



## **Explanation of Significant Differences**

### **Mountain Pine Pressure Treating Superfund Site Plainview, Yell County, Arkansas**

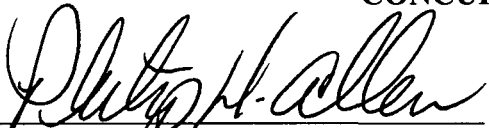
**United States  
Environmental Protection Agency  
Region 6  
Superfund Division**

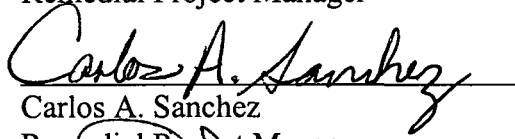
**July 2005**

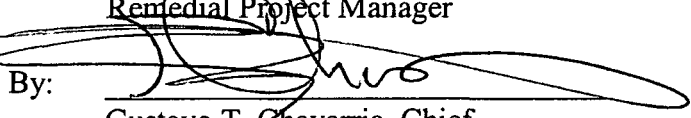


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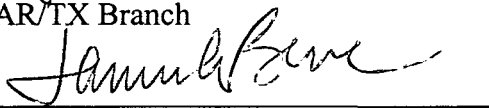
**EXPLANATION OF SIGNIFICANT DIFFERENCES  
MOUNTAIN PINE PRESSURE TREATING, INC., SUPERFUND SITE  
CONCURRENCE LIST**


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Philip Allen  
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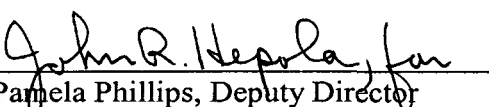
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**MOUNTAIN PINE PRESSURE TREATING SUPERFUND SITE  
PLAINVIEW, YELL COUNTY, ARKANSAS  
EXPLANATION OF SIGNIFICANT DIFFERENCES**

**I. Introduction**

Site Name: Mountain Pine Pressure Treating Superfund Site  
Site Location: Plainview, Yell County, Arkansas  
Lead Agency: U. S. Environmental Protection Agency, Region 6 (EPA)  
Support Agency: Arkansas Department of Environmental Quality (ADEQ)

This decision document presents the Explanation of Significant Differences (ESD) for the Mountain Pine Pressure Treating Superfund Site (Site), located in Plainview, Yell County, Arkansas. The ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section 300.435(c)(2)(i). The Director of the Superfund Division has been delegated the authority to sign this Explanation of Significant Differences (ESD).

**II. Statement of Purpose**

The EPA is issuing this ESD for the Mountain Pine Superfund Site (Site) to document a change in the cleanup levels that were specified in the Record of Decision (ROD) for the Site. The treatment goal specified in the ROD requires a reduction of 90% to 99% in the concentration or mobility of individual COCs (Contaminants of Concern). Based on information from the treatability studies conducted prior to the time that the ROD was written, the performance goals selected in the ROD were 500 ug/l for pentachlorophenol (PCP) and 20 ug/l for arsenic using the Synthetic Precipitation Leaching Procedure (SPLP) method. These levels represented a reduction of 94% and 95% in mobility for arsenic and PCP, respectively. During full scale excavation and treatment of the recovery holding pond (RHP) and the spray evaporation pond (SEP) materials, concentrations of PCP and arsenic were encountered at a higher concentration than those used in the treatability studies, which were used to set the performance levels in the ROD. Therefore, the performance goals of 500ug/l for PCP and 20 ug/l for arsenic are impracticable to be achieved and no longer represent reduction levels of 94% and 95%, respectively. Since higher contaminant levels are being encountered at the Site during Remedial Action activities, it is necessary to revise the performance levels for the Site. This ESD also modifies the leachability testing procedure regarding the curing time of the treated materials. The 2004 ROD states that the performance goals of reducing the mobility of the treated materials between 90 to 99% would be met at the 28-day period. In this ESD, the testing time for meeting the mobility reduction will be based on the laboratory results after a 7 day curing time. This revised procedure will result in a more conservative and protective remedy; since statistically, a greater reduction in mobility will be achieved with time. This revised testing procedure is an

improvement over the testing procedure specified in the 2004 ROD, and will achieve the performance goals over a shorter period of time. Revision of the performance levels and testing time will still achieve the overall treatment goal, and therefore the intent of the ROD. Any other alternative would result in dramatically higher costs without an appreciable increase in the protectiveness of the remedy.

