



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8  
1595 Wynkoop Street  
DENVER, CO 80202

Ref: 8EPR-ER

**ACTION MEMORANDUM**

**DATE:** August 1, 2011

**SUBJECT:** Memorandum for a Removal Action at the Pine Ridge Reservation Landfill Fire site pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104.

**FROM:** Paul Peronard, On-Scene Coordinator  
Emergency Response Unit

**THROUGH:** Curtis Kimbel, Supervisor  
Emergency Response Unit

**TO:** David Ostrander, Director  
Preparedness, Assessment & Emergency Response Program

**I. PURPOSE**

The purpose of this memorandum is to document the decision to initiate emergency response actions described herein for the Pine Ridge Reservation Landfill Fire Site located near Red Shirt, South Dakota on the Pine Ridge Reservation pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104.

**II. SITE CONDITIONS AND BACKGROUND**

**A. SITE DESCRIPTION**

Site Name:	Pine Ridge Reservation Landfill Fire
Superfund Site ID (SSID):	A809
NRC Case Number:	
CERCLIS Number:	
Site Location:	Near Red Shirt, South Dakota
Lat/Long:	43.46929, -102.87517
Potentially Responsible Party (PRP):	n/a
NPL Status:	
Removal Start Date:	June 13, 2011

## **B. SITE BACKGROUND**

### **1. Removal Site Evaluation**

At approximately 17:00 on June 9, 2011, EPA Region 8's Emergency Response Program received a referral from EPA personnel working with the Oglala Sioux Tribe (OST) regarding a landfill fire on the Pine Ridge Reservation in South Dakota. The EPA phone duty On-Scene Coordinator (OSC) contacted the local landfill manager, Tribal representatives and Indian Health Service (IHS) personnel. Reports from the scene, including video and photographs, depicted a large, uncontrolled fire at the landfill's main repository cell. Local attempts to cover the area with soil were not successful and nearly resulted in a serious situation when an OST bulldozer operator and his equipment began sinking into the smoldering debris. The local fire department responded to the fire but declined to become involved indicating that they did not have the proper equipment to fight the fire. EPA OSC Paul Peronard deployed to the Pine Ridge Landfill Fire Site (Site) on June 12, 2011.

During his Preliminary Removal Assessment on June 12, 2011, OSC Peronard confirmed the conditions identified by the landfill operator and IHS. When he arrived on the scene, the fire had progressed to include approximately 70 percent (~7 acres) of the landfill's footprint and a noxious plume had inundated nearby BIA Highway 41. Initial air quality (or atmospheric) measurements taken on June 13, 2011 indicated decreased levels of oxygen and elevated levels of particulates, VOCs and carbon monoxide. The initial Response Team observed evidence of breached and intact gas canisters. Local contacts indicated that waste was not screened for hazardous materials before being deposited in the landfill and evidence of hazardous substances (pesticide containers, paint cans, small drums, etc) was visibly evident throughout the extent of the fire.

The landfill operators are subject to limited resources and have been unable to apply consistent cover and compaction. As a result, OSC Peronard determined that the fire could be expected to burn indefinitely with a furnace-like airflow moving through poorly compacted layers of waste and uncovered trash 10-12 feet deep providing fuel.

### **2. Physical Location and Site Characteristics**

The landfill is located 13 miles south of Red Shirt along BIA Highway 41 in southwest South Dakota. Approximate GPS coordinates are 43.469 north latitude and - 102.875 west longitude.

The Site is the sole landfill for the Pine Ridge Reservation and is a RCRA Subtitle D solid waste facility. The property is owned and operated by the Oglala Sioux Tribe. The Federal Indian Health Service (IHS) provides technical support. The landfill has been in operation for less than 10 years and accepts waste from 11 transfer stations throughout the reservation. The landfill services approximately 30,000 people including the communities of Pine Ridge and Kyle. Approximately 50 tons of municipal solid waste is deposited at the landfill on a daily basis.

### **3. Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant or Contaminant**

Because there is no alternate facility and storage at the various transfer stations is limited, trash and, due to limited management, potentially hazardous waste continues to be trucked into the landfill. Use of the landfill is largely unrestricted - there is no gate and the facility is, for the most part, left unattended, meaning any amount or type of debris could be dumped therein without segregation or limitation. Landfill personnel, workers hauling daily loads, tribal members dropping off garbage, motorists along BIA Highway 41 and frequent scavengers are all at risk of exposure to a noxious plume of gases that is generated by the combustion of hazardous substances occurring in the landfill during this event.

As previously mentioned, there is no other facility capable of handling the reservation's waste stream, even on a temporary basis. In addition, if the landfill were to be closed because of the fire, household waste would begin to back up throughout the reservation causing subsequent public health impacts.

### **III. THREATS TO PUBLIC HEALTH WELFARE OR THE ENVIRONMENT**

The conditions at the Site present a threat to public health and welfare and meet the criteria for initiating a Removal Action under Section 300.415(b)(2) of the NCP.

#### **A. Nature of Actual or Threatened Release of Hazardous Substances, Pollutants or Contaminants.**

Per 40 CFR 302.4, various volatile organic compounds (VOCs) are listed hazardous substances and VOCs have been detected in elevated levels at the Site. In addition, since this is the only landfill on the reservation, if the landfill were to be closed because of the fire, household hazardous waste would begin to back up throughout the reservation and public health will be impacted.

