REVISED DRAFT
EXCAVATION WORK PLAN
FOR TREE REMOVAL ACTIVITIES

Niagara Falls Air Reserve Station Niagara County
Niagara Falls, New York

CONTRACT NO. W912DR-20-D-0012

NYSDEC Registry Site #: 932106
USEPA RCRA ID #: NY0570024273

Prepared for:

Air Force Civil Engineer Center
San Antonio, Texas

and

United States Army Corp of Engineers, Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201

Prepared by:
Tidewater Inc.
6625 Selnick Drive, Suite A
Elkridge, MD 21075-6220, USA

November 2023

Table of Contents

List of Tables

Attachment A: Trees Scheduled for Removal

Acronyms and Abbreviations

APP	Accident Prevention Plan
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
DER	Department of Environmental Remediation
EAB	Emerald Ash Borer
EWP	Excavation Work Plan
µg/m^3	micrograms per cubic meter
NFARS	Niagara Falls Air Reserve Station
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	polychlorinated biphenyl
PFAS	per- and polyfluorinated alkyl substances
PID	photo ionization detector
PM-10	particulate matter less than 10 micrometers in size
ppm	parts per million
SMP	Site Management Plan
SVOC	semi-volatile organic compounds
SWMU	solid waste management unit
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
VOC	volatile organic compounds

1.0 Introduction

This Excavation Work Plan (EWP) is intended to supplement Section 3.3.1 of the Site Management Plan (SMP; United States Department of Air Force, 2021) and applies to all stump removal activities planned within the soil cover at the Site 3 Landfill at the Niagara Falls Air Reserve Station (NFARS). This EWP has been prepared substantially in accordance with New York State Department of Environmental Conservation (NYSDEC) Publication Division of Environmental Remediation (DER) -10 Chapter 6.2.1 (b)(1).

Tidewater has been contracted by the United States Army Corps of Engineers (USACE) Baltimore District under Contract No. W912DR-20-D-0012 to conduct removal and disposal of approximately 50 trees within the improved grounds at the NFARS Site 3 Landfill. This includes removal of all tree stumps using a stump grinder to a maximum of six (6) inches below ground surface (bgs). During stump removal activities, work will be terminated if contamination or landfill waste is observed. Also, community air monitoring will be conducted during stump grinding activities. Attachment A includes a figure and table documenting the trees scheduled for removal. Section b(5) of the Accident Prevention Plan (APP) includes a description of the two phases of work associated with this project: (1) Phase I – Tree Removal, Disposal, and Community Air Monitoring Plan (CAMP) Air Monitoring and (2) Phase II – Site Restoration.

2.0 Notification

At least 15 days prior to the start of stump removal activities at the Site 3 Landfill, a written notification will be provided to the NYSDEC DER.

3.0 Screening Methods

Visual, olfactory, and instrument-based (e.g., photoionization detector [PID]) material screening will be performed by the Tidewater team during all stump grinding activities. Based on the depth of stump grinding (a maximum of 6 inches bgs), Tidewater does not anticipate encountering waste during intrusive activities (i.e., stump grinding). If waste material is encountered at any time during onsite operations, grinding at that location will be halted, AFCEC/USACE will be immediately notified, and the landfill cover will be restored to the extent practicable using material specified in Section 8.0.

The Tidewater team will load uncontaminated stump mulch into trucks for off-site disposal. Further discussion of off-site disposal of materials and on-site reuse is provided in Section 5.0.

The Tidewater team will not stockpile stump mulch as it will be immediately loaded into trucks of offsite disposal.

4.0 Materials Excavation and Loadout

The Tidewater team will oversee all invasive work and the stump grinding and load-out of all stump mulch material. Access to the installation is restricted from the public. The Tidewater team will restrict access during stump grinding to qualified personnel. Because of the nature of the site and the depth of stump grinding activities to (up to 6 inches bgs), the Tidewater team does not anticipate the presence of utilities on the site. Even so, Tidewater will contact New York 811 at least two working days but no more than 10 working days before beginning field operations.

In addition, the Tidewater team will be conducting stump grinding in such a way that personnel and equipment will avoid contact with potentially contaminated material. We do not anticipate equipment will coming into contact with contaminated material due to the grinding depth of up to 6 inches bgs. The landfill cover is up to 2 feet thick and is not anticipated to be breached during these activities. Section 3.0 discusses actions that will be taken if potentially contaminated material is encountered.