### **III. Site History**

The Mountain Pine Pressure Treating, Inc., Superfund Site, CERCLIS ID No. ARD049658628, is in Plainview, Yell County, Arkansas, approximately 80 miles northwest of Little Rock, Arkansas. The Site is an abandoned wood-treating facility located on the southwestern edge of Plainview, Arkansas. The 95 acre property consists of 45 acres of timberland and 50 acres of grassland, and is bordered on the north by State Highway 28, on the east by the City of Plainview, on the south by grass and woodlands, and on the west by Sunlight Bay Road. The area of the Site being addressed in the remedial action encompasses approximately 19.44 acres. The Site consists of three abandoned facilities: (1) the Plainview Lumber Company, located in the northern area of the Site, which operated from 1965 to 1986 as a raw and treated-wood lumber yard; (2) the Mountain Pine Pressure Treating chromated copper arsenate (CCA) and pentachlorophenol (PCP) plants, located in the central area of the Site, which operated from 1965 to 1981; and (3) the new CCA Treatment Plant (new CCATP), located in the eastern area of the Site, which operated from 1980 to 1986 followed by a brief period in the summer of 1989.

Mountain Pine Pressure Treating, Inc. operated from 1965 to 1981 and used PCP and CCA wood preserving processes at the facility. The facility initially treated lumber with PCP and creosote. PCP granules were mixed on-site with diesel oil, and pressure was used to force the mixture into the lumber while inside a treatment cylinder. In the late 1970s, the process was transitioned to a CCA treatment process with an addition to the PCP plant on its northern side. The treated wood was removed from the cylinders and allowed to dry on a drip pad. Excess PCP or CCA from the drying wood flowed down the drip pad toward the Recovery Holding Pond (RHP). An oil-water separator at the edge of the RHP allowed recovery of the oil for reuse in the process. The RHP was designed to receive up to 2,000 gallons of wastewater in a 24-hour period. When the RHP became full, the excess liquid was pumped to the Spray Evaporation Pond (SEP).

In 1980, the City of Plainview issued bonds guaranteed by the Arkansas Industrial Development Commission for the construction of the "new CCATP", which was built to the east of the existing facility. After construction of the "new CCATP", the PCP plant was no longer used. The "new CCATP" operated from 1980 to 1986 and used a closed-loop system whereby the excess CCA solution from the drip tracks flowed back toward a sump located under the treatment cylinder. The collected liquid from the sump was pumped back into a tank for reuse in the treatment process. The "new CCATP" appears to have been fully self-contained and did not utilize the existing wastewater treatment facilities.

The EPA published a proposed rule on April 23, 1999, to add the Mountain Pine Pressure Treating Site to the National Priorities List (NPL) of Superfund sites. The Site was added to the

NPL in a final rule published on July 22, 1999.

### **Removal Action**

EPA conducted a Time-Critical Removal action at the Site to alleviate liquid and sludge releases from the Recovery Holding Pond (RHP) in December 1987. The Removal Action included removal and treatment of liquids and solidification of 2,500 cubic yards of sludge materials with kiln dust and rice hulls to restrict mobility. The Removal Action also included the removal of hazardous materials from onsite tanks.

