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JEA INDUSTRIAL COMMUNITY SOLAR

FINAL ENVIRONMENTAL ASSESSMENT

Madison County, Tennessee

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Knoxville, Tennessee

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CHAPTER 1

1.0 INTRODUCTION

The Tennessee Valley Authority (TVA) proposes to enter a Power Purchase Agreement (PPA) with SR Jackson, LLC (SR Jackson), a wholly-owned subsidiary of Silicon Ranch Corporation (SRC), in Madison County, Tennessee. The long-term PPA would provide for TVA's purchase of electric power generated by the solar photovoltaic (PV) facility for 20 years.

In order to fulfill the PPA, SR Jackson plans to develop a solar PV facility on a 44.4-acre tract south of US 70/ State Route (SR) 1 (Airways Boulevard), east of the SR 223 intersection, and just north of the McKellar-Sipes Regional Airport in Madison County. While design of the facility is in the process of being finalized, the conceptual plan includes a combination of monofacial and bifacial solar modules comprised of approximately 5,500 individual panels arranged over roughly 15 acres.

The proposed facility would occupy approximately 15 acres of the 44.4-acre property to be owned by SRC and leased to SR Jackson for the project. The proposed facility would have a direct current (DC) generating capacity of 2 megawatts (MW) and would interconnect to the Jackson Energy Authority (JEA) distribution network. The project would consist of multiple parallel rows of PV panels on single-axis tracking structures, DC to alternating current (AC) inverters, and one transformer. It would connect to the existing JEA-owned overhead 12.47-kilovolt (kV) powerline along the southern boundary of the project site. The panels would face 60 degrees east and track the sun throughout the day until they face 60 degrees west at sunset. Bifacial modules would capture indirect light bouncing off the ground, increasing production capabilities. The PV panel surface material would be a smooth glass with an anti-reflective (AR) coating.

Figure 1 identifies the location of the proposed solar facility.

1.1 PURPOSE AND NEED FOR ACTION

In its 2011 Integrated Resource Plan (IRP; TVA 2011) TVA established the goal of increasing its renewable energy generating capacity by 1,500 to 2,500 MW by 2020. TVA established the Renewable Standard Offer (RSO) program and the Solar Solutions Initiatives (SSI) pilot as two means of meeting this goal. Under the program and the pilot, TVA purchases energy at established terms and conditions (the "standard offer") from operators of qualifying renewable energy-generating facilities. Qualifying facilities must be new, located within the TVA service area, and must generate electricity from specific technologies or fuels. Solar PV generation is one of the qualifying technologies. TVA's 2015 IRP (TVA 2015) reinforced the continued expansion of renewable energy generating capacity, including the addition of between 175 and 800 MW (AC) of solar capacity by 2023. The SSI pilot was redesigned to allow for greater Local Power Company (LPC) involvement and more LPC-directed projects. The resulting pilot was named Distributed Solar Solutions (DSS). The proposed PPA with SR Jackson for the solar facility would be executed through the DSS pilot and help TVA meet its need and goal for additional renewable generating capacity.

1.2 BACKGROUND

In May 2017, TVA approved 2 MW of solar capacity for JEA through its DSS pilot, which encourages LPCs to enter into partnerships for directed solar development. JEA worked with SR

Jackson during the application process and would continue to do so throughout the lifespan of the proposed project.

Under the PPA, SR Jackson will fund, build, own, and operate the solar energy facility. Although the proposed facility would be owned by a third party, the solar farm would be an Industrial Community Solar project to assist the Jackson industrial community in meeting corporate sustainability goals. Community solar allows participants to share the benefits of solar power without installing solar panels on their own property.

Figure 1. Jackson Solar – Project Location

1.3 SCOPE OF THIS ENVIRONMENTAL ASSESSMENT

The National Environmental Policy Act (42 United States Code [U.S.C.] §§ 4321-4347) and its implementing regulations promulgated by the Council on Environmental Quality ([CEQ], 40 Code of Federal Regulations [CFR] §§ 1500–1508), requires Federal agencies to evaluate the potential environmental impacts of their proposed actions. To meet these requirements, an Environmental Assessment (EA) has been prepared in accordance with NEPA, CEQ's regulations, and TVA's procedures for implementing NEPA (TVA 1983). TVA's Proposed Action would result in the construction and operation of the proposed solar facility by SR Jackson. The environmental review has been carried out to evaluate potential impacts of TVA's Proposed Action (the purchase of power under the PPA) and potential impacts related to the construction and operation of the proposed project. The following chapters describe the existing environment in the project area, analyze potential environmental impacts associated with the Proposed Action Alternative and the No Action Alternative, and identify and characterize cumulative impacts resulting from the proposed project in relation to other ongoing or reasonably foreseeable proposed activities within the surrounding area of the project site.

Potentially affected areas within and beyond the project site help define the area of impact. Chapter 3 discusses the extent of the area of impact with respect to certain environmental resources, e.g., impacts to archaeological resources are limited to areas of physical disturbance while impacts to historic architectural resources include structures within proposed project's viewshed.

TVA's commitment to purchase renewable power is contingent upon the satisfactory conclusion of the environmental review for the proposed project. For the project to continue as currently proposed, TVA must deem the project to be environmentally acceptable by determining that the project would not result in significant impacts to the human environment and is consistent with all applicable Federal, state, and local environmental laws and regulations.

1.4 PUBLIC NOTICE/PUBLIC INVOLVEMENT

A draft of this EA was issued for public comment on December 18, 2018. The draft EA was posted on the TVA website along with instructions on how to submit comments. Notices of its availability were sent to potentially interested state and federal agencies. In addition, email notifications were sent to the neighboring McKellar-Sipes Regional Airport and Islamic Center of Jackson. Construction practices and notifications will be followed as required by local and state requirements, ordinances, and regulations.

The comment period was initially scheduled to close on January 21, 2019. Due to Martin Luther King, Jr. Day falling on Monday, January 21, 2019, the comment period was extended through January 22, 2019. TVA received comments from the Tennessee Department of Environment and Conservation and McKellar-Sipes Regional Airport. Topics raised in these comments include the following: Air pollution management if open burning is used for disposal of wood wastes; solid waste management throughout construction and operation; effects of major seismic events; post-construction vegetation management techniques; and potential for wildlife attractant near airport if site is overgrown. TVA has revised the discussion of these topics in this EA to address these comments. Appendix A contains comments on the draft EA and TVA's responses to those comments.

1.5 REQUIRED PERMITS AND LICENSES

Based on the scope of the proposed construction activities, as described in Chapter 2, the project would likely require a National Pollutant Discharge Elimination System (NPDES) construction general permit issued by the Tennessee Department of Environment and Conservation (TDEC). A general NPDES permit would require the development of a stormwater pollution plan (SWPPP) and implementation of approved pollution prevention measures. Appropriate building and electrical permits will be obtained through the Madison County Building Department and other local entities. If open burning is determined to be the best method for wood waste management, a burn permit will be obtained through the Madison County Fire Department. While SR Jackson is currently exploring the location of the construction and permanent access roads, all potential areas have all been included in the environmental review. As currently proposed, permanent access to the facility would be from Westover Road to the south. While vehicular traffic would not be an issue once the solar facility is in operation, construction access would likely be from the north off US 70/SR 1 (Airways Boulevard) to avoid having truck traffic near the Madison County Fire Department. Temporary access from US 70/SR 1 (Airways Boulevard) will be obtained through appropriate Tennessee Department of Transportation (TDOT) channels and permitting.

CHAPTER 2

2.0 DESCRIPTION OF THE ALTERNATIVES

The following discussion identifies the alternatives evaluated in this EA, describes each alternative, provides a comparison of alternatives with respect to their potential environmental impacts, and identifies the Preferred Alternative.

This EA evaluates two alternatives: The No Action Alternative and the Proposed Action Alternative.

2.1 NO ACTION ALTERNATIVE

The No Action Alternative provides for a baseline of conditions against which the impacts of the Proposed Action Alternative can be measured. Under this alternative, TVA would not purchase power from the solar facility and the solar facility would not be constructed and operated by SR Jackson.

Under the No Action Alternative, environmental conditions in the project area would remain unchanged in the immediate future. The identified land would not be developed into a solar facility. No improvements would be made to the land. The approved 2 MW of solar capacity would not be developed, limiting community access to solar energy options and choices.

2.2 PROPOSED ACTION ALTERNATIVE

The Proposed Action Alternative would provide for the installation of a 2-MW solar facility in Madison County for which TVA would enter a 20-year PPA with SR Jackson. The proposed project would be developed on a 44.4-acre tract south of US 70/SR 1 (Airways Boulevard), east of the SR 223 intersection, and just north of the McKellar-Sipes Regional Airport. While the design is in the process of being finalized, the conceptual plan includes a combination of monofacial and bifacial solar modules comprised of approximately 5,500 individual panels arranged over roughly 15 acres. There are currently no plans for the development of the western portion of the property. The proposed project and associated PPA presented in the Proposed Action Alternative involve the development of the proposed facility occupying approximately 15 acres of the 44.4-acre property to be owned by SRC and leased to SR Jackson for the project.

Solar Facility

The Proposed Action Alternative would result in the installation of approximately 5,500 individual solar panels arranged over roughly 15 acres of the 44.4-acre area. The solar arrays would likely be supported by steel piles which would either be driven or screwed into the ground to a depth of 6 to 10 feet. On-site sedimentation basins would be shallow and, to the extent feasible, utilize the existing terrain without requiring extensive excavation. The PV panels would be connected with underground wiring placed in trenches. The trenches would be approximately 3 to 4 feet deep and 1 to 4 feet wide. Figure 2 below provides the overall site layout for the Proposed Action Alternative.

The solar arrays utilized for the proposed facility would be composed of multiple monocrystalline PV modules, or panels. PV power generation is the direct conversion of light into electricity at the atomic level. Some materials exhibit a property known as the photoelectric effect that causes them to absorb photons of light and release electrons. When these free electrons are captured,

an electric current is produced, which can be used as electricity (TVA 2014). The proposed facility would convert sunlight into DC electrical energy within monocrystalline PV panels (Figure 3).

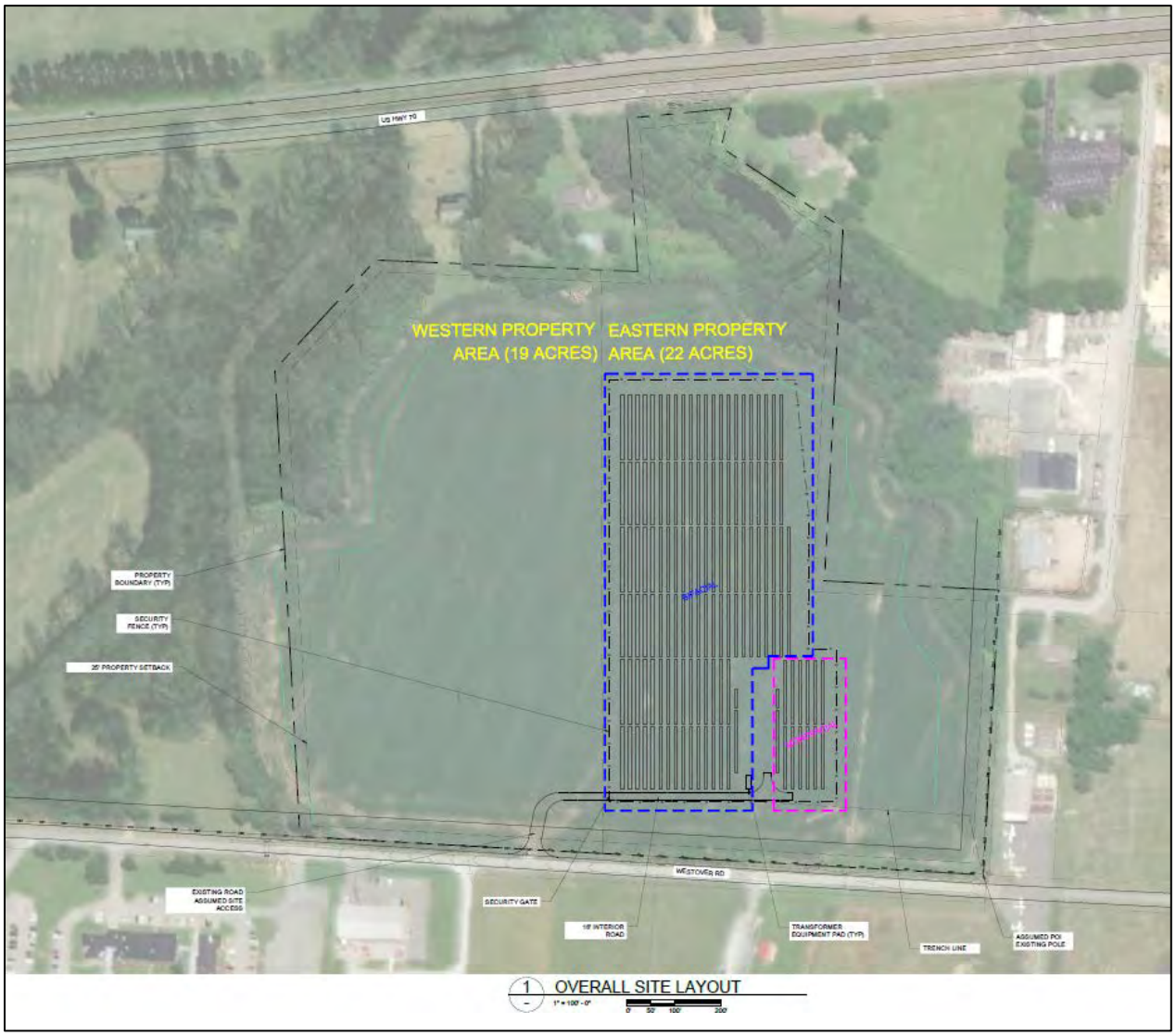

Figure 2. Jackson Solar – Conceptual Layout

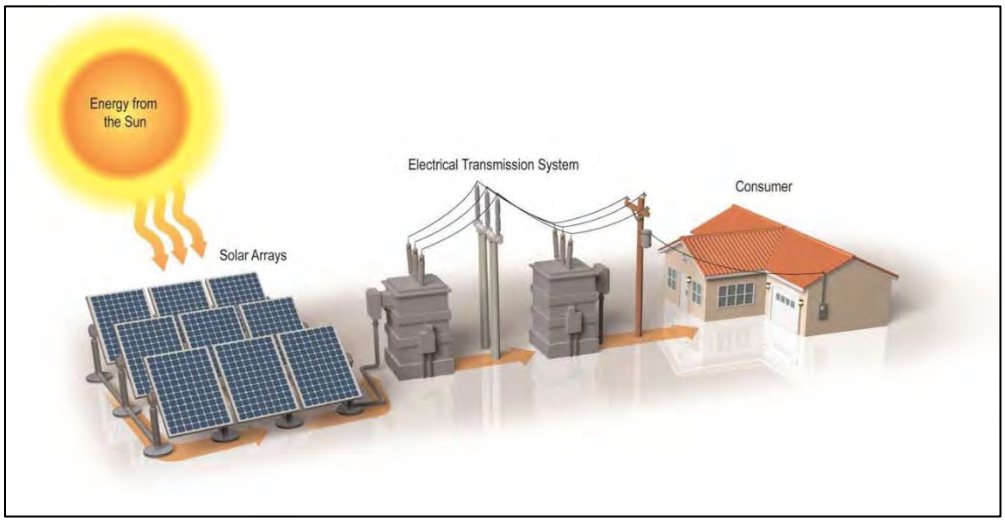

Figure 3. General energy flow diagram of PV solar system (not to scale)

The SR Jackson solar facility would be composed of approximately 5,500 PV panels, each capable of producing approximately 360 watts, mounted together in arrays (Figure 3). The arrays would connect to a total of 34 1,500V power inverters to convert the DC electricity generated by the solar panels into AC electricity, one 2.00-mega volt amp (MVA) transformer for the project's electrical collection system, and a riser pole connecting to the JEA distribution system.

The PV panels would be mounted on motor-operated axis tracker structures, commonly referred to as single-axis trackers. The axis trackers would be designed to pivot the panels along their north-south axes to follow the path of the sun from the east to the west across the sky. The tracker assemblies would be constructed in parallel north-south rows using steel piles installed using either a vibratory pile driver or helical piles with a depth of 6 to 10 feet below grade (Figure 4).

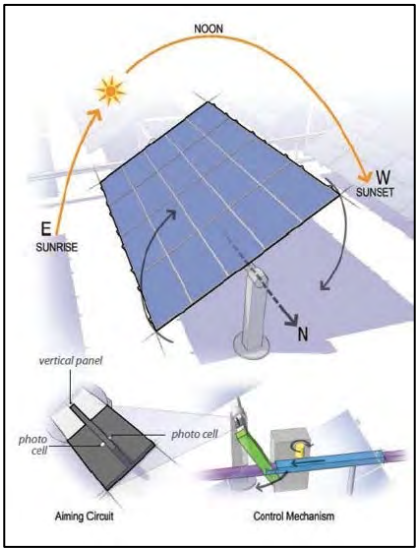

Figure 4. Diagram of single-axis tracking system (not to scale)

The PV modules would be electrically connected in series (called a "string") by wire harnesses that conduct DC electricity to combiner boxes. Each combiner box would collect power from a total of 202 strings of modules and feed a power conversion station via cables placed in excavated trenches. The excavated trenches would be approximately 3 to 4 feet deep and 1 to 4 feet wide. Each trench would be backfilled with project-site native soil and then appropriately compacted. Aboveground cables would be used to connect the modules to harnesses that lead wiring to combiner boxes.

The AC power from each individual inverter, typically 50 kW, will be collected at an AC recombiner to be sent to the transformer. The underground voltage collection circuits will deliver AC electricity from the single transformer to the project's riser pole connecting to the existing JEA overhead powerline.

The PV panels would be installed in parallel north-south rows and arranged to avoid streams and wetlands on the project site to the maximum extent practicable. The arrays would contain an inverter and approximately 87 trackers of panels. Buried electrical cables would connect the rows of PV panels to 1,500V power inverters, each connecting to the single pad-mounted 2.00 MVA transformer on site. The buried cables would continue from this transformer to the point of interconnection. As described above, all trenches for buried cables on the site would be backfilled with native soil, and the ground surface would be returned to its original grade. The project will connect to a new riser pole and interconnect with the existing JEA 12.47-kV distribution line already in place. The new riser pole will be constructed and owned by SR Jackson. The energy produced from the 2-MW DC site will be sold to TVA.

Construction

Construction of the solar power facility generally requires site preparation (surveying and staking, removal of tall vegetation and small trees, light grading and clearing, installation of security fencing, installation of erosion control Best Management Practices (BMPs), and preparation of construction laydown areas) prior to solar array assembly and construction, which includes driving steel piles for the tracker support structures, installation of solar panels and electrical connections, and system testing and verification.

SR Jackson is currently exploring the location of the construction and permanent access roads, keeping safety as the priority. These potential areas have been included in the environmental review. As currently proposed, permanent access to the facility would be from Westover Road to the south. While vehicular traffic would not be an issue once the solar facility is in operation, construction access would likely be from the north off US 70/SR 1 (Airways Boulevard) to avoid having truck traffic near the Madison County Fire Department. Temporary access from US 70/SR 1 (Airways Boulevard) will be coordinated with TDOT. Aquatic features, discussed later in the document, would not be disturbed by the proposed layout. It is anticipated that permitting activities related to Sections 401 and 404 of the Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.) will not be required.

Appropriate BMPs would be implemented and maintained during construction and operation of the facility. SRC's standard practice, which would be employed by SR Jackson, is to work with the existing landscape (e.g., slope, drainage, utilization of existing roads) where feasible to minimize or eliminate grading work to the greatest extent possible. Any required grading activities would be performed with portable earthmoving equipment and would result in a consistent slope to the local land. Prior to grading, native topsoil would be removed from the area to be graded and stockpiled on site for redistribution over the disturbed area after the grading is completed. Silt fence, sedimentation basins, and other appropriate controls would be used, as needed, to minimize exposure of soil and to prevent eroded soil from leaving the work area. Disturbed areas would be seeded post-construction using a mixture of certified weed-free, low-growing native grass seed obtained from a reputable seed dealer and in compliance with the requirements established by the local office of the Natural Resource Conservation Service (NRCS). Erosion control measures would be inspected and maintained until vegetation in the disturbed areas has returned to the preconstruction conditions or the site is permanently stabilized. Water would be used for soil compaction and dust control during construction.

Grading would consist of the excavation and compaction of earth to meet the final design requirements. Limited to no grading is expected at the project location as the site is relatively flat and would not require any off-site or on-site hauling. Open burning or chipping and grinding of

minimal debris from tree clearing on the site would occur to minimize construction wastes. If burning occurs, only vegetation and untreated wood would be burned, and no burning of other construction debris is anticipated. If open burning is determined to be the best method for wood waste management, a burn permit will be obtained through the Madison County Fire Department. In accordance with TDEC erosion and sediment control requirements, a minimum 60-foot buffer width surrounding all streams and wetlands would be established as an avoidance measure prior to any clearing, grubbing, or grading activities conducted by the construction contractor (TDEC 2012). The expanded buffer zone will be required as the project is in the vicinity of impaired waters. Apart from removal of tall vegetation through non-mechanical means and leaving the roots in place, these buffered areas would be avoided during construction to the greatest extent practicable. Once sensitive areas are marked, construction areas would be cleared and mowed of vegetation and miscellaneous debris. Mowing would continue as needed to contain growth during construction.

To manage stormwater during construction, sediment traps and erosion control silt fence would be utilized. All buffered streams and wetlands would be protected by erosion control silt fence, and sediment traps would be placed in strategic drainage areas to prevent sediment from entering on-site streams and wetlands. Off-site sediment migration would be moderated by the placement of silt fence around the entire area to be cleared. These stormwater BMPs would prevent sediment from entering on-site streams and wetlands and prevent sediment migration off site.

A construction assembly area (laydown area) would be required for worker assembly, vehicle parking, and material storage during construction. This area would be on site for the duration of construction. A temporary construction trailer, used for material storage and office space, would be parked on site. Following completion of construction activities, all trailers, unused materials, and construction debris would be removed from the site. No operations and maintenance buildings or other permanent structures would be on site.

Construction would be sequenced to minimize the time that bare soil on the disturbed areas is exposed. As described above, silt fence would surround the perimeter of the area to be cleared and graded. Other appropriate controls such as temporary cover would be used as needed to minimize exposure of soil and to prevent eroded soil from leaving the work area. Disturbed areas including but not limited to road shoulders, construction office and laydown areas, ditches, and other project-specific locations would be seeded post-construction. If conditions require, soil would be stabilized by mulch or sprayable fiber mat. If the area seeded is a steep slope (6:1 or greater), hydroseeding may be employed as an alternative. Where required, hay mulch would be applied at 3 tons per acre and well distributed over the area. Erosion control measures would be inspected and maintained until vegetation in the disturbed areas has returned to the preconstruction conditions or the site is stable. As part of NPDES permit authorization (see Section 1.4), a site-specific SWPPP would be finalized with the final grading and civil design and would address all construction-related activities prior to construction commencement.

The design of the tracker support structures could vary depending on the final PV technology and vendor selected. Typical installations of this type are constructed using steel support piles. The driven steel pile foundation is typically galvanized and used where high load bearing capacities are required. The pile is driven with a hydraulic ram. Soil disturbance is restricted to the pile insertion location with temporary disturbance from the hydraulic ram machinery, which is about the size of a small tractor. Screw piles are another option for PV foundations which are driven into

the ground with a truck-mounted auger. Screw piles create a similar soil disturbance footprint as driven piles.

Solar panels would be manufactured off site and shipped to the site ready for installation. If concrete pads are required for the drive motors, they would be precast and brought to the site via flatbed truck. Once the majority of components are placed on their respective foundations and structures, electricians and other workers would run electrical cabling throughout the solar field.

The proposed project would include new on-site power pole connections to the existing JEA distribution line. The SR Jackson-owned connection would exit the site via an overhead line and connect to an existing 12.47-kV line. After the equipment is electrically connected, electrical service would be tested, and motors and their controllers would be checked. As the solar arrays are installed, the balance of the facility would continue to be constructed and installed, and the instrumentation would be installed. Once all the individual systems have been tested, integrated testing of the project would occur.

Within the 44.4-acre solar facility site, the 15-acre area containing the solar arrays and associated electrical infrastructure, with exception of the riser pole and other interconnection items, would be securely fenced with 7-foot-high chain-link fencing with three strands of barbed wire on the top throughout construction and the operation of the project. Construction activities would take approximately 4 months to complete using a crew of approximately 40 to 50 people at the peak of construction. Work would generally occur 6 days per week (Monday through Saturday) from 7 am to 3:30 pm. Additional hours could be necessary to make up schedule deficiencies or to complete critical construction activities.

Project Operations

During operation of the solar facility, minor disturbance could occur to soils. Routine maintenance would include periodic motor replacement, inverter air filter replacement, fence repair, vegetation control, and periodic array inspection, repairs, and maintenance. The Proposed Action Alternative would implement traditional mechanized landscaping using lawnmowers, weed eaters, etc. Traditional trimming and mowing would be performed periodically to maintain the vegetation at a height ranging from 6 inches to 2 feet. Selective use of herbicides may also be employed around structures to control weeds. Products used would be limited to post-emergent herbicides and would be applied by a professional contractor.

No major physical disturbance would occur as a result of facility operation. Moving parts of the solar facility would be restricted to the east-to-west facing tracking motion of the solar modules, which amounts to a movement of less than a 1-degree angle every few minutes. This movement is barely perceptible. In the late afternoon, module rotation would start to backtrack west to east in a similar slow motion to minimize shading. At sunset the modules would track to a flat stow position. Otherwise, the PV modules would simply collect solar energy and transmit it to the JEA power grid. With the exception of fence repair, vegetation control, and periodic array inspection, repairs, and maintenance, the facility would require relatively little human activity during operation. No water or sewer service, or permanent lighting would be required on site during operations.

The project site would not be staffed during operation; however, inspection and maintenance is required biannually and in the case of equipment failures. At these times, up to four people would be on site for up to four days. Biannual inspections would involve drawing transformer oil samples and identifying any physical damage to panels, wiring, and interconnection equipment. Vegetation

on the site would be maintained to control growth and prevent shading of the PV panels or interference with the tracking mechanisms. Traditional trimming and mowing would be performed on a quarterly basis, depending on growth rate to maintain the vegetation. Selective use of spot herbicides may also be employed around structures to control any invasive weed outbreak. Precipitation in this region is adequate to remove dust and other debris from the PV panels while maintaining energy production; therefore, manual panel washing is not anticipated unless a specific issue is identified. The proposed project facility would be monitored remotely to identify any security or operational issues. If a problem is discovered during nonworking hours, a repair crew or law enforcement personnel would be contacted if an immediate response was warranted.

Decommissioning and Reclamation

Following the expiration of the 20-year PPA with TVA, SR Jackson would reassess the site operation and determine whether to cease operation or attempt to enter into a new PPA or other arrangement. If TVA or another entity is willing to enter into such an agreement, the facility would continue operating. If no commercial arrangement is possible, the facility would be decommissioned and dismantled and the site restored. In general, the majority of decommissioned equipment and materials would be recycled. Materials that cannot be recycled would be disposed of at approved facilities. SR Jackson would develop a decommissioning plan to document recycling and disposal of materials in accordance with applicable regulations.

2.3 COMPARISON OF ALTERNATIVES

This EA evaluates the potential environmental effects that could result from implementing the No Action Alternative or the Proposed Action Alternative at the proposed solar facility in Madison County. The analysis of impacts in this EA is based on current and potential future conditions on the property and within the surrounding region. The summary and comparison of impacts by alternative for each resource area evaluated is provided in Table 1.

2.4 MITIGATION MEASURES

SR Jackson would implement the following minimization and mitigation measures in relation to resources potentially affected by the proposed project:

- Maintain a vegetative buffer between residences north of the proposed solar facility. The location of the buffer will be determined by final design that takes into account potential shading affects that could impact the project.
- Comply with the terms of the SWPPP prepared as part of the NPDES permitting process and implement other routine BMPs, such as non-mechanical tree removal within surface water buffers, placement of silt fence and sediment traps along buffer edges, and proper vehicle maintenance to reduce the potential for adverse impacts to groundwater.
- Design of the final layout would avoid direct impacts to aquatic features.
- Limit tree clearing to October 15 through March 31, when Federally listed bat species are not present on the landscape in Tennessee, per TVA's programmatic consultation with the U.S. Fish and Wildlife Service (USFWS) on routine actions and federally listed bats that was completed in April 2018 (TVA 2018) in accordance with the Endangered Species Act (ESA) Section 7(a)(2).

2.5 THE PREFERRED ALTERNATIVE

The Proposed Action Alternative has been identified as the Preferred Alternative. Under this alternative, a PPA between TVA and SR Jackson would be executed, leading to SR Jackson's construction and operation of the proposed solar facility.

Table 1. Summary and Comparison of Alternatives by Resource Area

Resource Area	Impacts from No Action Alternative	Impacts from Proposed Action Alternative
Land Use and Zoning	No impacts anticipated	Minor direct and indirect adverse impacts. While a small portion of agricultural land would be lost due to project development, the land has previosuly been identified for idustrial growth in the One Jackson Civic Master Plan.
Geology, Soils, and Prime Farmland	No impacts anticipated	Potential for minor direct and indirect geologic impacts anticipated from the development of the solar facility. Minor impacts to prime farmland.
Water Resources	No impacts anticipated	No direct impacts are anticipated from the development of the solar facility. Minor indirect impacts to water resources could occur from stormwater runoff during construction. Impacts would be minimal but temporary during construction. No long-term adverse impacts are anticipated.
Floodplains	No impacts anticipated	No direct or indirect impacts are anticipated from the development of the solar facility.
Threatened and Endangered Species	No impacts anticipated	Potential indirect effects to the federally listed Indiana bat and the northern long-eared bat may occur due to loss of summer habitat. Under TVA's Bat Strategy, removal of sutiable summer habitat is determined to likely adversely affect the Indiana and northern long-eared bat.
Visual Resources	No impacts anticipated	Minor direct and indirect impacts are anticipated from the development of the solar facility. While views from surrounding properties may be slightly affected, the overall appearance of the solar panels will blend in with the immediate surrounding environment created by the airport and other industrial facilities.
Noise	No impacts anticipated	Minor temporary direct impacts would occur during construction activities.
Air Quality and Greenhouse Gas Emissions	No impacts anticipated	Minor temporary direct impacts would occur during construction activities. The project could reduce the amount of combustion necessary in the area for power production, resulting in a minor beneficial impact to air quality, and assist in the reduction of greenhouse gas emissions on behalf of TVA.
Cultural Resources	No impacts anticipated	No direct or indirect impacts anticipated from the development of the solar facility.
Solid and Hazardous Wastes	No impacts anticipated	Minor direct and indirect adverse impacts anticipated from the development of the solar facility. Construction waste generated during construction activities would be directed to local landfills. Impacts during system operation would be negligible through implementation of a recycling program.
Socioeconomics and Environmental Justice	No impacts anticipated	Minor beneficial direct, indirect, and cumulative impacts during construction and operation and maintenance activities by creation of local jobs, an increase in local tax base from an increase in assessed property value, and potential for expansion of future solar energy systems into the region. No direct or indirect environmental justice impacts anticipated from the development of the solar facility.

CHAPTER 3

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 LAND USE AND ZONING

Affected Environment

The subject property lies approximately five miles west of the center of Jackson in a predominantly rural, agricultural area of Madison County, near a regional airport. There are some adjacent single-family residential parcels to the north, but the project is largely surrounded by industrial and agricultural facilities. All five residential structures bordering the project area along US 70/SR 1 (Airways Boulevard) appear to be occupied while a residential structure to the east of the project area appears to be vacant and owned by the City of Jackson and Madison County. McKellar-Sipes Regional Airport is located just south of Westover Road and the project area. A religious institution, the Islamic Center of Jackson, is located near the northeastern corner of the project location at US 70/SR 1 (Airways Boulevard) and Compass Drive with the Tennessee College of Applied Technology and a Madison County Fire Department facility located west of the airport.

The site was previously zoned as F-A-R (Forestry-Agriculture-Recreation) (Madison County 2015); however, in October 2018, the Madison County Commission rezoned the property to I-2 (Manufacturing and Warehousing). Adopted in 2015, The One Jackson Civic Master Plan identifies a large area of land around McKellar-Sipes Regional Airport, including the proposed project site, as areas for industrial growth (City of Jackson 2015). Throughout the rezoning and planning process with the Madison County Commission and Planning Commission, project neighbors have been notified of project hearings. The Madison County Commission and Planning Commission have not received any comments on the proposed solar facility.

Environmental Consequences

Under the No Action Alternative, the proposed solar facility would not be built, and the land uses of the site would not change.

Under the Proposed Action Alternative, the development of the solar facility would result in the conversion of the site from agricultural uses to rural industrial. This would have little effect on the future land use of adjacent tracts.

Based on the surrounding industrial uses of neighboring properties, the proposed land would not only comply with the current zoning but would also fit within the surrounding environment. The rezoning is in alignment with the Master Plan, which, among other things, serves as the foundation for future land use and growth and development decision-making. Overall impacts to land use would be insignificant.

3.2 GEOLOGY, SOILS, AND PRIME FARMLAND

Affected Environment

Geology

The site is located in the Gulf Coastal Plain physiographic province, which extends from the Florida Panhandle to eastern Texas and from Kentucky to the Yucatan Peninsula in Mexico. The project is located in Madison County, which is within the East Gulf Coastal Plain section that dates

to the Quaternary Period. The landscape varies greatly in topography from rolling hills near the Appalachian Mountains to the flat sandy coastal regions near the Gulf of Mexico (National Park Service [NPS] 2018).

Paleontology

During the Cenozoic era Western Tennessee was a shallow, tropical sea. The best-preserved fossils within Western Tennessee are Mesozoic in age and found within the Coon Creek formation. The Coon Creek formation is known for its extremely well-preserved crustaceans and mollusks, including a small bivalve, Pterotrigonia thoracica, the official state fossil of Tennessee (Paleoportal 2018). The project site is located approximately 30 miles west of any mapped section of the Coon Creek formation; therefore, it is unlikely that any significant fossil remains are present within the project boundary as the area is not typically associated with paleontological finds.

Geological Hazards

Potentially hazardous geological conditions can include the following: landslides, volcanoes, earthquakes/seismic activity, and subsidence/sinkholes. The project site does not have conditions for a majority of these types of hazards. The project area is located on relatively stable ground and no significant slopes are present within several miles; therefore, landslides are not a potential risk. No volcanoes are present within several hundred miles of the project site. The predominant geologic unit on the west side of Madison County is Quaternary-aged loess. The project site lacks the carbonate bedrock geology and karst landforms associated with sinkholes.

Seismic activity at the site could cause surface faulting, ground motion, ground deformation, and conditions including liquefaction and subsidence. The Modified Mercalli Scale is used within the United States to measure the intensity of an earthquake. The scale arbitrarily quantifies the effects of an earthquake based on the observed effects on people and the natural and built environment. Mercalli intensities are measured on a scale of I through XII, with I denoting the weakest intensity and XII denoting the strongest intensity. The lower degrees of the scale generally deal with the manner in which the earthquake is felt by people. The higher numbers of the scale are based on observed structural damage. This value is translated into a peak ground acceleration (PGA) value to measure the maximum force experienced. The PGA is the maximum acceleration experienced by a building or object at ground level during an earthquake on uniform, firm-rock site conditions. The PGA is measured in terms of percent of “g”, the acceleration due to gravity. The United States Geological Survey (USGS) Earthquake Hazards Program publishes a seismic hazard map (Figure 5) that display the PGA with 10 percent (1 in 500-year event) probability of exceedance in 50 years. The potential ground motion for the proposed project area is 0.46g, for a PGA with a 2 percent probability of exceedance within 50 years (USGS 2014).

Soils and Prime Farmland

The project site contains five known soil types. The predominant soil on the project site is Memphis silt loam, comprising more than 60 percent of the on-site soil. The remaining soil types include Calloway silt loam, Grenada silt loam, and Lexington silt loam. Figure 6 below shows the approximate distribution area of each soil type while Table 2 provides a list of soils identified within the project site.

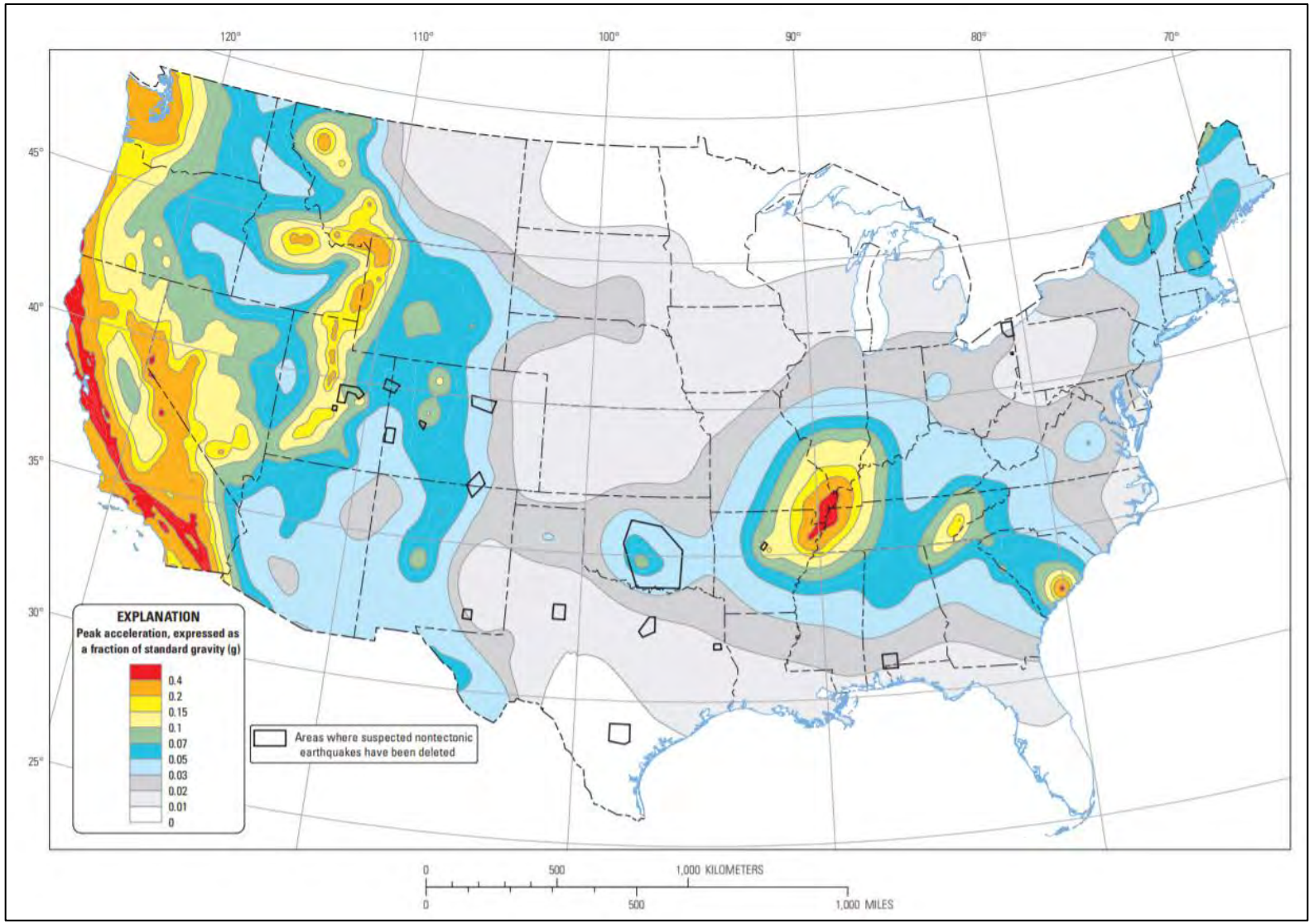

Figure 5. Ten-percent Probability of Exceedance in 50 Years Map of Peak Ground Acceleration

Figure 6. Site Soil Map

Table 2. Site Soils

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Co	Calloway silt loam, 0 to 2 percent slopes	6.5	15.7%
GrB	Grenada silt loam, 2 to 5 percent slopes	0.0	0.1%
LeB3	Lexington silt loam, 2 to 5 percent slopes, severely eroded	3.9	9.5%
LeD3	Lexington silt loam, 8 to 12 percent slopes, severely eroded	4.1	10.0%
MeB	Memphis silt loam, 2 to 5 percent slopes	26.3	64.1%
W	Water	0.3	0.6%
Totals for Area of Interest		**41.0**	**100.0%**

Source: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Memphis silt loam (MeB) is a well-drained soil with more than 80 inches depth to water table with 2 to 5 percent slopes. The parent material for MeB soils is loess. The Calloway silt loam (Co) has 0 to 2 percent slopes and is classified as somewhat poorly drained. Depth to the water table in Co soils is about 7 to 21 inches. The Lexington silt loam (LeB3) with 2 to 5 percent slopes is classified as a well-drained soil which originated from loess over loamy marine deposit parent material. The Lexington silt loam (LeD3) with 8 to 12 percent slopes is classified as being well-drained with more than 80 inches depth to water table. The Grenada silt loam (GrB) is a moderately well-drained soil with 2 to 5 percent slopes and 18 to 33 inches to fragipan (USDA NRCS 2018s). No hydric soils are found within the project site.

The Farmland Protection Policy Act ([FPPA]; 7 U.S.C. 4201 et seq.) requires Federal agencies to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Prime farmland is land that is the most suitable for economically producing sustained high yields of food, feed, fiber, forage, and oilseed crops.

Nearly 80 percent, over 30 acres, of the project site soil is considered prime farmland. This is comprised of Co, GrB, and MeB soils. The remaining soils, LeB3 and LeD3, appear for Madison County on the Soil Data Access (SDA) Prime and other Important Farmlands listing but are not considered prime farmland (USDA NRCS 2018b).

Environmental Consequences

Under the No Action Alternative, the proposed solar facility would not be constructed; therefore, no direct or indirect project related impacts on geological, paleontological, soil resources, or prime farmlands would result. Existing land use would be expected to remain a mix of farmland and forested areas.

Under the Proposed Action Alternative, minor direct impacts to geology and soil resources would be anticipated due to construction and operation of the project. Much of the land in the project site would be cleared and/or graded for the solar facility with the exception of any biologically sensitive areas. The site grading and clearing for the solar facility would cause minor impacts to geology and soils including minor, localized increases in erosion and sedimentation.

Geology and Paleontology

Under the Proposed Action Alternative, minor impacts to geology could occur.