Because the Tidewater team will be conducting stump grinding in a way that prevents contact with contaminated waste in the landfill there will not be a dedicated decontamination zone. The Tidewater team will ensure all loaded vehicles leaving the site will be appropriately lined, tarped, and securely covered in accordance with appropriate Federal, State, local, and New York State Department of Transportation requirements (and all other applicable transportation requirements).

Smaller equipment would be used during this project with tires/tracks that are designed to minimize impacts to the landfill cover. If necessary, mats will be used to further dissipate the weight of machines on the landfill cover depending on site conditions. The Tidewater team will ensure truck loading will be performed in a manner to minimize spillage and traffic disturbance. The site will be accessed from Kinross Street and equipment will be staged outside of the landfill site boundary. Due to barricades at the intersection of Kinross Street and Utzig Drive, no vehicular traffic other than that associated with this project is anticipated.

The Tidewater team will perform daily inspections where vehicles enter or exit the work site for evidence of off-site soil tracking and roads will be cleaned daily to prevent sediment transport. Smaller equipment (e.g., skid steers) will be transported to and from the site with trailers. Larger equipment (e.g., chipper trucks) will not be driven on the landfill cover unless site conditions permit access without rutting. At the end of each day, road surfaces will be cleared of debris using blowers. If required, equipment can be pressure washed onsite to prevent off-site soil tracking. The Tidewater team will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive activities.

Materials Transported Off-Site: All transport of materials will be performed by Davey Tree (USDOT# 93861) in accordance with appropriate local, State, and Federal regulations, including 6 New York Codes, Rules, and Regulations (NYCRR) Part 364, as appropriate. Haulers will be appropriately licensed and trucks properly placarded.

Chipped material will be transported in using chip trucks. All material transported by trucks exiting the site will be secured. Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials.

The Tidewater team will ensure that site operations do not disturb off-site operations by queuing trucks on-site to minimize off-site disturbance. Off-site queuing and/or idling will be prohibited.

5.0 Material Disposal

Waste and debris will be transported and disposed of at an approved offsite disposal facility, in accordance with NYSDEC regulations for trees infected with the Emerald Ash Borer (EAB). The Tidewater Team has identified one facility for waste material that is located within 50 miles of NFARS. Chipped material (including stump mulch) and logs will be taken to Good Earth Organics in Lancaster, NY (NYSDEC Permit No. 15Y02). Material will be chipped to less than one inch in at least two dimensions or heat treated, consistent with NYSDEC recommendations, prior to beneficial use as

compost. . The weight of the disposed material shall be provided to the Government at project completion.

6.0 Material Reuse On-Site

The Tidewater team will not reuse materials from stump grinding operations. Tidewater will use cover material described in Section 8.0 to establish the original grade of the landfill cover and will comply with the requirements of NYSDEC DER-10 Section 5.4(e)4. No other solid waste derived from clearing and grubbing of the site will be reused.

7.0 Fluids Management

The Tidewater team will not be removing liquids from the site during stump grinding activities.

8.0 Cover System Restoration

After completion of stump grinding, the Tidewater team will restore the landfill cover to match existing grade through the application of topsoil cover. While efforts to limit rutting in the work area will be made, any ruts on the cap and adjacent areas because of this project will be repaired daily.

Topsoil will be obtained from Adams Nursery and Garden Center (Lancaster, NY) and will be free of unacceptable material and stones larger than 2-inches. Topsoil will be substantially free from loam, other organic matter, and harmful substances. Cover soil/topsoil shall have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. Cover soil/topsoil shall have a maximum particle size of 2-inches, not less than 20 percent fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay size material. All topsoil placed will be in accordance with NYSDEC DER-10 Section 5.4(e)4 and discussed further in Section 9.0.

To ensure that the landfill cover remains intact, seeding of grass will be performed to re-establish a permanent cover in such a manner to prevent contact with landfill contaminants. The following grass types shall be used in seeding: 40-percent Kentucky bluegrass, 40 percent tall fescue, and 20 percent annual ryegrass (Lolium multiflorum). HydroCover™ will be placed on all seeded stump renovation areas to stabilize the areas and promote grass growth.

