

Pre-Assessment Screen Determination

for

**Tinker Creek fish kill
Botetourt and Roanoke Counties, Virginia**

Issued by:

**Commonwealth of Virginia and United States Department of Interior in their joint
capacity as Trustees for Natural Resources**

August 2017

1.0 INTRODUCTION

Pursuant to the authority of Section 107(f) of the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, 42 U.S.C. § 9607(f); Federal Water Pollution Control Act (CWA), as amended, 33 U.S.C. § 125, *et seq.*; Subpart G of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. §§ 300.600, 300.605; and other applicable Federal and State laws, designated Federal and State authorities may act on behalf of the public as natural resource trustees to pursue claims for natural resource damages (NRD) for injury to, destruction of, or loss of natural resources and their services resulting from the release of hazardous substances to the environment. NRD claims may be pursued against parties that have been identified as responsible for releasing hazardous substances to the environment. Under CERCLA, sums recovered by trustees as damages shall be used to restore, replace, rehabilitate, and/or acquire the equivalent of such natural resources and their services.

Under the CERCLA natural resource damage assessment and restoration (NRDAR) regulations (43 C.F.R. Part 11), the first step in the NRDAR process is the preparation of a pre-assessment screen (PAS). The PAS provides the basis for the Trustees' determination that further investigation and assessment efforts are warranted, and that there is a reasonable probability of making a successful claim against the party or parties responsible for the release of hazardous substances. It is based on a review of the readily available information on hazardous substance releases under evaluation and the potential impacts of those releases on natural resources and their services under the trusteeship of Federal and State authorities (43 C.F.R. § 11.23).

This PAS was prepared in accordance with the PAS provision of the CERCLA NRDAR regulations at 43 C.F.R. §§ 11.23 – 11.25. The natural resource trustees that participated in the preparation of this PAS include the Department of Environmental Quality (DEQ) acting on behalf of the Commonwealth of Virginia Secretary of Natural Resources, and the Northeast Regional Director of the U.S. Fish and Wildlife Service (Service) acting as Authorized Official on behalf of the Secretary of the U.S. Department of the Interior (DOI) (collectively the "Trustees"). This PAS addresses potential claims for natural resource damages for injury to, destruction of, or loss of natural resources and their services resulting from the release of hazardous substances from storage containers owned by Crop Production Services on the property located at 218 Simmons Drive in Cloverdale, Virginia on which Crop Production Services operates a pesticide and herbicide facility (Site). The hazardous substances were released to a storm drain that discharges to Tinker Creek, a tributary to the Roanoke River.

A review of readily available information has led the Trustees to conclude that an unpermitted release of contaminants/hazardous substances occurred on July 29, 2017 from the Site into

Tinker Creek in Cloverdale, Virginia and continued downstream into Roanoke County. This release has affected Tinker Creek and the natural resources and their services for which Federal and State agencies may assert trusteeship under Section 107(f) of CERCLA. Specifically, the Trustees have determined that:

- A release of hazardous substance has occurred;
- Natural resources for which the Trustees may assert trusteeship under CERCLA have been or are likely to have been adversely affected by the release;
- The quantity and concentration of the released hazardous substance is sufficient to potentially cause injury to natural resources;
- Data sufficient to pursue an assessment are readily available or likely to be obtained at a reasonable cost; and
- Response actions, if any, carried out or planned, may not or will not sufficiently remedy the injury to natural resources without further action.