### **Remedial Investigation/Feasibility Study**

The EPA initiated a Remedial Investigation (RI) for the Site in 1999 and finalized the RI Report in February 2002. Data needs identified in the RI Report were addressed in an Addendum to the RI Report finalized in October 2003. The RI was conducted to further characterize the nature and extent of contamination originally documented by the earlier investigations and provide data to support the completion of human health and ecological risk assessments. The RI data collection efforts included the collection and analysis of additional onsite soil, ground water, sediment, and surface water samples. Analyses performed on samples collected included: pentachlorophenol (PCP), dioxin/furans, Target Analyte List (TAL) metals and hexavalent chromium, water quality parameters, and physical soil parameters. Sample analysis for metals included both total concentration and toxicity characteristics for waste determination using the Toxicity Characteristic Leaching Procedure (TCLP). The water quality parameters included: total organic carbon (TOC), pH, total dissolved solids (TDS), total suspended solids (TSS), alkalinity, total hardness, and major cations/anions. The physical soil parameters included: TOC, pH, grain size, permeability, and percent moisture.

The nature and extent of contamination at the Site is based on the primary indicator constituents of arsenic and PCP. Based on all investigations completed at the Site, the affected media are defined as follows:

**Surface Water and Sediment** - Arsenic was detected in surface water samples with the highest concentration at 2.91 mg/L, and PCP was detected with the highest concentration at 0.001 mg/L. In sediment samples, arsenic was detected in samples ranging from 0.12 mg/kg to 48,400 mg/kg, and PCP was detected with the highest concentration at 30 mg/kg. These detections are generally confined to onsite drainage ditch locations, particularly near the former process areas which include the former CCA/PCP plants and the New CCA Treatment Plant, as well as the RHP and SEP, located south of the former PCP and CCA plants.

**Soil** - Arsenic and PCP were detected over a large area of the Site above background levels in surface soil (0 to 0.5 feet and greater than 2 feet). Generally the highest concentrations of these constituents were identified near the former process areas, with the highest detections found near the RHP and the SEP. PCP was detected in surface soil samples at concentrations ranging from 0.0032 mg/kg to 2,400 mg/kg. PCP was detected in subsurface soil samples collected from the

following areas: north and beneath the drip racks at the CCA/PCP plant, along the south side of the central drainage ditch, beneath and downslope of the RHP, at the eastern half and east of the SEP, west of the incinerator, and in the background sample. The highest concentration of PCP in the subsurface soil was found beneath and downslope of the RHP. Analytical results for surface soil samples identify the RHP as a potential source of PCP contamination to the upper water-bearing zone although ground water data indicates migration has been minimized by the subsurface conditions. Arsenic was detected above the Site background concentration of 10.9 mg/kg in subsurface soil samples analyzed, ranging from 11.1 mg/kg to 1,260 mg/kg. Arsenic was found within the RHP, at the north and downslope of the RHP, around the SEP, north of the drip racks at the CCA/PCP plant, and north of the New CCATP. The highest concentrations for arsenic were found within the RHP. No soil samples collected from below the confining clay layer contained arsenic above the Site background concentration.

**Ground Water** - The RI field activities included ground water monitor well installations and ground water sampling. Sixteen ground water monitor wells were installed at the Site and ground water beneath the Site was detected in an upper water bearing zone (UWBZ) and a lower water bearing zone (LWBZ). The UWBZ occurs in a clayey alluvium and is approximately 5 feet thick and occurs between 4 and 9 feet below ground surface. Ground water flows to the northwest which is consistent with the slope of the site topography and drainage features. Surface water from the SEP is probably recharging the UWBZ and the ground water eventually discharges into the nearby drainage ditches and surrounding creeks. A discontinuous clay layer separates the upper and lower water bearing zones and produces confined conditions in the deeper ground water zone. The LWBZ consists of a sand horizon in a weathered shale approximately 24 to 38 feet below ground surface. Ground water sampling indicated the presence of metals slightly above background but below health based or screening level criteria.

**Asbestos-Containing Material** - An asbestos survey was performed in 2002 and friable asbestos was identified as pipe and tank insulation in the former PCP process building.