Tidewater warranties the restoration areas for 1 year after project completion. The Tidewater team will supply a backflow prevention device to access water via fire hydrant and coordinate with the Base Fire Department on a daily basis when water is needed. Tidewater's subcontractor, Davey Tree, will apply water during the restoration warranty period such that dry weather/drought conditions do not result in the death of the grass. This will necessitate routine checking and watering for the 1-year period.

If dead grass in restored areas occurs within the 1-year warranty period, additional seed mixture and HydroCover™ identified above will be placed in the affected area.

9.0 Backfill From Off-Site Sources

All materials imported to the site by the Tidewater team as backfill will adhere to the backfill requirements provided in DER-10 Section 5.4 (see Section 8.0) and will be in compliance with the provisions of this EWP prior to receipt at the site. Samples will be obtained at the frequency specified by DER-10 Table 5.4(e)10 and in compliance with unrestricted use concentrations (DER-10 Appendix 5).

Tidewater estimates that less than 50 cubic yards of topsoil is needed; therefore, one discrete sample will be collected for volatile organic compounds (VOC) analysis and one composite sample will be collected for semi-volatile organic compounds (SVOC), inorganics, polychlorinated biphenyls (PCBs)/pesticides, per- and polyfluorinated alkyl substances (PFAS), and 1,4-dioxane. Samples will be collected following USACE approval of this EWP.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site. All imported soils will at a minimum meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d) for the particular land use, protection of groundwater, and protection of ecological resources criteria applicable to the Site 3 solid waste management unit (SWMU).

Tidewater estimates approximately 25-30 cubic yards of backfill material will be required to backfill stumps. Trucks entering the site with imported soils will be securely covered with tight fitting covers. The backfill material will be placed on a paved surface on Kinross Street and transported to the restoration areas using skid-steers. All backfill material will be used or removed from the paved area at the end of each day.

10.0 Stormwater Pollution Prevention

The stump removal being performed by the Tidewater team will be minor, occurring only in immediate vicinity of removed trees (up to 6 inches bgs and the diameter of the stumps). Therefore, a Stormwater Pollution Prevention Plan (SWPPP) is not needed because the disturbed area is significantly less than 1 acre and is considered routine maintenance of the landfill cover. That said, restored areas will be seeded with seed mixture specified in Section 8.0. HydroCover™ mulching granules will be placed on all seeded stump renovation areas, providing soil stabilization and stormwater protection.

11.0 Contingency Plan

While it is not anticipated, if the Tidewater team encounters unexpected, contaminated media or previously unidentified contaminant sources during stump grinding, site operations will be suspended and the AFCEC and USACE will be promptly notified. AFCEC/USACE will notify NYSDEC. Once the NYSDEC is contacted, the Tidewater Team will coordinate a plan to remediate and prevent further contamination prior to resuming site operations.

12.0 Community Air Monitoring Plan

This CAMP was developed for activities at the NFARS, located in Niagara Falls, New York. The purpose of the plan is to protect the community from any potential airborne releases that could result from field activities associated with tree removal activities at the NFARS Site 3 Landfill. It has been prepared in accordance with the NYSDEC Program Policy DER-10/Technical Guidance for Site Investigation and Remediation, dated May 3, 2010.

DER-10 (NYSDEC, 2010) includes a Generic CAMP from the New York State Department of Health (NYSDOH) as Appendix 1A. The generic CAMP is sufficient to cover NFARS and site-specific details and requirements are included in this CAMP. The CAMP is intended to protect off-site receptors and those not directly involved with tree removal activities from potential airborne contaminant releases that could result directly from site and landfill disturbance. For this reason, CAMP monitoring is limited to the perimeter of the work area and is in addition to any monitoring specified in the Site Safety and Health

Plan (SSHP) to protect on-site workers in the investigative work zone.

NFARS is located in the Towns of Niagara and Wheatfield, Niagara County, New York, approximately 15 miles north of Buffalo. The installation adjoins the Niagara Falls International Airport to the north, and both encompass approximately 958 total acres. NFARS and Niagara Falls International Airport are bounded by Lockport Road to the north, Porter Road to the south, Packard Road to the west, and Walmore Road to the east. The NFARS installation and Niagara Falls International Airport are bisected by Cayuga Creek with NFARS encompassing 547 acres on the north side of the Creek. The Site 3 Landfill is located in the Northeastern portion of NFARS.

The overall objectives of this document are as follows:

- Prevent exposure to the public from potential contaminant releases resulting from on-site investigation activities.
- Specify monitoring and documentation requirements.
- Provide contingency details.