The solar arrays would likely be supported by steel piles which would either be driven or screwed into the ground to a depth of 6 to 10 feet. On-site sedimentation basins would be shallow and, to the extent feasible, utilize the existing terrain without requiring extensive excavation. The PV panels would be connected with underground wiring placed in excavated trenches and backfilled with project-site native soil. Due to the small sizes of the subsurface disturbances, only minor direct impacts to potential subsurface geological resources are anticipated.

As excavation would be limited, only minor direct impacts to geological resources would be anticipated. Should paleontological resources be exposed during site construction (i.e., grading and foundation placement) or operation activities, a paleontological expert would be consulted to determine the nature of the paleontological resources, recover these resources, analyze the potential for additional impacts, and develop and implement a recovery plan/mitigation strategy.

Geologic Hazards

Hazards resulting from geological conditions would be minor because the project site is in a relatively stable geologic setting. There is a moderate potential for small to moderate intensity seismic activity. The facility would be designed to comply with applicable seismic standards prescribed in state and local building codes. A seismic event could cause minor impacts to the project site and equipment on the site. The project could be subject to potential adverse effects from ground failure associated with liquefaction during a strong seismic event. Structural damage to PV panels, PV panel support structures, and other associated equipment could occur. Since the site would not be staffed during operation, potential damage to on-site structures would pose very limited risk to humans. Geologic hazard impacts on the site would be unlikely to impact off-site resources.

Soils and Prime Farmland

As part of the site preparation and development process, portions of the site could be temporarily affected during mowing and construction activities. Soils located in areas where only vegetation clearing is proposed would remain in place unless a circuit trench or foundation would be constructed.

Although not anticipated, should borrow material be required, small amounts of sand and gravel aggregate may be obtained either from on-site activities within the developed portion of the project site, or from local, off-site sources. The creation of new impervious surface, in the form of panel footings and the foundations for the inverter stations and substation, would result in a minor increase in stormwater runoff and potential increase in soil erosion. Use of BMPs such as soil erosion and sediment control measures would minimize the potential for increased soil erosion and runoff. Due to the project disturbance area being at least 1 acre, a NPDES Permit for discharges of stormwater associated with construction activities would be required. Application for the permit would require submission of a SWPPP describing the management practices that would be utilized during construction to prevent erosion and runoff and those to reduce pollutants in stormwater discharges from the site. Following construction, implementation of soil stabilization and vegetation management measures would reduce the potential for erosion impacts during site operations.

During operation of the solar facility, minor disturbance could occur to soils. Routine maintenance would include periodic motor replacement, inverter air filter replacement, fence repair, vegetation control, and periodic array inspection, repairs, and maintenance. The Proposed Action Alternative would implement traditional mechanized landscaping using lawnmowers, weed eaters, etc. Traditional trimming and mowing would be performed periodically to maintain the vegetation at a height ranging from 6 inches to 2 feet. Selective use of herbicides may also be employed around structures to control weeds. Products used would be limited to post-emergent herbicides and would be applied by a professional contractor. Herbicides would be applied by a professional contractor according to manufacturer's directions. Weather events, e.g., predicted rainfall or high winds, would be taken into account prior to application of herbicides in efforts to reduce potential of runoff or drift. These maintenance activities would not result in any adverse impacts to soils on the project site during operations.

A land evaluation and site assessment system is used by the USDA NRCS to establish a farmland conversion impact rating score (7 CFR § 658.4(c)(4)(ii)). When considering the impact rating score, project stakeholders must consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level (USDA 2014). The construction and operation of the Proposed Action Alternative would potentially impact/convert prime farmland. There are approximately 184,000 acres of prime farmland in Madison County, accounting for roughly 51 percent of the total land area in the county. Nearly 80 percent, over 30 acres, of the project site soil is considered prime farmland. The entirety of the solar array, which would cover approximately 15 acres, would be installed in areas identified as prime farmland. The development of the 44.4-acre area into the solar facility impacts a minimal portion of the total available farmland in the county. Moreover, solar projects do not result in the permanent or irreversible conversion of farmland. While agricultural production would cease on the project site, long-term impacts to prime farmlands and soil productivity on the site would be insignificant, and the site could be readily returned to agricultural production once the solar farm is dismantled. Based on the limited site disturbance, there would be minimal direct and indirect effects on prime farmland under the Proposed Action Alternative.

3.3 WATER RESOURCES

Affected Environment

This project area is located in Madison County and drains to water ways within the (8-digit HUC 08010205) South Fork Forked Deer River watershed and more directly to the Johnson Creek watershed. The surface water features in the vicinity of this project include two ponds, one wet weather conveyance (WWC) and one-off site stream, Johnson Creek. Johnson Creek, which is designated for fish and aquatic life, recreation, livestock watering and wildlife and irrigation uses, is listed on the 303(d) list for physical substrate, habitat alterations, and loss of biological integrity due to siltation, non-irrigated crop production, channelization, and land development (TDEC, 2013 and 2016).

Surface water features in the project area were identified by a Tennessee Qualified Hydrologic Professional (TN-QHP) during a site visit. Prior to conducting the field survey, aerial photographs, USGS topographic maps, National Wetlands Inventory (NWI) maps, and soil survey maps were consulted to identify current and historic drainage patterns of the subject property and connectivity of potential wetlands to any other jurisdictional wetlands or waters of the U.S. A field investigation was conducted to evaluate areas of potential jurisdiction using procedures established for "routine delineations" as found in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation

Manual and with additional information as provided in the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region (Version 2.0) (USACE 2010).

Figure 7. Environmental Features

Figure 7 summarizes environmental features located within and adjacent to the project site. Two freshwater ponds are located near the northern border of the project and one WWC (WWC-1) was identified on site near the eastern edge of the parcel. The two ponds do not appear to be hydrologically connected; however, ground water or a spring feed source would need to be ruled out. While these ponds are located near a tributary to Johnson Creek, a berm provides separation, and there does not appear to be any outfall or connectivity to the tributary or each other. There is some vegetation, including trees, growing around the outer perimeter of the pond areas. A stream was identified adjacent to but outside of the project area between Westover Road and US 70/SR 1 (Airways Boulevard). No other wetland areas were observed.

Environmental Consequences

Under the No Action Alternative, the proposed solar facility would not be constructed and no project-related impacts to water resources would occur.

The Proposed Action Alternative includes construction activities, which have the potential to temporarily affect surface water via stormwater runoff. Soil erosion and sedimentation can clog small streams and threaten aquatic life. Appropriate BMPs would be followed, and all proposed project activities would be conducted in a manner to ensure waste materials are contained and the introduction of pollution materials to the receiving waters would be minimized. A general construction stormwater permit would be needed as more than 1 acre would be disturbed. This permit also requires the development and implementation of a SWPPP. Because this project is in the vicinity of impaired waters, additional protective measures may be required, such as expanded buffer zones. Please refer to the TDEC General Construction Stormwater permit (TDEC 2016b) for details. The SWPPP would identify specific BMPs to address construction-related activities that would be adopted to minimize stormwater impacts. Additionally, BMPs, as described in the Tennessee Erosion and Sediment Control Handbook (TDEC 2012), would be used to avoid contamination of surface water in the project area.

During construction, portable toilets would be provided for the construction workforce as needed. These toilets would be pumped out regularly, and the sewage would be transported by tanker truck to a publicly-owned wastewater treatment works that accepts pump out. Equipment washing and dust control discharges would be handled in accordance with BMPs described in the SWPPP for water-only cleaning. Proper implementation of these and other controls expected to result in only minor temporary impacts to surface waters.

Additionally, impervious buildings and infrastructure prevent rain from percolating through the soil and result in additional runoff of water and pollutants into storm drains, ditches, and streams. Clearing of vegetation and ground cover, and the addition of impervious surfaces, could alter the current stormwater flows. The proposed action could increase the impervious cover on the project area, thus altering and possibly increasing the concentrated stormwater flow off of the project site. This flow would be properly treated by implementing proper BMPs or diverting the stormwater discharge to ensure proper drainage.

Maintenance activities associated with solar panels would possibly include, but would not be limited to, periodic inspections, repairs, herbicide/pesticide use, lawn maintenance, and panel cleanings. Cleaning operations should utilize pure water, but if an additive is required to help facilitate the cleaning process than the waste product would need to be evaluated to ensure proper disposal of the waste stream according Federal, state and local regulations. Herbicide/pesticides would not be applied within 50 feet of water bodies and all Federal

Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. §136 et seq.) requirements would be followed.

Should the removal of the PV panels be required due to damage or decommissioning activities, all debris would be disposed of properly. With proper implementation of controls, the Proposed Action Alternative would be expected to have potential for only temporary minor impacts and would not be expected to have long-term direct or indirect impacts to wetlands or water resources.

TVA is subject to Executive Order (EO) 11990, Protection for Wetlands. Under EO 11990, unavoidable impacts to streams and wetlands are compensated through a process known as compensatory mitigation. Moreover, a 'no net loss of wetlands' policy was first adopted as a national goal under President George H. W. Bush's administration in 1988. This policy is aimed at balancing wetland losses due to development with wetlands preservation and restoration efforts. This policy was further refined and endorsed by subsequent administrations, eventually resulting in the 2008 Final Compensatory Mitigation Rule regulations promulgated jointly by the U.S. Environmental Protection Agency (USEPA) and the USACE. As no wetlands were identified on the project site, the project would not result in impacts to wetlands and would therefore be consistent with EO 11990.

Actions that could potentially affect the two ponds or the wet weather conveyance in the project vicinity would be subject to the terms and condition of a general Aquatic Resource Alteration Permit (ARAP) from TDEC pursuant to Section 401 of the CWA, and a USACE Nationwide Permit pursuant to Section 404 of the CWA (33 U.S.C. § 1251 et seq.). If it is necessary to obtain such permits, a hydrologic determination will be submitted to TDEC and the USACE at the appropriate time. Based on the Proposed Action Alternative, individual permitting efforts would not be needed. With implementation of appropriate BMPs, impacts to surface waters and aquatic life would be insignificant during construction and no long-term adverse impacts are anticipated.

3.4 FLOODPLAINS

Affected Environment

A floodplain is the relatively level land area along a stream or river that is subject to periodic flooding. The area subject to a 1 percent chance of flooding in any given year is normally called the 100-year floodplain. The area subject to a 0.2 percent chance of flooding in any given year is normally called the 500-year floodplain. It is necessary to evaluate development in the 100-year floodplain to ensure that the project is consistent with the requirements of EO 11988, Floodplain Management. A map showing the project area and the FEMA FIRM is presented in Figure 8 (FEMA 2018).

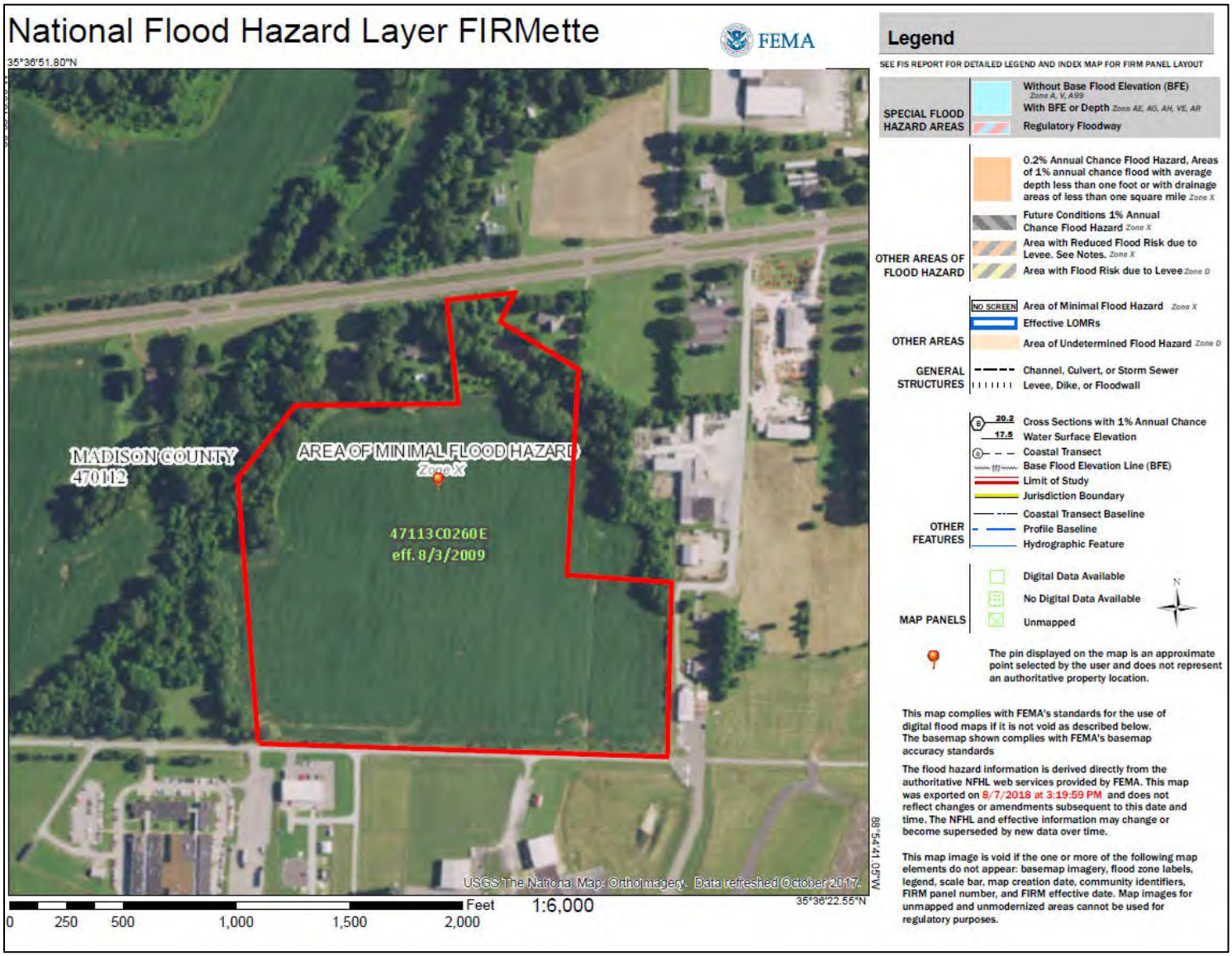

Figure 8. Site boundary and FEMA floodplain

Environmental Consequences

TVA adheres to the requirements of EO 11988, Floodplain Management. The objective of EO 11988 is "…to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative" (EO 11988, Floodplain Management). The EO is not intended to prohibit floodplain development in all cases, but rather to create a consistent government policy against such development under most circumstances (U.S. Water Resources Council, 1978). The EO requires that agencies avoid activities in the 100-year floodplain unless there is no practicable alternative.

Under the No Action Alternative, the proposed solar facility would not be constructed and no project-related impacts on floodplains would occur.

Based on a review of Panel 260 of 435, Map No. 47113C060E of the Madison County, Tennessee, Flood Insurance Rate Map (FIRM), the project would be located outside the 100-year floodplain, which would be consistent with EO 11988. The proposed project would result in no significant impacts on the natural and beneficial values of floodplains.

3.5 BIOLOGICAL RESOURCES

Affected Environment

A desktop survey was performed prior to field investigations of the proposed project site. Wildlife, vegetation, and threatened and endangered (T&E) species were researched during the desktop survey and verified through field investigations in July 2018. Results of desktop survey, field investigations, and list updates are described in this section. Photos taken during the field investigation are included in the appendices.

Biological resources are regulated by a number of federal and state laws. The laws and rules relevant to the Proposed Action undertaken by SR Jackson include:

- The ESA (16 U.S.C. §§ 1531-1544);
- The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §§ 703-712) (for actions of nonfederal entities);
- The Executive Order for Migratory Birds (EO 13186 of January 10, 2001) (for actions of federal agencies);
- The Bald and Golden Eagle Protection Act (BGEPA); and
- Rules of the Tennessee Wildlife Resources Agency, Chapter 1660-01-32 (based on authority provided in Tennessee Code Annotated §§ 70-1-206, 70-8-104, 70-8-106 and 70-8-107).

In addition to the above, TVA's programmatic consultation with USFWS on routine actions and federally listed bats in accordance with ESA Section 7(a)(2) was completed in April 2018 (TVA 2018). Effects from mid-scale solar generation, such as the proposed project, are considered in the Biological Assessment associated with this consultation (TVA 2017). Over the course of 20 years, 1,000 acres are expected to be cleared of trees in association with TVA's mid-scale solar program, and an estimated 50 acres will be cleared annually.

The USFWS Information for Planning and Conservation (IPaC) Trust Resource website was evaluated for potential species that may be present within the project area. An official list of threatened and endangered species that may potentially be affected by activities performed at this location can be found in the appendices.

Two species of federally listed mammals potentially occur on the project site: the Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*). Both bats prefer winter habitats (hibernacula) that include caves, mines, and cave-like structures (NatureServe 2018; USFWS 2015, 2018c, 2018d). Both species also utilize areas near caves in the fall and spring (for swarming and staging) prior to migration back to their summer habitat (roosting habitat) (NatureServe 2018). During the summer, Indiana bats roost under the exfoliating bark of dead and living trees in mature forests with an open understory often near sources of water. Indiana bats are known to change roost trees frequently throughout the season, yet still maintain site fidelity, returning to the same summer roosting areas in subsequent years. This species forages over forest canopies, along forest perimeters, tree lines, and occasionally over bodies of water (Kurta et al. 2002; Pruitt and TeWinkel 2007; USFWS 2018c).

In the summer, northern long-eared bats roost individually or in colonies beneath exfoliating bark or in crevices of both live and dead trees. While roost selection is similar to Indiana bats, northern long-eared bats are more opportunistic in roost site selection. This species has also been documented roosting in abandoned buildings and under bridges. Northern long-eared bats emerge at dusk to forage below the canopy of mature forests on hillsides and roads, and occasionally over forest clearings and along riparian areas (USFWS 2014, 2018c).

There is minimal potential suitable bat roosting habitat located in the northern wooded portion of the parcel, which can be found on Figure 7. The only potentially suitable summer roosting habitat identified for the northern long-eared bat and the Indiana bat consisted of two dead trees with cavities. Representative photos of potential habitat can be found in the appendices. During the winter, the northern long-eared bat and Indiana bat hibernate in caves and mines which have large entrances, constant temperatures, and high humidity. No caves or mines are located in or around the project area. Foraging habitat for both species exists in forested areas and wetlands in the northern portion of the project site.

In addition, the whorled sunflower (*Helianthus verticillatus*) is also listed as endangered in Madison County. The whorled sunflower occurs in moist, prairie-like openings in woodlands and along adjacent creeks. The plant grows in sandy clay soils which are alkaline, high in organic matter, and seasonally wet. In Tennessee, the species primarily occurs within the margins of agricultural fields and roadsides. There is critical habitat for the whorled sunflower population in Madison County; however, it is located near Pinson, about 14 miles southeast of the project site (USFWS 2018a).

No aquatic species listed under the Endangered Species Act are known or likely to occur within the project area (USFWS 2018b).

The USFWS IPaC report identified two species of migratory birds of concern that have the potential to occur in the vicinity of the project site: The wood thrush (*Hylocichla mustelina*) and the American kestrel (*Falco sparverius paulus*). These are birds of conservation concern, which are species not already federally listed, that represent USFWS' highest conservation priorities. The IPaC report indicates the wood thrust breeds May through August with highest probability of occurrence in the project area during the month of July (USFWS 2018b). The forested areas surrounding the project site presents potential habitat for the wood thrush (Cornell University 2018b). The American kestrel has a breeding season from April to August with heightened probability of presence in the project area during January, April, and May (USFWS 2018b). The open-field habitat present throughout much of the project site may provide resources for the American kestrel (Cornell University 2018a).

In addition to the federally threatened and endangered species, TDEC records identify two rare plant species and a rare aquatic species that may be found near the project. Table 3 provides a list of Federal and state threatened and endangered species with potential to occur near the project area. The project site has not been designated a natural area, open space, or park and no such areas occur within its immediate vicinity. There are two state natural areas, Cypress Grove Nature Park and the Arboretum at the West Tennessee AgResearch & Education Center, located within 5 miles of the project area.

Table 3. Federal and State Threatened & Endangered Species with Potential to Occur Near Project Location

Aquatic

Scientific	Common Name	Federal Status	TN State Rank	TN Status	Potential Habitat
Etheostoma pyrrhogaster	Firebelly Darter	N/A	S2	NMGT	None

Plant

Scientific	Common Name	Federal Status	TN State Rank	TN Status	Potential Habitat
Helianthus verticillatus	Whorled Sunflower	Endangered	S1	END	Not likely present
Chelone obliqua	Red Turtlehead	N/A	S1	SPCO	Not likely present
Carex lacustris	Sedge	N/A	-	-	Not likely present

Mammal

Scientific	Common Name	Federal Status	TN State Rank	TN Status	Potential Habitat
Myotis sodalis	Indiana Bat	Endangered	N/A	N/A	Habitat possible
Myotis septentrionalis	Northern Long-eared Bat	Threatened	N/A	N/A	Habitat possible

Source: TDEC

Environmental Consequences

Under the No Action Alternative, the proposed solar facility would not be constructed and no project-related impacts to Federal or state threatened and endangered species would occur.

Under the proposed action, no trees would be removed within the footprint of the solar array; however, there may be some tree removal on the edges of the property for site preparation and construction, including the installation of the security fence. At most, roughly 2.5 acres of vegetation containing two trees potentially suitable for summer roosting Indiana bat and northern long-eared bat would be removed. No direct effects to these federally listed bats are anticipated because tree removal would occur between October 15 and March 31. Potential indirect effects to the federally listed Indiana bat and the northern long-eared bat may occur due to loss of summer roosting habitat. Under TVA's Bat Strategy, removal of sutiable summer habitat was determined to likely adversely affect the Indiana and northern long-eared bat, but any such effect would be mitigated through conservation measures discussed further below. The proposed project would have no effect on winter roosting habitat as no hibernacula are located within or near the project area. No impacts to wetlands contributing to potential foraging habitat are anticipated. While herbicides may occasionally be used as part of routine maintenance, application of herbicides would occur through spot treatment and would not be applied within 50 feet of water bodies. Removal of a small amount of forested foraging habitat would have no measurable effect on foraging bats as similarly suitable vegetation and aquatic foraging habitat would still be available post-construction.

A number of activities associated with the proposed project, including tree removal and herbicide use, were addressed in TVA's programmatic consultation with USFWS on routine actions and federally listed bats in accordance with ESA Section 7(a)(2), completed in April 2018 (TVA 2018). For those activities with potential to affect bats, TVA committed to implementing specific conservation measures. These activities and associated conservation measures are identified on pages 6-11 of the TVA Bat Strategy Project Screening Form (attached) and would be implemented as part of the proposed project.

The federally endangered whorled sunflower was not observed during the field review of the project area. Due to the lack of presence and the surrounding potential habitat, the Proposed Action Alternative would have no effect on the whorled sunflower. No impacts to other rare, threatened, or endangered species are anticipated due to the Proposed Action Alternative.

While no nests or migratory birds of conservation concern were identified during the site visit, habitat is present within the project footprint for a variety of migratory birds, including wood thrush and American kestrel. Other migratory bird species also may nest on site or migrate through the project area. Vegetation removal would likely occur outside of the breeding seasons for both wood thrush and American kestrel, therefore no direct effects are anticipated to individuals of these species. Mobile adults are expected to flush if disturbed by the proposed actions. An abundance of similarly suitable habitat occurs in the adjacent landscape such that removal of this small amount of habitat is not likely to impact populations of these species.

The Proposed Action Alternative is not likely to impact any of the Tennessee Rare Species as the site does not present suitable habitat for the identified species. Likewise, impacts to natural areas are not anticipated from the development of the Proposed Action Alternative.

3.6 VISUAL RESOURCES

Affected Environment

Visual resources are the characteristics of a place, both natural and manmade, that give a particular landscape its character and aesthetic quality. An observer's experience within or near a specific location can be determined by the visual resources at and surrounding that location. A viewshed is defined as the environment that is visible from a certain vantage point.

The project site, located in rural Madison County, is primarily farmland with gently rolling terrain. The site is surrounded by agricultural fields, the Tennessee Technology of Applied Technology, the McKellar-Sipes Regional Airport, a religious institution, and industrial facilities with a few residential properties to the north. Due to its proximity to McKellar-Sipes Regional Airport, a glint and glare analysis was prepared for the Proposed Action Alternative. While there are some wooded areas within the project site, predominantly in the northern portion, the land has previously been actively farmed. A stream was identified west of the project area between Westover Road and US 70/SR 1 (Airways Boulevard). Two isolated ponds are located in the northeastern potion of the project site. No buildings or structures exist on the project site.

Environmental Consequences

Under the No Action Alternative, the proposed solar facility would not be built and there would be no project-related changes to the visual character of the area.

The Proposed Action Alternative would result in the installation of approximately 5,500 individual solar panels arranged over roughly 15 acres of the 44.4-acre area. At full extension, these panels are roughly 6-8 feet in height, depending on grade, and would have a setback of approximately 400 feet from residences along US 70/SR 1 (Airways Boulevard). SR Jackson will maintain a vegetative buffer between residences north of the proposed solar facility. The location of the buffer would be determined by the final design considering potential shading impacts. Motorists traveling along Westover Road would briefly see the solar panels; however, no adverse effects, such as glare, would impact a driver's visibility. While views from surrounding properties may be slightly affected, the overall appearance of the solar panels will blend in with the immediate surrounding environment created by the regional airport and other industrial facilities.

The glint and glare analysis considered specifics to the PV panels, including single-axis tracking, surface material, and maximum tracking angle. The panels would face 60 degrees east and track the sun throughout the day until they face 60 degrees west at sunset. At sunset the modules would track to a flat stow position. The PV panel surface material would be a smooth glass with an AR coating. Upon review of the expected total footprint of the proposed solar facility, no glare occurrences for approaches to either of the runways at McKellar-Sipes Regional Airport nor the airport's Air Traffic Control Tower were identified (Capitol Airspace Group 2018).

While minor impacts are anticipated from the development of the solar facility, the project is located in an area of Madison County that has been identified for industrial growth and was recently rezoned for manufacturing and warehouses.

3.7 NOISE

Affected Environment

Noise is generally described as unwanted sound, which can be based either on objective effects (hearing loss, damage to structures, etc.) or subjective judgments (such as community annoyance). Sound is typically measured by the decibel (dB), which is used to express the ratio of one value of a physical property to another on a logarithmic scale. A day-night average sound level of 55 dBA is commonly used as a threshold level for noise which could result in adverse impacts, and prolonged exposure to levels above 65 dBA is considered unsuitable for residential areas (USEPA 1974).

The proposed project would be developed on a 44.4-acre tract south of US 70/SR 1 (Airways Boulevard), east of the SR 223 intersection, and just north of the McKellar-Sipes Regional Airport. Surrounding major sources of noise come from the operation of the airport and nearby industrial facilities and the surrounding highways.

Few sensitive noise receptors occur close to the project area. These include, a few residences to the north of the project site, a religious institution near the northeastern corner of the project site, and the Tennessee College of Applied Technology located west of the airport.

Environment Consequences

Under the No Action Alternative, no noise impacts would occur from the construction or operation of the proposed solar facility, and the project would not result in related changes to noise levels in the area. No noise would be generated by the operation of the solar facility

The Proposed Action Alternative would result in short-term noise production related to construction activities. Construction equipment typically results in a maximum noise level within the range of 80 to 85 dBA at a distance of 50 feet from the equipment (USDOT 2006). Elevated noise levels caused by construction equipment could be experienced by nearby residents, but construction noise would be of short duration, and likely not exceed the 65 dBA noise level at nearby houses for prolonged periods. Work would generally occur 6 days per week (Monday through Saturday) from 7 am to 3:30 pm.

The nearest occupied houses are approximately 150 feet from the facility's northern boundary while the Islamic Center of Jackson lies approximately 700 feet from the northeastern boundary. Throughout the rezoning and planning process with the Madison County Commission and Planning Commission, project neighbors have been notified of project hearings. The Madison County Commission and Planning Commission have not received any comments on the proposed

solar facility. Specifically, no noise concerns have been expressed during the rezoning or site planning process. On November 29, 2018, the Islamic Center of Jackson was contacted via a phone call and email. There was no answer, and a voicemail was left. A follow-up email discussing the proposed solar facility was sent to an email address included on the Islamic Center of Jackson's website. No response to the voicemail or email has been received at this time.

Elevated noise levels from construction equipment could be perceptible above background noise but would be of short duration, during normal daylight hours and would likely not exceed the 65 dBA noise level for prolonged periods. Maintenance activities, primarily mowing, would result in noise periodically; however, this noise would be similar to existing noises near the project site. Overall noise impacts resulting from the Proposed Action Alternative would be insignificant.

3.8 AIR QUALITY AND GREENHOUSE GAS EMISSIONS

Affected Environment

The Clean Air Act (42 U.S.C. §7401 et seq.) mandates the protection and enhancement of our nation's air quality resources. National Ambient Air Quality Standards (NAAQS) for the following criteria pollutants have been set to protect the public health and welfare:

- Sulfur dioxide (SO2),
- Ozone,
- Nitrogen dioxide (NO2),
- Particulate matter whose particles are less than or equal to 10 micrometers (PM10),
- Particulate matter whose particles are less than or equal to 2.5 micrometers (PM2.5),
- Carbon monoxide (CO), and
- Lead.

The primary NAAQS were promulgated to protect the public health, and the secondary NAAQS were promulgated to protect the public welfare from any known or anticipated adverse effects associated with the presence of pollutants in the ambient air. Areas in violation of the NAAQS are designated as nonattainment areas. New sources to be located in or near these areas may be subject to more stringent air permitting requirements. A listing of the NAAQS is presented in Table 4 (USEPA 2018b). National standards other than annual standards are not to be exceeded more than once per year (except where noted). Based on available ambient air quality data, Madison County is currently in attainment for all criteria pollutants (USEPA 2015d).

Greenhouse Gases (GHGs) are chemical compounds in the Earth's atmosphere that trap and convert sunlight into infrared heat. Gases exhibiting greenhouse properties come from both natural and man-made sources. Carbon dioxide, methane, and nitrous oxide are among the most common GHGs emitted from natural processes and human activities.

The primary GHG emitted by human activities in the U.S. is carbon dioxide, representing more than 80 percent of total GHG emissions. This occurs when carbon dioxide enters the atmosphere through the burning of fossil fuels (coal, natural gas, and oil), solid waste, trees, and wood products and chemical reactions. Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle (USEPA 2018c).

The system-wide emissions from TVA's electrical generating facilities are described in TVA's 2015 Integrated Resource Plan Environmental Impact Statement (TVA 2015b). TVA has reduced

its emissions of criteria pollutants and greenhouse gases through the installation of emission controls at fossil fueled plants, idling and retirement of coal-fired generating units, increased use of low-emission generating facilities, and increased energy efficiency and demand reduction efforts.

Table 4. NAAQS Table

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours 1 hour	9 ppm 35 ppm	Not to be exceeded more than once per year
Lead (Pb)		primary and secondary	Rolling 3 month average	0.15 µg/m3(1)	Not to be exceeded
Nitrogen Dioxide (NO2)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb(2)	Annual Mean
Ozone (O3)		primary and secondary	8 hours	0.070 ppm(3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	PM2.5	primary	1 year	12.0 µg/m3	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m3	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m3	98th percentile, averaged over 3 years
	PM10	primary and secondary	24 hours	150 µg/m3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO2)		primary	1 hour	75 ppb(4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA 2018

Abbreviations: ppb = parts per billion, ppm = parts per million, µg/m3 = micrograms per cubic meter.

Notes:

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

(4) The previous SO2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2)any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO2 standards or is not meeting the requirements of a SIP call under the previous SO2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Environmental Consequences

Under the No Action Alternative, no project-related impacts to air quality or climate change would occur as the proposed solar facility would not be constructed and the PPA between SR Jackson and TVA would not be executed.

Under the Proposed Action Alternative, minor impacts to air quality would occur during the construction of the facility. Only minimal air impacts would be expected, as construction might result in localized dust and fumes from equipment. The construction would likely involve the use of diesel-powered machinery and thereby create small amounts of air borne dust and debris. The impacts on air quality are expected to be minimal and short-lived. Any emissions would be temporary and would not adversely impact the environment.

The operation of the solar facility would result in minor reduction in greenhouse gas emissions as the carbon dioxide-free power generated by the solar facility would displace power which would otherwise be generated in part by fossil fuels. This would result in minor beneficial impacts to air quality (TVA 2015).

3.9 CULTURAL RESOURCES

Affected Environment

Cultural resources are prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of historic events of importance. Cultural resources that are listed, or determined to be eligible for listing, on the National Register of Historic Places (NRHP) maintained by the National Park Service are considered historic properties. As a Federal corporate agency, TVA is required by Section 106 of the National Historic Preservation Act (NHPA) to evaluate the potential effects of its actions on historic properties (36 CFR Part 800). When a TVA action would adversely affect a historic property, TVA must, in consultation with state historic preservation officers, federally-recognized Indian tribes, and other stakeholders, consider ways to avoid or minimize the adverse effect. If avoidance or minimization are not feasible, measures to mitigate the adverse effect must be taken.

In accordance with Section 106 of the NHPA, a Phase I cultural resource survey to document and assess resources located within the survey area associated with the proposed project was conducted. The archaeological survey area consisted of the 44.4-acre tract of land where the solar array is proposed for construction. The area of potential effects (APE) for the architectural study consisted of the project site, in addition to areas visually connected to it via viewshed to and from the project area within a 0.5-mile radius. Areas within the architectural survey radius that were determined not to be within view of the proposed undertaking due to terrain, vegetation, and/or modern built environments were not considered part of the architectural APE.

The survey was conducted to provide an inventory of resources within the survey area, descriptions of the condition of any resources identified, and recommendations regarding their National Register of Historic Places (NRHP) eligibility. All work was consistent with the Secretary of the Interior's Standards and Guidelines for Identification (NPS1983) and met the minimum requirements established by TDEC (2009).

The architectural assessment, conducted on May 23, 2018, resulted in the identification of four previously unrecorded properties (IS-1 through IS-4) within the architectural APE. Based on the results of the survey, it was determined that properties IS-1, IS-2, and IS-3 are not eligible for the NRHP due to their lack of architectural distinction and loss of integrity caused by modern alterations. The final property identified by the survey, IS-4, was recommended to be eligible for the NRHP under Criterion A for its local significance in the area of aviation (TVAR 2018).

An archaeological survey was conducted between May 30 and June 2, 2018, and between June 28 and 29, 2018. The investigation resulted in the identification of one archaeological site; however, the area exhibited significant disturbance associated with plowing and artificial terracing. These disturbances impacted the integrity of the portion of the site within the survey area and because of this, it was recommended that the identified site not be considered eligible for listing in the NRHP (TVAR 2018).

Environmental Consequences

Under the No Action Alternative, no impacts to cultural resources would occur as the site would not be developed as a solar facility.

Under the Proposed Action Alternative, current project plans would result in a visual effect to property IS-4; however, the effect would not be adverse due to existing modern development within line of sight to the historic resource. As a result, no historic architectural resources would be affected by the Proposed Action Alternative. Unless plans change or new concerns are brought to light, no additional investigations of above-ground resources have been recommended.

The Proposed Action Alternative would not impact any listed or eligible NRHP archaeological sites. No further archaeological investigations were recommended in connection with the proposed project. In a letter dated September 13, 2018, TVA consulted with the Tennessee State Historic Preservation Office (SHPO) regarding TVA's finding of no effect to historic properties. In a letter dated September 25, 2018, the Tennessee SHPO concurred with TVA's "no effect" findings. TVA also consulted with federally-recognized Indian tribes regarding properties within the proposed project's APE that may be of religious or cultural significance to them, or eligible for the NRHP. In a letter dated October 16, 2018, the Chickasaw Nation concurred with TVA's findings. TVA received no objections from other federally recognized Indian tribes on the project.

3.10 SOLID AND HAZARDOUS WASTES

Affected Environment

An ASTM standard E1527-13 Phase I Environmental Site Assessment (Phase I ESA) was performed on the site in July 2018 and resulted in the following findings:

- Two underground storage tank (UST) sites were identified within ½ mile of the project area, with the closer being within ¼ mile. The UST sites are at higher elevation than the subject property.
- Two RCRA-CESQG sites were identified within ¼ mile of the project area. Both locations are lower in elevation than the subject property. No record of violations was found for either site within the last five years on the Environmental Protection Agency (EPA) Enforcement and Compliance History Online (ECHO) archive.
- Three historic USTs were identified within ½ mile of the project area, with the closest being within ¼ mile. All three locations have permanently closed tanks.
- One NPDES site was identified within 1 mile of the project area. The permits were granted for various construction work around the airport.
- No Recognized Environmental Conditions (REC) associated with the subject property were identified.

Environmental Consequences

Under the No Action Alternative, no project-related impacts associated with solid and hazardous waste would occur.

Construction activities and facility operation under the Proposed Action Alternative would generate solid waste. Oily rags, worn or broken metal and machine parts, defective or broken electrical materials, other scrap metal and plastic, broken down module boxes, empty containers, paper, glass, and other miscellaneous solid wastes would be generated throughout all phases of the proposed project. Waste would be disposed by means of contracted refuse collection and

recycling services. All applicable regulatory requirements would be followed in the collection and disposal of waste to minimize health and safety effects. Decommissioned equipment and materials, including PV panels, racks, and transformers, would be recycled. Materials that cannot be recycled would be disposed of at an approved facility.

Phase I ESA findings would not have an impact on the Proposed Action Alternative as hazardous materials are not likely to be encountered during construction. No hazardous waste would be generated during the construction and operation of the facility. During construction and operation of the facility, any materials determined to be wastes would be evaluated (e.g., waste determinations) and managed (e.g., inspections, container requirements, permitted transport, and disposal) in accordance with the Solid and Hazardous Wastes Rules and Regulations of the State of Tennessee (TDEC DSWM Rule 0400 Chapters 11 and 12, respectively).

Procedures to limit fuel spills would be implemented during construction and operation of the facility. Details regarding the handling of fluid spills and general trash will be included in the SWPPP. Waste generated during operation would be minimal and would mainly result from replacement of equipment. Nonhazardous wastes would be disposed of in an approved, operating landfill. Bulk chemicals would be stored in storage tanks or in returnable delivery containers. The transport, storage, handling, and use of all chemicals would be conducted in accordance with applicable laws, ordinances, regulations, and standards.

Oils on site would be used in the transformer for equipment operation and less than 1,320 gallons of oil would be generated on site; therefore, no spill prevention, control, and countermeasure (SPCC) plan is required. Upon expiration of the 20-year PPA or an amended or alternative PPA for the sale of power after the 20-year period, SR Jackson would develop a decommissioning plan to document the recycling and/or disposal of solar facility components in accordance with applicable regulations. Impacts from the generation of hazardous waste during the construction and operation of the proposed facility would be insignificant.

3.11 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Affected Environment

The proposed project is located in a rural area of Madison County approximately five miles west of the center of Jackson. Based on U.S. Census data available through the EPA's EJSCREEN, 194 people live within one-mile of the project area, less than 0.2 percent of the Madison County population of 98,128 (Census 2016). Tables 5 and 6 below provide a breakdown of relevant population, income, and poverty data.

Table 5. Project Area Population

JACKSON SOLAR PROJECT POPULATION DATA					
	Population	**Minority Population**			
Geography	Total	White	Percent White	Minority	Percent Minority
Tennessee	6,548,009	5,096,733	77.8%	1,451,276	22.2%
Jackson, TN Metro Area	130,041	85,208	65.5%	44,833	34.5%
Madison County, Tennessee	98,128	58,487	59.6%	39,641	40.4%
1-Mile Radius - Project Area	194	141	72.0%	54	28.0%

Sources:

***** U.S. Census Bureau. American FactFinder; 2016 ACS 5-year estimates; B01003, B19013, B02001, S1701. Accessed August 15, 2018. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

*USEPA. EJSCREEN. Accessed August 15, 2018. Available at: https://ejscreen.epa.gov/mapper/.

Based on EPA's EJSCREEN data, at least one responder reported multiple races.

EO 12898 on Environmental Justice directs Federal agencies to consider the impacts of their actions on minority and low-income populations and to avoid disproportionate impacts to those populations. While TVA is not listed as a Federal agency subject to EO 12898, TVA typically addresses environmental justice concerns through its NEPA analysis for Federal projects.

Recorded population within the one-mile radius is predominantly white, with 72 percent reporting race as white and 28 percent minority (USEPA 2018a). The reported minority population within the one-mile radius is over 12 percentage points lower than the Madison County minority population of 40.4 percent, which is nearly double Tennessee's 22.2 percent minority population.

Within one mile of the project area, a slightly lower per capita income, $18,704, has been reported as compared to Madison County's per capita income of $23,724. While median household income is not reported at this level through EJSCREEN, it is likely that the median household income within one mile of the project area is also below the median Madison County household income of $44,237.

Table 6. Project Area Income and Poverty

JACKSON SOLAR PROJECT INCOME AND POVERTY DATA						
	Median and Per Capita Income			**Poverty Level**		
Geography	Total Households	Median Household Income	Per Capita Income in the past 12 months	Population for whom poverty status is determined	Population below poverty level	Percent below poverty level
Tennessee	2,522,204	$46,574	$26,019	6,386,751	1,100,169	17.2%
Jackson, TN Metro Area	48,636	$43,155	$22,869	125,000	23,858	19.1%
Madison County, Tennessee	37,189	$44,237	$23,724	94,517	18,345	19.4%
1-Mile Radius - Project Area	N/A	N/A	$18,074	N/A	N/A	N/A

Sources:

*U.S. Census Bureau. American FactFinder; 2016 ACS 5-year estimates; B01003, B19013, B02001, S1701. Accessed August 15, 2018. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

*USEPA. EJSCREEN. Accessed August 15, 2018. Available at: https://ejscreen.epa.gov/mapper/.

Environmental Consequences

Under the No Action Alternative, no disproportionate impacts to the low-income or minority populations in the project area would occur.

Under the Proposed Action Alternative, 30 to 35 workers would be employed during construction. A vast majority of these workers would be based in the local area, leading to a short-term beneficial impact on the local economy.

Operation of the facility would not result in an increase in local employment as no workers would be needed for day-to-day operation of the solar facility. While periodic maintenance activities, primarily mowing, would be done by local workers, this would not result in an increase in employment. Although it is too early to quantify, the project would benefit the local tax base through the increased property taxes due to site improvements.

While there are only limited and short-term benefits to the labor force, the project and the diversification of energy sources better positions the Jackson region and the State of Tennessee in economic development ventures.

When compared to state and county data, there is no high-concentration of minority population near the project. While there is what would potentially be considered a low-income population near the project areas, the overall impacts of the solar facility, most of which would occur during the short construction period, would be minor. The off-site impacts (i.e., to surrounding properties) would be negligible. Consequently, there would be no disproportionately adverse impacts to minority and low-income populations.