1.1 Trusteeship

The President has designated Federal resource trustees in the NCP at 40 C.F.R. § 300.600 and through Executive Order 12580, dated January 23, 1987, as amended by Executive Order 13016, dated August 28, 1996. Pursuant to the NCP, the Secretary of the DOI acts as a trustee for natural resources and their supporting ecosystems and services, managed or controlled by the DOI. In this matter, the Service is acting on behalf of the Secretary of the DOI as trustee for natural resources under its jurisdiction, including but not limited to migratory birds and endangered and threatened species. In accordance with 42 U.S.C. § 9607(f)(2)(B) and the NCP at 40 C.F.R. § 300.605, the Virginia Secretary of Natural Resources has been designated the natural resource trustee by the Governor of Virginia. The State trustee acts on behalf of the public as trustee for natural resources, including their supporting ecosystems, within the boundaries of their state, or belonging to, managed by, controlled by, or appertaining to Virginia. The State trustee has, or shares trusteeship, with the Service over the natural resources potentially affected in this matter. This shared trusteeship is reflected in the coordinated wildlife management practices of the Service and Virginia, and is consistent with the management policies of Virginia and the Service.

1.2 Description of Assessment Area

The assessment area is defined in the CERCLA NRDAR regulations as

the area or areas within which natural resources have been affected directly or indirectly by the discharge of oil or release of a hazardous substance and that serves as the geographic basis for the injury assessment (43 C.F.R § 11.14(c)).

The assessment area at a minimum includes, but is not limited to, the points of discharge from the Site's storm drain into Tinker Creek downstream to the confluence with Carvin Creek, Roanoke, Virginia. The boundaries of the assessment area may be amended as more data become available.

2.0 INFORMATION ON THE SITE AND RELEASE OF HAZARDOUS SUBSTANCES

2.1 Time and Quantities of Release

At 07:24 am on July 29, 2017, the Virginia Emergency Operations Center (VEOC) was notified of foam in Tinker Creek and a fish kill. The foam and evidence of the fish kill were traced to property on which Crop Production Services operates an herbicide and pesticide business. A 275-gallon container (IBC or "tote") owned by Crop Protection Services containing Termix 5301 (a surfactant used as an additive in herbicide applications and referred to herein as "product") leaked through an approximate 1.5 inch puncture in the side of the tote. The product tote was being stored on a paved area on the south side of the warehouse. The product tote was labeled with hazard class pictograms for "Corrosives" and "Marine Pollutants." The product leaked onto the paved area and ran down a slope toward a stormwater drainage ditch and ultimately to an unnamed tributary to Tinker Creek. At this time, Virginia Department of Emergency Management estimates that 165 gallons of product was released. During the July 29, 2017 site visit, Trustees observed bulk quantities of products stored in containers outside of the warehouse on pavement adjacent to the drainage ditch without an apparent secondary containment system in place.

2.2 Hazardous Substance(s) Released

The Safety Data Sheet (SDS) for Termix 5301 lists ingredients containing 13-30% nonylphenol ethoxylate and 13-30% tallow alkyl ethoxylated amines. The SDS also lists 3 proprietary components (27-56% total), that we may assume are also hazardous substances. The ethoxylated compounds are primary contaminants of potential concern (COPC) associated with the release the Trustees are currently investigating. Nonylphenol ethoxylates and ethoxylated amines are produced using ethylene oxide, and ethylene oxide and 1,4-dioxane are listed as components on the SDS, under the Regulatory Information Section. Ethylene oxide and 1,4-dioxane are both listed as hazardous in Table 302.4, List of Hazardous Substances and Reportable Quantities

under CERCLA (40 C.F.R. § 302.4 (A)). The SDS notes that the product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR § 1910.1200) and is also labeled as corrosive, one of EPA's established four hazardous waste characteristics. The SDS reports that the product is "very toxic to aquatic organisms" and may cause long-term adverse effects in the aquatic environment. Both nonylphenol ethoxylates and tallow alkyl ethoxylated amines are acutely toxic to aquatic organisms (Servos 1999, Haller and Stocker 2003). Nonylphenol ethoxylates degrade to nonylphenol and nonylphenol mono- and di-ethoxylates, which are persistent in the environment, particularly aquatic sediments, and the acute toxicity of nonylphenol is greater than that of the parent compound (Servos 1999, Hale et al. 2000). Nonylphenol ethoxylates and nonylphenol are endocrine-disrupting compounds, as they cause estrogenic responses in aquatic organisms, particularly fish (Servos 1999).

