, Green Cove Springs, Florida, "Gasoline Storage and Distribution Plans, Sections & Details," Y & D Drawing No. 144,399; 23 September 1940
6. U.S. Naval Air Station, Jacksonville, Florida, Green Cove Springs, Florida, Y & D Drawing No. 144,400; 23 September 1940
7. U.S. Naval Station, Green Cove Springs, Florida, "Master Shore Station, Part II, Section 2, General Development Plan, Enlargement of Congested Area, Peacetime, Showing Conditions of 1 September 1959."
8. Section "A" of U.S. Naval Station, Green Cove Springs, Florida, "Master Shore Station, Part II, Section 2, General Development Plan, Enlargement of Congested Area, Peacetime, Showing Conditions as of 1 September 1959."
9. U.S. Naval Station, Green Cove Springs, Florida, "Master Shore Station, Part II, Section 2, General Development Plan, Peacetime Index of Structures, Showing Conditions as of 15 March 1959," Y & D Drawing No. 629,923.
10. Reynolds Industrial Park, Green Cove Springs, Florida, "Index of Structures," 18 July 1961
11. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, "Additional Gasoline Storage and Distribution, Grading Plans," Y & D Drawing No. 207,721; 6 August 1942
12. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, "Additional Gasoline Storage and Distribution, Plan and Pump House," Y & D Drawing No. 207,722; 6 August 1942
13. U.S. Naval Station, Green Cove Springs, "Master Shore Station, Part III, Section 2, General Development Plan, Peacetime Index of Structures, Showing Conditions as of 30 June 1956," Y & D Drawing No. 629,923.
14. U.S. Naval Station, Green Cove Springs, "Master Shore Station, Part III, Section 2, General Development Plan, Peacetime Index of Structures, Showing Conditions as of September 1958," Y & D Drawing No. 629,923.
15. Map of U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, "Showing Conditions on 30 June 1945"
16. Map of U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, "Showing Conditions on 30 June 1946"
17. Map of U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, "Showing Conditions on 30 June 1947"

18. Map of U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, "Showing Conditions on 30 June 1948"
19. Map of U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, "Showing Conditions on 30 June 1950"
20. U.S. Naval Station, Green Cove Springs, Florida, "Grades for Gasoline Pits," 21 February 1941, Y & Drawing No. 144,799
21. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, "Extension to Gasoline Distr. Systems, Equipment for Service Pits, Plot Plan & Details," Y & D Drawing No. 274,215, 17 September 1943
22. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, "Extension to Gasoline Distr. Systems, Plot Plan & Details," Y & D Drawing No. 274,233; 18 August 194[3]
23. U.S. Naval Air Station, Jacksonville, Florida, U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, "Gasoline Fill Line from Dock, Plan, Profile & Details," Y & D Drawing No. 207, 494; 23 February 1943
24. Lee Field, "Proposed Gasoline Fill Line from Docks," 23 October 1943
25. U.S. Naval Station, Green Cove Springs, Florida, Facilities for Inactive Vessels, "Extension to Power Plant, Elevations, Sections & Details, Structural," Y & D Drawing No. 429,195; 22 May 1946
26. U.S. Naval Station, Green Cove Springs, Florida, Facilities for Inactive Vessels, "Extension to Power Plant, Mechanical Equipment, Plan of Ground Floor & Details," Y & D Drawing No. 429,198; 22 May 1946
27. U.S. Naval Air Station, Jacksonville, Florida, "Proposed Layout, Outlying Field, Green Cove Springs," Y & D Drawing No. 147,936; 12 December 1940
28. Chart of Clay County Port, Inc./Reynolds Industrial Park, "Building Address Lists"
29. U.S. Naval Station, Green Cove Springs, "Master Shore Station, Part IV, Section 6, Area Development, Plan Areas 1-2-3-6-10-11. Utilities, Compressed Air, Gasoline, Propane Gas Distribution Systems," Y & D Drawing No. 629,923; 23 November 1953
30. Section "B" of U.S. Naval Station, Green Cove Springs, Florida, "Master Shore Station, Part II, Section 2, General Development Plan, Enlargement of Congested Area, Peacetime, Showing Conditions as of 1 September 1959."