3.12 CUMULATIVE IMPACTS

CEQ regulations define a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR § 1508.7). Cumulative impacts should be considered early in the project development process, as identification of potential cumulative impacts may assist in the design and selection of alternatives and mitigation measures to minimize a project’s environmental impacts.

As described above, the construction and operation of the solar facility under the Proposed Action Alternative would not affect some environmental resources and would have only minor adverse impacts to other resources, such as air quality and visual resources. There are no known planned projects in the area that would likely contribute to cumulative impacts associated with the proposed solar facility. No projects within the vicinity of the proposed solar facility appear in the Tennessee Department of Transportation 2017-2020 Tennessee Transportation Improvement Program or the Jackson Area Metropolitan Planning Organization’s 2017-2020 Transportation Improvement Program.

Due to the proposed project’s proximity to the McKellar-Sipes Regional Airport, SR Jackson has been in communication with the Jackson-Madison County Airport Authority to discuss the project and address any concerns that may arise from its development, specifically, representatives of McKellar-Sipes Regional Airport have expressed concern of glare from solar panels and rodent and wildlife attraction if the site is overgrown. As previously discussed, a glint and glare analysis determined that the installation of solar panels near the airport would have no impact on pilots or air traffic controllers (Capitol Airspace Group 2018).

Additional consideration has been given to solar facility development near airports and wildlife attraction. Solar arrays are not uncommon at and near airport facilities. While the SR Jackson facility is proposed for private property and the Federal Aviation Administration (FAA) guidance is

predominantly intended for the development of solar facilities on airport land, FAA policy was reviewed for potential application to the proposed project. In 2010, the FAA provided the Technical Guidance for Evaluating Selected Solar Technologies on Airports. According to the FAA, one advantage to constructing solar facilities at airports is that on-airport open space is often previously disturbed or is actively managed in accordance with formal vegetation and wildlife management plans to keep vegetation from penetrating airspace or becoming a wildlife habitat (FAA 2010). While the FAA guidance states that existing solar facilities on airport property do not appear to be wildlife attractants, it recommends that the environmental screening process should look carefully at potential wildlife impacts.

In addition to FAA guidance, research from the USDA National Wildlife Research Center concluded that converting airport grasslands to PV arrays would not increase hazards associated with bird strikes. The results of this study found that while there were birds observed in areas with solar arrays, the number and type of birds did not necessarily increase the risk of bird strikes. This particular study concluded that observed species did not conflict with safety regulations concerning wildlife at airports and went on to suggest that conversion of airfield habitat to PV arrays in some locations could decrease bird-strike risk relative to current grass or other natural land covers used on airports (DeVault et al. 2014).

The FAA recently published the draft Advisory Circular (AC) on Hazardous Wildlife Attractants on or near Airports (AC No. 150/5200-33C). The draft AC provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. While solar arrays are not discussed in this document, as they are not generally considered a wildlife attractant, general planning and management of wildlife attractants near airports are outlined in the document. The draft AC directs airports to work with nearby landowners and managers to cooperatively develop procedures to monitor and manage identified hazardous wildlife attractions. If the draft AC is approved, SR Jackson is open to discussing with McKellar-Sipes Regional Airport the need for procedures to monitor and further manage any wildlife attractants.

When considering the proposed project, it is important to note that the SR Jackson site has previously been used as an agricultural field. SR Jackson would ensure routine maintenance of the facility, and vegetation growth at the proposed site would not surpass levels of growth associated with the previous agricultural use. Based on current research, TVA does not believe the development of the solar facility would create an additional wildlife attractant. Appropriate contact information has been exchanged between SR Jackson and McKellar-Sipes Regional Airport to establish an open line of communication in the event of questions or concerns as project development, construction, and operation moves forward.

Based on the low level of anticipated impacts to the resources described above, and the lack of cumulative impacts from proposed local projects near the project area, the Proposed Action Alternative would not result in any adverse cumulative impacts.

CHAPTER 4

4.0 LIST OF PREPARERS

Nick Carmean (Barge Design Solutions, Inc.)
Experience: 9 years in regulatory compliance, preparation of NEPA/environmental review documents, protected species surveys, stream and wetland delineation, and permitting
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Chelsea Sachs (Barge Design Solutions, Inc.)
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CHAPTER 5

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Appendix A

Public and Agency Comments Received on the Draft EA and TVA's Response to Comments

Appendix A – Public and Agency Comments Received on the Draft EA and TVA's Response to Comments

A draft of the EA was released for public review and comment on December 18, 2018. Notice of availability of the Draft EA was transmitted to state, federal, and local agencies and federally recognized tribes. Additionally, the availability was sent to the neighboring McKellar-Skypes Regional Airport and Islamic Center of Jackson. The EA was also posted on TVA's website. Comments were accepted through January 22, 2019 via mail and e-mail. Comments were received from TDEC and McKellar-Skypes Regional Airport. Responses to comments raised during the comment period are provided below. A complete copy of each of the comments is included at the end of this section.

1. **Comment**
   The project is within the New Madrid Seismic Zone. According to the Catastrophic Earthquake Response Planning Project (2009), Madison County is listed as a county that is anticipated to be impacted or severely impacted during a major seismic event. This area is anticipated to experience increased soil amplification and liquefaction. TDEC recommends TVA consider soil amplification and liquefaction potential at the site to determine the risk from seismic activity. (TDEC)

   Response
   Hazards resulting from geological conditions would be minor because the project site is in a relatively stable geologic setting. There is a moderate potential for small to moderate intensity seismic activity. The facility would be designed to comply with applicable seismic standards prescribed in state and local building codes. A seismic event would likely only cause minor impacts to the project site and equipment on the site. The project could be subject to potential adverse effects from ground failure associated with liquefaction during a strong seismic event. Structural damage to PV panels, PV panel support structures, and other associated equipment could occur. Since the site would not be staffed during operation, potential damage to on-site structures would pose very limited risk to humans. Geologic hazard impacts on the site would be unlikely to impact off-site resources. (TDEC)

   EA Revisions
   Pg. 20 – Geologic Hazards

2. **Comment**
   The Draft EA does not address plans to develop the 19-acre western portion of the property. If there are any preliminary plans to expand this solar project to those acres in the future, TDEC recommends including that information in the Final EA. (TDEC)

   Response
   While SRC plans to purchase the 44.4-acre tract, there are currently no plans for the development of the western portion of the property. The proposed project and associated PPA presented in the Proposed Action Alternative involve the development of the proposed facility occupying approximately 15 acres of the 44.4-acre property to be owned by SRC and leased to SR Jackson for the project. (TDEC)

   EA Revisions
   Pg. 6 – Proposed Action Alternative

3. **Comment**
In the Draft EA, TVA notes that attempts were made to communicate with nearby community organizations, businesses, and residents to coordinate construction activities such that disturbances are minimized. TVA also notes that some attempts to reach neighboring locations were unsuccessful. TDEC recommends that TVA continue to make efforts to coordinate construction activities with nearby locations. (TDEC)

Response
Construction practices and notifications will be followed as required by local and state requirements, ordinances, and regulations.

EA Revisions
Pg. 4 – Public Notice/Public Involvement

4. **Comment**
TDEC believes the Draft EA adequately addresses potential impacts to cultural and natural resources within the proposed project area. (TDEC)

Response
Comment noted.

5. **Comment**
TDEC is supportive of resiliency efforts, including more decentralized power supply, in the state. In the event of an energy emergency, the site may provide an emergency source of electricity for critical infrastructure and facilities (e.g., hospitals, shelters, food banks) in the region. (TDEC)

Response
Comment noted.

6. **Comment**
TDEC recommends that consideration be given to using electric-powered lawn equipment, which can be as much as fifty percent (50%) quieter than traditional gas-operated model. Electric-powered Lawn equipment has zero air emissions onsite, reduces petroleum-fuel purchases, and eliminates used oil waste. Similarly, if there is an opportunity to use all-electric portable earthmoving equipment, it would result in reduced noise, air emissions, petroleum-fuel purchases, and used oil waste. TDEC recommends TVA consider these additional details in the Final EA. (TDEC)

Response
SRC has evaluated the potential use of electric powered lawn equipment but determined its use not feasible at this time due to the large area to be mowed and the current limitations of that equipment.

EA Revisions
Pg. 4 – Public Notice/Public Involvement

7. **Comment**
TDEC recommends that TVA consider addressing any potential Electro Magnetic Field (EMF) impacts that may result from the proposed action in the final EA. (TDEC)

Response
Studies conducted to date show the strength of electromagnetic fields generated by PV facility components is very low and similar to that generated by household appliances within close proximity. Electromagnetic fields, which strengths dissipate with increasing distance, are not believed to pose health risks to the neighboring community. Additional information is available on this through the following studies:

- http://files.masscec.com/research/StudyAcousticEMFLevelsSolarPhotovoltaicProjects.pdf
- http://www.ncbi.nlm.nih.gov/pubmed/26023811

EA Revisions
Pg. 4 – Public Notice/Public Involvement

8. **Comment**
TDEC recommends that should open burning be considered for disposal of wood wastes generated from the proposed project, alternatives to open burning, including chipping, composting or grinding of wood waste, be evaluated first. If open burning is selected for wood waste disposal TVA should consider implementing a smoke management plan, not burning on air quality alert days, and coordinating burning with other agencies (local and State air pollution control agencies, forestry agencies and local fire departments). TDEC encourages the Final EA to include discussion relating to the management of wood wastes generated by the Preferred Alternative. (TDEC)

Response
If open burning is determined to be the best method for wood waste management, a burn permit will be obtained through the Madison County Fire Department.

EA Revisions
Pg. 5 – Required Permits and Licenses, pg. 9 – Construction

9. **Comment**
During the course of construction and facility operations, all materials determined to be wastes should be evaluated (e.g., waste determinations) and managed (e.g., inspections, container requirements, permitted transport, and disposal) in accordance with the Solid and Hazardous Wastes Rules and Regulations of the State (TDEC DSWM Rule 0400 Chapters 11 and 12, respectively) in addition to other applicable TVA best management practices. TDEC recommends that the Final EA include reference to applicable state regulations. (TDEC)

Response
During construction and operation of the facility, materials determined to be wastes would be evaluated (e.g., waste determinations) and managed (e.g., inspections, container requirements, permitted transport, and disposal) in accordance with the Solid and Hazardous Wastes Rules and Regulations of the State of Tennessee (TDEC DSWM Rule 0400 Chapters 11 and 12, respectively).

EA Revisions
Pg. 36 – Solid and Hazardous Wastes – Environmental Consequences

10. Comment

The Draft EA notes that a stormwater construction general permit (CGP) will be required including a Stormwater Pollution Prevention Plan (SWPPP). The project will require a hydrologic determination to be performed by a certified hydrologic professional to identify all of the aquatic resources within the limits of project disturbance and assess the potential for any alterations to wet weather conveyances, streams, wetlands, or other aquatic resource, and whether an Aquatic Resource Alteration Permit (ARAP) will be required. TDEC recommends the Final EA include these considerations. (TDEC)

Response

A certified hydrologic professional has previously conducted a field survey and determined surface water features in the vicinity of this project include two ponds, one WWC, and one off-site stream. The proposed layout would avoid direct impacts to aquatic features. It is anticipated that permitting activities related to Sections 401 and 404 of the CWA (33 U.S.C. § 1251 et seq.) will not be required. If it is necessary to obtain such permits, a hydrologic determination will be submitted to TDEC at the appropriate time.

EA Revisions

Pg. 21, 25 – Water Resources – Environmental Consequences

11. Comment

There will be considerable vegetation management around the panels using herbicides. Care should be taken to follow manufacturer's directions and avoid herbicide application prior to predicted rainfall events or high winds to minimize any possibility of runoff or drift. TDEC recommends the Final EA include these considerations. (TDEC)

Response

Herbicides would be applied by a professional contractor according to manufacturer's directions. Weather events, e.g., predicted rainfall or high winds, would be taken into account prior to application in efforts to reduce potential of runoff or drift.

EA Revisions

Pg. 21 – Solis and Prime Farmland – Environmental Consequences

12. Comment:

McKellar-Sipes Regional Airport, through the Jackson-Madison County Airport Authority, expressed concern that the solar array, proposed for location adjacent to the approach to runway 20, would require more maintenance than four mows per year. According to the received comment, the airport's wildlife observers have recently noticed Raptors hunting within the area. The Jackson-Madison County Airport Authority went on to say that there is no objection to the location proposed by Silicon Ranch Corporation or Jackson Energy Authority, but the concern is specific to the proposed maintenance of the site, particularly related to bird and rodent control as well as site vegetation. (Jackson-Madison County Airport Authority)

Response

Additional consideration has been given to solar facility development near airports and wildlife attraction. Solar arrays are not uncommon at and near airport facilities. While the SR Jackson

facility is proposed for private property and the Federal Aviation Administration (FAA) guidance is predominantly intended for the development of solar facilities on airport land, FAA policy was reviewed. In 2010, the FAA provided the Technical Guidance for Evaluating Selected Solar Technologies on Airports. According to the FAA, one advantage to constructing solar facilities at airports is that on-airport open space is often previously disturbed or is actively managed in accordance with formal vegetative and wildlife management plans to keep it from penetrating airspace or becoming a wildlife habitat. While the FAA guidance states that existing solar facilities on airport property do not appear to be wildlife attractants, it continues to say that the environmental screening process should look carefully at potential wildlife impacts.

In addition to FAA guidance, research from the USDA National Wildlife Research Center concluded that converting airport grasslands to PV arrays would not increase hazards associated with bird strikes. The results of this study found that while there were birds observed in areas with solar arrays, the number and type of birds did not necessarily increase the risk of bird strikes. This particular study concluded that observed species did not conflict with safety regulations concerning wildlife at airports and went on to suggest that conversion of airfield habitat to PV arrays in some locations could decrease bird-strike risk relative to current grass or other natural land covers used on airports.

The FAA recently published the draft Advisory Circular (AC) on Hazardous Wildlife Attractants on or near Airports (AC No. 150/5200-33C). The draft AC provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. While solar arrays are not discussed in this document, as they are not generally considered a wildlife attractant, general planning and management of wildlife attractants near airports are outlined in the document. If the draft AC is approved, SR Jackson is open to discussing with McKellar-Sipes Regional Airport if and how this impacts the proposed facility as the draft AC directs airports to work with nearby landowners and managers to cooperatively develop procedures to monitor and manage identified hazardous wildlife attractions.

When considering the proposed project, it is important to note that the SR Jackson site has previously been used as an agricultural field. SR Jackson would ensure routine maintenance of the facility, and vegetation growth at the proposed site would not surpass levels of growth associated with the previous agricultural use. Based on current research, TVA does not believe the development of the solar facility would create an additional wildlife attractant. Appropriate contact information has been exchanged between SR Jackson and McKellar-Sipes Regional Airport to establish an open line of communication in the event of questions or concerns as project development, construction, and operation moves forward.

EA Revisions

Pgs. 38-39 – Cumulative Impacts

APPENDIX B

United States Department of Agriculture

Farmland Protection Policy Act Letter

USDA

United States Department of Agriculture

Date: August 18, 2015

Brian Mailet
ARCADIS
114 Lovell Road, Suite 202
Knoxville, Tennessee 37934

Re: Proposed Providence Solar Center in Madison County, Tennessee

Mr. Mailet,

I have reviewed your request for a Farmland Protection Policy Act (FPPA) assessment on the above-mentioned project. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to non-agricultural use and are completed by a Federal agency, or with assistance from a Federal agency.

Given the type of project (Solar Energy), and how the project is implemented, leads me to conclude that this project does not permanently convert farmland. Given that the project could be removed and normal farming practices resume on the site without much difficulty. As such, this projects appears to meet the exemption for the FPPA assessment. **Therefore, the FPPA assessment is not be required for this project.**

If the Federal agency assisting you with this project disagrees with my conclusion, let me know and I will contact our agency FPPA advisor and review the request again. If you have any additional questions, please contact me at (731) 668-0700.

Charles L. Davis
Resource Soil Scientist

Natural Resources Conservation Service - Jackson Area Office
235 Oil Well Road, Jackson, Tennessee 38305
Voice (731) 668-0700 Fax (855) 564-5848
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APPENDIX C

Natural Resources Field Review and Consultation

615 3rd Ave S, Suite 700
Nashville, Tennessee 37210
615.254.1500 Phone
615.255.6572 Fax
bargedesign.com

MEMORANDUM

TO: Ali Weaver, Project Development Manager, Silicon Ranch Corporation

CC: Russ Brasfield, Project Manager, Memphis Office

FROM: Nick Carmean, Project Biologist, Nashville Office

DATE: 8/14/2018

FILE: **3609507**

RE: Summary of Potential Bat Habitat and Water Features within the Proposed SRC Solar Farm in Jackson, Madison County, Tennessee.

An Ecology Survey in support of the Endangered Species Act (ESA) and a wetland delineation in support of the Tennessee Water Quality Control Act and the Clean Water Act (Sections 401 and 404) was performed within the location for the proposed solar farm in Jackson, Madison County, Tennessee. A summary of our findings are as follows:

- The U.S. Fish and Wildlife Service (USFWS) IPAC Trust Resource website was evaluated for potential species that may be present within the project area. An official list of species that may potentially be affected by activities performed at this location can be found in Attachment C. There is minimal potential suitable bat roosting habitat located in the northern wooded portion of the parcel, which can be found on Figure 1 (Attachment A). Dominant habitat types for the northern long-eared bat (*Myotis septentrionalis*) and the Indiana bat (*Myotis sodalis*) consisted of snags and cavities of two dead trees. Representative photos of potential habitat can be found in Attachment B. If the wooded area was proposed to be impacted by construction, it is recommended that USFWS be contacted to be given the opportunity to comment on the loss of the potential habitat for these two species. In addition, the whorled sunflower (*Helianthus verticillatus*) is also listed as endangered in Madison County. However, the required habitat for this species was not present within the parcel, and no further action is required.

- Figure 1 (Attachment A) summarizes environmental features located within and adjacent to the subject parcel. Two freshwater ponds are located near the northern border of parcel. If impacts were to occur to these two features, a preliminary jurisdictional determination (PJD) will need to be submitted to the U.S. Army Corp of Engineers (USACE) for review and concurrence. These two ponds are not hydrologically connected and there appears to be no source of surface water. The source of water is likely precipitation as both features were beginning to evaporate due to the lack of recent rainfall. Therefore, these two ponds would not likely be considered jurisdictional and no 401 or 404 permitting should be required. In addition, one wet weather (WWC-1) conveyance was identified on site near the eastern edge of the

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parcel. Likewise, if impacts are expected, a Hydrologic Determination Report will be required for review and concurrence with the Tennessee Department of Environment and Conservation (TDEC) for wet weather conveyance verification.

– In addition, Figure 1 (Attachment A) depicts the proposed solar panel and equipment location on the subject parcel. In review of the proposed location, it is not anticipated that there will be impacts that will require permitting. If the project moves forward with the proposed area of disturbance, it is likely that no permitting would be necessary.

Please note that all environmental features are subject to review, comment, and concurrence by state and federal regulatory agencies. This includes coordination with USFWS regarding the take of potential bat habitat. If you have any questions or comments, please do not hesitate to contact me at (615) 252-4306 (Nick.Carmean@bargedesign.com), or Grant Lynch at (615) 252-4246 (Grant.Lynch@bargedesign.com). Thank you!

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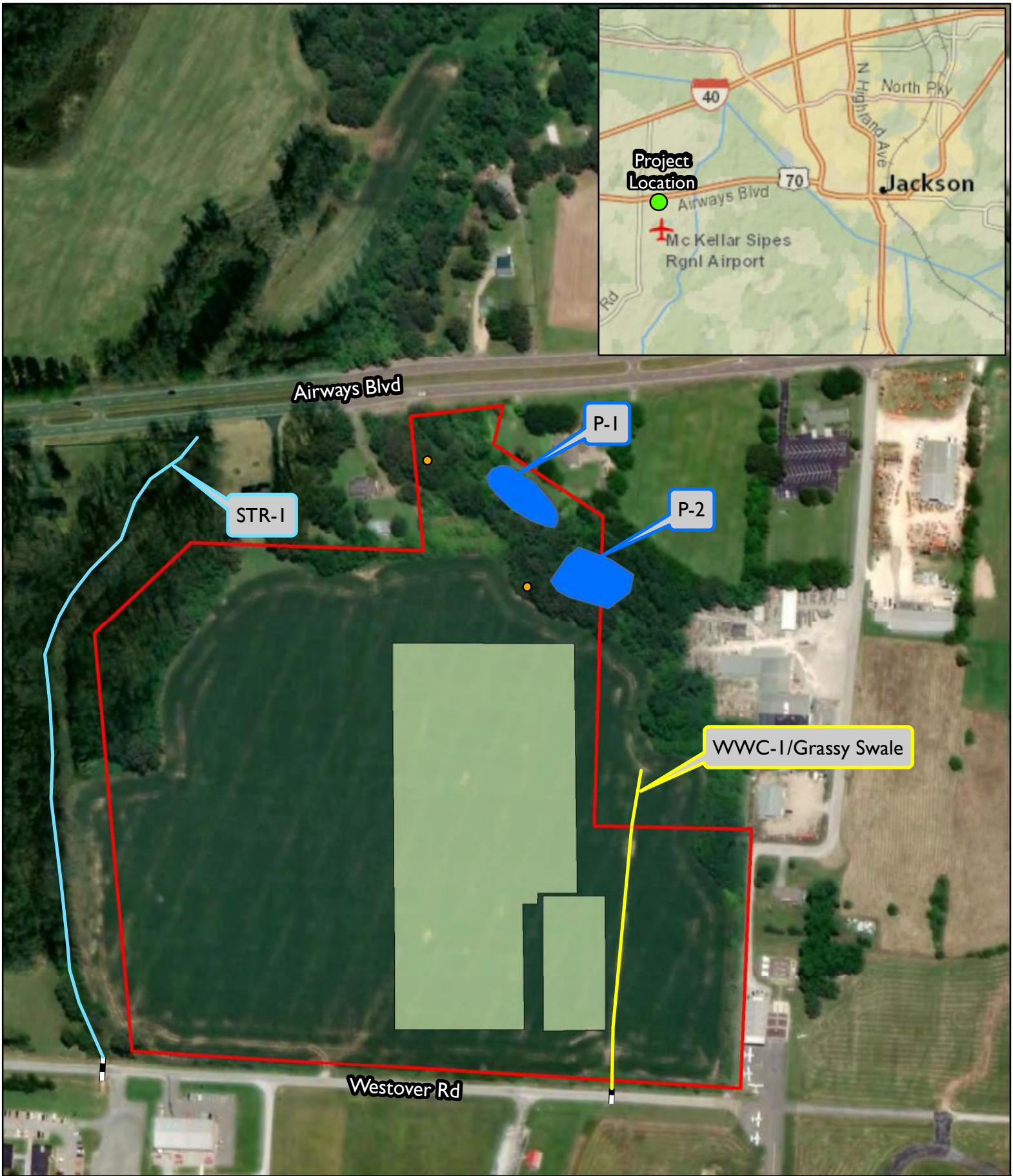
Attachment A

Figures



300 Feet

1 inch = 300 feet

Tennessee State Plane (feet)
North American Datum 1983

N

BARGE DESIGN SOLUTIONS

Environmental Features and Proposed Project Footprint Map

Jackson Solar Farm

Jackson, Madison County, Tennessee

- Project Area
- Proposed Footprint
- Pond
- Stream
- Grassy Swale
- Culvert
- Potential Bat Roost Tree

Figure 1

Document Path: \\corp.bwsc.net\data\Projects\36\36095\3609507\03_PROJECT_EXECUTION\EWR\GIS\Environmental Features Map.mxd

Date: 8/14/2018

Attachment B

Photo Summary

Photo Summary
Proposed SRC Solar Farm, Jackson, Madison County, TN

Photo: 1
By: G. Lynch
Date: 7 June 2018
Feature: Pasture
Photo Location:
35.6089, -88.9166

Representative photo of pasture area on the southern portion of the subject property.

Photo: 2
By: G. Lynch
Date: 26 July 2018
Feature: Wooded Area
Photo Location:
35.6117, -88.9163

Representative photo of wooded area on the northern portion of the subject property.

Photo: 3
By: N. Carmean
Date: 26 July 2018
Feature: Freshwater Pond
Photo Location:
35.6113, -88.9153

Photo of southernmost pond taken from the northern bank.

Photo: 4
By: N. Carmean
Date: 26 July 2018
Feature: Freshwater Pond
Photo Location:
35.6115, -88.9159

Photo of northernmost pond taken from the southern bank.

Photo Summary
Proposed SRC Solar Farm, Jackson, Madison County, TN

Photo: 5
By: N. Carmean
Date: 29 July 2018
Feature: STR-1
Photo Location: 35.6114, -88.9158

Representative photo of potential summer roosting habitat.

Photo: 6
By: G. Lynch
Date: 7 June 2018
Feature: WWC-1
Photo Location: 35.6094, -88.9147

View south of WWC-1/Grassy Swale.

Attachment C

USFWS Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Tennessee Ecological Services Field Office
446 Neal Street
Cookeville, TN 38501-4027
Phone: (931) 528-6481 Fax: (931) 528-7075

In Reply Refer To:
Consultation Code: 04ET1000-2018-SLI-0807
Event Code: 04ET1000-2018-E-01708
Project Name: Jackson Proposed Solar Farm

August 13, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Tennessee Ecological Services Field Office
446 Neal Street
Cookeville, TN 38501-4027
(931) 528-6481

Project Summary

Consultation Code: 04ET1000-2018-SLI-0807

Event Code: 04ET1000-2018-E-01708

Project Name: Jackson Proposed Solar Farm

Project Type: DEVELOPMENT

Project Description: A solar farm is proposed to be constructed.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/35.60993812249789N88.91713862824453W

Counties: Madison, TN

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Whorled Sunflower *Helianthus verticillatus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3375	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

From:	Hamrick, Elizabeth Burton
To:	Ross Shaw; Robbie Sykes (robbie_sykes@fws.gov)
Subject:	Notification in accordance with TVA Programmatic Consultation for Routine Actions and Federally listed bats
Date:	Tuesday, December 11, 2018 12:43:04 PM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png image007.png image008.png Completed_DSS_2012_SRJackson_EcoDev_TVA-Bat-Strategy_12.11.18.pdf

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Good afternoon,

TVA's programmatic ESA consultation on routine actions and bats was completed in April 2018.

For projects with NLAA or LAA determinations, TVA will be providing project-specific notification to relevant Ecological Service Field Offices. This notification also will be stored in the project administrative record. For projects that utilize Take issued through the Biological Opinion, that Take will be tracked and reported in TVA's annual report to the USFWS in March of the following year.

The attached form is serving at TVA's mechanism to determine if project-specific activities are within the scope of TVA's bat programmatic consultation and if there is project-specific potential for impact to covered bat species, necessitating conservation measures, which are identified for the project on pages 6-11. The form also is serving as the primary means of notification to the USFWS and others as needed.

Project: Power Purchase Agreement with Silicon Ranch Jackson, LLC to purchase power from a new 2MW solar facility. The new facility is utilizes 15 acres of a 44.4 acre site. Up to 2.5 acres of trees may be removed. Only 2 trees are potentially suitable for bats. Trees would be removed Oct 15-March 31. No wetlands impacted. No caves impacted.

Liz Hamrick
Terrestrial Zoologist
Biological Compliance

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Project Screening Form - TVA Bat Strategy *(05/08/2018)*

This form is to assist in determining alignment of proposed projects and any required measures to comply with TVA's ESA Section 7 programmatic consultation for routine actions and federally-listed bats[1]

Project Name: _____ **Date**: _____

Contact(s): _____ **CEC#**: _____ **RLR#:** _____ **Project ID**: _____

Project Location (City, County, State):_____

Project Description: _____

_____

_____

STEP 1) Select Appropriate TVA Action (or check here □ if none of the Actions below are applicable):

□	**1**	Manage Biological Resources for Biodiversity and Public Use on TVA Reservoir Lands	□	**6**	Maintain Existing Electric Transmission Assets
□	**2**	Protect Cultural Resources on TVA-Retained Land	□	**7**	Convey Property associated with Electric Transmission
□	**3**	Manage Land Use and Disposal of TVA-Retained Land	□	**8**	Expand or Construct New Electric Transmission Assets
□	**4**	Manage Permitting under Section 26a of the TVA Act	□	**9**	Promote Economic Development
□	**5**	Operate, Maintain, Retire, Expand, Construct Power Plants	□	**10**	Promote Mid-Scale Solar Generation

STEP 2) Select **all** activities from **Tables 1 and 2** (Column 1 only) included in proposed project. If you have an activity that is not listed below, describe here): _____

Table 1. Activities (CHECK ALL THAT APPLY) with No Effect on Federally Listed Bats. If none, check here: □

	#	ACTIVITY		#	ACTIVITY
□	**1**	Loans and/or grant awards	□	**12**	Sufferance agreement
□	**2**	Purchase of property	□	**13**	Engineering or environmental planning or studies
□	**3**	Purchase of equipment for industrial facilities	□	**14**	Harbor limits
□	**4**	Environmental education	□	**19**	Site-specific enhancements in streams and reservoirs for aquatic animals
□	**5**	Transfer of ROW easement or ROW equipment	□	**20**	Nesting platforms
□	**6**	Property and/or equipment transfer	□	**41**	Minor water-based structures
□	**7**	Easement on TVA property	□	**42**	Internal renovation or internal expansion of existing facility
□	**8**	Sale of TVA property	□	**43**	Replacement or removal of TL poles, or cutting of poles to 4-6 ft above ground
□	**9**	Lease of TVA property	□	**44**	Conductor and OHGW installation and replacement
□	**10**	Deed modification of TVA rights or TVA property	□	**49**	Non-navigable houseboats
□	**11**	Abandonment of TVA retained rights			

Table 2. Activities (CHECK ALL THAT APPLY) and Associated Conservation Measures. If none, check here: □

	#	ACTIVITY	CONSERVATION MEASURES	TZ SME Review Needed
□	**15**	Windshield or ground surveys for archaeological resources	□ a. NV1 □ b. HP2	□ b. HP1
□	**16**	Drilling	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3 □ g. L1, L2	□ a NV3, NV4 / □ a1. NV2
□	**17**	Mechanical vegetation removal; does not include removal of trees or tree branches ≥ 3" in diameter.	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5	□ f. SSPC4, SSPC7
□	**18**	Erosion control – minor	□ a. NV1 □ f. SPCC1, SSPC2, SSPC3, SSPC5	None
□	**21**	Herbicide use	□ d. SSPC1, SSPC2, SSPC3, SSPC5	□ d. SSPC6, SSPC7
□	**22**	Grubbing	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5	□ f. SSPC4
□	**23**	Prescribed burns, burn piles, or	□ c. SHF1, SHF4, SHF5	□ c. SHF2, SHF3, SHF6, SHF7,

	#	ACTIVITY	CONSERVATION MEASURES	TZ SME Review Needed
		brush piles		SHF8, SHF9
□	**24**	Tree planting	□ a. NV1 □ f. SSCP1, SSPC2, SSPC3, SSPC5	None
□	**25**	Maintenance, improvement or construction of pedestrian or vehicular access corridors	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5	□ a1. NV2 □ f. SSPC7
□	**26**	Maintenance or construction of access control measures	□ a. NV1 □ b. HP2 □ f. SSPC1, SSPC2, SSPC3,SSPC5 □ g. L1, L2	□ a NV3, NV4 / □ a1. NV2 □ b. HP1 □ f. SSPC7
□	**27**	Restoration of sites following human use and abuse	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3	□ f. SSPC7
□	**28**	Removal of debris (e.g., dump sites, hazardous material, unauthorized structures)	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3	□ f. SSPC7
□	**29**	Acquisition and use of fill/borrow material	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3	□ f. SSPC7
□	**30**	Dredging and excavation; recessed harbor areas	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	None
□	**31**	Stream/wetland crossings	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5	□ f. SSPC7
□	**32**	Clean-up following storm damage	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3	□ f. SSPC4, SSPC7
□	**33**	Removal of hazardous trees or tree branches	□ a. NV1 □ d. TR7, TR8 □ f. SSPC1, SSPC2, SSPC3, SSPC5	□ d. TR1, TR2, TR3, TR4, TR5, TR6, TR9, □ f. SSPC4, SSPC7
□	**34**	Mechanical vegetation removal, includes trees or tree branches three inches or greater in diameter	□ a. NV1 □ d. TR7, TR8 □ f. SSPC1, SSPC2, SSPC3, SSPC5	□ d. TR1, TR2, TR3, TR4, TR5, TR6, TR9, □ f. SSPC4, SSPC7
□	**35**	Stabilization (major erosion control)	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5	□ f. SSPC4, SSPC7
□	**36**	Grading	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5 □ g. L1, L2	□ f. SSPC4, SSPC7
□	**37**	Installation of soil improvements	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3 □ g. L1, L2	□ a1. NV2 □ f. SSPC7
□	**38**	Drainage installations (including for ponds)	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3 □ g. L1, L2	□ f. SSPC7
□	**39**	Berm development	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, □ g. L1, L2	None
□	**40**	Closed loop heat exchangers (heat pumps)	□ f. SSPC5	None
□	**45**	Stream monitoring equipment-placement, use	□ a. NV1	None
□	**46**	Floating boat slips within approved harbor limits	□ f. SSPC5	None
□	**47**	Conduit installation	□ a. NV1	□ a1. NV2
□	**48**	Laydown areas	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, □ g. L1, L2	None
□	**50**	Minor land-based structures	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5 □ g. L1, L2	None
□	**51**	Signage installation	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5	None
□	**52**	Floating buildings	□ a. NV1 □ f. SSPC2, SSPC3,SSPC5 □ g. L1, L2	□ a1. NV2
□	**53**	Mooring buoys or posts	□ a. NV1	

	#	ACTIVITY	CONSERVATION MEASURES	TZ SME Review Needed
			□ f. SSPC2, SSPC3, SSPC5	None
□	54	Maintenance of water control structures (dewatering units, spillways, levees)	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	□ f. SSPC6, SSPC7
□	55	Solar panels	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	□ f. SSPC7
□	56	Culverts	□ a. NV1 □ f. SSPC1, SSPC3, SSPC5	None
□	57	Water intake - non-industrial	□ a. NV1 □ f. SSPC3, SSPC5	None
□	58	Wastewater outfalls	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	None
□	59	Marine fueling facilities	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5 □ g. L1, L2	None
□	60	Commercial water-use facilities (e.g., marinas)	□ a. NV1 □ f. SSPC2, SSPC5 □ g. L1, L2	None
□	61	Septic fields	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5	None
□	62	Blasting	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, □ g. L1, L2	□ a NV3, NV4 / □ a1. NV2
□	63	Foundation installation	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3	□ a1. NV2
□	64	Installation of steel structure, overhead bus, equipment, etc.	□ a. NV1 □ g. SSPC1, SSPC2, SSPC3	□ a1. NV2
□	65	Pole and/or tower installation and/or extension	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3	□ a1. NV2
□	66	Private, residential docks, piers, boathouses	□ a. NV1 □ f. SPCC5 □ g. L1, L2	None
□	67	Siting of temporary office trailers	□ a. NV1 □ f. SSPC1, SSPC2, SSPC3, SSPC5 □ g. L1, L2	None
□	68	Financing for speculative building construction	□ a. NV1 □ f. SSPC5	None
□	69	Renovation of existing structures	□ a. NV1 □ f. SSPC1, SSPC3, SSPC5 □ g. L1, L2	□ e. AR1, AR2, AR4, AR5
□	70	Lock maintenance and construction	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	□ a1. NV2
□	71	Concrete dam modification	□ a. NV1 □ f. SSPC2, SSPC3	□ a1. NV2
□	72	Ferry landings/service operations	□ a. NV1 □ f. SSPC5 □ g. L1, L2	None
□	73	Boat launching ramps	□ a. NV1 □ f. SSPC2, SSPC5	□ a1. NV2
□	74	Recreational vehicle campsites	□ a. NV1 □ g. SPCC5	None
□	75	Utility lines/light poles	□ a. NV1 □ f. SPCC5 □ g. L1, L2	None
□	76	Concrete sidewalk	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	None
□	77	Construction or expansion of land-based buildings	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5 □ g. L1, L2	□ e. AR1, AR2, AR5
□	78	Wastewater treatment plants	□ a. NV1 □ f. SSPC2, SSPC5 □ g. L1, L2	□ a1. NV2
□	79	Swimming pools and associated	□ a. NV1	

	#	ACTIVITY	CONSERVATION MEASURES	TZ SME Review Needed
		equipment	□ f. SSPC5 □ g. L1, L2	None
□	**80**	Barge fleeting areas	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	□ a1. NV2
□	**81**	Water intakes - Industrial	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	None
□	**82**	Construction of dam/weirs/ Levees	□ a. NV1 □ f. SPCC2, SPCC3, SPCC5	□ a1. NV2
□	**83**	Submarine pipeline, directional boring operations	□ a. NV1 □ f. SSPC2, SSPC3, SSPC5	□ a1. NV2
□	**84**	On-site/off-site public utility relocation or construction or extension	□ a. NV1 □ f. SSPC1, SSPC3, SSPC5	None
□	**85**	Playground equipment - land-based	□ a. NV1 □ f. SSPC5	None
□	**86**	Landfill construction	□ a. NV1 □ f. SSPC2, SSPC3 □ g. L1, L2	□ a1. NV2
□	**87**	Aboveground storage tanks	□ a. NNV1 □ f. SSPC2, SSPC3, SSPC5	None
□	**88**	Underground storage tanks (USTs)	□ a. NV1 □ g. SSPC2, SSPC3, SSPC5	None
□	**89**	Structure demolition	□ f. SSPC1, SSPC2, SSPC3	□ e. AR1, AR2, AR4, AR5
□	**90**	Pond closure	□ a. NV1 □ f. SSPC2, SSPC3	None
□	**91**	Bridge replacement	□ a. NV1 □ f. SSPC3, SSPC5	□ a1. NV2 □ e. AR1, AR2, AR3, AR5,
□	**92**	Return of remains to former burial sites	□ a. NV1 □ b. HP2	□ b. HP1
□	**93**	Standard license	□ a. NV1 □ f. SSPC5	None
□	**94**	Special use license	□ a. NV1	None
□	**95**	Recreation license	□ a. NV1 □ f. SSPC5	None
□	**96**	Land use permit	□ a. NV1 □ f. SSPC5	None

STEP 3) Are all project activities limited to Table 1? If **YES**, **STOP HERE**. No Bat Strategy Conservation Measures required. Include this form in environmental documentation (e.g., attach to CEC) and send to batstrategy@tva.gov. If **NO**, proceed to Step 4.....□ **YES** □ **NO**

STEP 4) Check ALL relevant characteristics below. If **none** apply, **STOP HERE** and check . No Bat Strategy Conservation Measures required. Include form in environmental documentation and send to batstrategy@tva.gov

□ **a**. Project may occur outside, involves human presence, or use of equipment that **generates noise or vibration** (e.g., drilling, blasting, loud machinery).

□ **a1.** Project involves continuous noise (i.e., ≥ 24 hrs) that is >75 decibels measured on A scale (e.g., loud machinery).

□ **b**. Project may involve **human entry into/survey of a potential bat roost** (cave, bridge, other structure).

□ **c**. Project may involve **fire (e.g., prescribed fire, burn piles) or preparation of fire breaks** within 0.25 mi of trees, caves, or water sources. **If prescribed burn**, estimated acreage: _____

□ **d**. Project may involve **tree removal.**
Tree removal may need to occur **outside of winter**.....□ **YES** □ **NO**
Tree removal will occur **only in winter**.....□ **YES** □ **NO**

Estimated number of trees or acres to be removed: _____ □ acres □ trees
If warranted, project has flexibility for bat surveys (May 15-Aug 15):.....□ **MAYBE** □ **YES** □ **NO**

□ **e**. Project may involve **alteration or removal of bridges or other human structures**.

□ f. Project may involve land use activities involving **ground disturbance or use of chemicals or fuels** near water sources, wetlands, sinkholes, caves, or exposed limestone/karst.

□ g. Project may involve use of artifical lighting at night.

STEP 5) *Please contact Holly LeGrand or other Bat Strategy support staff for assistance if needed*. For those Activities selected in Table 2: select all Conservation Measures with letters (e.g., a-g) that correspond to characteristics selected in Step 4. If this results in selection of Conservation Measures in the last column of Table 2, a review by a terrestrial zoologist is required. Based on selection of Conservation Measures, does project require review by a terrestrial zoologist? If **YES**, **STOP HERE** and submit form as part of environmental review request; if **NO**, skip to **STEP 16**.....□ **YES** □ **NO**

Terrestrial Zoologist SME Verification (Steps 6-11 will be completed by a terrestrial zoologist if warranted):

STEP 6) Project is within range of: Gray bat VA Big-eared bat Indiana bat Northern long-eared bat

STEP 7a) Project includes the following:

- □ Removal/burning of suitable trees within 0.5 mile (0.8 km) of P1-P2 Indiana bat hibernacula or 0.25 mile (0.4 km) of P3-P4 Indiana bat hibernacula or any northern long-eared bat hibernacula.
- □ Removal/burning of suitable trees within 10 miles of documented Indiana bat hibernacula or within 5 miles of northern long-eared bat hibernacula.
- □ Removal/burning of suitable trees greater than 10 miles from documented Indiana bat hibernacula or greater than 5 miles from documented northern long-eared bat hibernacula.
- □ Removal/burning of trees within 150 feet of a documented Indiana bat or northern long-eared bat maternity roost tree.
- □ Removal/burning of suitable trees within 2.5 miles of Indiana bat roost trees or within 5 miles of Indiana bat capture sites.
- □ Removal/burning of suitable trees greater than 2.5 miles from Indiana bat roost trees or greater than 5 miles from Indiana bat capture sites.
- □ Removal/burning of documented Indiana bat or northern long-eared bat roost tree, if still suitable.

