

US EPA ARCHIVE DOCUMENT



ENVIRONMENTAL RESTORATION, LLC ACTION / WORK PLAN

PROJECT NAME: Ellisville-Strecker Forest Site
PROJECT JOB No: ES7-29
PROJECT LOCATION: Wildwood, MO
CONTRACT No.: [REDACTED]
TASK ORDER No.: [REDACTED]
DATE: 11/2/2013

SUBMITTED BY: [REDACTED], ER
REVIEWED BY: [REDACTED], EPA

1.0 SITE BACKGROUND

U.S. EPA Region 7 (EPA) is initiating activities to remediate 173 Strecker Rd with various environmental concerns involving contaminated soils at the Ellisville-Strecker Forest Site (Site) located in Wildwood, Missouri. The Site is approximately one acre in area and includes portions of the extreme northeast corner of Strecker Forest as well as a portion of the former Bliss-Ellisville Site, west of the Mid-America Horse Arena.

Due to proposed development at Strecker Forest, the EPA conducted reassessment actions at the Strecker Forest property from August 2011 through February 2012 to determine, among other things, if contaminants were present in soil and groundwater at concentrations that could present a threat to human health and the environment for the proposed land use. Information and recommendations from this reassessment were summarized in the "Site Reassessment Report for an Expanded Site Review, Proposed Strecker Forest Development Site, Wildwood, Missouri," dated June 13, 2012.

One of the findings of this reassessment was the discovery of elevated dioxin toxic equivalent (TEQ) concentration in surface and subsurface soil samples collected in the northeastern portion of the Strecker Forest parcel (northeast area). Dioxin TEQ concentrations as high as 26,684 parts per trillion (ppt) were detected in subsurface soils: concentrations as high as 5,882 ppt were detected in surface soils. The reassessment concluded that, with regard to the northeast area, "immediate actions are not warranted in the short-term to mitigate exposure, while further site assessment is on-going".

On October 30, 2012 the construction of a fence around the northeast area was completed. A report entitled "Preliminary Removal Action Report Proposed Strecker Forest Development Site, Wildwood, Missouri," dated July 24, 2013, summarizes activities associated with this action. The fence serves, among other things, to keep the landowner and potential trespassers from unknowingly disturbing the contaminated soil as the Site is further evaluated.

On July 16, 2013, the EPA returned to conduct additional assessment. Surface and subsurface sils were sampled within the northeast area to evaluate concentration profiles and spatial distribution of contamination. The expanded assessment verified elevated concentrations of dioxin TEQ in the northeast area in surface and subsurface soils. In addition, an effort was made to further investigate soils around Soil Boring #20 (SB-20). Samples from SB-20 were collected during the aforementioned site reassessment event. A single sample from SB-20, collected from beneath DU-38D, returned a subsurface dioxin TEQ concentration of 1,733 ppt. SB-20 is located along the northern boundary of the fence constructed during the previous action. On July 16, 2013, additional subsurface sampling was conducted near SB-20, below the surface of SU-38D and SU-39D, near the bank of the Caulks Creek tributary. Subsurface dioxin TEQ concentrations as high as 9,744 ppt and 1,904 ppt were identified in soils collected at Soil Boring #56 (SB-56) and Soil Boring #59 (SB-59) respectively. Both SB-56 and SB-59 were located outside of the fence along the southern bank of the Caulks Creek tributary, below SU-39D.

Information herein is proprietary and confidential and to be used or released to others with explicit written permission of ERLLC.



ENVIRONMENTAL RESTORATION, LLC ACTION / WORK PLAN

The EPA conducted a toxicological evaluation to determine health-based standards for the area based on youth recreational receptors. The report, "Preliminary Remediation Goals (PRGs) for Dioxin in Surface Soil Proposed Strecker Forest Development, Wildwood, Missouri" was made final on July 25, 2013. The report established cleanup goals for surface soils in the northeast area of Strecker Forest at a concentration less than or equal to 820 ppt dioxin TEQ where land use controls will be established to restrict future development and prevent residential use.