This plan is organized as follows:

- Section 12.1, VOC Monitoring and Particulate Monitoring – describes monitoring locations, frequency, and methodology for VOC and particulate matter, as well as meteorological monitoring.
- Section 12.2, Response Levels and Actions – describes response levels and actions based on VOC and particulate monitoring results.
- Section 12.3, Documentation – describes documentation required during monitoring activities.

12.1 Monitoring

Monitoring at the site will include VOCs and particulates monitoring with instrumentation, visual monitoring of fugitive dust migration, and monitoring of meteorological conditions. Monitoring locations, frequency, and methodology for VOCs and particulate matter are described in Sections 2.1 and 2.2, respectively. Meteorological monitoring is described in Section 2.3.

VOC Monitoring - VOC monitoring will take place according to the specifications described in this section. Locations will vary according to wind direction, and frequency will be determined by the type of activity being performed at the site. Table 12-1 summarizes the activities applicable to continuous or to periodic monitoring.

Table 12-1. Applicability of Continuous or Periodic Monitoring.

Type of Monitoring	**Applicable Activities**
Continuous Monitoring	Intrusive • Stump grinding activities

The general parameters for VOC sampling are outlined in Table 12-2 below. The upwind location will be determined at the start of each workday and a VOC reading taken. If the wind direction changes, another reading will be taken at the new upwind location to establish baseline levels. The downwind measurement will be taken at the downwind perimeter of the work area. If work activities are ground intrusive, continuous monitoring will be required. If they are non-intrusive, periodic monitoring will be conducted.

Table 12-2. VOC Monitoring.

Location	Frequency
Upwind of work area	• Start of each day • Additional measurements if wind directions changes or if background levels need to be re-established
Downwind perimeter of the immediate work area	• Continuous for stump grinding activities

VOC readings will be taken with a PID. The PID will be calibrated on a daily basis prior to use with an appropriate surrogate. The PID will be capable of running 15-minute (min) running average concentrations.

Particulate Monitoring - Particulate monitoring will take place on a continuous basis, and locations will vary according to wind direction. Refer to Table 12-3 for locations and frequency. The upwind location will be determined at the start of each workday. If wind direction changes, the upwind monitoring station will be changed to a new location to re-establish baseline levels. The downwind location will change in accordance with changes in the upwind location.

Table 12-3. Particulate Monitoring.

Location	Frequency
Upwind perimeter of exclusion zone	• Continuously
Downwind perimeter of exclusion zone	• Continuously

Particulate readings will be taken with an instrument that can measure particulate matter less than 10 micrometers in size (PM-10) and be capable of real-time monitoring. PM-10 is measured in micrograms per cubic meter ($\mu g/m^3$). The particulate monitoring equipment will have an audible alarm to indicate when action levels have been exceeded. In addition to particulate monitoring with instrumentation, fugitive dust migration will be visually assessed during all work activities. Further detail on fugitive dust and particulate monitoring can be found in Appendix 1B of DER-10 (NYSDEC, 2010)

Meteorological Monitoring - Meteorological monitoring will take place on a daily basis. It will consist of temperature, wind direction, and general atmospheric conditions (e.g., rain, snow). These parameters will be evaluated each morning and recorded in the field documentation. Wind direction will be monitored throughout the day so that upwind and downwind sampling locations can be adjusted, if necessary.

12.2 Response Levels and Actions

This section describes the VOC and particulate monitoring response levels and actions.

VOCs - VOC readings obtained from the monitoring described in Section 2.1 should be evaluated based on the criteria in Table 12-4 to determine the appropriate response actions. The resulting readings should be in 15-min averages for comparison purposes.

Table 12-4. VOC Response Levels and Actions.

Response Levels	Actions
Total VOCs at downwind perimeter of work area exceed upwind background levels by 5 parts per million (ppm) (15-minute average).	• Work activities temporarily halted and monitoring continued. • If instantaneous readings readily drop below 5 ppm over background levels, work activities can resume.
Total VOCs at downwind perimeter of work area persistently exceed background levels by between 5 ppm and 25 ppm (15-minute average)	• Work activities halted, source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. • After this occurs, work can continue if total VOCs 200 feet downwind of exclusion zone or ½ the distance to nearest potential receptor or residential/commercial structure, whichever is less, is below 5 ppm (15-minute average); note that this distance cannot be less than 20 feet.
Total VOCs at the perimeter of work area exceed 25 ppm (15-minute average)	• Activities must be shut down

Particulate Matter - Particulate matter readings obtained from the monitoring described in Section 12.1 should be evaluated based on the criteria in Table 12-5 to determine the appropriate response action. The resulting readings will be conducted in 15-minute averages for comparison purposes. Further detail on dust suppression techniques can be found in Appendix 1B of DER-10 (NYSDEC, 2010).