STEP 7b) Amount of SUITABLE tree/acreage removal or burned (may be different than total amount of removal): _____ □ acres □ trees

STEP 8) Select anticipated date range of burning/tree removal in table below:

STATE	SWARMING	WINTER	NON-WINTER	PUP
GA, KY, TN	□ Oct 15 - Nov 14	□ Nov 15 - Mar 31	□ Apr 1 - May 31, Aug 1- Oct 14	□ Jun 1 - Jul 31
VA	□ Sep 16 - Nov 15	□ Nov 16 - Apr 14	□ Apr 15 - Sep 15	□ Jun 1 - Jul 31
AL	□ Oct 15 - Nov 14	□ Nov 15 - Mar 15	□ Mar 16 - May 31, Aug 1 - Oct 14	□ Jun 1 - Jul 31
NC	□ Oct 15 - Nov 14	□ Nov 15 - Apr 15	□ Apr 16 - May 31, Aug 1 - Oct 14	□ Jun 1 - Jul 31
MS	□ Oct 1 - Nov 14	□ Nov 15 - Apr 14	□ Apr 15 - Sep 30	□ Jun 1 - Jul 31

STEP 9) Presence/absence surveys (visual, mist net, acoustic) were/will be conducted: □ **YES** □ **NO** □ **TBD**

STEP 10) Result of presence/absence surveys (if conducted), on _____ (date): □ **NEGATIVE** □ **POSITIVE** □ **N/A** *NOTES*: _____
_____

STEP 11) □ Conservation measures have been verified (and modified, if necessary) in Table 2. *NOTES*:
_____
_____

Bat Strategy Compliance Verification (Steps 12-15 will be completed by SME/Bat Strategy Support staff):

STEP 12) Project □ **WILL** □ **WILL NOT** require use of Incidental Take in the amount of _____ □ acres or □ trees, proposed to be used during the □ **WINTER** □ **VOLANT** □ **NON-VOLANT** bat season (or □ **N/A**).

STEP 13) Available Incidental Take as of _____ for _____(Action):

TVA Action	Total 20-year acreage	Winter Burning/Removal	Volant Season Burning/Removal	Non-Volant Season Burning/Removal

STEP 14) Amount contributed to TVA's Bat Conservation Fund upon activity completion: _____or □ **N/A**

STEP 15) Project Effects Determinations: ***Gray Bat***:□ NE □ NLAA □ N/A;***Virginia Big-eared Bat***:□ NE □ NLAA □ N/A
Northern Long-eared Bat: □ NE □ NLAA □ LAA □ N/A; ***Indiana Bat***: □ NE □ NLAA □ LAA □ N/A

NOTES:_____
_____

TVA's ESA Section 7 Bat Strategy Conservation Measures Required for:

STEP 16) Based on completion of Step 5, select the appropriate Conservation Measures listed in the table below (this will be completed/verified by a Terrestrial Zoologist if a Terrestrial Zoologist review is required) and review the following bullets. Save this form in project environmental documentation AND send a copy of form to batstrategy@tva.gov. Submission of this form is an indication that the Project Lead _____ (name) is (or will be made) aware of the requirements below.

- Implementation of conservation measures identified below is required to comply with TVA's programmatic Endangered Species Act bat consultation.

- Confirmation of completion (e.g., report from contractor, time stamped photos pre and post completion) for Conservation Measures below with an * (as well as any additional confirmation noted here by Terrestrial Zoologist:_____) will be provided to TVA's Bat Strategy Compliance Officer (batstrategy@tva.gov) following completion of activit (ies).

- TVA may conduct post-project monitoring to determine if conservation measures were effective in minimizing or avoiding impacts to federally listed bats.

STEP 17) For projects that require use of Take and/or contribution to TVA's Bat Conservation Fund, please acknowledge the following statement:

□ Project Lead/Contact acknowledges that proposed project will result in use of _____ □ acres/□ trees in Incidental Take and will require _____ contribution to TVA's Conservation Fund upon completion of activity.

	Conservation Measure Acronym	Conservation Measure Description
	NV1	Noise will be short-term, transient, and not significantly different from urban interface or natural events (i.e., thunderstorms) that bats are frequently exposed to when present on the landscape.
	NV2	Drilling, blasting, or any other activity that involves continuous noise (i.e., longer than 24 hours) disturbances greater than 75 decibels measured on the A scale (e.g., loud machinery) within a 0.5 mile radius of documented winter and/or summer roosts (caves, trees, unconventional roosts) will be conducted when bats are absent from roost sites.
	NV3	Drilling or blasting within a 0.5 mile radius of documented cave (or unconventional) roosts will be conducted in a manner that will not compromise the structural integrity or alter the karst hydrology of the roost site.
	NV4	Drilling or blasting within 0.5 miles of a documented roost site (cave, tree, unconventional roost) that needs to occur when bats are present will first involve development of project-specific avoidance or minimization measures in coordination with the USFWS.
	HP1	Site-specific cases in which potential impact of human presence is heightened (e.g., conducting environmental or cultural surveys within a roost site) will be closely coordinated with staff bat biologists to avoid or minimize impacts below any potential adverse effect. Any take from these activities would be covered by TVA's Section 10 permit.
	HP2	Entry into roosts known to be occupied by federally listed bats will be communicated to the USFWS when impacts to bats may occur if not otherwise communicated (i.e., via annual monitoring reports per TVA's Section 10 permit). Any take from these activities would be covered by TVA's section 10 permit.
	SHF1	Fire breaks will be used to define and limit burn scope.
	SHF2	Site-specific conditions (e.g., acres burned, transport wind speed, mixing heights) will be considered to ensure smoke is limited and adequately dispersed away from caves so that smoke does not enter cave or cave-like structures.
	SHF3	Acreage will be divided into smaller units to keep amount of smoke at any one

		time or location to a minimum and reduce risk for smoke to enter caves.
	SHF4	If burns need to be conducted during April and May, when there is some potential for bats to present on the landscape and more likely to enter torpor due to colder temperatures, burns will only be conducted if the air temperature is 55° or greater, and preferably 60° or greater.
	SHF5	Fire breaks will be plowed immediately prior to burning, will be plowed as shallow as possible, and will be kept to minimum to minimize sediment.
	SHF6	Tractor-constructed fire lines will be established greater than 200 feet from cave entrances. Existing logging roads and skid trails will be used where feasible to minimize ground disturbance and generation of loose sediment.
	SHF7	Burning will only occur if site specific conditions (e.g. acres burned, transport wind speed, mixing heights) can be modified to ensure that smoke is adequately dispersed away from caves or cave-like structures. This applies to prescribed burns and burn piles of woody vegetation.
	SHF8	Brush piles will be burned a minimum of 0.25 mile from documented, known, or obvious caves or cave entrances and otherwise in the center of newly established ROW when proximity to caves on private land is unknown.
	SHF9	A 0.25 mile buffer of undisturbed forest will be maintained around documented or known gray bat maternity and hibernation colony sites, documented or known Virginia big-eared bat maternity, bachelor, or winter colony sites, Indiana bat hibernation sites, and northern long-eared bat hibernation sites. Prohibited activities within this buffer include cutting of overstory vegetation, construction of roads, trails or wildlife openings, and prescribed burning. Exceptions may be made for maintenance of existing roads and existing ROW, or where it is determined that the activity is compatible with species conservation and recovery (e.g., removal of invasive species).
	TR1*	Removal of potentially suitable summer roosting habitat during time of potential occupancy has been quantified and minimized programmatically. TVA will track and document alignment of activities that include tree removal (i.e., hazard trees, mechanical vegetation removal) with the programmatic quantitative cumulative estimate of seasonal removal of potential summer roost trees for Indiana bat and northern long-eared bat. Project will therefore communicate completion of tree removal to appropriate TVA staff.
	TR2	Removal of suitable summer roosting habitat within 0.5 mile of Priority 1/Priority 2 Indiana bat hibernacula, or 0.25 mile of Priority 3/Priority 4 Indiana bat hibernacula or any northern long-eared bat hibernacula will be prohibited, regardless of season, with very few exceptions (e.g., vegetation maintenance of TL ROW immediately adjacent to a known cave).
	TR3*	Removal of suitable summer roosting habitat within documented bat habitat (i.e., within 10 miles of documented Indiana bat hibernacula, within five miles of documented northern long-eared bat hibernacula, within 2.5 miles of documented Indiana bat summer roost trees, within five miles of Indiana bat capture sites, within one mile of documented northern long-eared bat summer roost trees, within three miles of northern long-eared bat capture sites) will be tracked, documented, and included in annual reporting. Project will therefore communicate completion of tree removal to appropriate TVA staff.
	TR4*	Removal of suitable summer roosting habitat within potential habitat for Indiana bat or northern long-eared bat will be tracked, documented, and included in annual reporting. Project will therefore communicate completion of tree removal to appropriate TVA staff.
	TR5	Removal of any trees within 150 feet of a documented Indiana bat or northern long-eared bat maternity summer roost tree during non-winter season, range-wide pup season or swarming season (if site is within known swarming habitat), will first require a site-specific review and assessment. If pups are present in trees to be removed (determined either by mist netting and assessment of adult females, or by visual assessment of trees following evening emergence counts),

		TVA will coordinate with the USFWS to determine how to minimize impacts to pups to the extent possible. May include establishment of artificial roosts before removal of roost tree(s).
	TR6	Removal of a documented Indiana bat or northern long-eared bat roost tree that is still suitable and that needs to occur during non-winter season, range-wide pup season, or swarming season (if site is within known swarming habitat) will first require a site-specific review and assessment. If pups are present in trees to be removed (determined either by mist netting and assessment of adult females, or by visual assessment of trees following evening emergence counts), TVA will coordinate with USFWS to determine how to minimize impacts to pups to the extent possible. This may include establishment of artificial roosts before removal of roost tree(s).
	TR7	Tree removal within 100 feet of **existing transmission ROWs** will be limited to hazard trees. On or adjacent to TLs, a hazard tree is a tree that is tall enough to fall within an unsafe distance of TLs under maximum sag and blowout conditions and/or are also dead, diseased, dying, and/or leaning. Hazard tree removal includes removal of trees that 1) currently are tall enough to threaten the integrity of operation and maintenance of a TL or 2) have the ability in the future to threaten the integrity of operation and maintenance of a TL.
	TR8	Requests for removal of hazard trees on or adjacent to **TVA reservoir land** will be inspected by staff knowledgeable in identifying hazard trees per International Society of Arboriculture and TVA's checklist for hazard trees. Approval will be limited to trees with a defined target.
	TR9	If removal of suitable summer roosting habitat occurs when bats are present on the landscape, a funding contribution (based on amount of habitat removed) towards future conservation and recovery efforts for federally listed bats would be carried out. Project can consider seasonal bat presence/absence surveys (mist netting or emergence counts) that allow for positive detections without resulting in increased constraints in cost and project schedule. This will enable TVA to contribute to increased knowledge of bat presence on the landscape while continuing to carry out TVA's broad mission and responsibilities.
	AR1	Projects that involve structural modification or demolition of buildings, bridges, and potentially suitable box culverts, will require assessment to determine if structure has characteristics that make it a potentially suitable unconventional bat roost. If so a survey to determine if bats may be present will be conducted. Structural assessment will include: o Visual check that includes an exhaustive internal/external inspection of building to look for evidence of bats (e.g., bat droppings, roost entrance/exit holes); this can be done at any time of year, preferably when bats are active. o Where accessible and health and safety considerations allow, a survey of roof space for evidence of bats (e.g., droppings, scratch marks, staining, sightings), noting relevant characteristics of internal features that provide potential access points and roosting opportunities. Suitable characteristic may include: gaps between tiles and roof lining, access points via eaves, gaps between timbers or around mortise joints, gaps around top and gable end walls, gaps within roof walling or around tops of chimney breasts, and clean ridge beams. o Features with high-medium likelihood of harboring bats but cannot be checked visually include soffits, cavity walls, space between roof covering and roof lining. o Applies to box culverts that are at least 5 feet (1.5 meters) tall and with one or more of the following characteristics. Suitable culverts for bat day roosts have the following characteristics: ▪ Location in relatively warm areas

		▪ Between 5-10 feet (1.5-3 meters) tall and 300 ft (100 m) or more long ▪ Openings protected from high winds ▪ Not susceptible to flooding ▪ Inner areas relatively dark with roughened walls or ceilings ▪ Crevices, imperfections, or swallow nests o Bridge survey protocols will be adapted from the Programmatic Biological Opinion for the Federal Highway Administration (Appendix D of USFWS 2016c, which includes a Bridge Structure Assessment Guidance and a Bridge Structure Assessment Form). o Bat surveys usually are NOT needed in the following circumstances: ▪ Domestic garages /sheds with no enclosed roof space (with no ceiling) ▪ Modern flat-roofed buildings ▪ Metal framed and roofed buildings ▪ Buildings where roof space is regularly used (e.g., attic space converted to living space, living space open to rafters) or where all roof space is lit from skylights or windows. Large/tall roof spaces may be dark enough at apex to provide roost space.
	AR2	Additional bat P/A surveys (e.g., emergence counts) conducted if warranted (i.e., when AR1 indicates that bats may be present).
	AR3	Bridge survey protocols will be implemented, either by permittee (e.g., state DOT biologists) or qualified personnel. If a bridge is determined to be in use as an unconventional roost, subsequent protocols will be implemented.
	AR4	Removal of buildings with suitable roost characteristics within six miles of known or presumed occupied roosts for Virginia big-eared bat would occur between Nov 16 and Mar 31. Buildings may be removed other times of the year once a bat biologist evaluates a buildings' potential to serve as roosting habitat and determines that this species is not present and/or is not using structure(s).
	AR5	If evidence of bat use warrants seasonal modification or removal, TVA will carry out or recommend (i.e., to applicants) seasonal modification or removal. Risk to human safety, however, should take priority. For project-specific cases in which project is unable to accommodate seasonal modification or removal, and federally listed bat species are present, TVA will carry out or recommend consultation with the USFWS to determine the best approach in the context of the project-specific circumstance. This may include establishment of artificial roosts before demolition of structures with bats present.
	SSPC1	**Transmission actions and activities** will continue to Implement A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Construction and Maintenance Activities. This focuses on control of sediment and pollutants, including herbicides. Following are key measures: o BMPs to minimize erosion and prevent/control water pollution in accordance with state-specific construction storm water permits. BMPS are designed to keep soil in place and aid in reducing risk of other pollutants reaching surface waters, wetlands and ground water. BMPs will undertake the following principles: ▪ Plan clearing, grading, and construction to minimize area and duration of soil exposure. ▪ Maintain existing vegetation wherever and whenever possible. ▪ Minimize disturbance of natural contours and drains. ▪ As much as practicable, operate on dry soils when they are least susceptible to structural damage and erosion. ▪ Limit vehicular and equipment traffic in disturbed areas. ▪ Keep equipment paths dispersed or designate single traffic flow

		paths with appropriate road BMPs to manage runoff. ▪ Divert runoff away from disturbed areas. ▪ Provide for dispersal of surface flow that carries sediment into undisturbed surface zones with high infiltration capacity and ground cover conditions. ▪ Prepare drainage ways and outlets to handle concentrated/increased runoff. ▪ Minimize length and steepness of slopes. Interrupt long slopes frequently. ▪ Keep runoff velocities low and/or check flows. ▪ Trap sediment on-site. ▪ Inspect/maintain control measures regularly and after significant rain. ▪ Re-vegetate and mulch disturbed areas as soon as practical. o Application of herbicide is in compliance with USEPA, state water quality standards, and state permits. Areas in which covered species are known to occur on existing transmission line ROW are depicted on referenced, applicable spreadsheets and include guidelines to follow for impact minimization or avoidance. During pre-job briefings, the ROW Forester will review location of resources with contractors and provide guidelines and expectations from TVA's BMP Manual (Appendix O). Herbicides labeled for aquatic use are utilized in and around wetlands, streams, and SMZs. Unless specifically labeled for aquatic use, measures are taken to keep herbicides from reaching streams whether by direct application or through runoff or flooding by surface water. Hand application of certain herbicides labeled for use within SMZs is used only selectively. o Specific guidelines regarding sensitive resources and buffer zones: ▪ Extra precaution (wider buffers) within SMZs is taken to protect stream banks and water quality for streams, springs, sinkholes, and surrounding habitat. ▪ BMPs are implemented to protect and enhance wetlands. Select use of equipment and seasonal clearing is conducted when needed for rare plants; construction activities are restricted in areas with identified rare plants. ▪ Standard requirements exist to avoid adverse impacts to caves, protected animals, and unique and important habitat (e.g., protective buffers around caves, restricted herbicide use, seasonal clearing of suitable habitat).
	SSPC2	Operations involving chemical/fuel storage or resupply and vehicle servicing will be handled outside of riparian zones (streamside management zones) in a manner to prevent these items from reaching a watercourse. Earthen berms or other effective means are installed to protect stream channel from direct surface runoff. Servicing will be done with care to avoid leakage, spillage, and subsequent stream, wetland, or ground water contamination. Oil waste, filters, other litter will be collected and disposed of properly. Equipment servicing and chemical/fuel storage will be limited to locations greater than 300-ft from sinkholes, fissures, or areas draining into known sinkholes, fissures, or other karst features.
	SSPC3	**Power Plant actions and activities** will continue to implement standard environmental practices. These include: o Best Management Practices (BMPs) in accordance with regulations:

		▪ Ensure proper disposal of waste, ex: used rags, used oil, empty containers, general trash, dependent on plant policy ▪ Maintain every site with well-equipped spill response kits, included in some heavy equipment ▪ Conduct Quarterly Internal Environmental Field Assessments at each sight ▪ Every project must have an approved work package that contains an environmental checklist that is approved by sight Environmental Health & Safety consultant. ▪ When refueling, vehicle is positioned as close to pump as possible to prevent drips, and overfilling of tank. Hose and nozzle are held in a vertical position to prevent spillage o Construction Site Protection Methods ▪ Sediment basin for runoff - used to trap sediments and temporarily detain runoff on larger construction sites ▪ Storm drain protection device ▪ Check dam to help slow down silt flow ▪ Silt fencing to reduce sediment movement o Storm Water Pollution Prevention (SWPP) Pollution Control Strategies ▪ Minimize storm water contact with disturbed soils at the construction site ▪ Protect disturbed soil areas from erosion ▪ Minimize sediment in storm water before discharge ▪ Prevent storm water contact with other pollutants ▪ Construction sites also may be required to have a storm water permit, depending on size of land disturbance (>1 acre) o Every site has a Spill Prevention and Control Countermeasures (SPCC) Plan and requires training. Several hundred pieces of equipment often managed at the same time on power generation properties. Goal is to minimize fuel and chemical use
	SSPC4	Woody vegetation burn piles associated with **transmission construction** will be placed in the center of newly established ROWs to minimize wash into any nearby undocumented caves that might be on adjacent private property and thus outside the scope of field survey for confirmation. Brush piles will be burned a minimum of 0.25 miles from documented caves and otherwise in the center of newly established ROW when proximity to caves on private land is unknown.
	SSPC5	**Section** 26a permits and contracts associated with **solar projects**, **economic development projects** or land use projects include standards and conditions that include standard BMPs for sediment and contaminants as well as measures to avoid or minimize impacts to sensitive species or other resources consistent with applicable laws and Executive Orders.
	SSPC6	Herbicide use will be avoided within 200 ft of portals associated with caves, cave collapse areas, mines and sinkholes that are capable of supporting cave-associated species. Herbicides are not applied to surface water or wetlands unless specifically labeled for aquatic use. Filter and buffer strips will conform at least to federal and state regulations and any label requirements.
	SSPC7	Clearing of vegetation within a 200-ft radius of documented caves will be limited to that conducted by hand or small machinery clearing only (e.g., chainsaws, bush-hog, mowers). This will protect potential recharge areas of cave streams and other karst features that are connected hydrologically to caves.
	L1	Direct temporary lighting away from suitable habitat during the active season.
	L2	Evaluate the use of outdoor lighting during the active season and seek to minimize light pollution when installing new or replacing existing permanent lights by angling lights downward or via other light minimization measures (e.g., dimming, directed lighting, motion-sensitive lighting).

[1]Bats addressed in consultation (02/2018), which includes gray bat (listed in 1976), Indiana bat (listed in 1967), northern long-eared bat (listed in 2015), and Virginia big-eared bat (listed in 1979).

APPENDIX D

Glint and Glare Analysis

SR Jackson Solar Project

SR Jackson, LLC

Madison County, Tennessee

Glint & Glare Analysis

August 17, 2018

Capitol Airspace Group

capitolairspace.com

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Alexandria, VA 22312
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Table of Contents

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Summary

SR Jackson, LLC is proposing to construct a photovoltaic solar energy project near the McKellar-Sipes Regional Airport in Madison County, Tennessee. On behalf of SR Jackson, LLC, Capitol Airspace performed a Glint and Glare Analysis to identify any potential impact on McKellar-Sipes Regional Airport operations. Specifically, this analysis considered the impact on aircraft approaching to land on Runways 02/20 and 11/29. Since McKellar-Sipes Regional Airport is a controlled field, this analysis also considered the impact on air traffic control tower personnel. The study was conducted in accordance with the FAA established interim policy for Solar Energy System Projects on Federally Obligated Airports. It should be noted the SR Jackson solar array is off airport property and as such, FAA does not require the Glint Glare analysis. SR Jackson, LLC has requested this analysis to avoid impact to airport operations at the McKellar-Sipes Regional Airport.

The results of the study show that no glare is predicted from the SR Jackson solar array.

Methodology

The FAA established the interim policy for Solar Energy System Projects on Federally Obligated Airports on October 23, 2013. The FAA adopted this interim policy in order to enhance safety by providing standards for measuring ocular impact of proposed solar energy systems on pilots and/or air traffic controllers. In cooperation with the Department of Energy (DOE), the FAA developed and validated the Sandia National Laboratories' "*Solar Glare Hazard Analysis Tool*" (SGHAT), now licensed through ForgeSolar. The FAA requires the use of the SGHAT to demonstrate compliance with the standards for measuring ocular impact for on airport installations.

The interim policy states:

1. *A project must not have a potential for glint or glare in the existing or planned Airport Traffic Control Tower (ATCT) cab, (Green, Yellow or Red).*

2. *A project must not have a potential for glare (Yellow or Red) along the final approach path for any existing landing threshold or future landing thresholds (including any planned interim phases of the landing thresholds) as shown on the current FAA-approved Airport Layout Plan (ALP). An airport may have a "low potential for after image" (Green) within these areas. The final approach path is defined as two (2) miles from fifty (50) feet above the landing threshold using a standard three (3) degree glidepath.*

    a. ***Green:*** *Low potential for temporary after-image glare*
    b. ***Yellow:*** *Potential for temporary after-image glare*
    c. ***Red:*** *Potential for permanent eye damage glare*

3. *Ocular impact must be analyzed over the entire calendar year in one (1) minute intervals from when the sun rises above the horizon until the sun sets below the horizon.*

Capitol Airspace utilized the SGHAT based guidance provided in User's Manual v.3. Solar array specifications were provided by SR Jackson, LLC. The arrays are currently based on geographical boundaries in order to refine the analysis. The SR Jackson solar array is a single axis tracking solar array (***Figure 1***).

The flight path data is developed by reviewing airport specific operations before entering it into the SGHAT tool. Each flight path has configurable parameters. One of the configurable inputs allows for limiting the downward and azimuthal angles of view from the flight path to simulate a pilot's view out the window of the cockpit. SR Jackson, LLC specified that the analysis be conducted from the FAA's approved default settings in the SGHAT tool which utilizes the view from the pilot's perspective. The FAA approved default settings for a pilot's perspective are 30 degree downward and 50 degree azimuth viewing angles.

Figure 1: Location of solar array in reference to runways

Data

SR Jackson, LLC provided the following data for the solar projects expected total footprint, based on the input parameters defined in the SGHAT User's Manual v.3.

The data for the PV array is as follows:

Parameter	Array Inputs
PV array axis tracking	Single-axis tracking
Orientation	180 deg
Tilt	0 deg
PV surface material	Smooth glass with AR coating
Maximum tracking angle	60.0 deg
Resting angle	30.0 deg
Reflectivity	Vary with sun
Slope error	Correlate with material

Table 1: PV Array Inputs

ID	Latitude	Longitude	Ground Elevation (feet)	Height Above Ground (feet)	Total Elevation
1	35.612078	-88.916842	402.33	4.50	406.83
2	35.612141	-88.915897	406.02	4.50	410.52
3	35.610957	-88.915689	405.57	4.50	410.07
4	35.610525	-88.914601	408.89	4.50	413.39
5	35.609928	-88.914569	406.13	4.50	410.63
6	35.609836	-88.914138	411.65	4.50	416.15
7	35.609329	-88.914218	411.74	4.50	416.24
8	35.609057	-88.913898	412.30	4.50	416.80
9	35.607796	-88.913898	412.13	4.50	416.63
10	35.607756	-88.918572	400.71	4.50	405.21
11	35.608095	-88.918778	403.14	4.50	407.64
12	35.608134	-88.919096	408.28	4.50	412.78
13	35.609577	-88.919191	409.59	4.50	414.09
14	35.609708	-88.918425	405.43	4.50	409.93
15	35.610276	-88.918593	416.38	4.50	420.88
16	35.611007	-88.917975	406.07	4.50	410.57
17	35.611217	-88.916441	404.90	4.50	409.40

Table 2: PV Array Vertices

The data for Runway 02/20 is as follows:

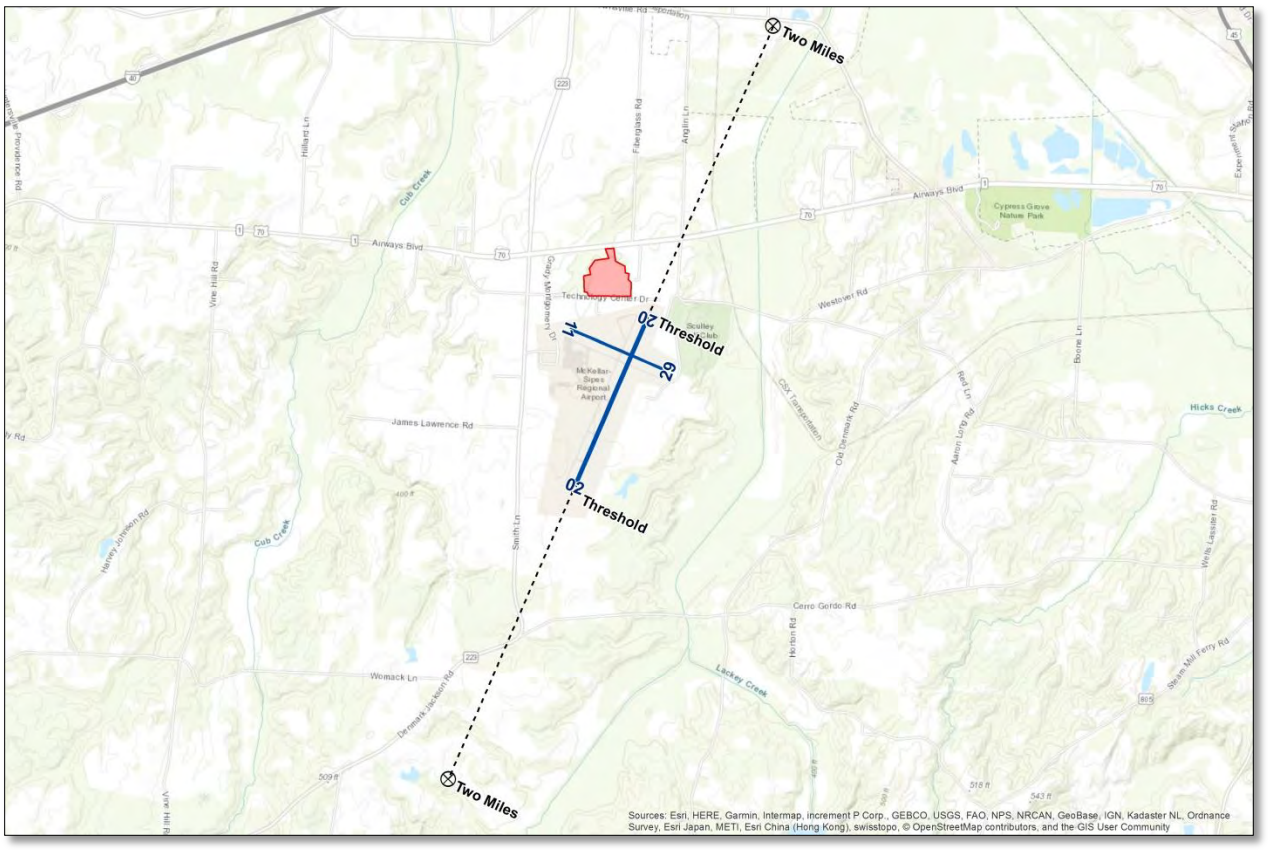


Figure 2: Runway 02/20 SGHAT flight path (dashed black)

Parameter	Runway 02 Inputs
Threshold height (ft)	50
Direction (deg)	22
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	Yes
Vertical view restriction (deg)	30
Azimuthal view restriction (deg)	50

Table 3: Runway 02 flight path and viewing parameters

Observation Point	Latitude	Longitude	Ground Elevation (feet)	Height above ground (feet)	Total Elevation (feet)
Threshold	35.590453	-88.919735	434.04	50.00	484.04
2-mile point	35.563645	-88.933069	456.98	580.51	1037.50

Table 4: Runway 02 flight path observation points

Parameter	Runway 20 Inputs
Threshold height (ft)	50
Direction (deg)	202
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	Yes
Vertical view restriction (deg)	30
Azimuthal view restriction (deg)	50

Table 5: Runway 20 flight path and viewing parameters

Observation Point	Latitude	Longitude	Ground Elevation (feet)	Height above ground (feet)	Total Elevation (feet)
Threshold	35.605716	-88.912096	414.72	50.00	464.72
2-mile point	35.632524	-88.898759	357.85	660.33	1018.18

Table 6: Runway 20 flight path observation points

The data for Runway 11/29 is as follows:

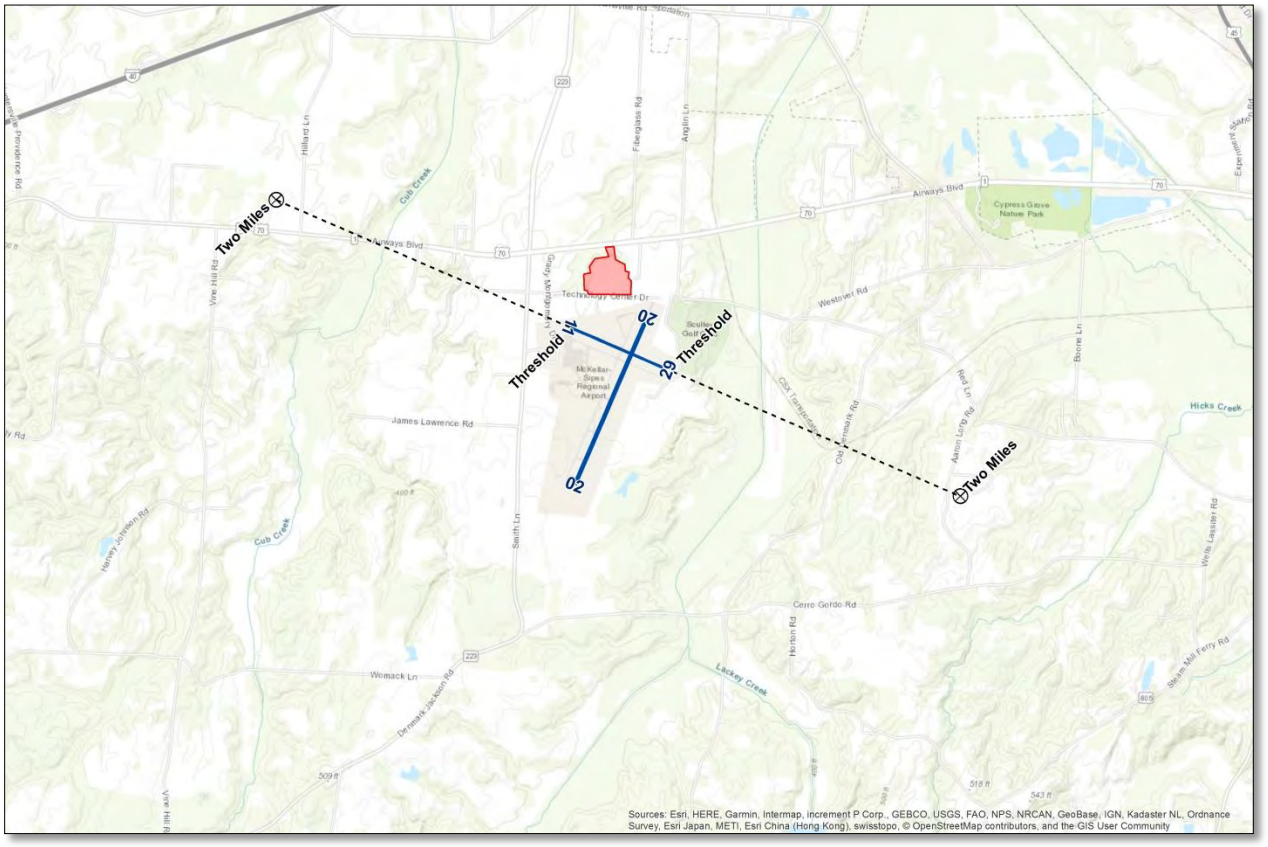


Figure 3: Runway 11/29 SGHAT flight path (dashed black)

Parameter	Runway 11 Inputs
Threshold height (ft)	50
Direction (deg)	112
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	Yes
Vertical view restriction (deg)	30
Azimuthal view restriction (deg)	50

Table 7: Runway 11 flight path and viewing parameters

Observation Point	Latitude	Longitude	Ground Elevation (feet)	Height above ground (feet)	Total Elevation (feet)
Threshold	35.604739	-88.920597	407.66	50.00	457.67
2-mile point	35.615570	-88.953607	432.17	578.95	1011.12

Table 8: Runway 11 flight path observation points

Parameter	Runway 29 Inputs
Threshold height (ft)	50
Direction (deg)	292
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	Yes
Vertical view restriction (deg)	30
Azimuthal view restriction (deg)	50

Table 9: Runway 29 flight path and viewing parameters

Observation Point	Latitude	Longitude	Ground Elevation (feet)	Height above ground (feet)	Total Elevation (feet)
Threshold	35.601099	-88.909706	418.22	50.00	468.23
2-mile point	35.590268	-88.876698	477.06	544.63	1021.68

Table 10: Runway 29 flight path observation points

The data for the Air Traffic Control Tower is as follows:

Figure 4: Location of array in reference to Air Traffic Control Tower

Observation Point	Latitude	Longitude	Ground Elevation (feet)	Height above ground (feet)	Total Elevation (feet)
ATCT	35.606305	-88.917141	413.47	90.00	503.48

Table 11: ATCT observation point

Results

Capitol Airspace utilized the previous inputs to analyze potential glint and glare at various points along the flight paths. Capitol Airspace obtained flight path inputs including runway end coordinates, visual glide path angles and threshold crossing heights from the FAA's National Airspace System Resources (NASR) data set. The SGHAT tool uses this information to analyze each flight path between a two mile final and the runway threshold.

If glare is detected, "Glare Occurrence Plots" are generated by SGHAT.[1] The color indicates the potential ocular hazard. The colors are defined as:

- Green: Low potential for temporary after-image glare
- Yellow: Potential for temporary after-image glare
- Red: Potential for permanent eye damage glare

The results of this analysis indicated no predicted glare from any runway or in the air traffic control tower (*Table 12*).

Receptor	Green Glare	Yellow Glare	Red Glare	Total Glare
Runway 02	0	0	0	0
Runway 20	0	0	0	0
Runway 11	0	0	0	0
Runway 29	0	0	0	0
ATCT	0	0	0	0
Total	0	0	0	

Table 12: Minutes of Glare per Year

Conclusion

The SGHAT analyzed the expected total footprint of the SR Jackson solar array and did not identify any glare occurrences for approaches to either of the runways at McKellar-Sipes Regional Airport nor the airport's Air Traffic Control Tower. As a result, the SR Jackson solar array is compliant with the FAA interim policy for Solar Energy System Projects on Federally Obligated Airports.

If you have any questions regarding the findings in this analysis, please contact ***Rick Coles*** at (703) 256-2485.

[1] Glare occurrence plots are available on request.

APPENDIX E

Cultural Resources Survey and Section 106 Consultation

A Phase I Cultural Resources Survey of a Planned Solar Array in Jackson, Madison County, Tennessee

Tennessee Valley Archaeological Research

Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, TN 37902

September 13, 2018

Mr. E. Patrick McIntyre, Jr.
Executive Director
Tennessee Historical Commission
2941 Lebanon Pike
Nashville, Tennessee 37243-0442

Dear Mr. McIntyre:

TENNESSEE VALLEY AUTHORITY (TVA), SILICON RANCH SOLAR ARRAY, JACKSON, MADISON COUNTY, TENNESSEE

TVA proposes to enter into a Power Purchase Agreement with Silicon Ranch Corporation (SRC) to buy electric power generated from the proposed solar array in Jackson, Madison County, Tennessee. The area of potential effects (APE) for direct effects to be the 44.4-acre project tract and APE for indirect/visual effects to be .5 mile radius within visual line sight to the project area

The SRC contracted with Tennessee Valley Archaeological Research (TVAR) to conduct a Phase I Cultural Resources survey. Please find enclosed the resulting report titled *A Phase I Cultural Resources Survey of a Planned Solar Array in Jackson, Madison County, Tennessee.*

The architectural survey resulted in the identification of four previously unrecorded properties (IS-1 through IS-4) within the visual APE. IS-1 and IS-2 are residences; TVA finds IS-1 and IS-2 ineligible for the National Register Historic Places (NRHP) based on lack of architectural merit and inability to associate the house/or owner with important historical event(s). IS-3 is the McKellar-Sipes Regional Airport that has been previously determined ineligible for the NRHP as part by the Tennessee Department of Transportation. TVA agrees with this eligibility finding. IS-4 is an airplane hangar that appears to have been constructed by the Works Progress Administration in 1937. TVA finds IS-4 eligible for the NRHP under Criterion A for its local significance in the area of aviation. The proposed project would have a visual effect on IS-4, however the viewshed has already been compromised due to the construction of modern buildings associated with McKeller-Sipes Airport. TVA finds that while there will be a visual effect to the resource, the effect will not be adverse.

The archaeological survey resulted in the identification of one site (40MD254; a historic artifact scatter) on the eastern boundary of the survey area. The site likely extends outside the APE. The site has been previously disturbed by artificial terracing and the majority of the artifacts were confined to the plowzone. TVA finds the portion of 40MD254 within the APE not eligible for the NRHP.

TVA has reviewed the enclosed report and finds that no historic properties would be adversely effected by the proposed undertaking. Pursuant to 36 CFR Part 800.5(b), we are seeking your concurrence with TVA's findings.

Pursuant to 36 CFR Part 800.3(f)(2), TVA is consulting with federally recognized Indian tribes regarding properties within the proposed project's APE that may be of religious and cultural significance to them and eligible for the NRHP.

If you have any questions, please contact Michaelyn Harle by phone, (865) 632-2248 or by email, mharle@tva.gov.

Sincerely,

Erin E Pritchard

Erin E. Pritchard on Behalf of Clinton E. Jones
Manager
Cultural Compliance

MSH:ABM
Enclosures
cc (Enclosures):
Ms. Jennifer Barnett
Tennessee Division of Archaeology
1216 Foster Avenue, Cole Bldg. #3
Nashville, Tennessee 37210

INTERNAL COPIES NOT TO BE INCLUDED WITH OUTGOING LETTER:

Lana D. Bean, WT 10C-K
Patricia B. Ezzell, WT 7C-K
Michaelyn S. Harle, WT 11C-K
Susan R. Jacks, WT 11C-K
Ashley A. Pilakowski, WT 11B-K
M. Susan Smelley, BR 4A-C
Dana M. Vaughn, WT 11B-K
ECM, WT CA-K

A Phase I Cultural Resources Survey of a Planned Solar Array in Jackson, Madison County, Tennessee

TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

September 25, 2018

Mr. Clinton E. Jones
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, TN 37902

RE: TVA / Tennessee Valley Authority, Silicon Ranch Solar Array, Jackson, Madison County, TN

Dear Mr. Jones:

In response to your request, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

After considering the documentation submitted, it is our opinion that there are no National Register of Historic Places listed or eligible properties affected by this undertaking. We have made this determination because either: no National Register listed or eligible Historic Properties exist within the undertaking's area of potential effects, the specific location, size, scope and/or nature of the undertaking and its area of potential effects precluded affects to Historic Properties, the undertaking will not alter any characteristics of an identified eligible or listed Historic Property that qualify the property for listing in the National Register, or it will not alter an eligible Historic Property's location, setting or use. We have no objections to your proceeding with your undertaking.

If your agency proposes any modifications in current project plans or discovers any archaeological remains during the ground disturbance or construction phase, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. If you are applying for federal funds, license or permit, you should submit this letter as evidence of consultation under Section 106 to the appropriate federal agency, which, in turn, should contact us as required by 36 CFR 800. If you represent a federal agency, you should submit a formal determination of eligibility and effect to us for comment. You may direct questions or comments to Casey Lee (615) 253-3163.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/cjl

October 16, 2018

Ms. Marianne Shuler, Senior Specialist,
Archaeologist and Tribal Liaison
Cultural Compliance
Tennessee Valley Authority
400 West Summit Hill Drive
460 WT 7D-K
Knoxville, TN 37902

Dear Ms. Shuler:

Thank you for the letters of notification of the proposed projects delineated in the attached table. We accept the invitation to consult under Section 106 of the National Historic Preservation Act.

The Chickasaw Nation supports the proposed undertakings and is not presently aware of any specific historic properties, including those of traditional religious and cultural significance, in the project areas. In the event the agency becomes aware of the need to enforce other statutes we request to be notified under ARPA, AIRFA, NEPA, NAGPRA, NHPA and Professional Standards.

Your efforts to preserve and protect significant historic properties are appreciated. If you have any questions, please contact Ms. Karen Brunso, tribal historic preservation officer, at (580) 272-1106, or at karen.brunso@chickasaw.net.

Sincerely,

Lisa John, Secretary
Department of Culture and Humanities

cc: mmshuler@tva.gov

Enclosure

Project Description	Location
Proposed Power Purchase Agreement with Silicon Ranch Corporation to buy electric power generated by the proposed solar array	Memphis, Shelby County, Tennessee
Proposed Power Purchase Agreement with Silicon Ranch Corporation to buy electric power generated by the proposed solar array	Jackson, Madison County, Tennessee

APPENDIX F

Phase I Environmental Site Assessment

Phase I
Environmental Site Assessment Report

WESTOVER ROAD
JACKSON, TENNESSEE 38301

PREPARED FOR

Silicon Ranch Corporation

PREPARED BY

615 3rd Avenue South, Suite 700
Nashville, TN 37210
Barge# 3609507

July 2018

SIGNATURE PAGE

Barge Project Number: 3609507
Barge Project Name: Silicon Ranch – Jackson, TN

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527 of approximately 39 acres located at Westover Road in Jackson, Madison County, Tennessee, the *property*. Any exceptions to, or deletions from, this practice are described in Section 7.4 of this *report*. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the *property.*

AUTHORED BY:
Signature: Chelsea Sachs

Name: Chelsea Sachs

Title: Project Geologist

Date: July 13, 2018

FINAL REVIEWED AND APPROVED BY:

Signature:

Name: Tom McComb, PG, CPG

Title: Senior Project Geologist

Date: July 13, 2018

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

Barge Design Solutions, Inc. (Barge) was retained to complete a Phase I Environmental Site Assessment (ESA) for Silicon Ranch Corporation on approximately 39 acres located at Westover Road in Jackson, Madison County, Tennessee. Silicon Ranch Corporation requested that this ESA be performed as due diligence to satisfy one of the *innocent landowner defense* requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) through the identification of recognized environmental conditions that may exist on the subject property.

