

Describe the present and original (if known) physical appearance

Scott Airfield (1922) is a large open field with a collection of metal sided ancillary buildings, a Mission Revival terminal, and a recently paved runway and taxiing area. It is set amid the flat delta country around Tallulah. Despite recent changes, the airfield still conveys its historical importance.

The taxiing area is encompassed on two sides by buildings. There is the 1928 Mission Revival terminal with its metal tile roof and round arch windows. Next to it is a 1920's frame hangar with more or less original metal siding. There are also two 1950's hangars and four 1950's sheds, all of which are metal sided. Despite the recent date of these sheds and hangars, they resemble earlier buildings of their type on the site (see historic view). In addition, the airfield retains its open agrarian character. The setting is intact and overall the site still resembles a rural airfield of the 1920's. Hence it conveys its historical role as a proving ground for crop dusting,

Contributing Elements:

The terminal and 1920's hangar are listed as contributing elements because despite the fact that they do not date from 1922 or 1923 (see Item 8), they do date from the 1920's. Small scale aerial experiments continued at Shirley Field throughout the 1920's on very meager funds. Hence the two buildings do date from the general period of experimentation. Moreover, they are unmistakably airport buildings and demonstrate the presence of an airport facility at Shirley Plantation in the 1920's. This of course is materially linked with the period of early experimentation because without these early experiments there would never have been an airplane facility on the site. The airport itself is evidence of the historical event which took place there.

Intrusions:

There are six low scale metal sided buildings on the site which are less than fifty years old. There are also 2 oil drums, a beacon tower, and a soybean container. Despite these, the site retains its historical integrity for the reasons mentioned above. Moreover, one would not expect a 1920's airport which has been continuously used since that time to retain its original appearance given advances in aviation technology.

Specific dates	1922-1923
Builder/Architect	Builder: U. S. D. A. Delta Laboratory

Statement of Significance (in one paragraph)
Criterion A

Scott Airfield is significant on the state level in the area of agriculture because it played an important role in the development of cotton crop dusting, which was of great benefit to the southern cotton belt.

After the disastrous boll weevil epidemic of the early twentieth century, the southern agricultural community and the USDA were casting about for some means of controlling the insect. The major thrust of this effort was the establishment of the USDA Delta Laboratory in Tallulah, Louisiana in 1909. An effective poison (calcium arsenate) was found rather quickly, but the problem remained as to how to administer the powdery substance to the plants. During the teens and early 20's the Delta Lab experimented with numerous poison dispensers ranging from simple handgun applicators to heavy mule drawn machines with as many as six applicator nozzles. The lab also rated commercially produced applicators. But however technically clever the applying devices

were, they still had to be hauled through the cotton fields at a slow rate of speed. This made dusting a labor intensive, time consuming, and expensive operation. Moreover, a farmer might treat his fields to halt or prevent a weevil infestation only to have a sudden heavy rain wash the poison dust from his plants. Re-dusting took a long time and often could not begin right away because the fields were too soggy.

Aerial application provided the solution to these problems. Actually poisoning insects by aerial bombardment had been tried sporadically in various parts of the world during the first two decades of this century. One such attempt was conducted in 1921 at the State Experimental Station in Troy, Ohio. A grove of catalpa trees was treated by dropping poison dust from a low-flying airplane. The successful results gained nationwide publicity. It was said that "two men in an airplane could do in a few minutes what it took many men several days to do less effectively."

Later that year one J. A. Truesdell, in a New York Times article, suggested the use of aerial application against the boll weevil in the cotton region. He also suggested that the army and the USDA cooperate in an experimental aerial application program. In 1922 the U. S. Air Service sent five airmen to the Delta Lab in Tallulah to conduct experiments under the direction of Dr. B. R. Coad. Coad, who had served as director of the lab since 1915, was at first skeptical of aerial application, but later he became one of its leading advocates. Coad chose Shirley Plantation (the present site) as the location for the experiments because the area offered a wide range of environmental conditions. It was also close to the Delta Lab.

The ensuing experiments using World War I planes were the first instance of the use of aerial crop dusting of cotton plants in the world. They were also the first organized testing program to determine whether aerial dusting was effective against insects which attack cotton plants. In preparation for the experiments the laboratory staff devised an inboard airplane hopper to more effectively deliver poison. (Previously a poison container was strapped to the side of the plane, which of course interfered with flying.) The experiments were intended to answer two essential questions: (1) Could airplanes be operated so as to dust cotton fields thoroughly? (2) Would the scattered dust adhere to the plants in sufficient quantity to control insects?

The results were surprisingly good. It was found that: (1) The slipstream of the airplane propellers forced the poison dust cloud down among the cotton plants regardless of weather conditions. (2) The dust adhered to the plants whether they were wet or dry. (3) Insects were effectively controlled. In 1923 further improvements were made including a better hopper and deflectors to provide a more uniform dust cloud.

Funding for large-scale experiments was cut off after 1923, but this did not stop the work. The agricultural community had watched the experiments at Scott Field with interest and private companies carried on development after federal funding stopped. For example, the Huff Daland Company worked with Dr. Coad at Scott Field in 1923 on a specially designed dusting plane. In 1925 Huff Daland dusted 60,000 acres as a private contractor. Numerous other firms went into the cotton dusting business as well, and in the following years two million acres were being dusted annually across the South. A new industry had grown up.

It is likely that none of this would have happened were it not for the crucial experiments conducted at Scott Field in 1922 and 1923. In our opinion Scott Field is the primary resource associated with the development of crop dusting in cotton production. It was there that crop dusting was proven to be effective and economical. Moreover, the Delta Laboratory facility is no longer extant.

Explanation of Level of Significance:

The resource is being nominated to the Register with a designation of significance at the state level. The historical phenomenon involved is of importance to the southern cotton belt. The significance embraces six or seven states, not the entire country. Since there is no regional category of significance, we felt that "state" was the most appropriate level.

NB: The applicant is interested in noting for the record that Scott Field is related, albeit remotely, to the formation of Delta Airlines. Certain individuals employed at Scott Field were involved in the beginnings of Delta Air Service (originally a crop dusting concern) in nearby Monroe. This company grew to become present-day Delta Airlines.

Bibliography

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Cleveland, T. C and Parencia, C. R. "History of the USDA Cotton Insects Research Laboratory, Tallulah, Louisiana, 1909-1973." Bulletin of the Entomological Society of America, December, 1976.

The above sources were supplied to the applicant by the United States Department of Agriculture through a request from Senator Russell Long.

Personal communication with Clifton E. Hester and James M. Yeates, June 27, 1984.
These men were employed at the Delta Lab in Tallulah in the 1920's.