31. "Annual Report Map of U.S. Naval Air Station, Green Cove Springs, Showing Conditions on 30 June 1943," N.A.S. Drawing No. 3-1-31
32. U.S. Naval Station, Green Cove Springs, "Master Shore Station, Part III, Section 2, Area Development, General Development Plan, Showing Conditions as of 30 June 1955,"
33. Florida Group, Atlantic Reserve Fleet, "General Development Map, Existing and Planned Pre-M Day, Conditions as of 1 June 1961," Y & D Drawing No. 913,278
34. Reynolds Industrial Park, Green Cove Springs, Florida," Existing 1966
35. U.S. Naval Air Station, Jacksonville, Florida, "Lee Field," n.d.
36. U.S. Naval Air Station, Jacksonville, Florida, U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, "Prefab. Shelters – Type MT –144 Aircraft

- Maintenance Trainers, Plans, Details & Electrical,” N.A.S. Drawing No. 3-4-56; 26 October 1944
37. U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, “Hangars No. 9 & 19, Extension to Sprinkler System, Plan & Details,” n.d.
 38. U.S. Naval Air Station, Jacksonville, Florida, Benjamin Lee Field, U.S. Naval Station, Green Cove Springs, Florida, “Additional Taxiways, Plan and Details,” Y & D Drawing No. 255,557
 39. U.S. Naval Air Station, Jacksonville, Florida, U.S. Naval Auxiliary Air Station, Green Cove Springs, Florida, “Fire Zones, Proposed Commissary Store,” 25 February 1942
 40. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, “Extension of Station Maint., Building No. 5, Electrical,” Y & D Drawing No. 226,580, 5 December 1942
 41. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, Green Cove Springs, Florida, “Building No. 5, Carpenter Shop, Sawdust Blower & Collector System Plan – Elevation & Section,” Y & D Drawing No. 565,836; 9 June 1952
 42. “General Storehouse – BLDG. 6, Naval Auxiliary Air Station, Green Cove Springs, Proposed Mezzanine Floors,” Work Order 5873, n.d.
 43. U.S. Naval Air Station, Jacksonville, Florida, “Block Plan – Building Area, Green Cove Springs, FLA,” Y & D Drawing No. 144,1[58], 30 August 1940
 44. U.S. Naval Air Station, Jacksonville, Florida, Green Cove Springs, Florida, “Alteration to Utility Building,” Y & D Drawing No. 157,619, 23 May 1941
 45. U.S. Naval Air Station, Jacksonville, Florida, Auxiliary Air Station, Green Cove Springs, Florida, “Utility and A&R Shop Building #8, Electrical,” Work Order 5873, 1943
 46. U.S. Naval Station, Green Cove Springs, Florida, “Garage – Building No. 8, Hydraulic Hoist & Shelter, Plans – Elevation & Sections,” P.W.O. Drawing No. C-412; 25 June 1952
 47. “Map of U.S. Naval Station, Green Cove Springs, Florida, Showing Conditions on 30 June 1953,”
 48. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, “Fire Station and Garage, BLDG. No. 37, Location, Floor & Roof Plans, Window & Door Schedules,” Y & D Drawing No 207,971; 7 October 1942
 49. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, “Fire Station and Garage, BLDG. No. 37, Elevations & Details,” Y & D Drawing No 207,973; 7 October 1942
 50. U.S. Naval Station, Green Cove Springs, Florida, “Building No. 50, Paint & Oil Storehouse, Proposed Extension, Plans, Elevation & Details,” P.Wo. Drawing No. C-425.