The subject property is identified by the Madison County Property Assessor as shown below.

Parcel ID	Address	Current Owner	Approximate Acreage
076 047.00	Westover Road	Rich Blanche Long	39

The site assessment did not detect any recognized environmental conditions on the site or on the adjacent sites.

Database Search Results

An environmental database search by Environmental Data Resources, Inc. (EDR) was commissioned for the subject property. The findings of the EDR report were reviewed and revealed the following within the search radii.

Database	Subject Property	Sites < ¼ mile	Sites ¼ - ½ mile	Sites ½ - 1 mile
National Pollutant Discharge Elimination System (NPDES)	-	-	-	1
Historic UST	-	1	2	-
UST	-	1	1	-
RCRA-CESQG	-	2	-	-
LUST	-	-	-	1

Environmental Findings

Two UST sites were identified at a higher elevation than the subject property. Given the type of listing and lack of recorded releases, no impact to the subject property is expected.

Two RCRA-CESQG sites were identified. Both locations are lower in elevation than the subject property. No record of violations was found for either site within the last five years on the EPA ECHO archive. No impact to the subject property is expected.

Three historic USTs were identified. All three locations have permanently closed tanks. No impact to the subject property is expected.

One National Pollutant Discharge Elimination System (NPDES) site was identified. The permits were granted for various construction work around the airport. No impact to the subject property is expected.

Conclusions

Based on the available information in records research, our understanding of the past and current operations, and our site reconnaissance, there are no Recognized Environmental Conditions (REC) associated with the subject property.

1.0 INTRODUCTION

1.1 Purpose

The purpose of this ESA is to identify recognized environmental conditions on the subject property. The ASTM Standard Practice E1527-13 defines areas of past or current environmental concerns as 'Recognized Environmental Conditions' which is specifically described as:

> "*The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release…into structures on the property or into the ground, groundwater, or surface water on the property…This term is not intended to include de minimis conditions that generally do not present a material risk of harm to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.*"

By identifying recognized environmental conditions or the lack thereof, the use of this ESA is intended to satisfy one of the requirements to qualify for the "innocent landowner defense" to CERCLA liability.

1.2 Scope of Work

The scope of work performed in the preparation of this ESA was in conformance with the standards set forth in the ASTM Standard Practice E 1527-13, the All Appropriate Inquiries (AAI) provision in 40 CFR Part 312, and the apparent conditions, uses, and history of the subject property.

The following specific task items were addressed in the Scope of Work for this ESA:

- Documentation of the known historical use to 1940 or to first period of development. This includes deeds, restrictions, agreements, and easements;
- Determination of use (prior and current activities) of property and facility construction which would indicate the presence of or cause the release of hazardous substances;
- Determination of use of adjacent and surrounding property generally within a one-mile radius (unless a greater area is warranted), which could allow the release of hazardous substances to the subject property;
- Review of available subsurface and geological information, aerial photographs, and topographic maps;
- Review of reasonably ascertainable data from state and federal regulatory

agencies and utility companies, file searches and permit reviews. These include but are not limited to records of hazardous spills, Superfund listings, waste disposal sites, underground storage tanks, waste generators, wetlands, NPDES permits, waste treatment facilities, and air emissions permits for the subject property and the adjacent properties within one-half mile of the subject property;

- Interviews with individuals knowledgeable with the current, historical and regulatory use of the property;
- Site reconnaissance of accessible portions of the property to observe or determine the presence of a recognized environmental condition from current or historical operations, abnormalities in vegetation, drainage from or onto adjacent land, wetlands, and building construction. If applicable an evaluation is made on any use and storage of hazardous materials.

1.3 Significant Assumptions

Due to the limitations of data availability and reliability, no environmental assessment can wholly eliminate uncertainty regarding potential for significant environmental conditions in connection with a property. Performance of this Phase I Environmental Site Assessment is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property.

Barge's opinions regarding direction of groundwater flow are limited, and are based primarily on observed surface topography and topographic mapping. Unknowns such as bedrock strata and karst conditions that can affect groundwater flow direction are not predictable without additional investigation.

The statements of fact contained within this report are true and correct to the best of our knowledge. However, Barge does not assume responsibility for incorrect data which is inadvertently supplied to or obtained by Barge from third party information sources.

1.4 Special Terms and Conditions, Limitations, and Exceptions

The Phase I Environmental Site Assessment (ESA) was completed to conform to the American Society of Testing and Materials (ASTM) Standard Practice E 1527-13. It did not include sampling of environmental media or investigation of subsurface conditions. Similarly, this ESA did not include specific evaluations to determine the presence of lead based paint, asbestos containing material, wetlands, or radon.

Inquiries made in completing this ESA have not been exhaustive, but they have been consistent with the standards set forth in the ASTM Standard Practice E 1527-13, the All Appropriate

Inquiries (AAI) provision in 40 CFR Part 312, and the apparent conditions, uses, and history of the subject property.

Drawings and exhibits included in this report are for the purpose of assisting the reader in visualizing the property and is data which may have been supplied in part by reliable third party agencies other than Barge. These drawings and exhibits are not intended to take the place of actual surveys, utility locations, utility capacities, or data otherwise needed for actual development and construction.

In accordance with the ASTM Standard Practice E 1527-13, this report is valid for a period not-to-exceed 180 days. Beyond that period, the reader of this report should consider the re-verification of the report data, which is subject to change after the initial report preparation based on the type of property assessed, and the condition of the areas surrounding the subject property.

1.5 User Reliance

This report has been prepared for reliance by Silicon Ranch Corporation. Neither all nor any part of the contents of this report shall be relied upon by parties other than the entity(s) indicated without the prior written consent of Barge.

1.6 Environmental Professional Statement

This Phase I ESA was completed by or under the direct supervision of the Environmental Professionals (EP) identified on the signature page of this report. The EPs declare that, to the best of his or her professional knowledge and belief, they meet the definition of an Environmental Professional as defined in 40 CFR Part 312.

The EP has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. The EP has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

2.0 SUBJECT PROPERTY DESCRIPTION

2.1 Location

The subject property is located in west Jackson in Madison County, Tennessee. The subject property is located at Westover Road. Vicinity and site maps showing the boundary of the subject property are provided in Appendix A.

2.2 Subject Property and Vicinity Characteristics

The subject property lies approximately five miles west of the center of Jackson, Tennessee. The property is in a predominantly rural, agricultural area near a regional airport.

2.3 Current Use of the Subject Property

The subject property appears to be used for agricultural purposes.

2.4 Descriptions of Subject Property Structures and Improvements

The subject property has a small entranceway into the field. No structures or remnants of structures were observed during the site visit.

2.5 Current Use of Adjoining Properties

The adjoining properties are used for residential and educational purposes. There is a regional airport adjoining the property.

3.0 USER PROVIDED INFORMATION

In accordance with ASTM Standard Practice E1527-13, in order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the User must provide information (if available) to the environmental professional. If all information is not provided, the environmental professional could determine that all appropriate inquiry is not complete.

An Environmental Questionnaire was completed by Ali Weaver, Project Development Manager for Silicon Ranch Corporation on June 18, 2018. Ms. Weaver indicated that she was unaware of any environmental issues related to the subject property.

3.1 Environmental Liens or Activity and Use Limitations (AULs)

The User has no actual knowledge of any environmental lien or activity and use limitations encumbering the subject property or in connection with the subject property.

No environmental liens or activity and land use limitations for the subject property were found. A copy of the lien search and supporting documents are presented in Appendix J.

3.2 Specialized Knowledge

The User has no specialized knowledge or experience that is material to any Recognized Environmental Conditions in connection with the subject property.

3.3 Knowledge of Hazardous Substances or Petroleum Products

The User is unaware of any hazardous substances and/or petroleum products in, on, or under the subject property.

3.4 Commonly Known or Reasonably Ascertainable Information

The User is unaware of any commonly known or reasonably ascertainable information within the local community about the subject property that is material to Recognized Environmental Conditions in connection with the subject property.

3.5 Valuation Reduction for Environmental Issues

The User has considered the relationship of the purchase price of the subject property to the fair market value of the subject property if it were not affected by hazardous substances or petroleum products.

3.6 Owner, Property Manager, and Occupant Information

The subject property is identified by the Madison County Property Assessor as shown below.

Parcel ID	Address	Current Owner	Approximate Acreage
076 047.00	Westover Road	Rich Blanche Long	39

3.7 Degree of Obviousness

The User has considered the degree of obviousness of the presence or likely presence of releases or threatened releases at the subject property and the ability to detect releases or threatened releases by appropriate investigation. The User has not observed any conditions indicating the presence or likely presence of releases or threatened releases at the subject property.

3.8 Litigation, Administrative Proceedings and Notices

The User is unaware of (i) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property; (ii) any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property; or (iii) any notices from any governmental entity

regarding any possible violations of environmental laws or possible liability relating to hazardous substances or petroleum products.

3.9 Reason for Performing Phase I ESA

This Phase I ESA was performed as due diligence to satisfy one of the *innocent landowner defense* requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), for the Foreign Sovereign Immunities Act (FSIA), through the identification of recognized environmental conditions that may exist on the property, prior to property ownership transfer and/or other financial transaction.

3.10 Helpful Documents

The User is unaware of any helpful environmental document concerning the subject property.

4.0 RECORDS REVIEW

4.1 Standard Environmental Record Sources

4.1.1 Federal and State Database

On behalf of Barge, Environmental Data Resources, Inc. (EDR) completed an ASTM-compliant environmental records/database review. The database review took place on June 13, 2018, and is included in Appendix K. The EDR review provides federal and state regulatory agency information for the subject property and properties within the ASTM search radii (radius depends on the type of database). The report indicated the following:

<u>Sites located within 1/8 mile from the subject property</u>

- UST
  - One UST site was identified at a higher elevation than the subject property. The site currently has one UST still in operation. Given the type of listing and lack of recorded releases, no impact to the subject property is expected.
- Historic UST
  - One historic UST site was identified. It is located at a higher elevation. It was permanently closed, no impact to the subject property is expected.
- RCRA-CESQG
  - Two RCRA-CESQG sites were identified. Both locations are lower in elevation than the subject property. No record of violations were found for either site within the last five years on the EPA ECHO archive. No impact to the subject property is expected.

Sites located 1/8 – 1/2 mile from the subject property

- UST
  - One UST site was identified. It is located at a higher elevation than the subject property. All USTs at this location were removed by 1995. No impact to the subject property is expected.
- Historic UST
  - Two historic sites were identified. They are located at a higher elevation. Both locations have permanently closed tanks. No impact to the subject property is expected.
- RCRA NONGEN/NLR
  - Two sites were identified. They are located at higher elevations. Given the type of listing, no impact to the subject property is expected.

Sites located ½ - 1 mile from the subject property

- LUST
  - One site was identified. It is located at a higher elevation. Based on information obtained from TDEC, the tank was permanently closed. The site is not expected to impact the subject property.
- NPDES
  - One NPDES site was identified. Several permits were issued to this location. The activity and issue date for each permit is listed below:
    - Runway 02/20 RSA Grading and Taxiway Relocation – 5/23/2016
    - Apron and Taxilane Addition – 10/5/2009
    - Grading for the Construction of New Hangers – 5/18/2007
    - Borrow Pit – 10/9/2006
    - Construct New Perimeter Access Road Around Existing Security Fence – 7/06/2006 and expired – 5/30/2010

No mapped sites were found in EDR's search of available ("reasonably ascertainable") government records either on the target property or within the search radius around the target property for the following databases:

NPL, Proposed NPL, NPL Liens, Delisted NPL, FEDERAL FACILITY, SEMS, SEMS-ARCHIVE, CORRACTS, RCRA-TSDF, RCRA-LQG, RCRA-SQG, LUCIS, US ENG CONTROLS, US INST CONTROL, ERNS, SHWS, SWF/LF, LUST TRUST, INDIAN LUST, HIST_LUST CO, INDIAN UST, FEMA UST, AST, Indian VCP, INST CONTROL, ENG

CONTROLS, SRP, BROWNFIELDS, US BROWNFIELDS, SWRCY, ODI, DEBRIS REGION 9, INDIAN ODI, IHS OPEN DUMPS, CDL, DEL SHWS, US CDL, US HIST CDL, PRIORITYCLEANERS, LIENS, LIENS 2, HMIRS, SPILLS, DOT OPS, CONSENT, FUDS, DOD, US FIN ASSUR, ROD, UMTRA, US MINES, TRIS, 2020 COR ACTION, ICIS, TSCA, FTTS, HIST FTTS, SSTS, PADS, MLTS, RADINFO, RAATS, RMP, PRP, SCRD DRYCLEANERS, UXO, DOCKET HWC, AIRS, LEAD, DRYCLEANERES, FUELS PROGRAM, INDIAN RESERV, FUSRAP, PCB TRANSFORMER, COAL ASH DOE, COAL ASH EPA, LEAD SMELTERS, EPA WATCH LIST, ABANDONED MINES, EDR Hist Cleaners, EDR MGP, RGA LF, RGA LUST.
(Please refer to the EDR report for definitions.)

Orphan sites are those that could not be mapped due to poor or inadequate information. One orphan Superfund Enterprise Management System Archive (SEMS-ARCHIVE) site was listed and identified as the Owens-Corning Landfill Site in Jackson, Tennessee. The address of the Owens-Corning Landfill Site was not determined, but based on a map review, the site appears to be located approximately three miles to the northeast of the subject property. Based on the distance, the orphan SEMS-ARCHIVE site listed is outside the ASTM search radii for the subject property and does not represent an environmental hazard to the site.

4.1.2 State Agency Inquiries

Based on the findings of the EDR Report, no additional state agency inquiries were made.

4.2 Additional Environmental Records Sources

No specific additional environmental record sources were obtained.

4.3 Physical Setting

4.3.1 Topography

The current U.S. Geological Survey topographic 7.5-minute map for the property area is the ADAIR, TN quadrangle and the WESTOVER, TN quadrangle both from 2013. The subject property is located approximately 405.31 feet above sea level at N 35° 36’ 36’’ W -88° 54’ 58’’, and is generally gently rolling with a general topographic gradient of northwest. Topographic maps are included in Appendix E.

4.3.2 Soils

Examination of the National Cooperative Soil Survey of Madison County, Tennessee, issued by the United States Department of Agriculture Soil Conservation Service, indicates that the property is mainly underlain by soils classified as Memphis silt loam (MeB), Calloway silt loam

(Co), and Lexington silt loam (LeB3, LeD3). The Memphis silt loams and the Lexington silt loam are well drained soils, while the Calloway silt loam is somewhat poorly drained.

4.3.3 Wetlands & Endangered Species

A wetland delineation was performed, but not as part of the scope of this Phase I ESA report. A separate report will be provided for the wetland delineation. According to the National Wetland Inventory Mapper, no wetlands are located on the subject property.

An endangered species survey was not performed as part of the scope of this Phase I ESA report. According to the USFWS Critical Habitat Mapper, no critical habitats are located on the subject property.

4.3.4 Surface Water Bodies and Storm Water

A stream delineation was performed, but not as part of the scope of this Phase I ESA report. A separate report will be provided. According to the National Hydrology Dataset, no streams are located on the subject property. The most recent topographic map of the area shows a blue-line stream in the northern portion of the property, a pond on the northeastern property boundary, and a small pond on the southwestern property boundary.

4.3.5 Flood Plains

According to FEMA Flood Insurance Rate Map Number 47113C0260E, dated August 3, 2009, no known special flood hazard zones are located on the subject property.

4.4 Historical Research

The following historical topographic maps were researched during preparation of this report and are presented in Appendix E:

USGS 7.5 Minute Topographic Map – Adair 1959
USGS 7.5 Minute Topographic Map – Westover 1959
USGS 7.5 Minute Topographic Map – Adair 1979
USGS 7.5 Minute Topographic Map – Westover 1980
USGS 7.5 Minute Topographic Map – Westover 1981
USGA 7.5 Minute Topographic Map – Adair 2013
USGA 7.5 Minute Topographic Map – Westover 2013

Aerial photographs dated 1947, 1952, 1956, 1975, 1982, 1985, 1997, 2008, 2012, and 2016 are presented in Appendix D. Based on the map review, the site has been used for agriculture purposed from 1959 to the present.

No Sanborn fire insurance maps were available for the subject property (Appendix F).

4.5 Historical Use of Subject and Adjoining Properties

Topographic maps dating back to 1959 and aerial photographs dating back to 1947, indicate that the subject property remains mostly agricultural land. A small structure is indicated on the topographic maps from 1959-81 and in the map from 2013 it is no longer shown. There are no structure or remnants were observed during the site visit.

Adjacent properties have remained developed, for aviation, educational, and rural residential purposes.

5.0 SUBJECT PROPERTY RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The reconnaissance of the subject property was performed by Chelsea Sachs and Kayla Hillis of Barge on June 12, 2018. Barge personnel traversed the length and width of the property on foot. Photographs of the subject property taken during the site reconnaissance are presented in Appendix B.

5.2 Hazardous Substances in Connection with Identified Uses

No hazardous substances were observed on the subject property at the time of site reconnaissance.

5.3 Unidentified Substance, Containers, Staining, or Stressed Vegetation

No unidentified substances, containers, staining, or stressed vegetation were observed on the subject property at the time of site reconnaissance.

5.4 Known Spills or Releases

No evidence of spills or releases was observed on the subject property at the time of site reconnaissance.

5.5 Storage Tanks

5.5.1 Underground Storage Tank (USTs)

There was no evidence of underground storage tanks (USTs) observed on the subject property at the time of site reconnaissance.

5.5.2 Aboveground Storage Tank (ASTs)

There was no evidence of aboveground storage tanks (ASTs) observed on the subject property at the time of site reconnaissance.

5.6 Lead-Based Paint (LBP)

A lead paint survey was not completed as part of the scope of this ESA. Structures built before 1978 have a greater potential of containing LBP. No structures were present on the property.

5.7 Indications of Polychlorinated Biphenyl's (PCBs)

No transformers were observed on the property.

5.8 Asbestos Containing Materials (ACMs)

An asbestos survey was not completed as part of the scope of this ESA and the presence or absence of ACMs in the building has not been determined. Structures built before 1975 have a greater potential of containing ACMs. No structures were present on the property.

5.9 Floor Drains/Sumps

No floor drains or sumps were observed on the subject property at the time of site reconnaissance. No structures were present on the property.

5.10 Indications of Solid Waste Disposal

No indications of solid waste disposal were observed on the subject property at the time of site reconnaissance.

5.11 Vapor Intrusion and Encroachment

The vapor migration pathways to the subject property would be via preferential flow pathways for vapors including utility lines, fractures in the soil, or along caves or conduits within the bedrock. Vapor pathways do not necessarily mirror ground-water flow pathways. Based on the limited number of listed sites within the search radius, and the lack of recorded releases at the sites, vapor intrusion does not appear to be a major concern for the subject property.

6.0 INTERVIEWS

6.1 Interviews with Owner

The current owner was not interviewed.

6.2 Interviews with Local Government Officials

No government officials were interviewed.

6.3 Interviews with Neighboring or Nearby Property Owners or Occupants

No additional interviews with property owners were performed based on the findings of the EDR report, site reconnaissance, and historical site information.

7.0 FINDINGS AND CONCLUSIONS

7.1 Findings

Two UST sites were identified at a higher elevation than the subject property. Given the type of listing and lack of recorded releases, no impact to the subject property is expected.

Two RCRA-CESQG sites were identified. Both locations are lower in elevation than the subject property. No record of violations were found for either site within the last five years on the EPA ECHO archive. No impact to the subject property is expected.

Three historic USTs were identified. All three locations have permanently closed tanks. No impact to the subject property is expected.

One NPDES site was identified. The permits were granted for various construction work around the airport. No impact to the subject property is expected.

7.2 Data Failure

Data failure is "a failure to achieve the historical research objectives" of AAI, "even after reviewing the standard historical sources" listed in AAI "that are reasonably ascertainable and likely to be useful." No significant data failures were encountered during this assessment.

7.3 Data Gaps

Data gaps are, "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance, and interviews." No significant data gaps were encountered during this assessment. The address of the Owens-Corning Landfill was not determined, and there is an adjacent road named "Fiberglass Road". A review of the historic topographic and aerial maps of the site and surrounding area did not identify features associated with a landfill.

7.4 Deviations

No deviations were made from the ASTM Standard Practice E 1527-13 guidelines; however, the EDR report was prepared based on slightly different project boundaries. After the EDR report

had been requested, an updated project area was received from Silicon Ranch Corporation. Based on the minimal variance, it was determined this would not have an impact on the results of the EDR report or the Phase I ESA. The map included in Appendix A depicts the currently proposed project area.

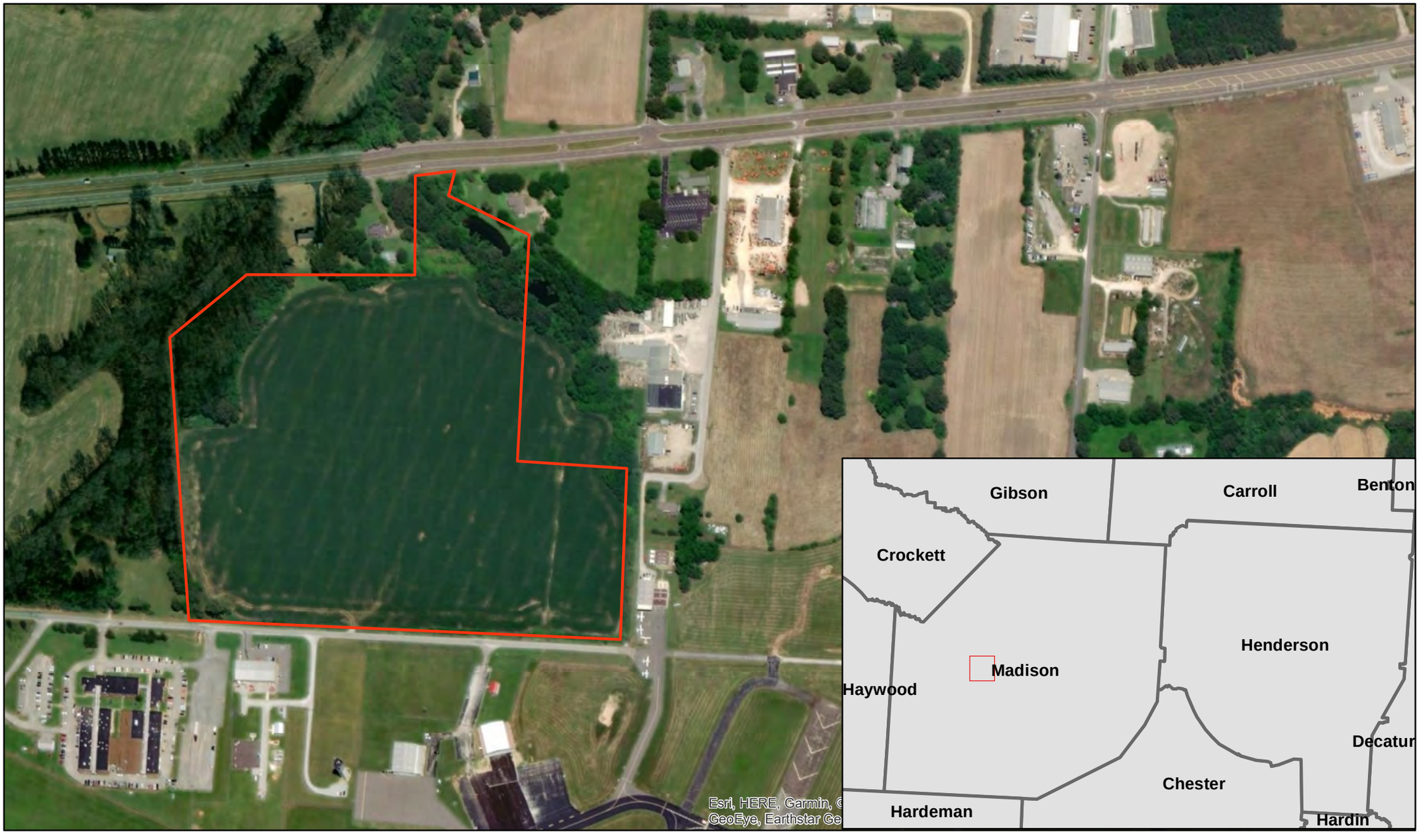
7.5 Conclusions

Barge performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E1527-13, of the subject property located on approximately 39 acres located at Westover Road in Jackson, Madison County, Tennessee. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

Based on the available information in records research, our understanding of the past and current operations, and our site reconnaissance, there are no Recognized Environmental Conditions (REC) associated with the subject property.

APPENDICES

Appendix A
Vicinity and Site Maps



500
Feet

N

Tennessee State Plane (feet)
North American Datum 1983

BARGE DESIGN SOLUTIONS

Project Location Map

Westover Road
Jackson, Tennessee
Madison County, Tennesse

Figure 1. - Project Vicinity/ Site Map

Date: 6/14/2018

Appendix B
Site Photographs

Photographer: Chelsea Sachs **Date:** 6/12/2018 **Description:** Photograph 1 – General view of property	

Photographer: Chelsea Sachs **Date:** 6/12/2018 **Description:** Photograph 2 – Wooded area located on the property	

Photographer: Chelsea Sachs	
Date: 6/12/2018	
Description: Photograph 3 – Sewer line	

Photographer: Chelsea Sachs	
Date: 6/12/2018	
Description: Photograph 4 – Entrance to property	

Photographer: Chelsea Sachs	
Date: 6/12/2018	
Description: Photograph 5 – General view	

Appendix C
User Questionnaire

USER QUESTIONNAIRE

1. **Does the reliant party have any specialized knowledge or experience that is material to any Recognized Environmental Conditions in connection with the Property?**

   No

2. **Does the reliant party have any actual knowledge of any environmental lien or activity and use limitations encumbering the Property or in connection with the Property?**

   No

3. **Is the reliant party aware of any hazardous substances and/or petroleum products in, on, or under the Property.**

   No

4. **Has the reliant party considered the relationship of the purchase price of the Property to the fair market value of the Property, if the Property were not affected by hazardous substances or petroleum products?**

   Yes

5. **Is the reliant party aware of any commonly known or reasonably ascertainable information within the local community about the Property that is material to Recognized Environmental Conditions in connection with the Property?**

   No

6. **Has the reliant party considered the degree of obviousness of the presence or likely presence of releases or threatened releases at the Property and the ability to detect releases or threatened releases by appropriate investigation? Has the reliant party observed any conditions indicating the presence or likely presence of releases or threatened releases at the Property?**

   Yes; No

7. **Is the reliant party aware of any substances or petroleum products in, on, or from the Property; (ii) any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Property; or (iii) any notices from any governmental entity regarding any possible violations of environmental laws or possible liability relating to hazardous substances or petroleum products?**

   No

8. **Is the reliant patty aware of any helpful environmental documents concerning the Property?**

USER QUESTIONNAIRE

No

Property Address/Location: Madison County, TN

Property Type: Agriculture

Transaction Type: Purchase

6/18/2018

Signature **Date**

Name: Ali Weaver

Title: Project Development Manager

Company/Organization: Silicon Ranch Corporation

Address: 222 2nd Avenue S, Suite 1900, Nashville, TN 37201

Phone Number: 281-728-1534

Email Address: ali.weaver@siliconranch.com

BARGE DESIGN SOLUTIONS

User Questionnaire

In accordance with ASTM Standard Practice E1527-13, to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the User must provide information (if available) to the environmental professional. If all information is not provided, the environmental professional could determine that all appropriate inquiry is not complete.

An Environmental Questionnaire was completed by Ali Weaver with Silicon Ranch Corporation on June 18, 2018.

Appendix D
EDR Aerial Photo Report

Jackson Solar Farm

Westover Road

Jackson, TN 38301

Inquiry Number: 5325073.8

June 07, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

06/07/18

Site Name:

Jackson Solar Farm
Westover Road
Jackson, TN 38301
EDR Inquiry # 5325073.8

Client Name:

Barge Design Solutions
211 Commerce Street
Nashville, TN 37201
Contact: Chelsea Sach

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
1997	1"=500'	Acquisition Date: February 01, 1997	USGS/DOQQ
1985	1"=500'	Flight Date: March 18, 1985	USDA
1982	1"=1000'	Flight Date: March 31, 1982	USGS
1975	1"=500'	Flight Date: October 15, 1975	USGS
1956	1"=500'	Flight Date: March 17, 1956	USGS
1952	1"=500'	Flight Date: November 12, 1952	USGS
1947	1"=500'	Flight Date: March 31, 1947	USGS

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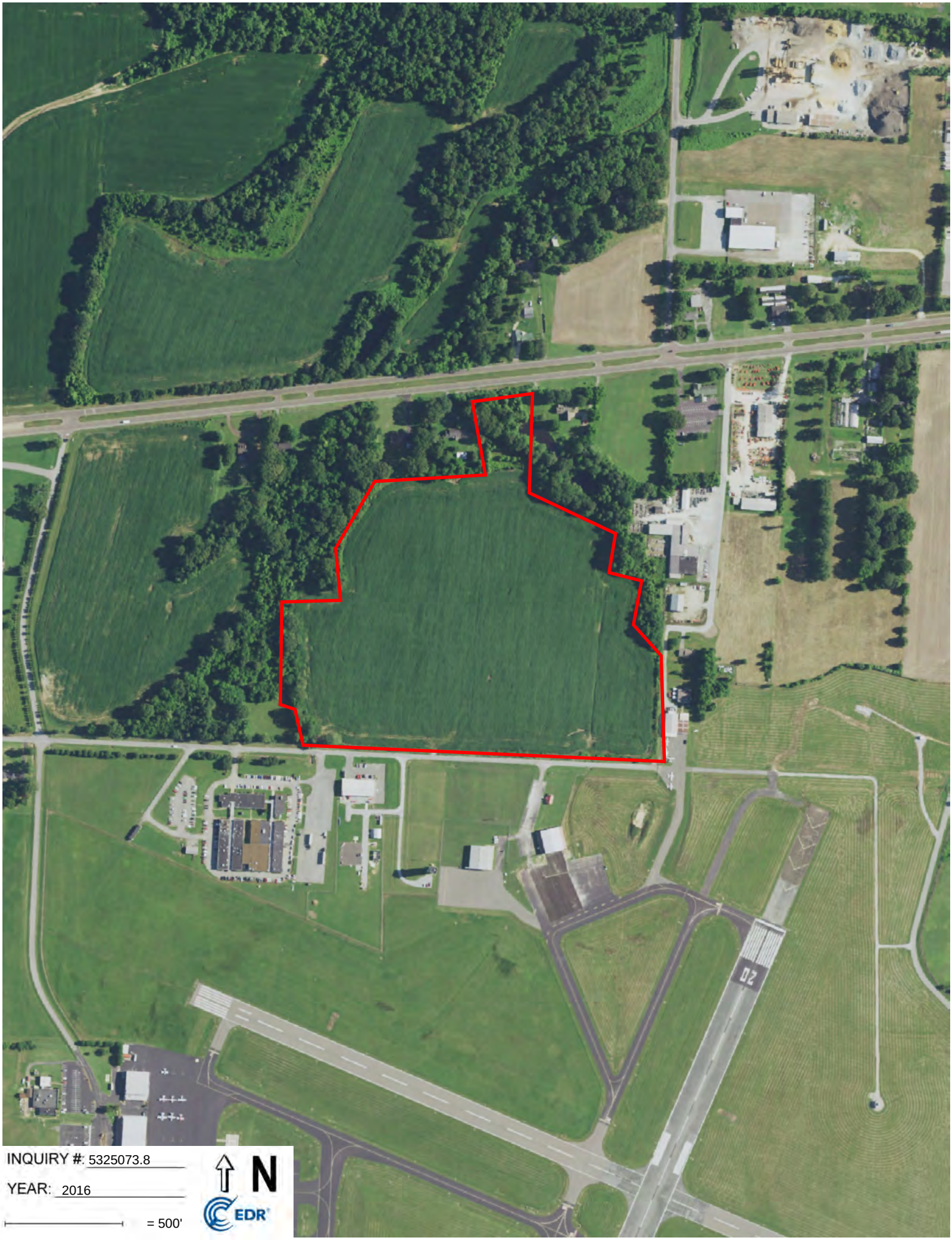


INQUIRY #: 5325073.8

YEAR: 2016

= 500'

N

EDR


INQUIRY #: 5325073.8
YEAR: 2012
= 500'
N
EDR

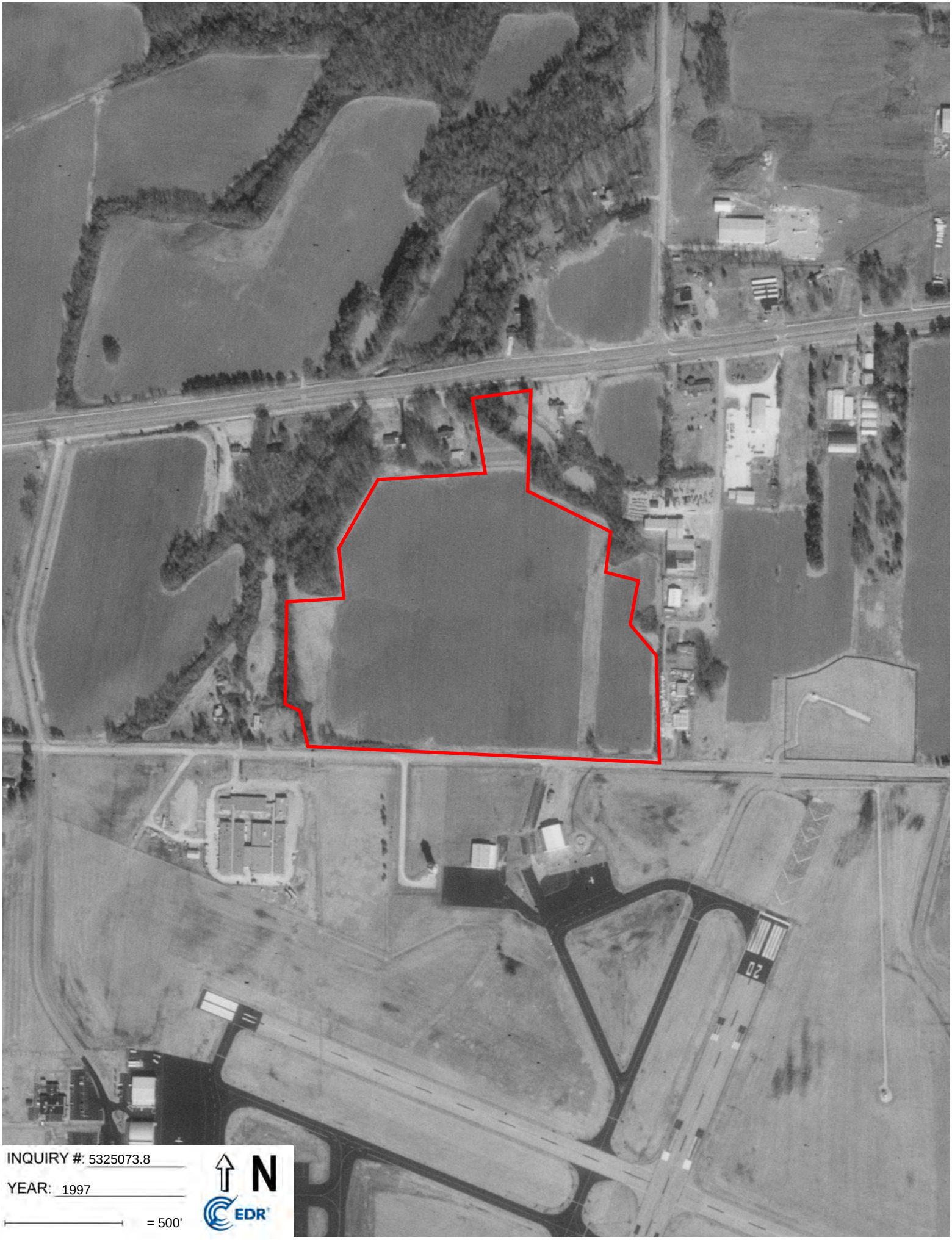
INQUIRY #: 5325073.8

YEAR: 2008

= 500'

N

EDR



INQUIRY #: 5325073.8

YEAR: 1997

= 500'

N

EDR

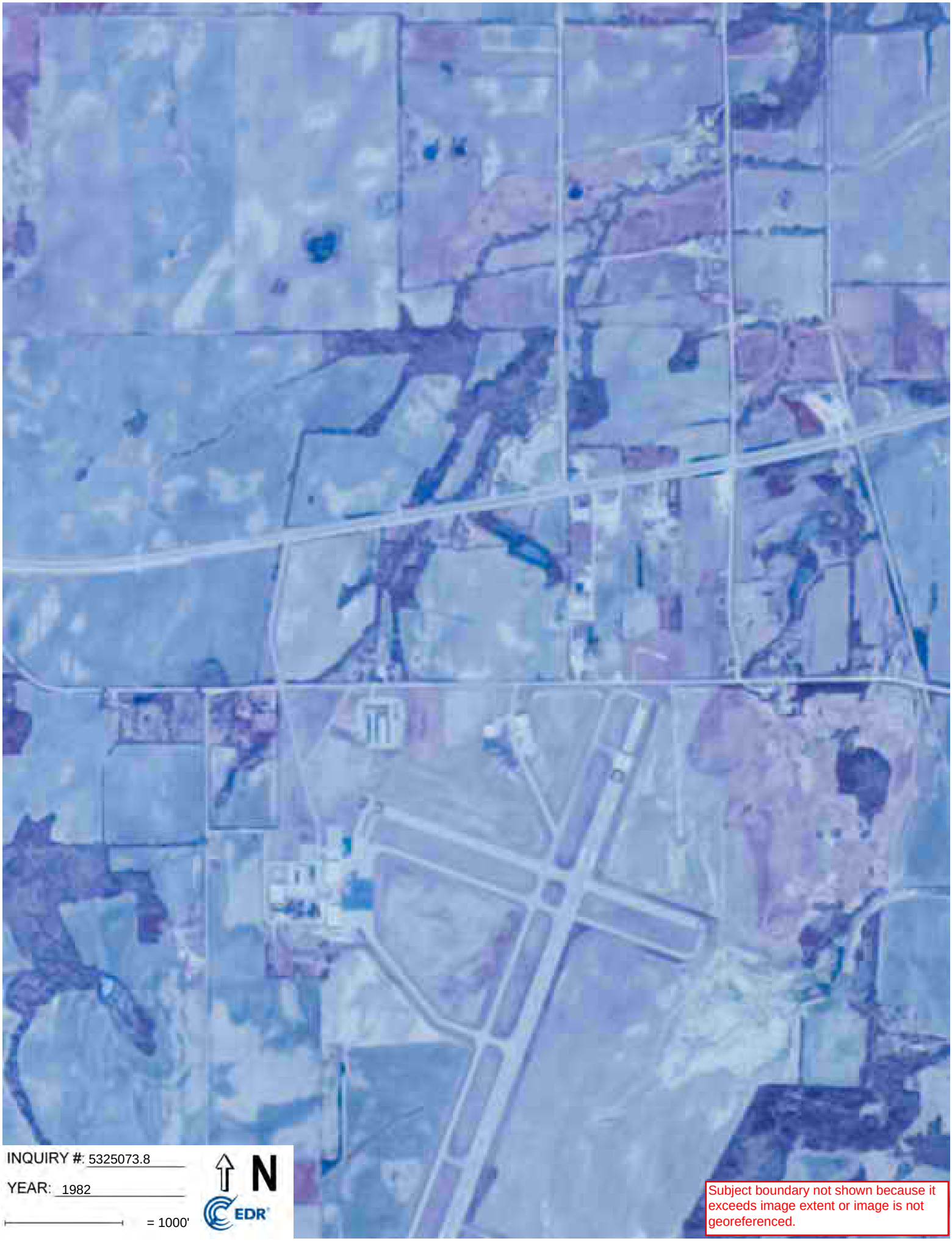
INQUIRY #: 5325073.8

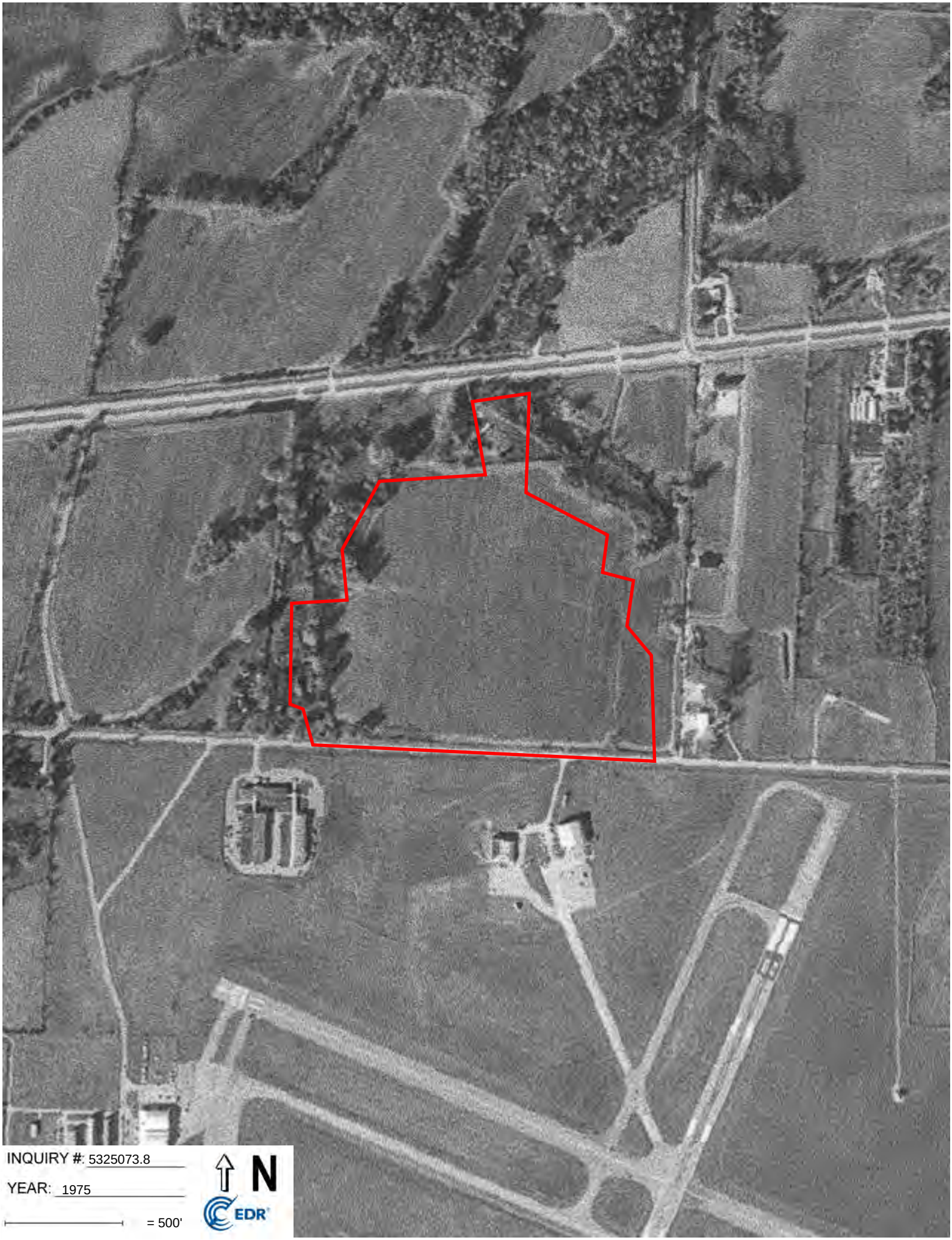
YEAR: 1985

= 500'