Because concentrations exist in the northeast area of Strecker Forest that exceed the site-specific cleanup goals for the youth recreational/trespass scenario and because source areas exist which, if disturbed by future development, could cause elevated levels of dioxin-contaminated soil to migrate, the EPA is proposing the removal action described herein.

The EPA has tasked Environmental Restoration, LLC (ER) to address the recent environmental concerns as identified to remove the contaminants from the Site. The following section shall describe ER's approach to meeting the Scope of Work (SOW).

2.0 SCOPE OF WORK

Environmental Restoration has been tasked by the EPA to perform a time critical removal action at the Ellisville Site Property. The project SOW tasks shall consist of the following items as identified in the Task Order (TO) and determined during the initial site walk of the property;

- 1) Develop HASP for Site operations and air monitoring as required
- 2) Install erosion controls
- 3) Clearing and grubbing of vegetation/trees
- 4) Construct access road/staging areas
- 5) Excavate contaminated soils as required to meet Site Action levels
- 6) Transportation and Disposal (T&D)
- 7) Restoration of Property

3.0 OPERATIONAL APPROACH

The following sections discuss ER's approach to the execution of the Task Order Statement of Work. Significant tasks are identified with details on how ER will accomplish the SOW requirements. ER anticipates all the Site Operations being completed in 2 phases, with phase I encompassing the operations from Pre-mobilization to T&D confirmation sampling of the proposed soils, and phase II covering the excavation and T&D of generated waste materials and the restoration of the Site to original condition.

3.1 PRE-MOBILIZATION ACTIVITIES

ER will prepare the following plans for submittal, review and acceptance by the US Environmental Protection Agency prior to site mobilization.

- ✓ Work Plan [Contained Here-in]
- ✓ Site Health and Safety Plan (HASP) [Attachment A]

ER has begun solicitation and procurement efforts to initiate the commencement of on-site operations. The following is an initial list of items to be identified and addressed prior to mobilization;

- ✓ Local authorities will be contacted and informed of site operations and schedule [OSC function –ER will support]

Information herein is proprietary and confidential and to be used or released to others with explicit written permission of ERLLC.



ENVIRONMENTAL RESTORATION, LLC ACTION / WORK PLAN

- ✓ Coordinate with respective utilities on clearances/locates to ensure safe Site work zones
- ✓ Obtain city water permit/meter and identify location of water source
- ✓ Local suppliers will be identified for work materials/resources
- ✓ Equipment and material sources will be identified and tentatively scheduled
- ✓ T&D options will be evaluated and solicitation of subcontracted services/providers will be initiated and/or finalized as warranted to support SOW operations

3.2 MOBILIZATION

Mobilization will occur in one step from ER's St. Louis Office for each Phase of work to be performed. The initial mobilization will include all necessary equipment, personnel, and materials to perform the Site SOW. ER will mobilize personnel, equipment, and materials as warranted by site tasks/operations. RM will directly coordinate with the OSC in determining resources required to perform the identified tasks. At this time, it is anticipated all site work will be accomplished in one mobilization for each of Phase of work identified.

3.3 SITE PREPARATION / SET-UP

ER will begin site preparations upon initial mobilization to the site. Site preparations will include the following items;

- HASP review with site crew
- Identify and mark any underground utilities, review with on-site personnel
- Delineate Support Zone, Contamination Reduction Zone and Exclusion Zones- Work zones will be delineated by using hazard tape or rope prior to beginning field work to ensure employees and others are fully aware of site controls. The CRZ/SZ will be designation as all areas outside the control area.
- Identify and construct control area- final control area TBD upon site mobilization and placement of access road. Red/yellow caution tape will be used to mark the boundary of the control area.
- Maintain access control as necessary with traffic control measures placed as warranted including traffic control on Strecker Road identifying trucks entering and exiting the Site

3.4 EROSION CONTROL

ER will install erosion controls as required to limit off-site migration of excavated soils. Controls will include installation of silt fencing/straw bales or earthen soil berms to control run-on and run-off from the excavation areas. ER will maintain these engineered controls throughout the duration of on-site operations and through the final restoration/re-establishment of vegetation of the impacted areas.