#### **Remedial Construction Activities**

Under the RACs contract, Tetra Tech completed the remedial design (RD) for the Mountain Pine Site on March 28, 2005. Tetra Tech started pre-remedial action activities at the Site in late March 2005. On April 12, 2005, EPA approved the Remedial Action Work Plan. Tetra Tech mobilized to the Site to start remedial action activities on April 14, 2005. Remaining remedial action activities include treatment of contaminated materials at the spray evaporation pond and the recovery holding pond. This ESD is being prepared to revise the cleanup levels specified in the ROD. As previously stated, although the cleanup levels are being revised based on new data, the performance goals of the ROD to reduce mobility of the contaminants of concern by 90% to 99% will be met.

#### **IV. Selected Remedy**

The selected remedy for the Site includes excavation of the contaminated soils and sediments

exceeding the remedial goals, treatment of the contaminated soils and sediments through a stabilization/solidification mixing process, and return of the treated material to the excavated locations. The major components of this remedy are:

- Stabilization and solidification of the contaminated soils and sediment exceeding the remedial goals for pentachlorophenol (PCP) and arsenic in the following areas of the facility: 1) the former Recovery Holding Pond (RHP); 2) the Spray Evaporation Pond (SEP), 3) the on-site drainage ditch; and, 4) two separate hot-spots in the surface soil. The soils and sediment will be treated and returned to the excavated locations without further consolidation except for the material removed from the drainage ditch;
- Construction of a soil cover over the treated areas and seeding of the area to control erosion;
- Demolition of the former process buildings and other ancillary buildings and structures to obtain access to all of the contaminated soils, asbestos abatement will be required prior to the demolition of select structures to prevent the release of fibers into the atmosphere; the building debris may be disposed at either an on-site or off-site location;
- Treatment and discharge of surface water from the SEP and other areas to the on-site drainage ditch with eventual discharge to Porter Creek;
- Placement of an institutional control on the Site property, such as a property easement or other appropriate mechanism, to protect human health and prevent accidental exposure through the following actions: 1) alert prospective purchasers that hazardous substances are present at the Site and explaining the actions taken to address the Site contamination; 2) document the restricted activities that would interfere with or adversely affect the integrity or protectiveness of the remedy implemented at the Site; and, 3) ensure future Site development is consistent with the industrial/commercial human health exposure scenario (i.e., non-residential usage) that is the basis for the soil cleanup goals for PCP and arsenic; and,
- Operation and maintenance of the Site following treatment including a ground water monitoring program to evaluate potential leaching from the treated waste material. Included in this component is the installation of additional monitoring wells, if necessary.

## **V. Basis for the Document**

The EPA is issuing this ESD for the Mountain Pine Superfund Site (Site) to document a change in the performance levels that will still meet the remedial action goals that were specified in the ROD for the Site. The treatment goal specified in the ROD requires a reduction of 90% to 99% in the concentration or mobility of individual COCs. Based on information from the treatability studies conducted prior to the time that the ROD was written, the performance levels selected in the ROD were 500 ug/l for PCP and 20 ug/l for arsenic using the SPLP method. These levels represented a reduction of 94% and 95% in mobility for arsenic and PCP, respectively. During full scale excavation and treatment of the RHP and the SEP materials, concentrations of PCP and arsenic were encountered at higher levels than those used in the treatability studies, which were used to set the performance levels in the ROD. Therefore, the performance goals of 500ug/l for PCP and 20 ug/l for arsenic are impractical to be achieved and no longer represent reduction

levels of 94% and 95%, respectively. Since higher contaminant levels are being encountered at the Site during Remedial Action activities, it is necessary to revise the performance goals for the Site.

In order to meet the treatment goal specified in the ROD, the contaminated materials will be tested using the SPLP analyses before and after treatment to ensure that the Remedial Action activities are achieving a reduction of 90% to 99% in mobility of both pentachlorophenol and arsenic. Specific concentrations will not be used to determine the success of the treatment process. The average leachate concentration for the treated material in the RHP and the SEP will achieve the reduction in mobility of 90% to 99% as specified in the ROD. The success of reducing the mobility of the contaminants by 90% to 99% will be determined as a single mass of treated material for the RHP and the SEP separately; and the methodology for treating the SEP and the RHP will also be different.