N

EDR


INQUIRY #: 5325073.8
YEAR: 1982
= 1000'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 5325073.8
YEAR: 1975
= 500'
N
EDR


INQUIRY #: 5325073.8
YEAR: 1956
= 500'
N
EDR

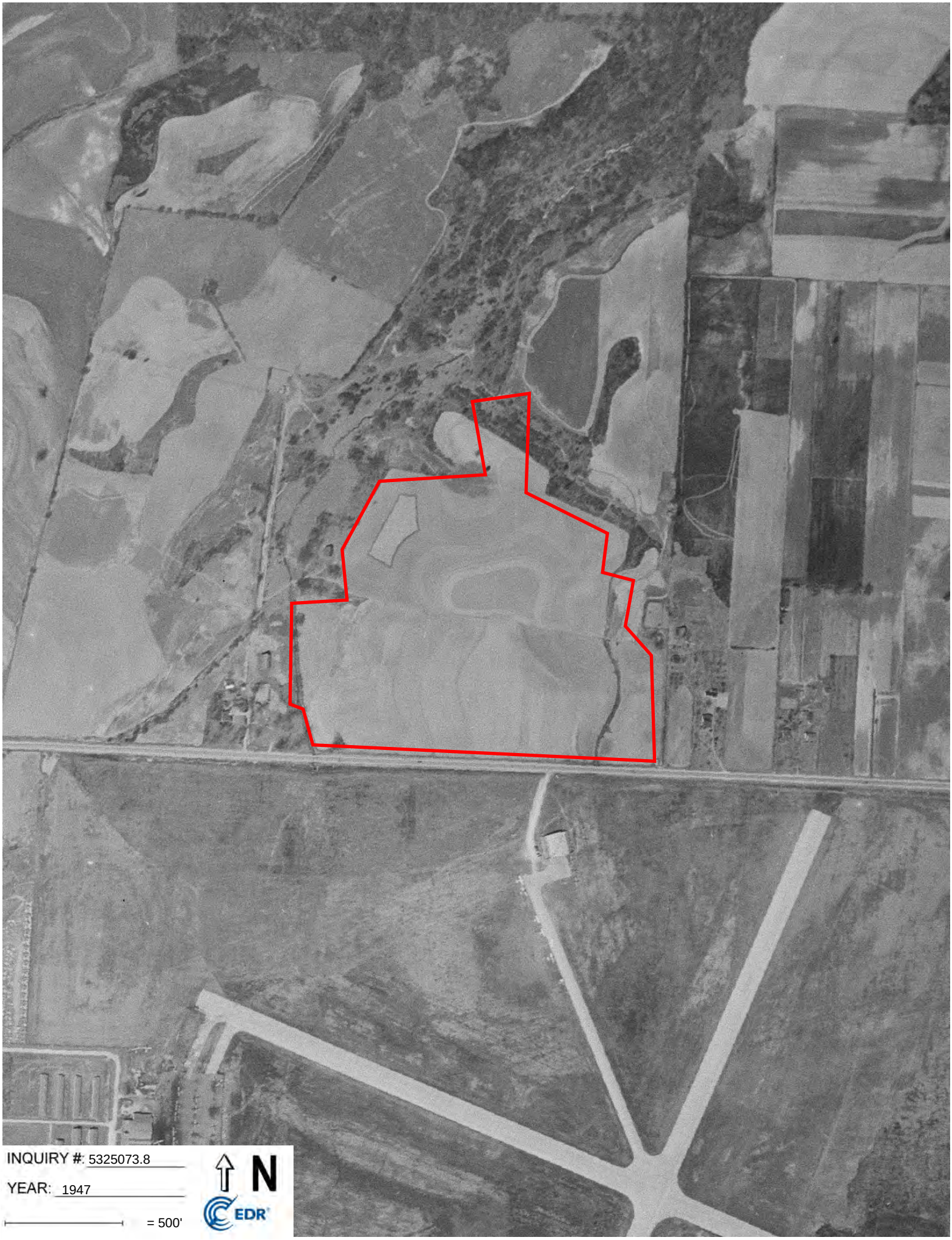
INQUIRY #: 5325073.8

YEAR: 1952

= 500'

N

EDR


INQUIRY #: 5325073.8
YEAR: 1947
= 500'
N
EDR

Appendix E
EDR Historical Topo Map Report

Jackson Solar Farm
Westover Road
Jackson, TN 38301

Inquiry Number: 5325073.4
June 07, 2018

EDR Historical Topo Map Report
with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/07/18

Site Name:

Jackson Solar Farm
Westover Road
Jackson, TN 38301
EDR Inquiry # 5325073.4

Client Name:

Barge Design Solutions
211 Commerce Street
Nashville, TN 37201
Contact: Chelsea Sach

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Barge Design Solutions were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 3608507
Project: Jackson Solar Farm

Coordinates:

Latitude:	35.609936 35° 36' 36" North
Longitude:	-88.916128 -88° 54' 58" West
UTM Zone:	Zone 16 North
UTM X Meters:	326447.01
UTM Y Meters:	3942376.19
Elevation:	405.31' above sea level

Maps Provided:

2013
1981
1979, 1980
1959

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets

Adair
2013
7.5-minute, 24000

Westover
2013
7.5-minute, 24000

1981 Source Sheets

Westover
1981
7.5-minute, 24000
Aerial Photo Revised 1975

1979, 1980 Source Sheets

Adair
1979
7.5-minute, 24000
Aerial Photo Revised 1975

Westover
1980
7.5-minute, 24000
Aerial Photo Revised 1975

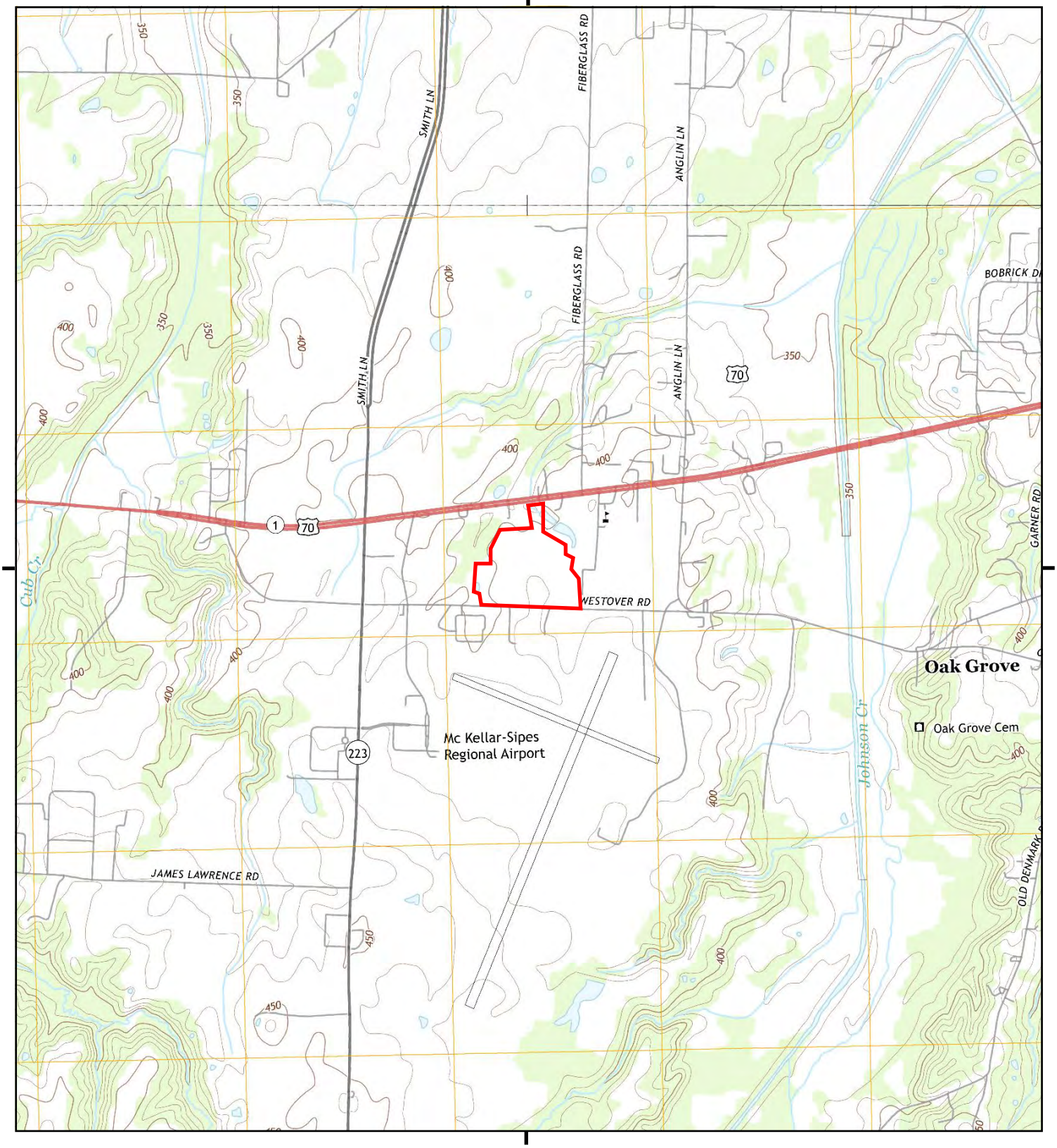
1959 Source Sheets

Adair
1959
7.5-minute, 24000
Aerial Photo Revised 1956

Westover
1959
7.5-minute, 24000
Aerial Photo Revised 1956

Historical Topo Map

2013



This report includes information from the following map sheet(s).

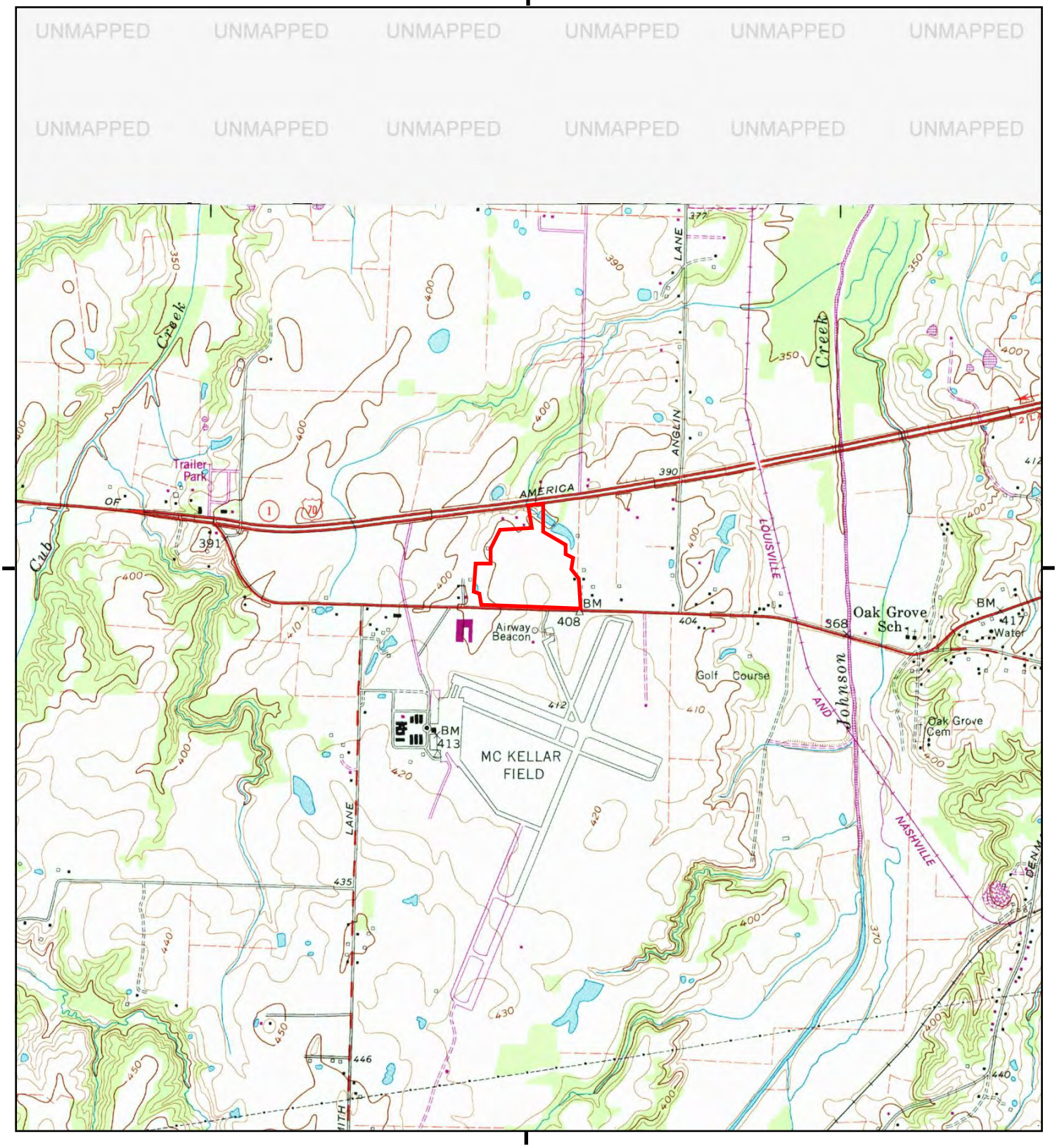
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Westover, 2013, 7.5-minute
N, Adair, 2013, 7.5-minute

SITE NAME: Jackson Solar Farm
ADDRESS: Westover Road
Jackson, TN 38301
CLIENT: Barge Design Solutions

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

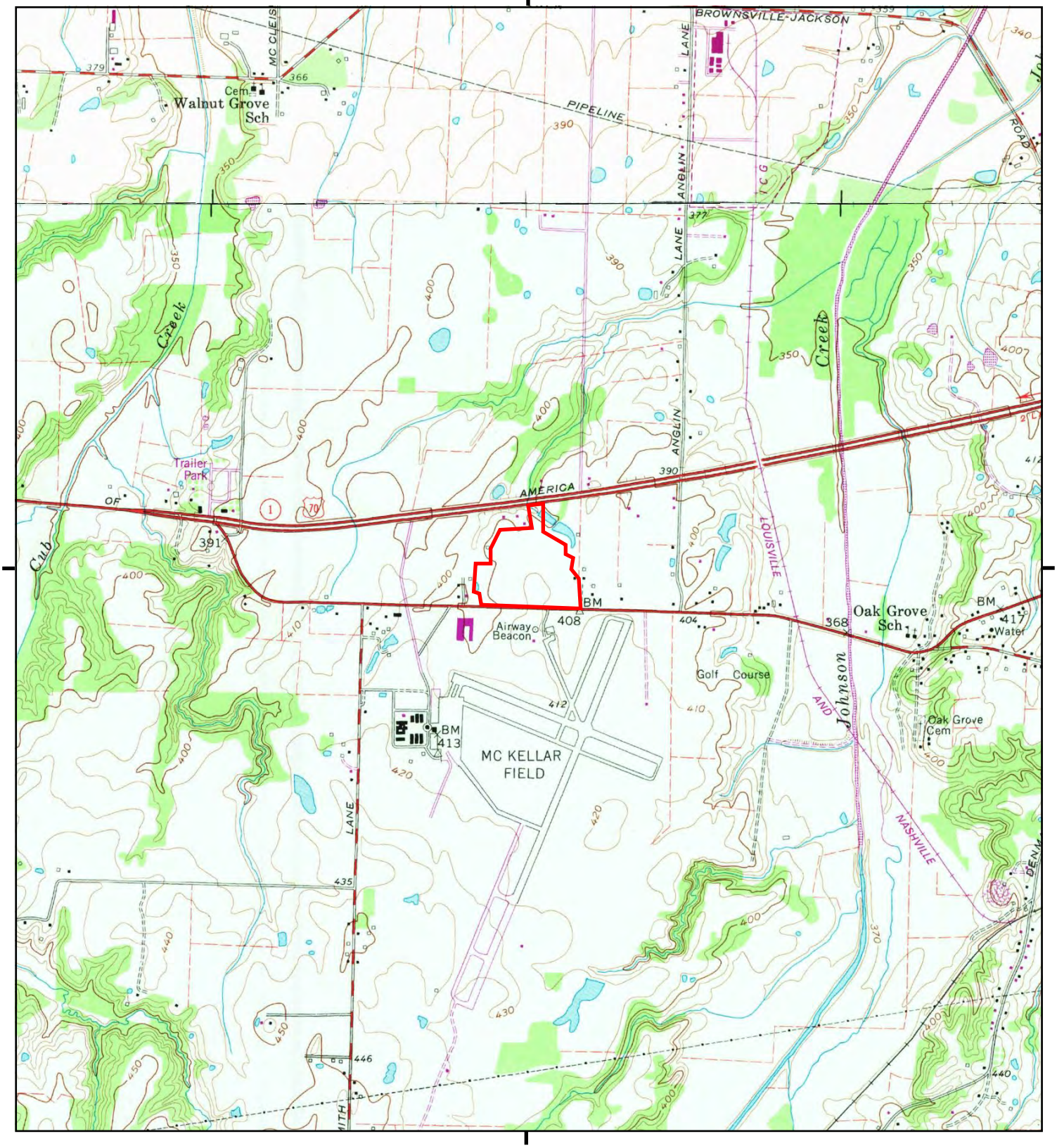
TP, Westover, 1981, 7.5-minute

SITE NAME: Jackson Solar Farm
ADDRESS: Westover Road
Jackson, TN 38301
CLIENT: Barge Design Solutions

N

Historical Topo Map

1979, 1980



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

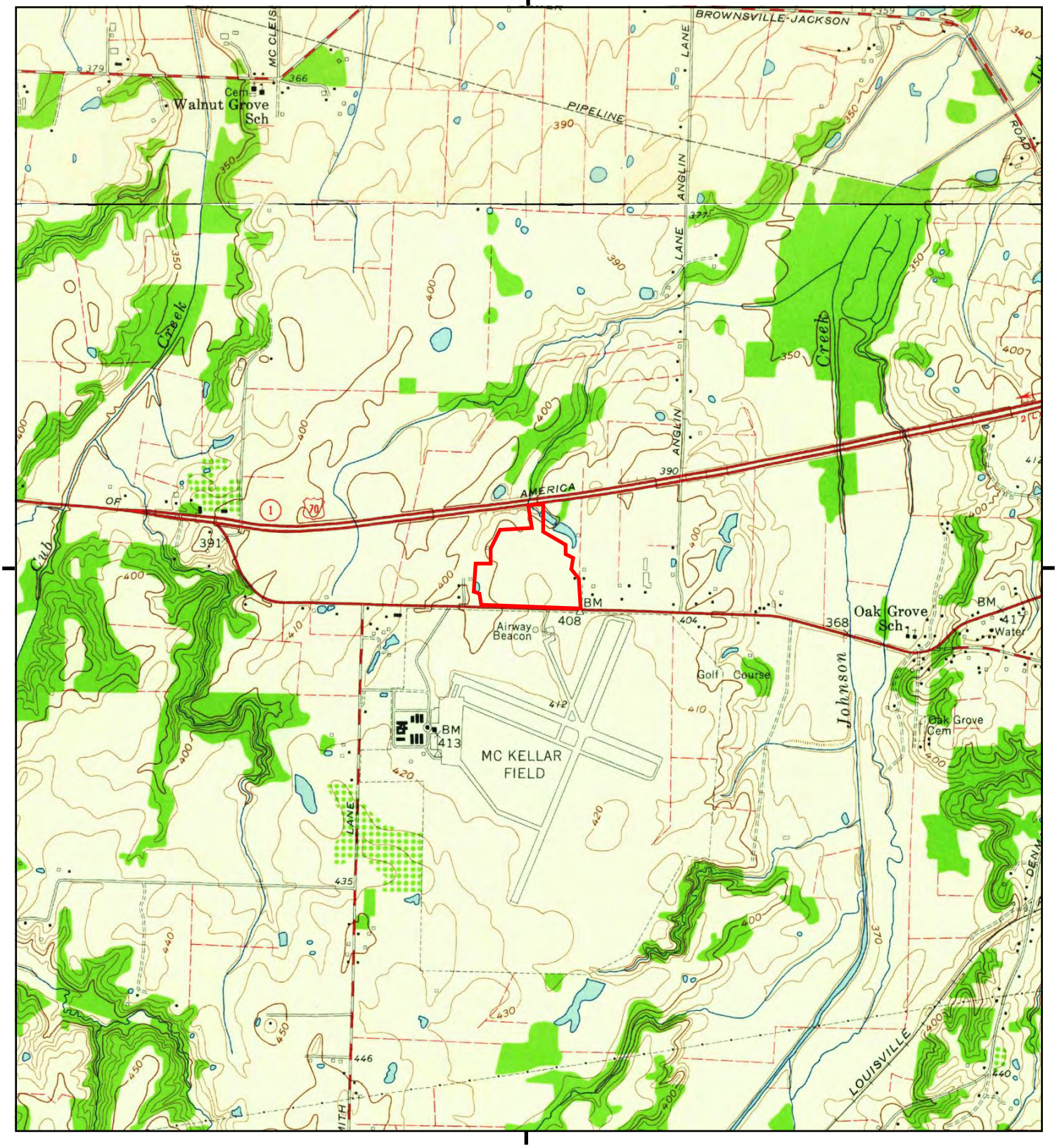
TP, Westover, 1980, 7.5-minute
N, Adair, 1979, 7.5-minute

SITE NAME: Jackson Solar Farm
ADDRESS: Westover Road
Jackson, TN 38301
CLIENT: Barge Design Solutions

N

Historical Topo Map

1959



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Westover, 1959, 7.5-minute
N, Adair, 1959, 7.5-minute

SITE NAME: Jackson Solar Farm
ADDRESS: Westover Road
Jackson, TN 38301
CLIENT: Barge Design Solutions

N

Appendix F
EDR Sanborn Map Report

Jackson Solar Farm
Westover Road
Jackson, TN 38301

Inquiry Number: 5325073.3
June 07, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/07/18

Site Name:

Jackson Solar Farm
Westover Road
Jackson, TN 38301
EDR Inquiry # 5325073.3

Client Name:

Barge Design Solutions
211 Commerce Street
Nashville, TN 37201
Contact: Chelsea Sach

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Barge Design Solutions were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 5BA1-41EE-AFB7

PO # 3608507

Project Jackson Solar Farm

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 5BA1-41EE-AFB7

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Appendix G
EDR City Directory Listing Report

Jackson Solar Farm
Westover Road
Jackson, TN 38301

Inquiry Number: 5325073.5
June 12, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1968	☐	☐	Mullin-Kille's City Directory
1964	☐	☐	Mullin-Kille's City Directory

FINDINGS

TARGET PROPERTY STREET

Westover Road
Jackson, TN 38301

Year	*CD Image*	*Source*	
WESTOVER RD			
2014	pg A2	EDR Digital Archive	
2010	pg A6	EDR Digital Archive	
2005	pg A9	EDR Digital Archive	
2000	pg A12	EDR Digital Archive	
1995	pg A15	EDR Digital Archive	
1992	pg A19	EDR Digital Archive	
1968	-	Mullin-Kille's City Directory	Street not listed in Source
1964	-	Mullin-Kille's City Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
COMPASS DR			
2014	pg. A1	EDR Digital Archive	
2010	pg. A5	EDR Digital Archive	
2005	pg. A8	EDR Digital Archive	
2000	pg. A11	EDR Digital Archive	
1995	pg. A14	EDR Digital Archive	
1992	pg. A18	EDR Digital Archive	
1968	-	Mullin-Kille's City Directory	Street not listed in Source
1964	-	Mullin-Kille's City Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

COMPASS DR 2014

14	HELENA CHEMICAL COMPANY
63	ELECTRI-GLASS INC
102	NEW, JO A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2014

860	SOUTHERN CONCRETE PRODUCTS INC
875	TEAGUE TRANSPORTS
1237	BOONE, DAVID H
1240	OCCUPANT UNKNOWN,
1248	OCCUPANT UNKNOWN,
1252	BYRUM, JOHNATHON L
1262	OCCUPANT UNKNOWN,
1263	ANDRESEN, EDWARD
	BURSE, DIANA C
	WILLIAMS, MARTAVIUS
1264	OCCUPANT UNKNOWN,
1271	JACOBY INC
	OCCUPANT UNKNOWN,
1276	FRANCIS, ROBERT E
1278	OCCUPANT UNKNOWN,
1279	OCCUPANT UNKNOWN,
1293	CROSSETT, JOSEPH R
1300	CUMMINGS, TREY
1315	WISEMAN, JIMMIE D
1339	MOORE, MARK E
1342	FREEMAN, PAUL
1350	BRADLEY, BRITTNEY
1357	MCCLATCHER, JOIRUS
	OCCUPANT UNKNOWN,
	RABATOR, RICHARD L
1358	RODEN, BRENDA C
1367	WOOLSEY, ROSEMARY
1372	KEE, KAREN D
1373	BARNETT, SANDRA
1374	BURTON, GERALDINE C
1375	BOND, TRACY L
1383	OCCUPANT UNKNOWN,
1397	COLLINS MITCHELL L
	COLLINS, MITCHELL L
1415	HICKS, CARL
1422	SIMON, ANN L
1425	TURNER, HARRIS W
1433	RICH, MICHAEL D
1442	FERRELL, JENNIFER
1443	JONES, PATRICE M
1445	FOSTER, JOHN M
1450	BROOKS JOSDEPH
	BROOKS, JOSEPH L
1451	IMP MINISTRY
	MILLER, MAE A
1456	OCCUPANT UNKNOWN,
1463	BOYD, JAMES C
1473	LATCH, THOMAS G
1474	OCCUPANT UNKNOWN,
1524	MADISON COUNTY

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2014 (Cont'd)

1529 MADISON COUNTY
1537 BALIEY, CHRIS
1562 VOWELL, JOSH V
1568 HICKS, CRYSTAL G
1569 MADISON COUNTY
1582 RUDY, JR R
SCALISE, MICHALE D
TATE, CHRISTY
1586 BRALY, WILLIAM B
1592 HEISMANN, AMANDA L
1606 OCCUPANT UNKNOWN,
1620 SMITH, SHELETHA
1626 BEATY, AMANDA
LAMBERT, DOUGLAS J
OCCUPANT UNKNOWN,
WEBB, ZACHARY A
1636 BROME, EMILY
1642 FOSTER, RUBY A
1643 MADISON COUNTY RECREATION
1648 FOSTER, AMANDA S
1658 ROLAND, MARGARET
1664 CAMPBELL, ONEAL
ERIC, KOON
KOON, ERIC M
RAINEY, MIKE
1670 BYRD, CAROL
1676 BYRD, CAROL Y
1684 NEIHARDT, DARCY K
1694 HARPER, GARY P
HENDREN JOHN T
1740 ELLISON, MARCUS
1743 TAYLOR, CAPRI
1746 DAVIS, KEITH B
1747 DICKERSON, SATORIA
1761 THOMPSON-COUCH, KAYE
1766 MILLER ROBERT
MILLER, ROBERT A
1771 HANKS, STEVEN R
1799 WILLIAMS, DAVID E
1805 YARBROUGH, GILFORD R
1810 JOHNSON, THOMAS E
1870 OCCUPANT UNKNOWN,
1872 BROWN, RAYMOND
1874 TATE, JAY
1881 WILLER, CLYDE
1883 FRIENDLY OAK GROVE BAPTIST CH
2059 RICHTER, DOREEN R
2067 OCCUPANT UNKNOWN,
2093 PUCKETT, CLYDE E
2094 ANTHONY, JESSE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2014 (Cont'd)

2147 HASKINS, THOMAS C
2152 DARTS CARTS
SCULLEY, VIRGINIA L
2162 L AND L GOLF INC
LONGEWAY DART
2165 SHAW, ANN L
2254 MILITARY TENNESSEE DEPARTMENT
2451 STOOTS, RONNIE R
2468 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

COMPASS DR 2010

14	HELENA CHEMICAL COMPANY
63	ELECTRI-GLASS INC
102	NEW, JO A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2010

860 SOUTHERN CONCRETE PRODUCTS INC
875 TEAGUE TRANSPORTS
1216 PAYNE, CLAUDE W
1240 MOORE, CLYDE L
1247 ARWOOD, NIKKI
1252 BYRUM MARGARET
BYRUM, MARGARET
1262 PAYNE AMY D
PAYNE, SAM
1263 MCLAIN, KATHLEEN
WILLIAMSON, DOROTHY J
WILSON, MARY
1264 PAYNE CLAUDE SAM
1271 JACOBY INC
MORSE, LISA M
1276 PIRTLE, DANNY
1279 WHITTLE, BETTY J
1293 CROSSETT, JOSEPH R
1298 QUALITY FIRST PLUMBING
1300 CUMMINGS RARE COINS INC
CUMMINGS, WILLIAM D
1337 ROSS, RAYMOND S
1339 MOORE MARK E
PAYNE, CHARLES S
1350 WILLIAMS, ALBERT
1357 BROSCHART, JOHN E
MCCLATCHER, CHRISTY
ODWYER, ARIANE
SANDERS, CHERON
1372 MULLINS, HARVEY
1373 WILKES DELVIN D
1374 BURTON, GERALDINE
1375 BOND, TRACY L
1376 WILLIAMSON, LAURA A
1383 BROOKS, TRACY M
1397 ARNOLD CHARLOTTE F
COLLINS MITCHELL L
COLLINS, MITCHELL L
1415 ARNOLD TAMMY J
MEDLIN, AMY
1422 HILL, GARY W
1425 SMITH, RARPARA A
1433 RICH, MICHAEL D
1442 BURTON, HUGH
1443 DAVIS, NICHOLE
1445 FOSTER, JOHN M
1450 TUBBS, B
1451 IMP MINISTRY
1456 FREEMAN, PAUL D
1463 MURPHY, MEGAN

WESTOVER RD 2010 (Cont'd)

1473	COLEY, THOMASINA K
1474	BRIDGES, WILLIAM M
1524	MADISON COUNTY OF
1529	MADISON COUNTY OF
1537	BALIEY, CHRIS
1562	VOWELL, JOSH
1568	HICKS, CRYSTAL G
1569	MADISON COUNTY OF
1582	CRANE, MICHAEL R
	RUDY, JR R
1592	HEISMANN, AMANDA L
1606	CHURCH, REGINA
1620	BOLLINGER, JOHN
1642	FOSTER, YVONNE Y
1643	MADISON COUNTY RECREATION
1664	RAINEY, MICHAEL L
1676	BYRD, CAROL Y
1684	NEIHARDT, DARCY K
1694	FRANKLIN, MELVINA N
1712	LORD, SHIRLEY J
1726	GEREMIA, JAMES A
1740	JAMES, LORETTA J
1743	DICKERSON SATORIA
	DICKERSON, TIFFANY N
1746	DAVIS, KEITH B
1747	DICKERSON, SATORIA
1766	SILVERS, ALI E
1771	HANKS, STEVEN R
1799	WILLIAMS, REGINE P
1810	JOHNSON, DEBERRY
1871	LONG, EDDIE L
1883	FRIENDLY OAK GROVE BAPTIST CH
2059	LONON, WELDON
2067	JENSRUD, VANESSA
2073	LONON, LESTIE J
2079	MONEY, DUANE E
	WILLIS, BILL
2093	PORTRAITS BY CHRISTINE
	PUCKETT, CLYDE E
2094	ANTHONY, JESSE
2147	HASKINS, JUDY A
2162	L AND L GOLF INC
	LONGEWAY DART
2165	SHAW, ANNE L
2254	MILITARY TENNESSEE DEPARTMENT
2451	STOOTS, RONNIE R

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

COMPASS DR 2005

14	HELENA CHEMICAL COMPANY
63	ELECTRI-GLASS INC
102	NEW, JO A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2005

813	VALES JAMES WILLARD TAMMY LOU
875	TEAGUE TRANSPORTS
1216	PAYNE, CLAUDE W
1240	MOORE, C L
1247	PARSONS, JENNIE
1248	GRIFFIN, BO
1252	HARBER, R
1262	PAYNE, SAM
1263	GRIFFIN, JIMMY
1264	PAYNE CLAUDE SAM
	PAYNE, JANE D
1271	JACOBY INC
1278	COOPER, JIMMY L
	LORRAINE SCARBROUGH BOOKE
1293	CATES, WADE
1296	CUMMINGS, WILLIAM
1298	ANDERSON, JULIE D
1300	CUMMINGS RARE COINS INC
	CUMMINGS, WILLIAM D
1317	JIMS BUG & CYCLE SHOP
1337	ROSS, RAYMOND S
1339	MOORE MARK E
	PAYNE, CHARLES P
1350	WILLIAMS, ALBERT
1357	KING, GARY A
	RUVIS, KIM
1374	FOWLER, LEE V
1375	BOND, TRACY L
1376	THOMPSON-COUCH, A K
1383	GOLDEN, VICKIE
1397	COLLINS, MITCH L
1415	ARNOLD, ERIC S
1422	HILL, ANN L
1425	SMITH, RARPARA A
1433	RICH, MICHAEL D
1442	BURTON, HUGH
1443	DAVIS, RUBEN
1445	FOSTER, JOHN M
1450	BURTON, HUGH
1451	MILLER, GARY J
1456	FREEMAN, ED D
1473	REAVES, HELEN S
1474	BRIDGES, WILLIAM M
1524	MADISON COUNTY OF
1529	MADISON COUNTY OF
1562	MUNCY, JOSEPH
1569	MADISON COUNTY OF
1582	CATES, BRIAN
	COCKRELL, DAWN
1586	LITTRELL, WILLIAM L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2005 (Cont'd)

1592 JAMES, SHEILA A
1606 SCALES, JOHN
1626 SPELLINGS, MICHAEL
VINSON, GARY
1636 BRADLEY, LISA E
1642 FOSTER, YVONNE Y
1643 MADISON COUNTY RECREATION
POPE BASEBALL FIELD
1648 BLACK, LON B
1658 WILLIAMSON, DOROTHY J
1676 BYRD, CAROL M
1684 NEIHARDT, DARCY K
1694 LEWIS, ROBERT C
1712 WOODS, JOHN B
1726 GEREMIA, JAMES A
1740 JAMES, LORETTA
1746 DAVIS, KEVIN
1747 DICKERSON, SATORIA
1761 THOMPSON, A
1766 SILVERS, ALI
1799 WILLIAMS, REGINE A
1805 YARBROUGH, GILFORD
1859 DODSON, HERMAN R
1871 LONG, EDDIE L
1872 BROWN, RAYMOND
1883 FRIENDLY OAK GROVE BAPTIST CH
2059 LONDON W SEPTIC TANK SERVICE
2067 THOMAS, JAMES E
2073 LONDON W SEPTIC TANK SERVICE
2079 MONEY, DUANE
2093 PUCKETT, PEGGY A
2094 ANTHONY, JESSE
2147 HASKINS, JUDY A
2152 SCULLEY, VIRGINIA L
2162 CHIP SHOT
L AND L GOLF INC
LONGEWAY DART
2165 SHAW, ANNE L
2254 ARMY UNITED STATES DEPT OF

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

COMPASS DR 2000

14	UNITED AGRI PRODUCTS INC
63	ELECTRI-GLASS INC
79	FOWLER CONSTRUCTION LLC
	FOWLER STEVE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2000

860	CITY CONCRETE PRODUCTS INC
875	TEAGUE TRANSPORTS
1150	GLOVER, JOHN E
1216	PAYNE, CLAUDE W
1240	MOORE, C L
1248	DUNBAR, H J
1252	HARBER, R
1263	MCKINNEY, NICKIA O
	TRANSOU, M
1264	PAYNE, JANE D
1271	BOOTH, PATRICK
1278	CRAWFORD, KRISTY S
1279	WHITTLE, EARL
1293	LEE, LANCE
1317	JIMS BUG & CYCLE SHOP
1339	PAYNE, P J
1342	CUMMINGS, WIL
1350	HOLIFIELD, LEONARD L
1357	BOOZ, JEAN
	CROSSETT, RYAN
	KEY, DEBORAH A
	KING, GARY A
	MORSE, L M
	NEWMAN, HAROLD
	WILLIAMS, SHELLEY
	WILSON, DARRELL G
1358	RODEN, JAMES
1367	DEDMON, ANNE H
1372	MULLINS, WILLIAM H
1373	BELL, O T
1374	FOWLER, LEE V
1375	SHARE AND CARE INC
1397	COLLINS, C M
1415	FOUTCH, LORAINE M
1422	INGRAM, T
1425	SMITH, BARBARA
	TURNER, BETTY
1433	RICH, MICHAEL D
1442	BURTON, HUGH
1450	HURT, FRANK
1451	MILLER, GARY J
1456	FREEMAN, E D
1463	TAYLOR, CALVIN
1473	COLEY, J W
	LATCH, TERESA
	REAVES, SUSIE
1474	BRIDGES, W M
1524	MADISON COUNTY OF
1529	MADISON COUNTY OF
1568	PETTY, HUBERT C

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 2000 (Cont'd)

1569 MADISON COUNTY OF
1582 FOSTER, WILSON
1592 JAMES, ROBERT H
1606 SCALES, JOHN
1620 MCEARL, GARY P
1626 PERRY, D
1642 FOSTER, YVONNE
1643 MADISON COUNTY RECREATION
POPE BASEBALL FIELD
1648 BLACK, LON B
1658 WILLIAMSON, DOROTHY
1666 HAMILTON, ROBERT E
1676 BYRD, CAROL
1684 GERHARDT, FLOYD
1694 LEWIS, ROBERT C
1740 WEST, JERRY
1766 BOBBITT, SAMUEL
1870 TAYLOR, JACK
1872 BROWN, RAYMOND
2059 RICHTER, DOREEN
2067 THOMAS, JAMES
2093 PUCKETT, PEGGY L
2094 ANTHONY, JESSE
2147 HASKINS, WILLIAM L
2152 SCULLEY GOLF CRSE DRVING RANGE
SCULLEY, TOM
2162 SCULLEY GLF COURSE & DRVNG RNG
2165 SHAW, BROOKS C
2254 TN ARMY NATL GUARD

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

COMPASS DR 1995

14	TRI-STATE DELTA CHEMICALS INC
63	ELECTRI-GLASS INC
79	FOWLER STEVE
	FOWLER, RONNIE B
102	NEW, JOSEPH W

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 1995

813	AMERICAN UTILITY CORP
	CRANE SERVICE INC
842	JIM MCGEE BODY SHOP
	METAL CRAFTERS INC
860	CITY CONCRETE COMPANY
875	TEAGUE TRANSPORTS
1104	HAIRRELL, BARBARA
1110	BAILEY, BERT SR
1138	ELLIS, S
1186	OCCUPANT UNKNOWNN
1207	OCCUPANT UNKNOWNN
1223	CROMWELL, BILLY
1240	MOORE, C L
1247	ARWOOD, T
1248	DUNBAR, H J
1252	RALEY, LENA
1263	POOLE, SHERRY
1264	PAYNE, LITTLE C
1268	BRIDGES, B J
1276	BLECK, DENNIS
1277	WHITTLE, EARL
1278	SCARBROUGH, L
1293	VIERS, MICHAEL S
1317	JIMS BUG & CYCLE SHOP
	OCCUPANT UNKNOWNN
1339	PAYNE, P J
1342	CUMMINGS, WIL
1350	GIBSON, JOHNNIE
1357	ALLEN, QUINCY
	HANEY, BARBARA
	LAPOINTE, WILLIAM
	SMITH, BOBBY E
	TAYLOR, JERRY W
	WARNE, KRISTI
1358	RODEN, JAMES
1367	JOHNSON, RUTH
1372	KEE, NICKY
1373	BELL, O T
1374	OCCUPANT UNKNOWNN
1375	CARE HAVEN
	OCCUPANT UNKNOWNN
1376	CHILDERS, M G
1383	RAY, M
1393	OCCUPANT UNKNOWNN
1397	SCOTT, C F
1415	FOUTCH, LEONARD
1422	KIRBY, DONALD R
1425	TAYLOR, DARRELL
1433	OCCUPANT UNKNOWNN
1442	BURTON, HUGH

WESTOVER RD 1995 (Cont'd)

1443 OCCUPANT UNKNOWNN
1445 OCCUPANT UNKNOWNN
1450 GROSS, AUDREY
1451 MILLER, GARY J
1456 FREEMAN, E D
1463 TAYLOR, CALVIN G
1473 COLEY, J W
1474 BRIDGES, W M
1488 OCCUPANT UNKNOWNN
1568 TRITT, M E
1582 FOSTER, WILSON
1592 JAMES, ROBERT H
1606 SCALES, JOHN
1620 VARUGHESE, THOMAS
1626 MALONE, JASON
STUTZMAN, GEORGE
1636 BOYD, BRINDA
1642 FOSTER, YVONNE
1643 MADISON COUNTY RECREATION
1648 BLACK, LON B
1666 HAMILTON, ROBERT E
1684 GERHARDT, FLOYD
1694 LEWIS, ROBERT C
1712 OCCUPANT UNKNOWNN
1726 RHODES, SHELIA
1743 HURST, JAMES T
1746 ADAMS, KENNETH
1766 KNIPP, TIM
1778 SUPERIOR FIRE PROTECTION INC
1799 PAGE, JIMMY
1805 YARBOROUGH, GILFORD R
1810 OCCUPANT UNKNOWNN
1859 DODSON, HERMAN
1870 JACKSON, IVORY
1871 LONG, S C
1874 TATE, T
WILLIAMS, JANELLE
1880 COLE, MINNIE P
1883 OAK GRV BAPTIST CHURCH
2059 ALEXANDER, BEN
2067 THOMAS, JAMES
2093 PUCKETT, P L
2094 ANTHONY, JESSE
2147 HASKINS, W L
LASLEY, T R
2152 SCULLEY GOLF CRSE DRVING RANGE
SCULLEY, TOM
2165 SHAW, BROOKS C
2195 OCCUPANT UNKNOWNN
2313 TENNESSEE AIRCRAFT SERVICES

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 1995 (Cont'd)

2468 TENNESSEE TECH CTR AT JACKSON
2552 OCCUPANT UNKNOWNN

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

COMPASS DR 1992

63	ELECTRI-GLASS INC
79	FOWLER CONSTRUCTION
	FOWLER STEVE
	FOWLER, RONNIE B
102	NEW, JOSEPH W

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WESTOVER RD 1992

813	C & W CONSTRUCTION CO INC
842	JIM MCGEE BODY SHOP
860	CITY CONCRETE COMPANY
875	TEAGUE TRANSPORTS
1110	BUTTON, PAM
1185	ROBERTSON, GLENDER
1186	BRIDGER, DANNY JR
1207	FLY, ALBERT J
1240	MOORE, C L
1247	ARWOOD, T
1248	DUNBAR, H J
1252	RALEY, LENA
1263	WEST, TERRI
1268	BRIDGES, B J
1277	WHITTLE, EARL
1293	VIERS, MICHAEL S
1350	GIBSON, JOHNNIE
1357	ELLINGTON, A
	GALBRAITH, FRANK D
	LAPOINTE, WILLIAM
	RADER, TIM
1358	RODEN, JAMES
1367	JOHNSON, RUTH
1373	BELL, O T
1374	TURNER, L G
1375	CARE HAVEN
1397	HINTON, J D
1415	FOUTCH, LEONARD
1422	KIRBY, D R
1442	BURTON, HUGH
1445	MAYO, TOMMIE
1450	GROSS, AUDREY
1451	MILLER, GARY J
1456	FREEMAN, E D
1473	COLEY, J W
1488	NAYLOR, PAUL R
1524	MADISON COUNTY HIGHWAY DEPT
1582	HOLLAND, CLYDE
	LAMPLEY, JUDY
1592	JAMES, ROBERT H
1606	SCALES, JOHN
1626	HOUSE, HOWARD B
	WEAVER, TONY
1642	FOSTER, YVONNE
1684	GERHARDT, FLOYD
1694	LEWIS, ROBERT C
1743	HURST, JAMES T
1766	KNIPP, TIM
1778	SUPERIOR FIRE PROTECTION INC
1799	PAGE, JIMMY

WESTOVER RD 1992 (Cont'd)

1810 JOHNSON, THOMAS E
1859 DODSON, HERMAN
1871 LONG, S C
1880 CURRY, PEARL
1883 OAK GRV BAPTIST CHURCH
2067 THOMAS, JAMES
2093 MILLER, BRIAN
RAINES, TERESA
2147 HASKINS, W L
LASLEY, T R
2152 SCULLEY GOLF CRSE DRVING RANGE
SCULLEY, TOM
2165 SHAW, BROOKS C
2195 VAUGHN, LEON
2468 TENNESSEE STATE OF
2552 LAWRENCE, SWANEE B
12631 BLEVINS, K D

Appendix H
EDR Environmental Lien Search

Jackson Solar Farm
Westover Road
Jackson, TN 38301

Inquiry Number: 5344542.2
June 26, 2018

EDR Environmental Lien and AUL Search

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

The EDR Environmental LienSearch™ Report

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

Westover Road
Jackson Solar Farm
Jackson, TN 38301

RESEARCH SOURCE

Source 1:

Madison Recorder
Madison, TN

PROPERTY INFORMATION

Deed 1:

Type of Deed:	Quit Claim Deed
Title is vested in:	Blanche Long Rich
Title received from:	Harry S Long Jr et al
Deed Dated	8/13/1984
Deed Recorded:	8/23/1984
Book:	443
Page:	592
Volume:	NA
Instrument:	NA
Docket:	NA
Land Record Comments:	see exhibit
Miscellaneous Comments:	NA
Legal Description:	see exhibit
Legal Current Owner:	Blanche Long Rich
Parcel # / Property Identifier:	076 047.00
Comments:	see exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

Deed Exhibit 1

MADISON COUNTY
ASSESSOR'S OFFICE
MAP 76 GP ____ PL 47
COMPLETE ☐ PARTIAL ☑
-0- VALUE
N Rainey ASSESSOR
CLERK

QUITCLAIM DEED

8-2-84 KNOW ALL MEN BY THESE PRESENTS: That we, Harry S. Long, Jr., Deborah L. Mauter and George A. Long, for good and valuable consideration do hereby quitclaim and convey unto Blanche Long Rich for and during her natural life all of our right, title and interest in and to all household furniture and furnishings located in the former residence of Maurine Long Williamson and or parcel of real estate located in the Eighth Civil District of Madison County, Tennessee, which is particularly described as follows:

> BEGINNING at a point at the northern margin of the paved surface of the Old Brownsville Road at Durham's Southwest corner, being the Southeast corner of the herein described tract, thence in a generally Northwest direction 216 feet, more or less, along Durham's West line to a point at Durham's North line, thence in a Northeasterly direction 100 feet, more or less, along Durham's north line to a point along a tree line, thence following said tree line in a generally Northwesterly direction 600 feet, more or less, to the center of a ditch, thence meandering along the center of the ditch in a Southerly direction to a point in the Northern margin of the Old Brownsville Road, thence in a generally Northeastern direction along the Northern margin of the Old Brownsville Road 540 feet, more or less, to the point of beginning.
>
> Being the same property devised under Article II of the Last Will and Testament of Maurine Williamson to her husband, Kenneth Donald Williamson, for the remainder of his life, and then under the residual clause of said Will to Harry Sykes Long. Maurine Long Williamson's Will is filed in Will Book O, Page 67, in the County Court Clerk's Office of Madison County, Tennessee.
>
> Harry Sykes Long is deceased and devised all of his property to the Grantors herein in his Last Will and Testament filed in Will Book X, Page 20, in the County Court Clerk's Office of Madison County, Tennessee.