 51. PHOTO: Enclosure from “Automotive Vehicle Maintenance Facility”
 52. Environmental Sciences and Engineering, Inc., “Figure 3-5Grease Rack Ditch Soil Sampling Sites,” 1987.
 53. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, “Magazines & Access Road, Detailed Layout & Site Plan,” Y & D Drawing No. 255,692; 19 May 1943

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54. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, "Fixed Gun Firing Range, Site Plan" Y & D Drawing No. 226,741; 4 September 1943
 55. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, "Fixed Gun Firing Range, Paving, Grading & Drainage" Y & D Drawing No. 226,742; 4 September 1943
 56. U.S. Naval Station, Green Cove Springs, "Master Shore Station, Part II, Section 2, General Development Plan, Peacetime," Y & D Drawing No. 629,923; [circa 1957]
 57. Aerial Photograph: Clay County, 11-19-58; PD 85 2-05, Approximate Scale 1"=300'
 58. Aerial Photograph: Clay County, 11-9-69; PD 692 10H-12, Approximate Scale 1"=300'
 59. Aerial Photograph: Clay County, 4-25-71; PD 948 1-1, Approximate Scale 1"=400'
 60. Aerial Photograph: Clay County, 12-10-73; PD 1454 12-10, Approximate Scale 1"=300'
 61. Aerial Photograph: Clay County, 11-15-75; PD 1779 12-12, Approximate Scale 1"=300'
 62. Aerial Photograph: Clay County, 11-26-79, PD 2587 7-12, Approximate Scale 1"=300'
 63. Aerial Photograph: Clay County, 01-29-81; PD 2681 12-11, Approximate Scale 1"=300'
 64. Aerial Photograph: Clay County, 3-22-84; PD 3106 12-10, Approximate Scale 1"=300'
 65. Aerial Photograph: Clay County, 2-10-87; PD 3615 12-12, Approximate Scale 1"=300'
 66. Aerial Photograph: Clay County, 4-12-93; PD 4180 12-12, Approximate Scale 1"=300'
 67. Aerial Photograph: Clay County, 11-19-58; 71100-2-05
 68. Aerial Photograph: Clay County, 11-9-69; KU692-10H-1
 69. Aerial Photograph: Clay County, 4-25-71; 1:24,000; KAR9481-1
 70. Aerial Photograph: Clay County, 12-10-73; DD 1454-12-10
 71. Aerial Photograph: Clay County, 11-26-79; PD 2587-7-12
 72. Aerial Photograph: Clay County, 4-12-93; PD 4180-12-12
 73. Dames & Moore, U.S. Army Corps of Engineers, Former U.S. Naval Air Station, Lee Field, Green Cove Springs, Florida, "Figure 2: Site Layout with Investigation Sites"
 74. Dames & Moore, U.S. Army Corps of Engineers, Former U.S. Naval Air Station, Lee Field, Green Cove Springs, Florida, "Figure 16: Probable Container Burial Area"
 75. PHOTO: Department of the Navy, Public Works Program, Fiscal Year 1960, "Facilities Utilized by Supply & Fiscal Department," [1957]
 76. PHOTOS: Pier Area [1950s]
 77. U.S. Naval Station, Green Cove Springs, Florida, "Permanent Berth Assignment Plan, Florida Group, Atlantic Reserve Fleet," P.W.O. Drawing No. C-255, 25 April 1952
 78. U.S. Naval Station, Green Cove Springs, Florida, Facilities for Inactive Vessels, "Sand Blasting Operation, 200 Ton Steel Hopper, Location & Plot Plan – Paving," P.W.O. Drawing No. C-229, 25 June 1952
 79. PHOTO: Fire Safety Week Scrapbook [1957]

80. PHOTO: Fire Fighter School Area, April 2000
81. U.S. Naval Station, Green Cove Springs, Florida, "Sanitary Sewers Distribution Plan," N.A.S. Drawing No. 3-26-40, July 1945
82. U.S. Naval Station, Green Cove Springs, Florida, Facilities for Inactive Vessels, "Fresh Water, Fire Protection, Storm & Sanitary Sewerage, Exterior Services," Y & D Drawing No. 429,186; 22 May 1946
83. U.S. Naval Station, Green Cove Springs, Florida, "Sewerage Treatment Plant, Location Plan, Piping & Details," Y & D Drawing No. 431,461; 29 May 1946
84. U.S. Naval Station, Green Cove Springs, Florida, "Plot Plan of Landing Field Showing Grading & Storage," Y & D Drawing No. 144,138; 23 September 1940
85. U.S. Naval Air Station, Jacksonville, Florida, Lee Field, "Roads & Walks, Storm Sewers," Y & D Drawing No. 193,604; 23 March 1942
86. U.S. Naval Station, Green Cove Springs, Florida, "Additions to Drainage System," Y & D Drawing No. 158,036, 1 August 1941
87. U.S. Naval Station, Green Cove Springs, Florida, "Landplane Hangar #9 – Lee Field, Rearrangement of Aerological Equipment," Y & D Drawing No. 255,777
88. U.S. Naval Station, Green Cove Springs, "Master Shore Station, Part IV, Section 6, Area Development Plan, Areas 1-3-4-5-6-7-8-9-10-11 Utilities, Storm Drainage System," Y & D Drawing No. 629,948; 23 November 1953