

PMC-ND
(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: NREL

STATE: CO

PROJECT TITLE: Flatirons CART 3 Turbine Decommission; NEPA Tracking No. 20-037

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-20-037a	GO28308

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

DOE/EA 1914 (NREL NWTC)	Final Site-Wide Environmental Assessment of the Department of Energy's National Wind Technology Center at the National Renewable Energy Laboratory
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Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) proposes to decommission the CART3 wind turbine located at Site 4.2 at the NREL Flatirons Campus (FC) in Boulder, Colorado. The purpose of the proposed project is to entirely disassemble the wind turbine and associated components, including the foundation and other underground infrastructure, and surplus certain components for use on the CART2 wind turbine located at Site 4.3.

CART3 was installed in the late 1990s and used for various types of wind turbine research until June 2020. Research on the turbine has concluded due to a recent gearbox failure. The blades were removed while investigating the extent of damage due to this failure, and the proposed decommissioning would proceed in two phases: Phase 1) removal of the nacelle, turbine tower, and meteorological (met) tower, and; Phase 2) recycling of the turbine tower, removal of the concrete base, and removal of other in-ground infrastructure, such as electrical conduits.

The second and final phase of decommissioning is still being designed, so there is insufficient data available at this time to complete a thorough review of the anticipated activities and any potential associated impacts. Phase 2 will be reviewed once specific details for foundation and underground infrastructure removal have been determined. This NEPA Determination applies only to Phase 1 activities as identified below.

Phase 1 would involve 3 to 4 crane lifts using a hydraulic crane (subcontracted through RMS Cranes) to lower the following structures to the ground for disassembly, storage and/or removal:

- The CART3 nacelle. Prior to scrapping, the gearbox and other fluid-containing subcomponents would be drained and fluids captured. Components within the nacelle to be used as replacement parts for the CART2 wind turbine would be further disassembled for long term storage in shipping containers at Sites 4.2 and 4.3.
- The CART3 tower. The tower would be temporarily stored onsite until Phase 2, during which it would be disassembled and recycled.
- The CART 3 met tower. The met tower would be disassembled and placed in outdoor storage onsite. Guy wires and hardware would be placed in shipping containers at Site 4.2. The concrete base and anchors would be abandoned in place.

The expected duration of this work is 2 to 3 weeks. Phase 1 is scheduled to be completed in early Fall 2020. Prior to beginning Phase 2, additional information regarding the proposed final decommissioning activities would be submitted for further NEPA review. No resources would be committed for Phase 2 until further NEPA review is complete.

All work would be performed by NREL staff, with contracted support from RMS Cranes. Individuals working on this project could be exposed to physical and electrical hazards. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, and monitoring, as well as obtaining a Safe Work Permit. Additional policies and procedures would be implemented as necessary if new health and safety risks are identified.

The types and approximate amounts of fluids that would be drained from nacelle components would include: 284 liters (L) of Mobil SHC 629 gearbox oil; 57 L of gear oil in yaw drive gear box; 12 L of yaw brake hydraulic oil, and; 2 L of brake fluid (mineral oil). These are not classified as hazardous materials. All fluids would be properly recycled by an approved NREL contractor.

Minor ground disturbance resulting from Phase 1 activities would occur in previously developed areas such as the crane pad, access road, and graveled space near the Site 4.2 data center. Crane and vehicle operations would disturb vegetation surrounding the turbine tower. An area designated as ancient soils located roughly 140 feet from the CART3 project area would be avoided. All ground disturbing activities would be conducted in accordance with existing NREL policies and procedures that guide such work. Air emissions resulting from ground disturbing activities and equipment operation would be de minimis.

Phase 1 activities would not affect cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands, and no permits would be required. A migratory bird nesting survey shall be completed if project activities involving ground disturbance occur between March 15 and September 15. If nests or eggs are found, the area would be cordoned off with a proper buffer until nestlings fledge.

Based on the review of the project, DOE has determined that Phase 1 fits within the scope of activities that were analyzed in Section 3.4.3.2 "Increasing and Enhancing Research and Support Capabilities (Zone 1 and Zone 2)" of the 2014 Final Site-Wide Environmental Assessment of the NREL NWTC (DOE/EA-1914). DOE has determined that Phase 1 of the project is bound by the environmental impact analysis contained in this EA and its respective FONSI, and no further NEPA review is required.

NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

Phase 1, which includes removal of the nacelle, turbine tower, and meteorological tower.

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

Phase 2, which includes recycling of the turbine tower, removal of the concrete base, and removal of other in-ground infrastructure.

Notes:

NREL

Whitney Doss Donoghue, 9/18/2020

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

 Electronically Signed By: Kristin Kerwin

NEPA Compliance Officer

Date: 9/18/2020

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
 Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____
Field Office Manager

Date: _____