3.5 DUST CONTROL

Throughout the duration of the project ER will be continually performing dust suppression, as needed, to control any fugitive dust emissions. A water truck with spray attachments will be staged adjacent to the excavation areas, with a technician applying a water mist as need to mitigate any fugitive dust. ER will continually employ dust control as conditions warrant during all on-site tasks and operations as needed.

3.6 SITE ACCESS

ER will be required to clear and grub vegetation to allow access for construction of a stable roadway and to allow access to the contaminated grids. ER will construct access road and staging area to support T&D operations at the Site.



ENVIRONMENTAL RESTORATION, LLC ACTION / WORK PLAN

3.6.1 CLEARING AND GRUBBING

ER will employ heavy equipment, including a bobcat with brushcat attachment, with a combination of hand tools-chainsaws/weedeaters to remove vegetation where needed from the site. Vegetation will be removed along the existing road/path to allow for construction of the access road. Vegetation will also be removed from the contaminated grids to allow direct access to the grids to be excavated and transport equipment to move freely to the load out area. All trees/vegetation will be removed from the excavation grid areas. ER will try to save large trees/greater than 2 foot in diameter if possible in all other areas of the Site. A specialty arborist subcontractor maybe required to remove large branches that extend over the adjacent barn structure on the Bliss-Ellisville property. Removed trees and bushes will be chipped on-site with the generated stockpiled material, staged on-site in clean area pending use in final restoration operations.

3.6.2 CONSTRUCT ROAD AND STAGING AREA

ER will construct an access road and staging areas utilizing a combination of a dozer and an excavator. Dozer will be employed to clear vegetation and obstructions in staging areas and in designated roadway. Once grade of road is established and appropriate drainage ditches/culvert pipes installed, ER will place a geo-membrane fabric the entire length of the roadway. Base type rock, 3-4" in diameter, will then be placed with the dozer with a final 1" minus rock placed and compacted capping the roadway. Access road and staging areas will require continual maintenance throughout the duration of Site operations. ER does not anticipate installing a rock in the staging areas at this time.

3.7 SOIL EXCAVATION OPERATIONS

Excavation will begin in the designated 25' x 25' grids on the upward slope, southern edge of the Site and shall progress down gradient as grids are confirmed clean by START contractor sampling. Excavation will follow EPA directive on depth to meet Site action level of 820 ppt in the top 12 inches and 2,460 ppt at depths greater than 12 inches up to a maximum of 4 foot in depth. Soil shall be removed with hydraulic excavator equipped with a smooth edged bucket. The excavated soil will be carefully dumped from excavator bucket into loader bucket for transport and subsequent unloading into staged lined rolloff containers occurring only in the designated work zone area. Once full, ER will document/track grids or sample units placed into each staged rolloff. Rolloffs will then be hauled up the access road and placed in staging area pending sampling and final T&D determination. Excavation shall continue until all excavated areas are addressed and meet Site action level criteria per START confirmation sampling.

3.7.1 DECONTAMINATION

Decontamination of the rolloffs maybe required and will be performed in the control area next to the excavation area. Visual inspection shall be performed on each rolloff prior to leaving the excavation area. ER anticipates performing decon using dry decontamination methods-wiping/scraping off any residual material and capturing this material on poly placed around the staged rolloff. ER will employ best management practices to minimize any residual materials on the outside of the rolloff boxes.

3.8 TRANSPORTATION AND DISPOSAL

As stated during Phase I operations, ER will sample the contaminated soil waste stream for T&D determination based on rolloff/s and to meet TSDF disposal parameters. Once data is received ER will profile the waste stream for T&D. At this time ER anticipates possibly three waste streams for the contaminated materials at the Site unless some unknown material/items are uncovered during excavation operations. The three waste streams are; F027 soil > 10ppb, F027 soil < 10ppb, and non-hazardous debris. No additional waste streams are anticipated due to sampling investigation and generator knowledge.

Information herein is proprietary and confidential and to be used or released to others with explicit written permission of ERLLC.