#### **B. Check applicable factors (from 40 CFR 300.415) which were considered in determining the appropriateness of a removal action:**

All of the factors from 40 CFR §300.415(b)(2) of the NCP were considered but the factors cited below form the basis for EPA's determination of both the threat presented and the appropriate action to be taken:

- X Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)].
- Actual or potential contamination of drinking water supplies or sensitive ecosystems [300.415(b)(2)(ii)].
- X Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that pose a threat of release [300.415(b)(2)(iii)].

- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate [300.415(b)(2)(iv)].
- Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [300.415(b)(2)(v)].
- X Threat of fire or explosion [300.415(b)(2)(vi)].
- X The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)].
- Other situations or factors that may pose threats to the public health or welfare of the United States or the environment [300.415(b)(2)(viii)].

#### **IV. ENDANGERMENT DETERMINATION**

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action described in this Action Memorandum, presented an imminent and substantial endangerment to public health, welfare, or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

##### **A. Proposed actions**

##### **1. Current Situation.**

Work is complete.

##### **2. Removal activities to date**

The Response Actions discussed in this Action Memorandum is based on traditional measures for the suppression of a landfill fire: cover and compaction. Of critical importance is the availability of soil and the use of suitable earth moving equipment (excavators, haul trucks, bulldozers and compactors). Site specific factors influencing these Response Actions include:

- The Site is one-hour from Rapid City, SD which is the nearest town with suitable support services
- The nearest water source is 13 miles away in Red Shirt, SD

EPA deployed its ERRS contractor resources to the scene to implement the cover and compaction activities. By June 20, 2011, the burning area of the landfill was completely compacted and 70% covered. No smoke or smoldering debris have been observed since late on June 19, 2011. The ERRS crews continue to place cover material over the burn area and compact the affected area. Frequent rain and stormy weather caused periodic

work stoppages due to lightning and muddy conditions. Lack of vegetative cover and the high clay content in the local soils create muddy and slick conditions on Site.

ERRS crews spread, covered, and compacted the remaining trash and debris in the landfill to eliminate the possibility of re-ignition. This was completed by the afternoon of June 24, 2011. A stockpile of approximately 1500 cubic yards of cover material remained. Based on discussions with Mr. Hobart Yankton (OST Solid Waste Director) it was decided to leave this stockpile, as well as the roads built to access the cover material borrow area, in place for future use by the Tribe.

Crews had begun to decontamination of equipment and prepared for demobilization. The EPA Mobile EOC is demobilized on June 23, 2011.

#### **B. Planned Removal Actions**

Work is complete.

#### **C. Estimated Costs\***

The costs below are estimated final figures for this response action based upon estimates and daily cost summaries that have been presented to EPA to date. Accurate accounting of costs is expected to be presented in final invoices from ERRS and START contractors by the end of June, 2011.

Contractor costs (ERRS/START staff, travel, equipment)	<b>\$235,000</b>
Other Extramural Costs (Strike Team, other Fed Agencies)	<b>\$10,000</b>
<b>Total Removal Project Ceiling</b>	<b>\$245,000</b>

#### **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION HAVE BEEN DELAYED OR NOT TAKEN**

Delayed action would have increased the threat to public health and the environment.

#### **VII. OUTSTANDING POLICY ISSUES**

None

#### **VIII. ENFORCEMENT**

Potential enforcement actions are being reviewed.

The total EPA costs for this Removal action that will be eligible for cost recovery are based on full-cost accounting practices, and are listed below. These costs include extramural costs from section V.B. (above) plus costs associated with EPA's oversight.

Total Removal Project Ceiling	\$ 245,000
Intramural Direct Costs	\$ 5,000
Indirect Costs (35%*)	<u>\$ 87,500</u>

Total Estimated EPA Costs for the Removal Action	\$ 337,500
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\* Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of the removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of total cost estimates nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

## IX. RECOMMENDATIONS

This decision document represents the selected removal action for this Site, developed in accordance with CERCLA as amended, and not inconsistent with the National Contingency Plan. This decision is based on the administrative record for the Site.

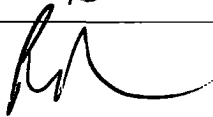
Conditions at the site meet the NCP section 300.415(b) criteria for a removal action and through this document, I am approving the proposed removal actions. The total project ceiling is \$245,000, this amount will be funded from the Regional removal allowance.



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Paul Peronard,  
Federal On-Scene Coordinator

8/1/2011  
Date

Routing Slip / Concurrence Chain for Removal Action Memos **(EMERGENCY)**

SITE NAME/LOCATION:		
Routing Sequence	Date :	Initials
1. <del>OSC: Paul Peronard</del> (8EPR-SA)		
2. John Goodrick – revisions (8EPR-SA)	8/3/11	JG
3. <del>OSC (for signature) Paul Peronard</del> (8EPR-SA)		
4. ER Unit <u>Curtis Kimbel</u> x6108 (8ENF-RC)		
5. PAR Director: <b>David Ostrander</b> x6827 (8EPR-SA)	DAO 8/3/11	
6. Email electronic signed copies to the R8 Action Memo Distribution List	Informational copy	