Said interest in said property is conveyed subject to such limitations, restrictions and encumbrances as may affect the premises.

THIS INSTRUMENT PREPARED BY
MENZIES, RAINEY, KIZER & ALDERSON
ATTORNEYS AT LAW
105 S. HIGHLAND AVENUE
JACKSON, TENNESSEE 38301
WITHOUT SURVEY OR TITLE EXAMINATION

TAX ASSESSOR: Taxes to be paid by:
Blanche Long Rich
(Name)
Old Brownsville Hi-way Rt 2
(Address)
Jackson Tenn 38301

IN WITNESS WHEREOF, we have hereunto set our hands on this _____ day of _____, 1984.

2nd day of August, 1984 Harry S. Long, Jr.
Harry S. Long, Jr.

13th of August, 1984 Deborah L. Long-Mauter
Deborah L. Mauter

6th day of August, 1984 George A. Long
George A. Long

STATE OF Colorado

COUNTY OF Mesa

Personally appeared before me, the undersigned Notary Public, in and for said State and County, duly commissioned, sworn, qualified and acting, the within named bargainor in the foregoing and attached instrument of writing, HARRY S. LONG, JR., with whom I am personally acquainted or proved to me on the basis of satisfactory evidence, and who acknowledged that he executed the within instrument for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and Official Seal, at office, in said state and county, this the 2 day of August, 1984.

Notary Public

My Commission Expires: My Commission Expires July 13, 1987

STATE OF Colorado

COUNTY OF Denver

Personally appeared before me, the undersigned Notary Public, in and for said State and County, duly commissioned, sworn, qualified and acting, the within named bargainor in the foregoing and attached instrument of writing, DEBORAH L. MAUTER, with whom I am personally acquainted or proved to me on the basis of satisfactory evidence, and who acknowledged that she executed the within instrument for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and Official Seal, at office, in said state and county, this the 13th day of August, 1984.

Susan M. Flick
Notary Public
251 E. 12th Ave. Den., Colo.

My Commission Expires: My Commission Expires July 22, 1986

STATE OF *Colorado*

COUNTY OF *Rio Blanco*

Personally appeared before me, the undersigned Notary Public, in and for said State and County, duly commissioned, sworn, qualified and acting, the within named bargainor in the foregoing and attached instrument of writing, GEORGE A. LONG, with whom I am personally acquainted or proved to me on the basis of satisfactory evidence, and who acknowledged that he executed the within instrument for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and Official Seal, at office, in said state and county, this the *6th* day of *August*, 1984.

[signature]
Notary Public

My Commission Expires: *6-11-85*

I, OR WE, HEREBY SWEAR OR AFFIRM THAT THE ACTUAL CONSIDERATION FOR THIS TRANSFER OR VALUE OF THE PROPERTY TRANSFERRED, (WHICH EVER IS GREATER) IS $ *-0-*

[signature]
AFFIANT

SUBSCRIBED AND SWORN TO BEFORE ME THIS THE *23* DAY OF *Aug*, 19*84*

Curtis White, Register

COMMISSION EXPIRATION:

(State of Tennessee) I, Curtis White, Register of said County do hereby (County of [illegible]) certify that the foregoing instrument, with Notary Public certificate and seal thereon, was filed in my office for registration on the *23* day of *Aug* 19*84*, at *4:20* __ M., and noted in Note Book *49* Page *23* and was duly recorded this day, in Book of *Deed* No. *443* Page *592* Recording *9.00* Total ______ Receipt No. *9159*
State Taxes ______ Register's Fee ______

By *[signature]* D.R.

BOOK 443 PAGE 594

Appendix I
EDR Radius Map Report

Jackson Solar Farm
Westover Road
Jackson, TN 38301

Inquiry Number: 05325073.2r
June 07, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

WESTOVER ROAD
JACKSON, TN 38301

COORDINATES

Latitude (North):	35.6099360 - 35° 36' 35.76''
Longitude (West):	88.9161280 - 88° 54' 58.06''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	326442.9
UTM Y (Meters):	3942176.8
Elevation:	405 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5944486 WESTOVER, TN
Version Date:	2013
North Map:	5944430 ADAIR, TN
Version Date:	2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140701
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
WESTOVER ROAD
JACKSON, TN 38301

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	THE PICTSWEET COMPAN	2374 TECHNOLOGY CENT	UST, HIST UST	Higher	51, 0.010, South
2	ELECTRI-GLASS, INC.	63 COMPASS DR.	RCRA-CESQG, US AIRS	Lower	51, 0.010, ENE
3	TENNESSEE TECHNOLOGY	2468 TECHNOLOGY CENT	RCRA-CESQG, FINDS, ECHO	Lower	431, 0.082, WSW
A4	AVIATION CENTER OF J	PENTACHLOROPHENOL 2	RCRA NonGen / NLR	Higher	891, 0.169, SW
A5	SPEARS AVIATION SERV	MC KELLAR FIELD	RCRA NonGen / NLR	Higher	891, 0.169, SW
B6	FEDERAL AVIATION ADM	233 GRADY MONTGOMERY	UST	Higher	1181, 0.224, WSW
B7	MALESUS TN (QML) RML	233 GRADY MONTGOMERY	HIST UST	Higher	1181, 0.224, WSW
B8	FEDERAL AVIATION ADM	233 GRADY MONTGOMERY	HIST UST	Higher	1181, 0.224, WSW
9	MCKELLAR-SIPES AIRPO	308 GRADY MONTGOMERY	LUST, VCP, NPDES	Higher	1563, 0.296, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

SHWS ---------- List of Inactive Hazardous Substance Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Disposal Facilities

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
LUST TRUST ---------- LUST TRUST Fund Database
HIST_LUST CO ---------- Leaking Underground Storage Tanks Sites

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
AST ---------- Aboveground Storage Tanks
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS ---------- Engineering Control Sites
INST CONTROL ---------- Institutional Control Sites

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
SRP ---------- State Remediation Program List

State and tribal Brownfields sites

BROWNFIELDS ---------- Superfund VOAP Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ---------- Recycling Facilities Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register

CDL	Registry of Contaminated Properties
PRIORITYCLEANERS	DCERP Remediation Sites Listing
DEL SHWS	Deleted State Hazardous Waste Sites
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS	Liens Information
LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	State Spills

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
AIRS	Listing of Permitted Sources

DRYCLEANERS..... Registered Facilities List
LEAD..... Lead Safe Housing Registry
NPDES..... Permitted Facility Listing
VAPOR..... Vapor Intrusion

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants
EDR Hist Auto..... EDR Exclusive Historical Auto Stations
EDR Hist Cleaner..... EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF..... Recovered Government Archive Solid Waste Facilities List
RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 12/11/2017 has revealed that there are 2 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ELECTRI-GLASS, INC.	***63 COMPASS DR.***	***ENE 0 - 1/8 (0.010 mi.)***	***2***	***10***
TENNESSEE TECHNOLOGY	***2468 TECHNOLOGY CENT***	***WSW 0 - 1/8 (0.082 mi.)***	***3***	***17***

State and tribal leaking storage tank lists

LUST: A listing of leaking underground storage tank site locations.

A review of the LUST list, as provided by EDR, and dated 05/14/2018 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCKELLAR-SIPES AIRPO	***308 GRADY MONTGOMERY***	***SW 1/4 - 1/2 (0.296 mi.)***	***9***	***27***
Facility Id: 570430				
Current Status: 1a Completed Tank Closure				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Conservation's Facility and Tank Report.

A review of the UST list, as provided by EDR, and dated 05/14/2018 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THE PICTSWEET COMPAN	***2374 TECHNOLOGY CENT***	***S 0 - 1/8 (0.010 mi.)***	***1***	***8***
Compartment Status: Permanently Out of Use				
Compartment Status: Currently In Use				
Facility Id: 8570317				
FEDERAL AVIATION ADM	233 GRADY MONTGOMERY	WSW 1/8 - 1/4 (0.224 mi.)	B6	23
Compartment Status: Permanently Out of Use				
Facility Id: 570254				
Facility Id: 570430				

State and tribal voluntary cleanup sites

VCP: The Voluntary Cleanup Oversight and Assistance Program (VOAP) offers people the opportunity to work proactively with state government to address necessary cleanup of a property to return it to productive use. In return for their efforts, participants can receive a No Further Action letter and a release of liability for areas where investigation and cleanup is conducted The program is open to everyone with an interest in addressing contamination at a site.

A review of the VCP list, as provided by EDR, and dated 12/18/2017 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCKELLAR-SIPES AIRPO	***308 GRADY MONTGOMERY***	***SW 1/4 - 1/2 (0.296 mi.)***	***9***	***27***
Facility Status: Closed				
Facility Id: 57543				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

HIST UST: This database is no longer updated by the agency. It contains records and detail fields that the current UST database does not.

A review of the HIST UST list, as provided by EDR, and dated 05/14/2018 has revealed that there are 3 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THE PICTSWEET COMPAN	***2374 TECHNOLOGY CENT***	***S 0 - 1/8 (0.010 mi.)***	***1***	***8***
Tank Status: Currently in Use Tank Status: Permanently Out of Use Facility Id: 8-570317				
MALESUS TN (QML) RML	233 GRADY MONTGOMERY	WSW 1/8 - 1/4 (0.224 mi.)	B7	25
Tank Status: Permanently Out of Use Facility Id: 0-570254				
FEDERAL AVIATION ADM	233 GRADY MONTGOMERY	WSW 1/8 - 1/4 (0.224 mi.)	B8	26
Tank Status: Permanently Out of Use Facility Id: 0-570430				

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/11/2017 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

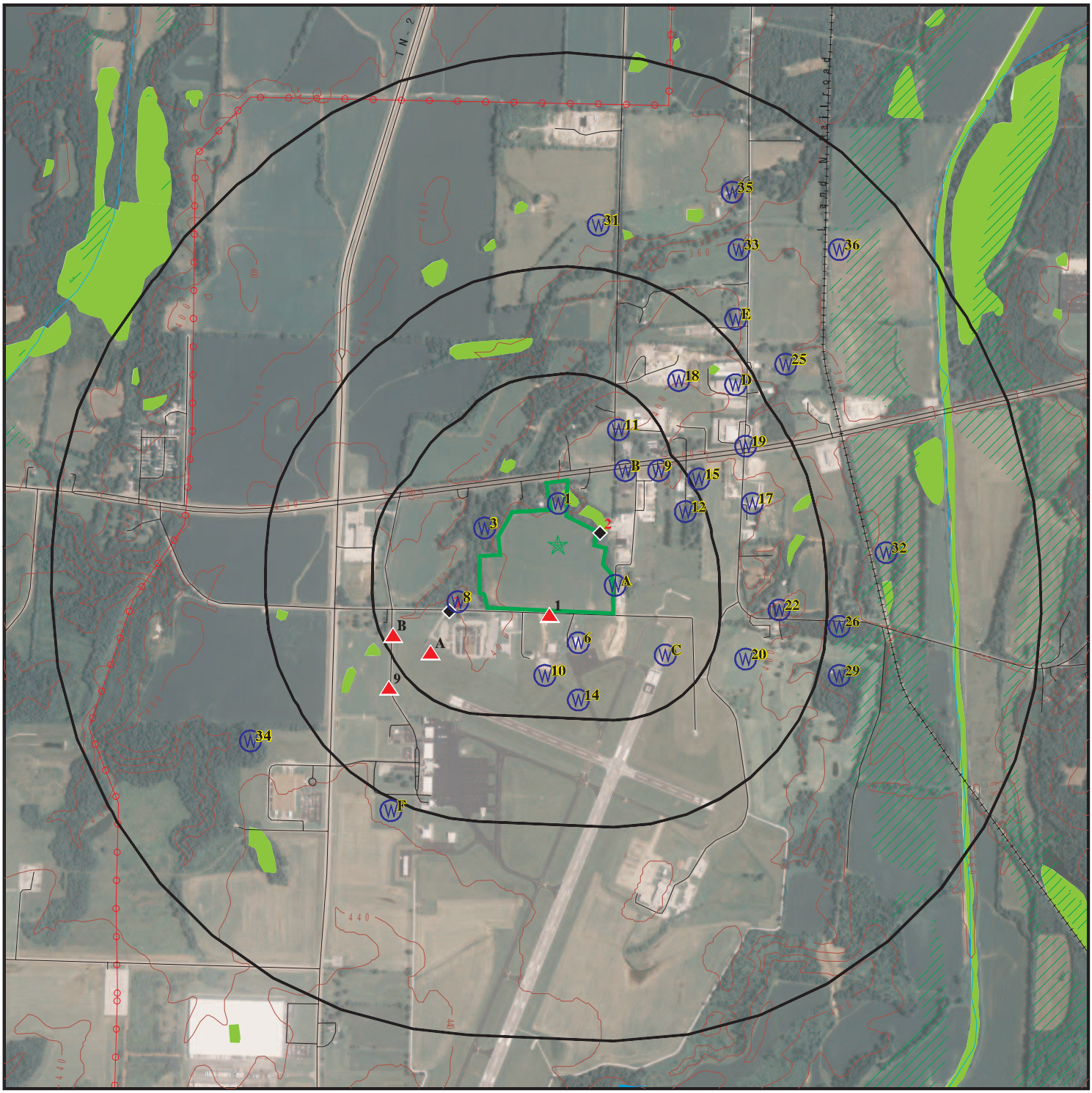
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AVIATION CENTER OF J	PENTACHLOROPHENOL 2	SW 1/8 - 1/4 (0.169 mi.)	A4	21
SPEARS AVIATION SERV	MC KELLAR FIELD	SW 1/8 - 1/4 (0.169 mi.)	A5	23

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
OWENS-CORNING LDFL SITE	SEMS-ARCHIVE

OVERVIEW MAP - 05325073.2R



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Jackson Solar Farm	CLIENT: Barge Design Solutions
ADDRESS: Westover Road Jackson TN 38301	CONTACT: Chelsea Sach
LAT/LONG: 35.609936 / 88.916128	INQUIRY #: 05325073.2r DATE: June 07, 2018 3:07 pm

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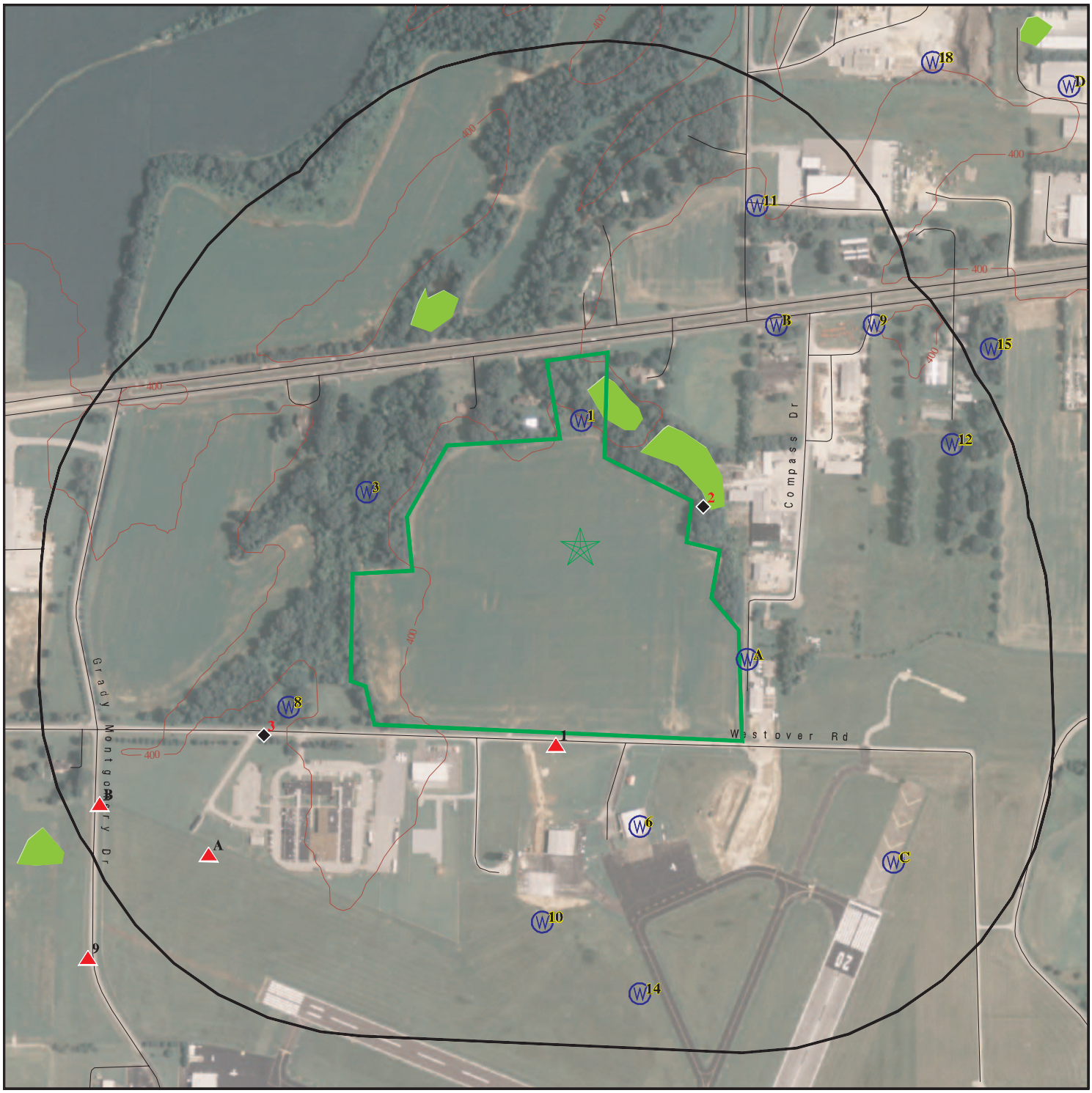
DETAIL MAP - 05325073.2R



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Jackson Solar Farm ADDRESS: Westover Road Jackson TN 38301 LAT/LONG: 35.609936 / 88.916128	CLIENT: Barge Design Solutions CONTACT: Chelsea Sach INQUIRY #: 05325073.2r DATE: June 07, 2018 3:09 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		2	0	NR	NR	NR	2
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
LUST TRUST	0.500		0	0	0	NR	NR	0
HIST_LUST CO	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	1	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	1	NR	NR	1
SRP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
PRIORITYCLEANERS	0.500		0	0	0	NR	NR	0
DEL SHWS	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
HIST UST	0.250		1	2	NR	NR	NR	3
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SPILLS	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	2	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
LEAD	0.001		0	NR	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
VAPOR	0.500		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	4	5	2	0	0	11

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
South
< 1/8
0.010 mi.
51 ft.

THE PICTSWEET COMPANY
2374 TECHNOLOGY CENTER DRIVE
JACKSON, TN 38301

UST **U002105697**
HIST UST **N/A**

Relative:
Higher

Actual:
410 ft.

UST:

Facility ID:	8570317
Facility Description:	Aircraft Owner
Owner ID:	308453
Owner Name:	THE PICTSWEET COMPANY
Owner Address:	10 PICTSWEET
Owner Address 2:	Not reported
Owner City,St,Zip:	BELLS, TN 38006
Owner Description:	Private
Tank Number:	1
Tank ID:	46967
Tank Other Material:	Not reported
RSN Red Tagged:	Not reported
Fac Red Tagged:	N
Replacement:	Not reported
Compartment ID:	47688
Compartment Letter:	A
Compartment Status:	Permanently Out of Use
Compartment Capacity:	17000
Small Delivery:	Not reported
Tank RD:	NotListed
Substance Description:	Not Listed
Date Installed:	MAY-07-1976
Date Last Used:	FEB-28-1984
Date Closed:	Not reported
Regulated:	Regulated
Tank Material Desc:	Asphalt Coated or Bare Steel
Tank Mod Desc:	Lined Interior
Tank Emergency:	Not reported
Tank No Fee:	Y
Overfill Type:	Not reported
Overfill Device Installed:	N
Spill Device Installed:	N
Date Removed From Ground:	MAR-14-1991
Pipe Material Desc:	Galvanized Steel
Pipe Other Material:	Not reported
Pipe RD:	NotListed
Pipe Repaired:	N
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported
Tank Number:	2
Tank ID:	46968
Tank Other Material:	Not reported
RSN Red Tagged:	Not reported
Fac Red Tagged:	N
Replacement:	N
Compartment ID:	47689
Compartment Letter:	A
Compartment Status:	Currently In Use
Compartment Capacity:	17000

THE PICTSWEET COMPANY (Continued) **U002105697**

Small Delivery:	N
Tank RD:	ATG Tank_Tightness InvControl
Substance Description:	Aviation Fuel
Date Installed:	MAY-07-1976
Date Last Used:	Not reported
Date Closed:	Not reported
Regulated:	Regulated
Tank Material Desc:	Steel w/Impressed Current
Tank Mod Desc:	Lined Interior
Tank Emergency:	N
Tank No Fee:	Y
Overfill Type:	Overfill Alarm
Overfill Device Installed:	Y
Spill Device Installed:	Y
Date Removed From Ground:	Not reported
Pipe Material Desc:	Steel w/impressed current
Pipe Other Material:	Not reported
Pipe RD:	1YrTightTest
Pipe Repaired:	N
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

HIST UST:

Facility ID:	8-570317
Facility Description:	Gas Station
Owner ID:	9561
Owner Name:	The Pictsweet Company
Owner Address:	10 Pictsweet
Owner City,St,Zip:	Bells, TN 38006
Owner Telephone:	731-663-7600
Owner Description:	Private
Tank ID:	2
Tank Status:	**Currently in Use**
Tank Capacity:	17000
Tank Contents:	Kerosene
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	05/07/1976
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True

THE PICTSWEET COMPANY (Continued) **U002105697**

Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	17000
Tank Contents:	Not Listed
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	05/07/1976
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

---

2 **ELECTRI-GLASS, INC.** **RCRA-CESQG** **1000883777**
ENE **63 COMPASS DR.** **US AIRS** **TND982166399**
< 1/8 **JACKSON, TN 38301**
0.010 mi.
51 ft.

Relative:
Lower

Actual:
404 ft.

RCRA-CESQG:

Date form received by agency:	03/01/2017
Facility name:	ELECTRI-GLASS, INC.
Facility address:	63 COMPASS DR. JACKSON, TN 38301
EPA ID:	TND982166399
Mailing address:	COMPASS DRIVE JACKSON, TN 38301
Contact:	JOE W PETERS
Contact address:	COMPASS DR. JACKSON, TN 38301
Contact country:	US

ELECTRI-GLASS, INC. (Continued) **1000883777**

Contact telephone: 901-427-0433
Contact email: Not reported
EPA Region: 04
Land type: Other land type
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: ELECTRI GLASS INC
Owner/operator address: COMPASS DRIVE
JACKSON, TN 38301
Owner/operator country: US
Owner/operator telephone: 731-427-0433
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JOE W PETERS
Owner/operator address: COMPASS DR
JACKSON, TN 38301
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

ELECTRI-GLASS, INC. (Continued) **1000883777**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Historical Generators:
Date form received by agency: 03/02/2016
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/02/2012
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/02/2009
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

ELECTRI-GLASS, INC. (Continued) **1000883777**

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/03/2008
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/05/2007
Site name: ELECTRI-GLASS, INC.
Classification: Not a generator, verified

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/09/2006
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL

ELECTRI-GLASS, INC. (Continued) **1000883777**

BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/02/2004
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/04/2003
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/09/2001
Site name: ELECTRI-GLASS, INC.
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 02/22/1999
Site name: ELECTRI-GLASS, INC.
Classification: Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 08/14/1997
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/11/1996
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

ELECTRI-GLASS, INC. (Continued) **1000883777**

Evaluation date: 10/29/1996
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/24/1996
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/10/1996
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/27/1996
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/22/1996
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/14/1992
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/24/1992
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 02/02/1989
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/09/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

US AIRS MINOR:
Envid: 1000883777
Region Code: 04
Programmatic ID: AIR TN0000004711300235

ELECTRI-GLASS, INC. (Continued) **1000883777**

Facility Registry ID: 110000374719
D and B Number: Not reported
Primary SIC Code: 3089
NAICS Code: 325211
Default Air Classification Code: MIN
Facility Type of Ownership Code: POF
Air CMS Category Code: Not reported
HPV Status: Not reported

US AIRS MINOR:
Region Code: 04
Programmatic ID: AIR TN0000004711300235
Facility Registry ID: 110000374719
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 1997-02-24 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

US AIRS MINOR:
Envid: 1000883777
Region Code: 04
Programmatic ID: AIR TN0000004711300235
Facility Registry ID: 110000374719
D and B Number: Not reported
Primary SIC Code: 3089
NAICS Code: 325211
Default Air Classification Code: MIN
Facility Type of Ownership Code: POF
Air CMS Category Code: Not reported
HPV Status: Not reported

US AIRS MINOR:
Region Code: 04
Programmatic ID: AIR TN0000004711300235
Facility Registry ID: 110000374719
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 1997-02-24 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

3
WSW
< 1/8
0.082 mi.
431 ft.

TENNESSEE TECHNOLOGY CENTER @ JACKSON
2468 TECHNOLOGY CENTER DRIVE
JACKSON, TN 38301

RCRA-CESQG
FINDS
ECHO

1004782197
TND982135709

Relative:
Lower

Actual:
401 ft.

RCRA-CESQG:

Date form received by agency:	01/07/2016
Facility name:	TENNESSEE TECHNOLOGY CENTER @ JACKSON
Facility address:	2468 TECHNOLOGY CENTER DRIVE JACKSON, TN 38301
EPA ID:	TND982135709
Mailing address:	TECHNOLOGY CENTER DRIVE JACKSON, TN 38301
Contact:	DAVID WALLER
Contact address:	TECHNOLOGY CENTER DRIVE JACKSON, TN 38301
Contact country:	US
Contact telephone:	731-424-0691
Contact email:	DAVID.WALLER@TCATJACKSON.EDU
EPA Region:	04
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	STATE OF TENNESSEE
Owner/operator address:	TECHNOLOGY CENTER DRIVE JACKSON, TN 38301
Owner/operator country:	US
Owner/operator telephone:	901-424-0691
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1964
Owner/Op end date:	Not reported

Owner/operator name:	STATE OF TENNESSEE
Owner/operator address:	TECHNOLOGY CENTER DRIVE JACKSON, TN 38301
Owner/operator country:	US
Owner/operator telephone:	901-424-0691
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported

TENNESSEE TECHNOLOGY CENTER @ JACKSON (Continued) **1004782197**

Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1964
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Universal Waste Summary:
Waste type: Lamps
Accumulated waste on-site: Yes
Generated waste on-site: Not reported

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Historical Generators:
Date form received by agency: 01/07/2014
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

TENNESSEE TECHNOLOGY CENTER @ JACKSON (Continued) **1004782197**

Date form received by agency: 01/17/2013
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 01/10/2012
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 01/11/2011
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 02/13/2009
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT

TENNESSEE TECHNOLOGY CENTER @ JACKSON (Continued) **1004782197**

NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 01/08/2008
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 04/03/2006
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 01/29/2004
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 02/12/2003
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON

TENNESSEE TECHNOLOGY CENTER @ JACKSON (Continued) **1004782197**

Classification: Conditionally Exempt Small Quantity Generator

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 03/01/2001
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 01/12/2000
Site name: TENNESSEE TECHNOLOGY CENTER @ JACKSON
Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004987934

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1004782197
Registry ID: 110004987934
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004987934

A4 SW 1/8-1/4 0.169 mi. 891 ft. **AVIATION CENTER OF JACKSON INC** **RCRA NonGen / NLR** **1000915684**
PENTACHLOROPHENOL 2 (WT 5.5 W **TND030406581**
JACKSON, TN 38301

Site 1 of 2 in cluster A

Relative: Higher
Actual: 407 ft.

RCRA NonGen / NLR:
Date form received by agency: 11/19/1980
Facility name: AVIATION CENTER OF JACKSON INC
Facility address: PENTACHLOROPHENOL 2%(WT 5.5%W
JACKSON, TN 38301
EPA ID: TND030406581
Mailing address: MC KELLAR FIELD

AVIATION CENTER OF JACKSON INC (Continued) **1000915684**

JACKSON, TN 38301
Contact: AVIATION CENTER
Contact address: PENTACHLOROPHENOL 2%(WT 5.5%W
JACKSON, TN 38301
Contact country: US
Contact telephone: 615-555-1212
Contact email: Not reported
EPA Region: 04
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 11/20/1987
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/12/1986
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/10/1986
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 02/21/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

AVIATION CENTER OF JACKSON INC (Continued) **1000915684**

Evaluation date: 01/07/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

A5 **SPEARS AVIATION SERVICE** **RCRA NonGen / NLR** **1000916083**
SW **MC KELLAR FIELD** **TND041173998**
1/8-1/4 **JACKSON, TN 38301**
0.169 mi.
891 ft. **Site 2 of 2 in cluster A**

Relative:
Higher

Actual:
407 ft.

RCRA NonGen / NLR:
Date form received by agency: 11/19/1980
Facility name: SPEARS AVIATION SERVICE
Facility address: MC KELLAR FIELD
JACKSON, TN 38301
EPA ID: TND041173998
Contact: SPEARS AVIATION
Contact address: MC KELLAR FIELD
JACKSON, TN 38301
Contact country: US
Contact telephone: 615-555-1212
Contact email: Not reported
EPA Region: 04
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B6 **FEDERAL AVIATION ADMINISTRATION** **UST** **U004162655**
WSW **233 GRADY MONTGOMERY DRIVE** **N/A**
1/8-1/4 **JACKSON, TN 38301**
0.224 mi.
1181 ft. **Site 1 of 3 in cluster B**

Relative:
Higher

Actual:
406 ft.

UST:
Facility ID: 570430
Facility Description: Federal Non-Military
Owner ID: 300153
Owner Name: AIRWAY FACILITIES SECTOR FIELD O

FEDERAL AVIATION ADMINISTRATION (Continued) **U004162655**

Owner Address:	233 GRADY MONTGOMERY
Owner Address 2:	Not reported
Owner City,St,Zip:	JACKSON, TN 38301
Owner Description:	Federal Government
Tank Number:	1
Tank ID:	55423
Tank Other Material:	Not reported
RSN Red Tagged:	Not reported
Fac Red Tagged:	Not reported
Replacement:	Not reported
Compartment ID:	56717
Compartment Letter:	A
Compartment Status:	Permanently Out of Use
Compartment Capacity:	3000
Small Delivery:	Not reported
Tank RD:	NotListed
Substance Description:	Diesel
Date Installed:	JUL-18-1987
Date Last Used:	NOV-12-1994
Date Closed:	Not reported
Regulated:	Regulated
Tank Material Desc:	Asphalt Coated or Bare Steel
Tank Mod Desc:	None
Tank Emergency:	Not reported
Tank No Fee:	Y
Overfill Type:	Not reported
Overfill Device Installed:	N
Spill Device Installed:	N
Date Removed From Ground:	NOV-12-1994
Pipe Material Desc:	Galvanized Steel
Pipe Other Material:	Not reported
Pipe RD:	NotListed
Pipe Repaired:	N
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank Number:	1
Tank ID:	1495
Tank Other Material:	Not reported
RSN Red Tagged:	Not reported
Fac Red Tagged:	Not reported
Replacement:	Not reported
Compartment ID:	1501
Compartment Letter:	A
Compartment Status:	Permanently Out of Use
Compartment Capacity:	285
Small Delivery:	Not reported
Tank RD:	NotListed
Substance Description:	Diesel
Date Installed:	APR-22-1961
Date Last Used:	JAN-01-1995
Date Closed:	Not reported
Regulated:	Regulated
Tank Material Desc:	Asphalt Coated or Bare Steel
Tank Mod Desc:	None

FEDERAL AVIATION ADMINISTRATION (Continued) **U004162655**

Tank Emergency:	Not reported
Tank No Fee:	Y
Overfill Type:	Not reported
Overfill Device Installed:	N
Spill Device Installed:	N
Date Removed From Ground:	JUN-06-1995
Pipe Material Desc:	Bare Steel
Pipe Other Material:	Not reported
Pipe RD:	NotListed
Pipe Repaired:	N
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

B7 **MALESUS TN (QML) RMLR** **HIST UST** **U003608654**
WSW **233 GRADY MONTGOMERY DRIVE** **N/A**
1/8-1/4 **JACKSON, TN 38301**
0.224 mi.
1181 ft. **Site 2 of 3 in cluster B**

Relative:
Higher

Actual:
406 ft.

HIST UST:

Facility ID:	0-570254
Facility Description:	Federal Non-Military
Owner ID:	14511
Owner Name:	AIRWAY FACILITIES SECTOR FIELD O
Owner Address:	233 Grady Montgomery
Owner City,St,Zip:	Jackson, TN 38301
Owner Telephone:	(901) 422-3357
Owner Description:	Federal Government
Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	285
Tank Contents:	Diesel
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/22/1961
Tank Leak Detection Listed:	True
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False

MALESUS TN (QML) RMLR (Continued) **U003608654**

Pipe SIR: False
Pipe Leak Detection Listed: True

B8 **FEDERAL AVIATION ADMINISTRATION** **HIST UST** **U003608659**
WSW **233 GRADY MONTGOMERY DRIVE** **N/A**
1/8-1/4 **JACKSON, TN 38301**
0.224 mi.
1181 ft. **Site 3 of 3 in cluster B**

Relative:
Higher

Actual:
406 ft.

HIST UST:
Facility ID: 0-570430
Facility Description: Federal Non-Military
Owner ID: 14511
Owner Name: AIRWAY FACILITIES SECTOR FIELD O
Owner Address: 233 Grady Montgomery
Owner City,St,Zip: Jackson, TN 38301
Owner Telephone: (901) 422-3357
Owner Description: Federal Government

Tank ID: 1
Tank Status: **Permanently Out of Use**
Tank Capacity: 3000
Tank Contents: Diesel
Tank Material: Asphalt Coated or Bare Steel
Tank 2ndary Trait: None
Tank Manual Gauge: False
Tank Tightness: False
Tank Inventory Control: False
Tank ATG: False
Tank Vapor Monitor: False
Tank Groundwater Monitor: False
Tank Double Walled: False
Tank 2nd Contained: False
Tank SIR: False
Overfill Installed: False
Spill Installed: False
Cathodic Protection: False
Date Installed: 07/18/1987
Tank Leak Detection Listed: True
Pipe Material: Galvanized Steel
Pipe Other Material: None
Pipe Type: Not Listed
Pipe Auto Line Leak Detect.: False
Pipe Leak Detection Listed: False
Pipe Vapor Monitor: False
Pipe Groundwater Monitor: False
Pipe Dbl Walled: Not reported
Pipe 2nd Contained: False
Pipe SIR: False
Pipe Leak Detection Listed: True

9
SW
1/4-1/2
0.296 mi.
1563 ft.

MCKELLAR-SIPES AIRPORT
308 GRADY MONTGOMERY DR.
JACKSON, TN 38301

LUST **S107464445**
VCP **N/A**
NPDES

Relative:
Higher

Actual:
412 ft.