2.3 History of the Current and Past Use of the Site Identified as the Source of the Discharge of a Hazardous Substance

Crop Production Services stores chemicals and operates at the Site located at 218 Simmons Drive in Cloverdale, Virginia. The CPS property and storage containers located on the property, is a "facility" under CERCLA (43 U.S.C. § 9601(9)). The facility is co-located in a shell building with a separately operated chemical company. At the facility, Crop Production Services receives bulk quantities of products, which are blended into pesticides for distribution to utility companies. This is the first known release of hazardous substances from this Site.

2.4 Potentially Responsible Parties (PRPs)

At the time of the release, Crop Production Services was the owner and operator of the chemicals stored at the Cloverdale facility, including owning the storage containers located on the property from which hazardous substances were released, and is considered the potentially responsible party.

2.5 Damages Excluded from Liability Under CERCLA

The CERCLA NRDAR regulations at 43 C.F.R. § 11.24 provide that the Trustees must determine whether the damages being considered are barred by specific defenses or exclusions from liability under CERCLA. These determinations are whether the damages:

- (i) resulting from the discharge or release were specifically identified as an irreversible and irretrievable commitment of natural resources in an environmental impact statement or other comparable environmental analysis, that the decision to grant the permit or license authorizes such commitment of natural resources, and that the facility or project was otherwise operating within the terms of its permit or license, so long as, in the case of damages to an Indian tribe occurring pursuant to a Federal permit or license, the

issuance of that permit of license was not inconsistent with the fiduciary duty of the United States with respect to such Indian tribe; or (ii) and the release of a hazardous substance from which the damages have resulted have not occurred wholly before the enactment of CERCLA; or (iii) resulted from the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act 7 U.S.C. §§ 135-135k; or (iv) resulted from any other federally permitted release, as defined in section 101 (10) of CERCLA; or (v) resulting from the release or threatened release of recycled oil from a service station dealer described in section 107(a)(3) or (4) of CERCLA if such recycled oil is not mixed with any other hazardous substance and is stored, treated, transported or otherwise managed in compliance with regulations or standards promulgated pursuant to section 3014 of the Solid Waste Disposal Act and other applicable authorities.

- The Trustees must also determine whether the discharge meets one or more of the exclusions provided in sections 311(a)(2) or (b)(3) of the CWA.

The Trustees do not believe that any exclusions from damages, as described above, is applicable to this Site nor are the damages subject to the exceptions to liability provided in sections 107(f), (i), and (j) and 114(c) of CERCLA. Therefore, the continuation of an assessment of injuries to natural resources is not precluded.

3.0 PRELIMINARY IDENTIFICATION OF RESOURCES POTENTIALLY AT RISK

3.1 Preliminary Identification of Pathways

Pathway identification is an essential component of the determination of injury to natural resources. Pursuant to 43 C.F.R. § 11.14(dd), a pathway is defined as:

The route or medium through which...a hazardous substance is or was transported from the source of the discharge or release to the injured resource.

The primary mechanism for release of contaminants from the facility into Tinker Creek and the surrounding environment is through an onsite stormwater drainage ditch. Once discharged into the environment, possible pathways resulting in exposure of biota to hazardous substances include direct contact with suspended or dissolved contaminants in the water column, direct contact with contaminated sediments, direct contact with contaminated sediment interstitial pore water, exposure by re-suspended, pre-contaminated sediments, ingestion of contaminated sediment during foraging or feeding, and/or indirect contact through ingestion of contaminated prey species.

3.2 Sampling of Exposed Areas and Potentially Injured Natural Resources

On July 29 and 30, 2017, Trustee representatives surveyed Tinker Creek to assess the extent of the fish kill attributed to the release and to determine areas of the suitable habitat for the federally listed endangered Roanoke logperch (*Percina rex*). Trustees relied on DEQ's Pollution Response Program to determine the number and types of fish killed by the release.