All the contaminated sediment in the SEP is to be treated at once with three reagents selected in the ROD (cement, ferrous sulfate and granular activated carbon). The ratios of the reagents have been adjusted in the field based on new treatability studies. After adequate mixing, the treated material will be spread out into 100 by 100 feet grids, one foot deep. Composite samples of each grid will be collected and analyzed using the SPLP method, and compared to the average of all the untreated material in the SEP. The reductions of all samples will then be averaged to ensure that an average reduction of at least 90% has been achieved.

The methodology for treating the RHP will consist of treating individual batches (approximately 250 to 350 cubic yards) of contaminated material with the four reagents selected in the ROD (cement, ferrous sulfate, granular activated carbon, and lime). The ratios of the reagents for the RHP have also been adjusted based on new treatability studies performed in the field. Each batch of material from the RHP will be analyzed using the SPLP method before and after treatment to determine the percent reduction of mobility of the contaminants. As long as the average of all the percent reductions of mobility for all the batches is at least 90%, the treatment process is considered successful.

This ESD also modifies the leachability testing procedure regarding the curing time of the treated materials. The 2004 ROD states that the performance goals of reducing the mobility of the treated materials between 90 to 99% would be met at the 28-day period. In general, about 70-85% of leachability reduction will occur after 7 days, about 90-95 % will occur after 14 days, and some additional reduction will continue to occur after day 28. In this ESD, the testing time for meeting the mobility reduction will be based on the laboratory results after a 7 day curing time. This revised procedure will result in a more conservative and protective remedy, since statistically, a greater reduction in mobility will be achieved with time. This change will allow site remediation to proceed at an accelerated rate and will facilitate a much more efficient utilization of the contractor's time. This revised testing procedure is an improvement over the testing procedure specified in the 2004 ROD, and will achieve the performance goals over a shorter period of time.



As a result of this ESD, the 2004 ROD remains protective of human health and the environment, and continues to meet ARARs (Applicable, Relevant and Appropriate Requirements).

## **VI. Description of Significant Differences**

The EPA is issuing this ESD to document the revisions to the treatment of materials contaminated with PCP and arsenic to achieve the performance goals specified in the ROD of reducing mobility of contaminants by 90% to 99%. No other significant differences exist for the remedy selected in the 2004 ROD.

## **VII. Support Agency Comments**

The support agency has been consulted and provided the opportunity to comment on this ESD in accordance with NCP §§ 300.435 (c)(2) and 300.435 (c)(2)(i) and CERCLA § 121 (f).

## **VIII. Statutory Determinations**

The EPA has determined that these significant changes comply with the statutory requirements of CERCLA § 121, 42 U.S.C. § 9621, are protective of human health and the environment, comply with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, are cost-effective, and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. This remedy also satisfies the statutory preference for treatment as a principal element of the remedy (i.e., reduces the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants as a principal element through treatment).

## **IX. Public Participation**

This ESD will become part of the Administrative Record (NCP 300.825(a)(2)), which has been developed in accordance with Section 113 (k) of CERCLA, 42 U.S.C. § 9613 (k), and which is available for review at Plainview City Hall, 303 West Main Street, Plainview, Arkansas 72857; Arkansas Department of Environmental Quality, 8001 National Drive, Little Rock, Arkansas 72219; and, United States Environmental Protection Agency, Region 6, 12th Floor Library, 1445 Ross Avenue, Dallas, Texas, 75202. As required by NCP § 300.435(c)(2)(i)(B), a Notice of Availability and a brief description of the ESD has been published in the local paper.

**X. Authorizing Signatures**

This ESD documents the significant changes related to the remedy at the Mountain Pine Treating Superfund Site. These changes were selected by EPA with the concurrence of the Arkansas Department of Environmental Quality.

U.S. Environmental Protection Agency

By: John R. Hepola for  
Samuel Coleman, P.E.  
Director  
Superfund Division

Date: 7/21/05