Table 12-5. Particulate Response Levels and Actions.

Response Levels	Actions
PM-10 particulate level at downwind perimeter 100 micrograms per cubic meter ($\mu g/m^3$) greater than upwind perimeter for 15-minute period.	• Employ dust suppression techniques (see Section 14.0).
Airborne dust observed leaving the work area	• Employ dust suppression techniques.
After implementation of dust suppression techniques, PM-10 particulate level at downwind perimeter over 150 $\mu g/m^3$ greater than upwind perimeter.	• Work must be stopped and activities re-evaluated • Work can resume if measures and controls reduce downwind PM-10 concentrations to within 150 $\mu g/m^3$ of upwind level and visible dust migration is prevented.

12.3 Documentation

During the implementation of the CAMP, the following information will be recorded and maintained:

- Climatological conditions including temperature, wind direction, and other atmospheric conditions (e.g., rain, snow) along with the date and time of observations.
- Calibration of field instruments.
- VOC 15-minute average readings as well as instantaneous readings, if necessary.
- All particulate readings.
- Any exceedances to the response levels and the respective corrective actions.

VOC 15-minute average readings will be made available for review by the State (NYSDEC and NYSDOH), if requested. All particulate readings will made available for review by the State (NYSDEC

and NYSDOH) and County Health personnel, if requested.

13.0 Odor Control Plan

The Tidewater team will be performing CAMP air monitoring for particulate and VOC concentration. If nuisance odors are identified at the installation boundary, or if odor complaints are received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until nuisance odors are controlled. AFCEC/USACE will be notified of all odor events and/or odor complaints, and AFCEC/USACE will notify NYSDEC and NYSDOH. Primary measures to be implemented to control odors, if necessary, include shrouding open stump grinding areas with tarps and covers, and direct load-out of tree stump grindings to trucks for off-site disposal.

14.0 Dust Control

The Tidewater team will suppress dust from stump grinding activities to the greatest extent practicable. If necessary, dust suppression will be achieved using an on-site water truck for wetting roads, stump grindings, and stockpiles as needed. The Tidewater team will not be clearing and grubbing large areas that would expose un-vegetated soils vulnerable to dust production. Trucks will be restricted to paved roads to the greatest extent possible to avoid additional site disturbance.

15.0 References

New York State Department of Environmental Conservation. 2010. *DER-10/Technical Guidance for Site Investigation and Remediation.* May.

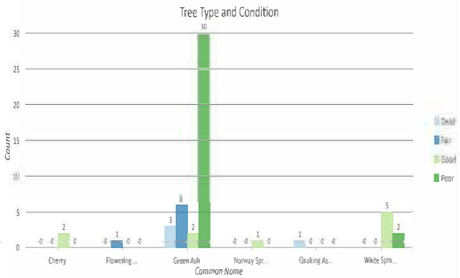
United State Army Corps of Engineers. 2023. *Performance Work Statement - Tree Removal at LF008 Landfill Site #3, Niagara Falls Air Reserve Station, Niagara Falls, NY*. July 28.

United States Department of Air Force. 2021. *Site Management Plan, Niagara Falls Air Reserve Station, Niagara County Niagara Falls, New York*. NYSDEC Registry Site No. 932106; EPA RCRA ID No. NY0570024273. Prepared by EA Engineering.

Attachment A: Trees Scheduled for Removal

Niagara Falls ARS

Trees Within IRP Site 3



There are 50 trees within this survey that intersect with the landfill IRP Site 3. Tree points originated from 2018 URS tree survey and were cross referenced with 2019 imagery. All point data is on accompanying spreadsheet with Tree Number corresponding to the tree labels on this map.

Legend

- IRP Site 3 Landfill
- Niagara Falls ARS Boundary
- Tree Requiring Removal

N
W E
S

0 50 100 200 Feet

Produced By: AFRC GIS Office
7 January 2020
afrc.gio@us.af.mil