LUST:

Region:	STATE
Facility Id:	570430
Current Status:	1a Completed Tank Closure
Product Released:	Not reported
Discovery Date:	NOV-15-1994
How Discovered:	1 At Closure
Cause:	5 Pipe Failure
Case Manager:	Robert Strong
Case Description:	Not reported
Section:	FO
Priority:	Not reported
Company Name:	AIRWAY FACILITIES SE
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Telephone:	Not reported
Owner Address 2:	Not reported
fadd2:	Not reported
Site Number:	1
Contact:	Not reported
Cac Contact:	Not reported
Contact Title:	Not reported
Consultant Address 1:	Not reported
Consultant Address 2:	Not reported
Contact City:	Not reported
Contact State:	Not reported
Contact Phone:	Not reported
Contact zip:	Not reported
Cac Type:	Not reported

VCP:

Facility ID:	57543
Facility Status:	Closed
Program:	Voluntary
SubProgram:	Voluntary
EFO:	Jackson
Latitude:	35.6005
Longitude:	-88.92127
Acres:	0.12

NPDES:

Permit Number:	TNR121818
Permit Type:	CGP
Permitting Action:	Inactive
Permittee Name:	McKellar-Sipes Regional Airport
EFO Name:	Jackson
Function1:	Not reported
Function2:	Not reported
Name:	Not reported
Company:	Not reported

MCKELLAR-SIPES AIRPORT (Continued) **S107464445**

Address:	Not reported
City/Zip:	Not reported
Phone:	Not reported
Email:	Not reported
Mailing Addr 2:	Not reported
Issuance:	Not reported
Expiration:	Not reported
Effective:	05/23/2016
Rating:	N/A
NPDES Permit:	TNS075604
App for Environemntal Field Office:	Not reported
App for NCO:	05/23/2016
Activity Description:	Runway 02/20 RSA Grading and Taxiway Relocation
Effluent Description:	Not reported
SIC Code:	Not reported
Receiving Stream:	Johnson Creek
Site ID:	21439
Discharge Code:	Not reported

Permit Number:	TNR121132
Permit Type:	CGP
Permitting Action:	Active
Permittee Name:	McKellar-Sipes Regional Airport
EFO Name:	Jackson
Function1:	Official Contact
Function2:	Not reported
Name:	Executive Director Steve Smith
Company:	Jackson-Madison County Airport Authority
Address:	308 Grady Montgomery Drive
City/Zip:	Jackson 38301
Phone:	423-0995
Email:	ssmith@aeneas.net
Mailing Addr 2:	Not reported
Issuance:	Not reported
Expiration:	Not reported
Effective:	10/05/2009
Rating:	N/A
NPDES Permit:	TNS075604
App for Environemntal Field Office:	08/19/2009
App for NCO:	08/19/2009
Activity Description:	Apron and taxilane addition
Effluent Description:	Not reported
SIC Code:	Not reported
Receiving Stream:	UNT Johnson Creek
Site ID:	21439
Discharge Code:	Not reported

Permit Number:	TNR120809
Permit Type:	CGP
Permitting Action:	Active
Permittee Name:	McKellar-Sipes Regional Airport
EFO Name:	Jackson
Function1:	Official Contact
Function2:	Not reported
Name:	Rodney Hendrix
Company:	Jackson-Madison County Airport Authority
Address:	308 Grady Montgomery Drive

MCKELLAR-SIPES AIRPORT (Continued) **S107464445**

City/Zip:	Jackson 38301
Phone:	423-0995
Email:	rhendrix@aeneas.net
Mailing Addr 2:	Not reported
Issuance:	Not reported
Expiration:	Not reported
Effective:	05/18/2007
Rating:	N/A
NPDES Permit:	TNS075604
App for Environemntal Field Office:	04/20/2007
App for NCO:	04/20/2007
Activity Description:	Grading for the construction of new hangars
Effluent Description:	Not reported
SIC Code:	Not reported
Receiving Stream:	UNT to Johnson Creek
Site ID:	21439
Discharge Code:	Not reported

Permit Number:	TNR120718
Permit Type:	CGP
Permitting Action:	Inactive
Permittee Name:	Ford Construction Company
EFO Name:	Jackson
Function1:	Official Contact
Function2:	Not reported
Name:	Corey Kissell
Company:	Ford Construction Company
Address:	PO Box 527
City/Zip:	Dyersburg 38025
Phone:	285-1938
Email:	Not reported
Mailing Addr 2:	Not reported
Issuance:	Not reported
Expiration:	Not reported
Effective:	10/09/2006
Rating:	N/A
NPDES Permit:	TNS075604
App for Environemntal Field Office:	09/28/2006
App for NCO:	09/28/2006
Activity Description:	Borrow pit
Effluent Description:	Not reported
SIC Code:	Not reported
Receiving Stream:	UNT to Cub Creek
Site ID:	21439
Discharge Code:	Not reported

Permit Number:	TNR058295
Permit Type:	TMSP
Permitting Action:	Inactive
Permittee Name:	McKellar-Sipes Regional Airport
EFO Name:	Jackson
Function1:	Official Contact
Function2:	Billing Person
Name:	Executive Director Steve Smith
Company:	Jackson-Madison County Airport Authority
Address:	308 Grady Montgomery Drive
City/Zip:	Jackson 38301

MCKELLAR-SIPES AIRPORT (Continued) **S107464445**

Phone:	423-0995
Email:	ssmith@aeneas.net
Mailing Addr 2:	Not reported
Issuance:	Not reported
Expiration:	Not reported
Effective:	Not reported
Rating:	N/A
NPDES Permit:	TNS075604
App for Environemntal Field Office:	Not reported
App for NCO:	07/15/2010
Activity Description:	Not reported
Effluent Description:	Not reported
SIC Code:	4581
Receiving Stream:	Cub Creek
Site ID:	21439
Discharge Code:	Not reported

Permit Number:	TNR120653
Permit Type:	CGP
Permitting Action:	Active
Permittee Name:	McKellar-Sipes Regional Airport
EFO Name:	Jackson
Function1:	Official Contact
Function2:	Not reported
Name:	Rodney Hendrix
Company:	Jackson-Madison County Airport Authority
Address:	308 Grady Montgomery Drive
City/Zip:	Jackson 38301
Phone:	423-0995
Email:	rhendrix@aeneas.net
Mailing Addr 2:	Not reported
Issuance:	Not reported
Expiration:	05/30/2010
Effective:	07/06/2006
Rating:	N/A
NPDES Permit:	TNS075604
App for Environemntal Field Office:	06/13/2006
App for NCO:	06/13/2006
Activity Description:	Construct new perimeter access road around existing security fence
Effluent Description:	Not reported
SIC Code:	Not reported
Receiving Stream:	Cub Creek and Johnson Creek
Site ID:	21439
Discharge Code:	Not reported

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
JACKSON	1003868569	OWENS-CORNING LDFL SITE	WESTOVER RD	38301	SEMS-ARCHIVE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/16/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 78

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

SHWS: Promulgated Sites

"Inactive hazardous substance sites that constitute an imminent, substantial danger" is an inactive hazardous substance site where there is a threat of danger to the public health, safety, or environment which is both real and presently existing. Such situations may include, but are not limited to one or more of the following: an immediate action is necessary to minimize an ongoing threat to the public health or pollution of the environment, an inactive hazardous substance site where there is an active release, where direct access to the hazardous substance is not controlled, or where incompatible hazardous substances are found in close proximity. Also known as Promulgated Sites List.

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 07/08/2016
Date Made Active in Reports: 09/16/2016
Number of Days to Update: 70

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Disposal Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/15/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 8

Source: Department of Environment and Conservation
Telephone: 615-532-0804
Last EDR Contact: 03/15/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST: Fund Eligible Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank site locations.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 17

Source: Department of Environment and Conservation
Telephone: 615-532-0945
Last EDR Contact: 05/14/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Semi-Annually

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/06/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

LUST TRUST: LUST TRUST Fund Database

This list contains information on sites that had accidental releases of petroleum and are eligible for reimbursement from the TN Petroleum UST Fund.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 17

Source: Department of Environment & Conservation
Telephone: 615-532-0971
Last EDR Contact: 05/14/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Semi-Annually

HIST_LUST CO: Leaking Underground Storage Tanks Sites

A listing of leaking underground storage tank site locations from the Columbia Field Office. The listing is no longer updated.

Date of Government Version: 10/18/1994
Date Data Arrived at EDR: 10/24/1994
Date Made Active in Reports: 12/30/1994
Number of Days to Update: 67

Source: Department of Environmental Conservation, Columbia Field Office
Telephone: 931-380-3371
Last EDR Contact: 06/29/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

UST: Facility and Tank Report

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 17

Source: Department of Environment and Conservation
Telephone: 615-532-0945
Last EDR Contact: 05/14/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Semi-Annually

AST: Aboveground Storage Tanks

Registered Aboveground Storage Tanks.

Date of Government Version: 10/01/1999
Date Data Arrived at EDR: 10/12/1999
Date Made Active in Reports: 11/05/1999
Number of Days to Update: 24

Source: Department of Environment and Conservation
Telephone: 615-532-0965
Last EDR Contact: 04/20/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: No Update Planned

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 134

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Control Sites

Sites that have engineering controls.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 52

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 05/14/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Semi-Annually

INST CONTROL: Institutional Control Sites

Sites that have institutional controls.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 52

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 05/14/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Semi-Annually

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup, Oversight and Assistance Program Sites

The Voluntary Cleanup Oversight and Assistance Program (VOAP) offers people the opportunity to work proactively with state government to address necessary cleanup of a property to return it to productive use. In return for their efforts, participants can receive a No Further Action letter and a release of liability for areas where investigation and cleanup is conducted. The program is open to everyone with an interest in addressing contamination at a site.

Date of Government Version: 12/18/2017
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 32

Source: Department of Environmental & Conservation
Telephone: 615-532-0912
Last EDR Contact: 05/17/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

SRP: State Remediation Program List

The State Remediation Program (SRP) was established in 1994 within the Division of Solid Waste Management for the purpose of providing owners, prospective purchasers and other interested parties the means to voluntarily investigate, clean up or monitor contaminated sites not regulated under RCRA, CERCLA or the Tennessee Division of Underground Tanks (UST).

Date of Government Version: 12/18/2017
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 32

Source: Department of Environemtn & Conservation
Telephone: 615-532-0853
Last EDR Contact: 05/17/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Superfund VOAP Listing
Brownfields sites included on the Superfund Voluntary Cleanup, Oversight & Assistance Program listing.

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 07/08/2016
Date Made Active in Reports: 09/14/2016
Number of Days to Update: 68

Source: Department of Environment & Conservation
Telephone: 615-532-0912
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities Listing
A listing of recycling facility locations.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/12/2018
Number of Days to Update: 46

Source: Department of Environment & Conservation
Telephone: 615-532-8657
Last EDR Contact: 03/15/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/30/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/04/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

CDL: Registry of Contaminated Properties

Pursuant to TCA 68212509 the following properties have been quarantined because of methamphetamine production, but have not been cleaned and certified within the 60day time frame allotted by the statute. These properties are hereby registered by the Tennessee Department of Environment and Conservation as unremediated methamphetamine sites. This is not a comprehensive list of quarantined properties. These are properties that TDEC has been notified as being quarantined, but have not been cleaned within the 60 day grace period. Other properties where methamphetamine production residues are a concern may not have been quarantined, may not have been reported to TDEC, or may not have passed the 60day grace

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/03/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 29

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

PRIORITY CLEANERS: DCERP Remediation Sites Listing
Drycleaner Environmental Response Program remediation sites.

Date of Government Version: 01/29/2018
Date Data Arrived at EDR: 01/30/2018
Date Made Active in Reports: 03/07/2018
Number of Days to Update: 36
Source: Department of Environment & Conservation
Telephone: 615-253-3876
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

DEL SHWS: Deleted State Hazardous Waste Sites
A listing of sites removed from the Promulgated Sites Listing.

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 07/08/2016
Date Made Active in Reports: 09/14/2016
Number of Days to Update: 68
Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

HIST UST: Underground Storage Tank Database
This database is no longer updated by the agency. It contains records and detail fields that the current UST database does not.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 17
Source: Department of Environment & Conservation
Telephone: 615-532-0945
Last EDR Contact: 05/14/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Liens Information
A listing of sites with environmental liens information.

Date of Government Version: 03/10/2015
Date Data Arrived at EDR: 04/07/2015
Date Made Active in Reports: 04/30/2015
Number of Days to Update: 23
Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

SPILLS: State Spills
A listing of spills locations.

Date of Government Version: 01/05/2015
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 02/10/2015
Number of Days to Update: 35

Source: Department of Environment & Conservation
Telephone: 615-532-0109
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/15/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/08/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/20/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 01/04/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 79

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 02/28/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 72

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 92

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 06/01/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/23/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

AIRS: Listing of Permitted Sources

A listing of permitted sources issued by the Division of Air Pollution Control.

Date of Government Version: 05/01/2018
Date Data Arrived at EDR: 05/03/2018
Date Made Active in Reports: 06/04/2018
Number of Days to Update: 32

Source: Department of Environment & Conservation
Telephone: 615-532-0545
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

DRYCLEANERS: Registered Facilities List
A list of all active registered drycleaner facilities, There may be some inactive facilities included.

Date of Government Version: 03/21/2018
Date Data Arrived at EDR: 04/18/2018
Date Made Active in Reports: 06/01/2018
Number of Days to Update: 44
Source: Dept. of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

LEAD CERT: Lead Safe Housing Registry
A listing of Tennessee properties that have achieved a lead safe designation.

Date of Government Version: 12/04/2017
Date Data Arrived at EDR: 12/06/2017
Date Made Active in Reports: 01/04/2018
Number of Days to Update: 29
Source: Department of Environment & Conservation
Telephone: 615-532-8011
Last EDR Contact: 06/01/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

NPDES: Permitted Facility Listing
A listing of permitted wastewater facilities.

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 29
Source: Department of Environment & Conservation
Telephone: 615-253-2245
Last EDR Contact: 05/23/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

VAPOR: Vapor Intrusion
A listing of sites that have a potential for vapor intrusion

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 29
Source: Department of Environment & Conservation
Telephone: 615-532-0930
Last EDR Contact: 04/26/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment and Conservation in Tennessee.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014
Number of Days to Update: 198

Source: Department of Environment and Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment and Conservation in Tennessee.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environment and Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/09/2018
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 01/12/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 02/13/2018
Number of Days to Update: 25

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 04/16/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/08/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Listing
Source: Department Of Human Services
Telephone: 615-313-4778

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Environment & Conservation
Telephone: 651-532-0052

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

JACKSON SOLAR FARM
WESTOVER ROAD
JACKSON, TN 38301

TARGET PROPERTY COORDINATES

Latitude (North):	35.609936 - 35° 36' 35.77''
Longitude (West):	88.916128 - 88° 54' 58.06''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	326442.9
UTM Y (Meters):	3942176.8
Elevation:	405 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5944486 WESTOVER, TN
Version Date:	2013
North Map:	5944430 ADAIR, TN
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

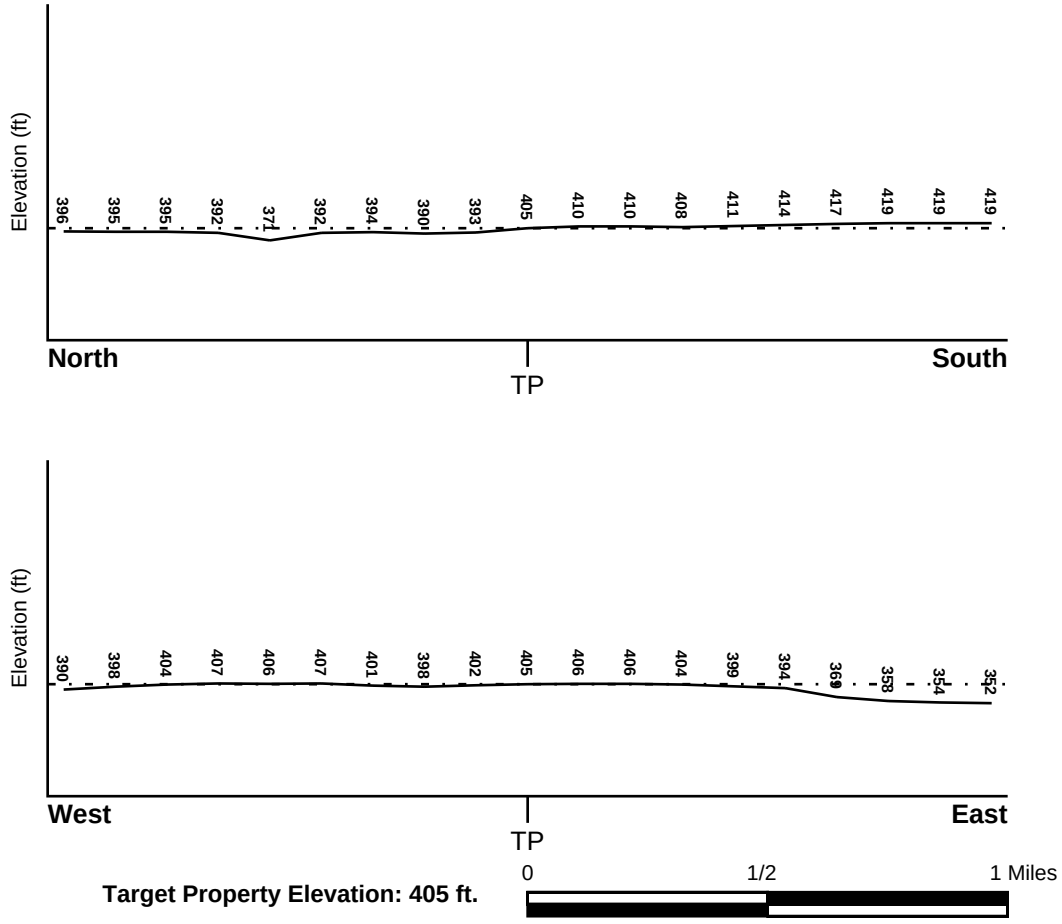
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
47113C0260E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
WESTOVER	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Tertiary
Series:	Eocene Claiborne Group
Code:	Te2 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	GRENADA
Soil Surface Texture:	silt loam
Hydrologic Group:	Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class:	Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
2	5 inches	21 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
3	21 inches	24 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
4	24 inches	42 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 6.00 Min: 4.50
5	42 inches	60 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 7.30 Min: 5.10

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: sandy loam

Surficial Soil Types: sandy loam

Shallow Soil Types: silty clay loam

Deeper Soil Types: loamy sand
loam
sandy loam

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

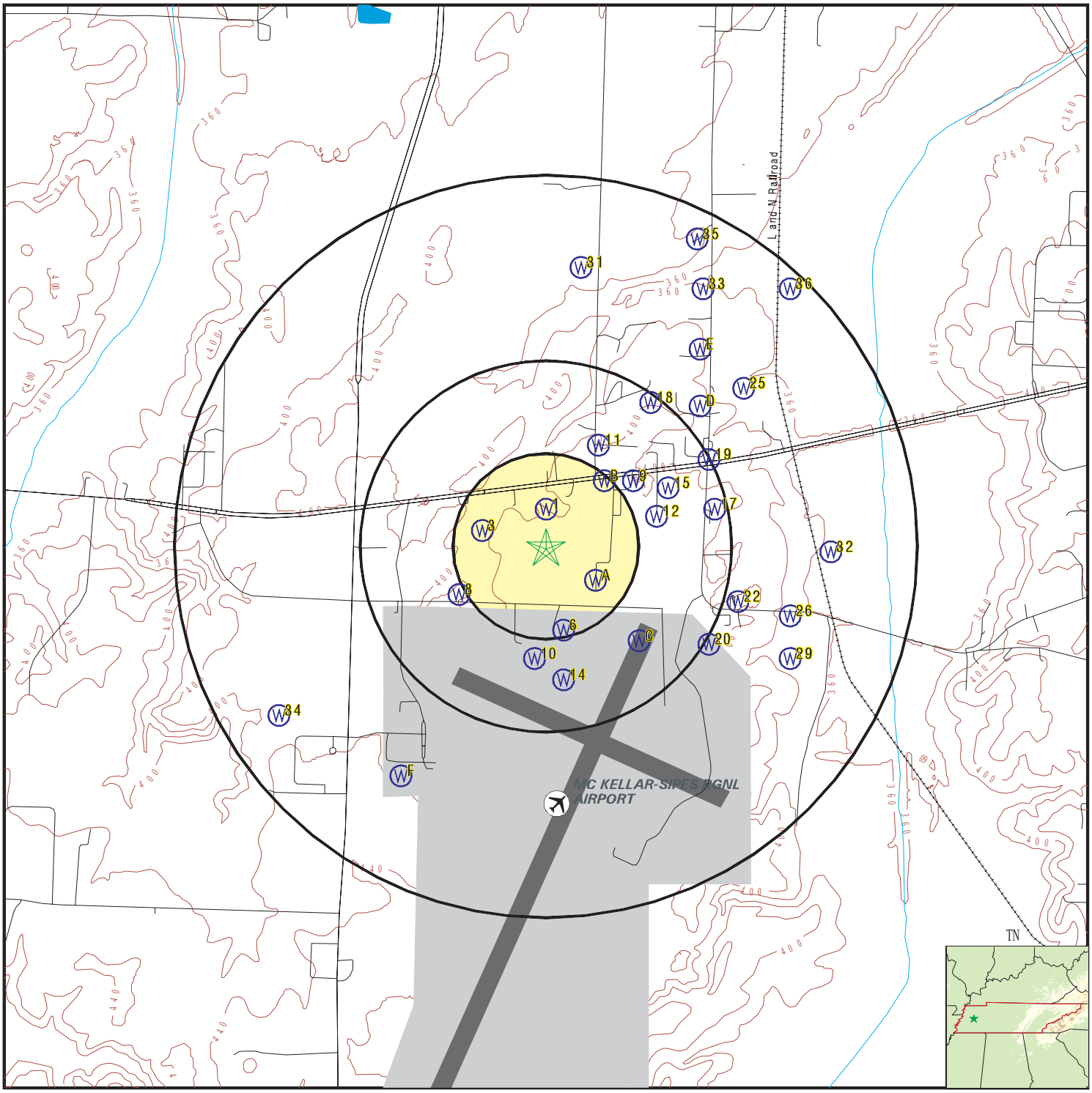
MAP ID	WELL ID	LOCATION FROM TP
1	TN6000000085302	0 - 1/8 Mile North
A2	TN6000000085142	1/8 - 1/4 Mile ESE
3	TN6000000222160	1/8 - 1/4 Mile WNW
A4	TN6000000084205	1/8 - 1/4 Mile SE
B5	TN6000000085471	1/8 - 1/4 Mile NE
6	TN6000000085408	1/8 - 1/4 Mile SSE
B7	TN6000000084098	1/4 - 1/2 Mile NE
8	TN6000000085094	1/4 - 1/2 Mile WSW
9	TN6000000086089	1/4 - 1/2 Mile NE
10	TN6000000084394	1/4 - 1/2 Mile South
11	TN6000000166276	1/4 - 1/2 Mile NNE
12	TN6000000181913	1/4 - 1/2 Mile ENE
C13	TN6000000085085	1/4 - 1/2 Mile SE
14	TN6000000084961	1/4 - 1/2 Mile South
15	TN6000000085585	1/4 - 1/2 Mile ENE
C16	TN6000000085084	1/4 - 1/2 Mile SE
17	TN6000000172772	1/4 - 1/2 Mile ENE
18	TN6000000086043	1/4 - 1/2 Mile NE
19	TN6000000086878	1/4 - 1/2 Mile ENE
20	TN6000000213473	1/2 - 1 Mile ESE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
D21	TN6000000173112	1/2 - 1 Mile NE
22	TN6000000086250	1/2 - 1 Mile ESE
D23	TN6000000194207	1/2 - 1 Mile NE
E24	TN6000000084197	1/2 - 1 Mile NE
25	TN6000000151477	1/2 - 1 Mile NE
26	TN6000000084181	1/2 - 1 Mile ESE
E27	TN6000000084695	1/2 - 1 Mile NE
F28	TN6000000084934	1/2 - 1 Mile SSW
29	TN6000000086570	1/2 - 1 Mile ESE
F30	TN6000000084866	1/2 - 1 Mile SW
31	TN6000000247704	1/2 - 1 Mile North
32	TN6000000084392	1/2 - 1 Mile East
33	TN6000000085310	1/2 - 1 Mile NNE
34	TN6000000161063	1/2 - 1 Mile WSW
35	TN6000000084028	1/2 - 1 Mile NNE
36	TN6000000084619	1/2 - 1 Mile NE

PHYSICAL SETTING SOURCE MAP - 05325073.2r



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

N

SITE NAME:	Jackson Solar Farm	CLIENT:	Barge Design Solutions
ADDRESS:	Westover Road Jackson TN 38301	CONTACT:	Chelsea Sach
LAT/LONG:	35.609936 / 88.916128	INQUIRY #:	05325073.2r
		DATE:	June 07, 2018 3:10 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **North** **0 - 1/8 Mile** **Lower**	**TN WELLS**	**TN6000000085302**

County nam:	MADISON
Well numbr:	11301430
Driller na:	EVANS J.
Addr line1:	Not Reported
License co:	441
Cmpltn dat:	16-DEC-73
Latitude:	353641
Cmpltn tot:	125
Cmpltn est:	15
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885458
Accuracy:	S
Casing fee:	120
Wbz:	95
Descriptio:	Residential
Driller re:	1407286
Site id:	TN6000000085302

A2 **ESE** **1/8 - 1/4 Mile** **Higher**	**TN WELLS**	**TN6000000085142**

County nam:	MADISON
Well numbr:	11301268
Driller na:	WILLIAMSON D
Addr line1:	Not Reported
License co:	101
Cmpltn dat:	28-SEP-72
Latitude:	353632
Cmpltn tot:	75
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885451
Accuracy:	S
Casing fee:	72
Wbz:	65
Descriptio:	Farm
Driller re:	1407126
Site id:	TN6000000085142

---

3 **WNW** **1/8 - 1/4 Mile** **Lower**	**TN WELLS**	**TN6000000222160**

County nam:	MADISON
Well numbr:	95002562
Driller na:	JACKSON TRACTOR
Addr line1:	HWY 70
License co:	565
Cmpltn dat:	02-JUN-95
Latitude:	353638
Cmpltn tot:	105
Cmpltn est:	10
Wlts quad :	0438SW2
Driller ta:	D0004046
Longitude:	885509
Accuracy:	F
Casing fee:	95
Wbz:	0
Descriptio:	Other
Driller re:	1287022
Site id:	TN6000000222160

A4
SE
1/8 - 1/4 Mile
Higher

TN WELLS **TN6000000084205**

County nam:	MADISON
Well numbr:	11300329
Driller na:	SHOE B
Addr line1:	Not Reported
License co:	101
Cmpltn dat:	20-AUG-65
Latitude:	353630
Cmpltn tot:	73
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885448
Accuracy:	S
Casing fee:	69
Wbz:	0
Descriptio:	Residential
Driller re:	1406189
Site id:	TN6000000084205

B5
NE
1/8 - 1/4 Mile
Higher

TN WELLS **TN6000000085471**

County nam:	MADISON
Well numbr:	11301600
Driller na:	K.H JEHOVA WITNESS
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	09-JUN-75
Latitude:	353644
Cmpltn tot:	105
Cmpltn est:	0
Wlts quad :	0438SW3

Driller ta:	Not Reported
Longitude:	885448
Accuracy:	S
Casing fee:	101
Wbz:	90
Descriptio:	Not Reported
Driller re:	1407455
Site id:	TN6000000085471

6
SSE **TN WELLS** **TN6000000085408**
1/8 - 1/4 Mile
Higher

County nam:	MADISON
Well numbr:	11301536
Driller na:	J&M COUNTY AIRPORT
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	24-JAN-75
Latitude:	353624
Cmpltn tot:	105
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885455
Accuracy:	S
Casing fee:	101
Wbz:	90
Descriptio:	Commercial
Driller re:	1407392
Site id:	TN6000000085408

B7
NE **TN WELLS** **TN6000000084098**
1/4 - 1/2 Mile
Higher

County nam:	MADISON
Well numbr:	11300221
Driller na:	JONES W
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	13-JUN-64
Latitude:	353646
Cmpltn tot:	103
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885448
Accuracy:	S
Casing fee:	103
Wbz:	70
Descriptio:	Residential
Driller re:	1406082
Site id:	TN6000000084098

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

8
WSW
1/4 - 1/2 Mile
Lower

TN WELLS **TN6000000085094**

County nam:	MADISON
Well numbr:	11301220
Driller na:	RICH B
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	12-DEC-72
Latitude:	353629
Cmpltn tot:	105
Cmpltn est:	0
Wlts quad :	0438SW2
Driller ta:	Not Reported
Longitude:	885513
Accuracy:	S
Casing fee:	101
Wbz:	60
Descriptio:	Not Reported
Driller re:	1407078
Site id:	TN6000000085094

9
NE
1/4 - 1/2 Mile
Lower

TN WELLS **TN6000000086089**

County nam:	MADISON
Well numbr:	11302231
Driller na:	GOLDEN CIRCLE IMPLEM
Addr line1:	Not Reported
License co:	441
Cmpltn dat:	28-FEB-80
Latitude:	353645
Cmpltn tot:	150
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885443
Accuracy:	S
Casing fee:	135
Wbz:	100
Descriptio:	Industrial
Driller re:	1408073
Site id:	TN6000000086089

10
South
1/4 - 1/2 Mile
Higher

TN WELLS **TN6000000084394**

County nam:	MADISON
Well numbr:	11300518
Driller na:	MCGOWEN
Addr line1:	Not Reported
License co:	395
Cmpltn dat:	18-JUL-67
Latitude:	353620
Cmpltn tot:	100
Cmpltn est:	0
Wlts quad :	0439NW6
Driller ta:	Not Reported
Longitude:	885500
Accuracy:	S
Casing fee:	0
Wbz:	85
Descriptio:	Residential
Driller re:	1406378
Site id:	TN6000000084394

11
NNE **TN WELLS** **TN6000000166276**
1/4 - 1/2 Mile
Lower

County nam:	MADISON
Well numbr:	20050455
Driller na:	FORD CONSTRUCTION CO.
Addr line1:	90 FIBERGLASS RD.
License co:	618
Cmpltn dat:	27-JAN-05
Latitude:	353650
Cmpltn tot:	195
Cmpltn est:	200
Wlts quad :	0438SW3
Driller ta:	D0069722
Longitude:	885449
Accuracy:	F
Casing fee:	155
Wbz:	60
Descriptio:	Industrial
Driller re:	1495617
Site id:	TN6000000166276

12
ENE **TN WELLS** **TN6000000181913**
1/4 - 1/2 Mile
Lower

County nam:	MADISON
Well numbr:	20081331
Driller na:	RANDOLPH NURSERY
Addr line1:	1650 AIRWAYS BLVD
License co:	565
Cmpltn dat:	17-MAR-08
Latitude:	353640
Cmpltn tot:	200
Cmpltn est:	150
Wlts quad :	0438SW3

Driller ta:	D0083284
Longitude:	885439
Accuracy:	F
Casing fee:	160
Wbz:	160
Descriptio:	Commercial
Driller re:	1512369
Site id:	TN6000000181913

C13
SE
1/4 - 1/2 Mile
Higher

TN WELLS **TN6000000085085**

County nam:	MADISON
Well numbr:	11301211
Driller na:	MARCH E
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	26-JAN-73
Latitude:	353622
Cmpltn tot:	142
Cmpltn est:	0
Wlts quad :	0439NW6
Driller ta:	Not Reported
Longitude:	885444
Accuracy:	S
Casing fee:	138
Wbz:	105
Descriptio:	Not Reported
Driller re:	1407069
Site id:	TN6000000085085

14
South
1/4 - 1/2 Mile
Higher

TN WELLS **TN6000000084961**

County nam:	MADISON
Well numbr:	11301087
Driller na:	MARCH O.
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	17-SEP-71
Latitude:	353617
Cmpltn tot:	140
Cmpltn est:	0
Wlts quad :	0439NW6
Driller ta:	Not Reported
Longitude:	885455
Accuracy:	S
Casing fee:	136
Wbz:	100
Descriptio:	Not Reported
Driller re:	1406945
Site id:	TN6000000084961

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

15
ENE
1/4 - 1/2 Mile
Lower

TN WELLS **TN6000000085585**

County nam:	MADISON
Well numbr:	11301722
Driller na:	UNKNOWN431
Addr line1:	Not Reported
License co:	740
Cmpltn dat:	Not Reported
Latitude:	353644
Cmpltn tot:	0
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885437
Accuracy:	S
Casing fee:	0
Wbz:	0
Descriptio:	Commercial
Driller re:	1407569
Site id:	TN6000000085585

C16
SE
1/4 - 1/2 Mile
Higher

TN WELLS **TN6000000085084**

County nam:	MADISON
Well numbr:	11301210
Driller na:	MARSHALL L P
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	26-JAN-73
Latitude:	353623
Cmpltn tot:	118
Cmpltn est:	0
Wlts quad :	0439NW6
Driller ta:	Not Reported
Longitude:	885440
Accuracy:	S
Casing fee:	114
Wbz:	90
Descriptio:	Not Reported
Driller re:	1407068
Site id:	TN6000000085084

17
ENE
1/4 - 1/2 Mile
Lower

TN WELLS **TN6000000172772**

County nam:	MADISON
Well numbr:	20062380
Driller na:	HUNT, LAMAR
Addr line1:	109 ANGLIN LANE
License co:	119
Cmpltn dat:	09-MAY-06
Latitude:	353641
Cmpltn tot:	115
Cmpltn est:	12
Wlts quad :	0438SW3
Driller ta:	D0073872
Longitude:	885429
Accuracy:	F
Casing fee:	105
Wbz:	115
Descriptio:	Residential
Driller re:	1502514
Site id:	TN6000000172772

18
NE
1/4 - 1/2 Mile
Lower

TN WELLS **TN6000000086043**

County nam:	MADISON
Well numbr:	11302185
Driller na:	CREWS B
Addr line1:	Not Reported
License co:	441
Cmpltn dat:	19-SEP-79
Latitude:	353656
Cmpltn tot:	135
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885440
Accuracy:	S
Casing fee:	125
Wbz:	100
Descriptio:	Residential
Driller re:	1408027
Site id:	TN6000000086043

19
ENE
1/4 - 1/2 Mile
Lower

TN WELLS **TN6000000086878**

County nam:	MADISON
Well numbr:	11303049
Driller na:	JONES, GRADY W
Addr line1:	HWY 70
License co:	345
Cmpltn dat:	16-JUL-86
Latitude:	353648
Cmpltn tot:	120
Cmpltn est:	0
Wlts quad :	0438SW3

Driller ta:	Not Reported
Longitude:	885430
Accuracy:	S
Casing fee:	110
Wbz:	0
Descriptio:	Commercial
Driller re:	1408862
Site id:	TN6000000086878

20
ESE **TN WELLS** **TN6000000213473**
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	93004296
Driller na:	SCULLY, TOM
Addr line1:	AIRWAY'S
License co:	565
Cmpltn dat:	04-OCT-93
Latitude:	353622
Cmpltn tot:	128
Cmpltn est:	18
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885430
Accuracy:	S
Casing fee:	118
Wbz:	0
Descriptio:	Residential
Driller re:	1278333
Site id:	TN6000000213473

D21
NE **TN WELLS** **TN6000000173112**
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	20062722
Driller na:	HINSON, RICK
Addr line1:	294 ANGLIN LANE
License co:	119
Cmpltn dat:	23-JUN-06
Latitude:	353655
Cmpltn tot:	145
Cmpltn est:	12
Wlts quad :	0438SW3
Driller ta:	D0073887
Longitude:	885433
Accuracy:	F
Casing fee:	135
Wbz:	145
Descriptio:	Residential
Driller re:	1502886
Site id:	TN6000000173112

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

22
ESE
1/2 - 1 Mile
Lower

TN WELLS **TN6000000086250**

County nam:	MADISON
Well numbr:	11302395
Driller na:	HASKINS W.L.
Addr line1:	Not Reported
License co:	441
Cmpltn dat:	02-FEB-82
Latitude:	353628
Cmpltn tot:	120
Cmpltn est:	18
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885425
Accuracy:	S
Casing fee:	100
Wbz:	70
Descriptio:	Residential
Driller re:	1408234
Site id:	TN6000000086250

D23
NE
1/2 - 1 Mile
Lower

TN WELLS **TN6000000194207**

County nam:	MADISON
Well numbr:	20121162
Driller na:	HELMS, JEFF
Addr line1:	236 ANGLIN R4D
License co:	565
Cmpltn dat:	11-JUN-12
Latitude:	353656
Cmpltn tot:	100
Cmpltn est:	11
Wlts quad :	0438SW3
Driller ta:	D0097029
Longitude:	885430
Accuracy:	S
Casing fee:	90
Wbz:	0
Descriptio:	Commercial
Driller re:	1525717
Site id:	TN6000000194207

E24
NE
1/2 - 1 Mile
Lower

TN WELLS **TN6000000084197**

County nam:	MADISON
Well numbr:	11300321
Driller na:	ANGLIN J
Addr line1:	Not Reported
License co:	101
Cmpltn dat:	10-SEP-65
Latitude:	353703
Cmpltn tot:	47
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885432
Accuracy:	S
Casing fee:	43
Wbz:	0
Descriptio:	Residential
Driller re:	1406181
Site id:	TN6000000084197

25
NE **TN WELLS** **TN6000000151477**
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	20013537
Driller na:	FORD CONST
Addr line1:	FIBERGLASS RD
License co:	703
Cmpltn dat:	23-JUL-01
Latitude:	353658
Cmpltn tot:	180
Cmpltn est:	100
Wlts quad :	0438SW2
Driller ta:	D0051479
Longitude:	885424
Accuracy:	F
Casing fee:	160
Wbz:	0
Descriptio:	Industrial
Driller re:	1479616
Site id:	TN6000000151477

26
ESE **TN WELLS** **TN6000000084181**
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	11300305
Driller na:	CHESHIRE
Addr line1:	Not Reported
License co:	101
Cmpltn dat:	25-JUN-65
Latitude:	353626
Cmpltn tot:	38
Cmpltn est:	0
Wlts quad :	0438SW3

Driller ta:	Not Reported
Longitude:	885416
Accuracy:	S
Casing fee:	34
Wbz:	0
Descriptio:	Industrial
Driller re:	1406165
Site id:	TN6000000084181

E27
NE
1/2 - 1 Mile
Lower

TN WELLS **TN6000000084695**

County nam:	MADISON
Well numbr:	11300821
Driller na:	FREEMAN M
Addr line1:	Not Reported
License co:	52
Cmpltn dat:	08-APR-70
Latitude:	353704
Cmpltn tot:	100
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885431
Accuracy:	S
Casing fee:	96
Wbz:	80
Descriptio:	Not Reported
Driller re:	1406679
Site id:	TN6000000084695

F28
SSW
1/2 - 1 Mile
Higher

TN WELLS **TN6000000084934**

County nam:	MADISON
Well numbr:	11301060
Driller na:	J & M COUNTY AIRPORT
Addr line1:	Not Reported
License co:	466
Cmpltn dat:	15-FEB-71
Latitude:	353604
Cmpltn tot:	145
Cmpltn est:	100
Wlts quad :	0438SW2
Driller ta:	Not Reported
Longitude:	885521
Accuracy:	S
Casing fee:	145
Wbz:	60
Descriptio:	Commercial
Driller re:	1406918
Site id:	TN6000000084934

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
29 **ESE** **1/2 - 1 Mile** **Lower**		**TN WELLS**	**TN6000000086570**
County nam:	MADISON		
Well numbr:	11302740		
Driller na:	SCULLEY'S GOLF COURS		
Addr line1:	OLD #70		
License co:	441		
Cmpltn dat:	07-SEP-84		
Latitude:	353620		
Cmpltn tot:	120		
Cmpltn est:	35		
Wlts quad :	0438SW3		
Driller ta:	Not Reported		
Longitude:	885416		
Accuracy:	F		
Casing fee:	90		
Wbz:	80		
Descriptio:	Irrigation		
Driller re:	1408554		
Site id:	TN6000000086570		
F30 **SW** **1/2 - 1 Mile** **Higher**		**TN WELLS**	**TN6000000084866**
County nam:	MADISON		
Well numbr:	11300992		
Driller na:	JACKSON-MADISON		
Addr line1:	Not Reported		
License co:	29		
Cmpltn dat:	01-APR-71		
Latitude:	353603		
Cmpltn tot:	156		
Cmpltn est:	200		
Wlts quad :	0438SW2		
Driller ta:	Not Reported		
Longitude:	885525		
Accuracy:	S		
Casing fee:	130		
Wbz:	130		
Descriptio:	Industrial		
Driller re:	1406850		
Site id:	TN6000000084866		
31 **North** **1/2 - 1 Mile** **Lower**		**TN WELLS**	**TN6000000247704**

County nam:	MADISON
Well numbr:	99005279
Driller na:	FISCHER LIME AND CEM
Addr line1:	FIBERGLASS RD
License co:	565
Cmpltn dat:	19-OCT-99
Latitude:	353715
Cmpltn tot:	180
Cmpltn est:	60
Wlts quad :	0438SW3
Driller ta:	D0041693
Longitude:	885452
Accuracy:	F
Casing fee:	160
Wbz:	0
Descriptio:	Industrial
Driller re:	1312568
Site id:	TN6000000247704

32
East **TN WELLS** **TN6000000084392**
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	11300516
Driller na:	MARSHEL G
Addr line1:	Not Reported
License co:	395
Cmpltn dat:	06-JUN-67
Latitude:	353635
Cmpltn tot:	100
Cmpltn est:	0
Wlts quad :	0439NW6
Driller ta:	Not Reported
Longitude:	885409
Accuracy:	S
Casing fee:	100
Wbz:	80
Descriptio:	Residential
Driller re:	1406376
Site id:	TN6000000084392

33
NNE **TN WELLS** **TN6000000085310**
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	11301438
Driller na:	SHOE A.L.
Addr line1:	Not Reported
License co:	441
Cmpltn dat:	09-MAY-73
Latitude:	353712
Cmpltn tot:	95
Cmpltn est:	15
Wlts quad :	0438SW3

Driller ta:	Not Reported
Longitude:	885431
Accuracy:	S
Casing fee:	90
Wbz:	70
Descriptio:	Residential
Driller re:	1407294
Site id:	TN6000000085310

34
WSW **TN WELLS** **TN6000000161063**
1/2 - 1 Mile
Higher

County nam:	MADISON
Well numbr:	20033353
Driller na:	H & M CONSTRUCTION
Addr line1:	SMITH LANE
License co:	597
Cmpltn dat:	26-AUG-03
Latitude:	353612
Cmpltn tot:	162
Cmpltn est:	250
Wlts quad :	0438SW2
Driller ta:	D0057443
Longitude:	885544
Accuracy:	F
Casing fee:	122
Wbz:	120
Descriptio:	Commercial
Driller re:	1490056
Site id:	TN6000000161063

35
NNE **TN WELLS** **TN6000000084028**
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	11300151
Driller na:	BOOKER R
Addr line1:	Not Reported
License co:	101
Cmpltn dat:	Not Reported
Latitude:	353719
Cmpltn tot:	63
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885432
Accuracy:	S
Casing fee:	58
Wbz:	0
Descriptio:	Residential
Driller re:	1406012
Site id:	TN6000000084028

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
TN WELLS	**TN6000000084619**

36
NE
1/2 - 1 Mile
Lower

County nam:	MADISON
Well numbr:	11300745
Driller na:	WOOD R
Addr line1:	Not Reported
License co:	215
Cmpltn dat:	18-FEB-69
Latitude:	353712
Cmpltn tot:	110
Cmpltn est:	0
Wlts quad :	0438SW3
Driller ta:	Not Reported
Longitude:	885416
Accuracy:	S
Casing fee:	0
Wbz:	0
Descriptio:	Residential
Driller re:	1406603
Site id:	TN6000000084619

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: TN Radon

Radon Test Results

County	Total Sites	Avg	Max	<4 pCi/L	4-10 pCi/L	10-20 pCi/L	20-50 pCi/L	50-100 pCi/L	>100 pCi/L
MADISON	20	1.5	4.6	19	1	0	0	0	0

Federal EPA Radon Zone for MADISON County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 38301

Number of sites tested: 5

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.040 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Environment & Conservation
Telephone: 651-532-0052

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

County Water Wells in Tennessee
Source: Department of Environment and Conservation
Telephone: 615-532-0191
Water well locations for the entire state.

OTHER STATE DATABASE INFORMATION

RADON

State Database: TN Radon
Source: Department of Environment & Conservation
Telephone: 615-299-9725
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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