ENVIRONMENTAL RESTORATION, LLC ACTION / WORK PLAN

Once excavated material is staged in rollofs, ER in combination with the START contractor will sample each rolloff, at a minimum, with each sample given a unique identifying number. The samples will then be composited prior to the point of generation [transported off-site] based on TSD requirements and to determine total dioxin concentration. The results from these samples are anticipated to fall into the following 3 categories for the excavated waste materials.

3.8.1 FO27 SOIL > 10PPB



3.8.2 FO27 SOIL < 10PPB



3.8.1 Non-Hazardous Debris

During the site walk, an area of debris/shingles was identified adjacent to the barn located on the Bliss-Ellisville Site. ER intends to segregate this material during excavation operations and place into a designated rolloff pending disposal analysis. ER anticipate this material will meet the parameters to be disposed at a local CERCLA approved Subtitle D landfill based on the material being segregated and on the surface of the soil and not commingled with the F027 materials.

3.9 RESTORATION OPERATIONS

Once final clean confirmation analytical data is received on the excavation areas, ER will import clean fill materials to restore the areas to their pre-construction condition. Prior to Phase I operations, ER will have identified, solicited and awarded a subcontract for the backfill dirt and gravel. Materials proposed for use will be tested/inspected to ensure compliance with Site action levels. ER will place and compact the material as required to meet existing Site grade. ER will compact to within 4-6" of the surface utilizing a sub soil material. ER will complete restoration with a 4-6" lift of a topsoil quality material to facilitate vegetation germination. Restoration will be completed by placement of a native of seed mixture covered with a straw blanket over the placed topsoil. In drainage areas, ER will place large/gabion type stone to manage and minimize erosion in these areas. OSC will provide technical direction on location of the rock to ensure meets Site restoration objectives.

3.10 DEMOBILIZATION

All equipment, materials and personal will then demobe back to the St. Louis office or local supplier as project tasks warrant under both Phases of the project. ER will maximize resources and minimize cost by demobilizing resources as necessary. All demobilized items will be thoroughly decontaminated prior to leaving the site by utilizing either via dry or wet decontamination methods as appropriate.

4.0 RESOURCES

The following table identifies the different resources ER will employ to complete the SOW elements.

Information herein is proprietary and confidential and to be used or released to others with explicit written permission of ERLLC.

ENVIRONMENTAL RESTORATION, LLC ACTION / WORK PLAN

PERSONNEL	QUANTITY	COMMENTS
Response Manager	1	TBD
Equipment Operator	2	TBD
Laborer	2	TBD
Field Clerk	1	Off-site, Part-Time
Truck, P/U	1	ER owned
Truck, Stkdbd 1ton	1	ER owned
	1	ER owned or Competitive procurement through local sources
	1	ER owned or Competitive procurement through local sources
	1	ER owned
	1	ER owned or Competitive procurement through local sources
Misc. Hand Tools	Lot	ER owned
PID	1	If not supplied by START contractor
OFCs	QUANTITY	COMMENTS
PPE-Level C	Lot	ER warehouse
Erosion control supplies	Lot	Competitive procurement through local sources
Analytical (START)	1	T&D profile sample approval
T&D	tn	ER and Awarded Subcontractor
Portable Toilets	1	Competitive procurement through local sources
Water Meter/Source	1 LS	PRP
Absorbent Pads	Lot	ER warehouse
Backfill soil	cy est.	Competitive procurement through local sources
3-4" Rock for roadway	TBD	Competitive procurement through local sources
Seed/Straw	sf est.	Competitive procurement through local sources
Misc. Materials	Lot	Scrub Brushes, Rags, Drum Liners, etc.

5.0 TASK ORDER DELIVERABLES

ITEM	DUE BY:	DESIGNATED INDIVIDUAL
H&S Plan	TBD	TBD
Cost Estimate / Work Plan	TBD	TBD
Volume Logs	Weekly	RM/FCA
1900-55	Weekly	FCA
Final Report	End of Project	RM
CERLCA Report/s	60 days of Final Disposal	RM

Information herein is proprietary and confidential and to be used or released to others with explicit written permission of ERLLC.



ATTACHMENT A

[HASP-Submitted under separate cover]