3.3 Potentially Affected Resources

Natural resources affected or potentially affected include, but are not limited to the following, all of which are within the jurisdiction of the Trustees:

- freshwater fish, including the federally listed endangered Roanoke logperch;
- migratory birds, including songbirds, waterfowl, raptors, and others;
- freshwater invertebrates, including crayfish
- lands, including instream and riparian;
- surface waters and sediments.

Services provided by these natural resources include, but are not limited to, the following:

- habitat for Trustee species, including food, shelter, breeding areas, nesting, and other factors essential to survival, and;
- recreational uses such as sport fishing.

Loss of services may include the ecological impairment of a resource (e.g., decrease in reproduction) or diminished human use of a resource (e.g., limited opportunity to participate in recreational fishing).

4.0 GENERAL CRITERIA FOR PROCEEDING WITH A DAMAGE ASSESSMENT

In accordance with 43 C.F.R. § 11.23, the Trustees have determined that all of the following criteria have been met.

4.1 Criterion 1 - A release of a hazardous substance has occurred.

Information reviewed by the Trustees indicates that a hazardous substance has been emitted,

emptied, discharged, allowed to escape, disposed, or otherwise released directly or indirectly into Tinker Creek and the surrounding environment from the Crop Production Services' facility in Cloverdale, Virginia.

4.2 Criterion 2 - Natural resources for which the Trustees may assert trusteeship under CERCLA have been or are likely to have been adversely affected by the release.

The exposed areas and the natural resources adversely affected by the release are within the purview of the Trustees as defined under CERCLA. The release of hazardous substances from the Crop Production Services Facility may have affected, and may continue to affect, migratory birds, raptors, fish, aquatic insects, reptiles, amphibians, surface water and sediment within Tinker Creek and the surrounding environment.

4.3 Criterion 3 - The quantity and concentration of the released hazardous substances are sufficient to potentially cause injury.

The quantity and concentration of COPC released from the Crop Production Services facility have resulted in a significant fish kill. For example, the release of Termix 5301 on July 29, 2017, adversely affected multiple fish trophic guilds inhabiting Tinker Creek, including several species of sunfish, rock bass, smallmouth bass, largemouth bass, darters, madtoms, catfish, and suckers. In turn, the impact to the fish community may represent a loss in prey base services to several species of birds which may use Tinker Creek as a foraging area. The potential also exists for direct injury to sediment dwelling organisms from these COPC.

4.4 Criterion 4 - Data sufficient to pursue an assessment can be obtained at a reasonable cost.

Data relevant to natural resources and potential injuries resulting from the release can be obtained at a reasonable cost compared to the potential NRD claim.

4.5 Criterion 5 - Response actions, if any, carried out or planned do not or will not sufficiently remedy the injury to natural resources without further action.

Response actions were initiated after injury had occurred and did not remedy injuries to natural resources and the services provided by those resources because these actions do not have the capacity to restore lost services to the public resulting from the release.

5.0 PRE-ASSESSMENT SCREEN DETERMINATION

Based on the information in this PAS, the Trustees have made the preliminary determination that the criteria specified in 43 C.F.R. § 11.23 have been met. The Trustees further determine that current information indicates there is reasonable probability of making a successful NRD claim for injuries to natural resources and their services under their trusteeship pursuant to CERCLA Section 107. The Trustees have further determined that an NRDA should be carried out for Tinker Creek in accordance with CERCLA NRDAR regulations (43 C.F.R. Part 11, Subparts C and E). Thus, we the undersigned designated natural resource trustee agencies, acting on behalf of the public, pursuant to Federal and State law, do find sufficient cause and intend to seek restoration or compensation for injuries suffered by natural resources under our management and control.

6.0 Literature cited

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Natural Resource Trustee:

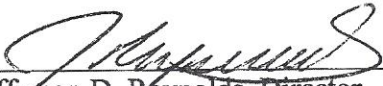


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9/18/2017

Date

Natural Resource Trustee:



Jefferson D. Reynolds, Director
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Virginia Department of Environmental Quality

25 August 2017

Date