UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

NOW THE
OFFICE OF LAND AND
EMERGENCY MANAGEMENT

APR 06 2017

Mr. Joe Briers
President
Southwest Pipe Services
P.O. Box 2187
Alvin, Texas 77512

Dear Mr. Briers:

The Office of Resource Conservation and Recovery (ORCR) of the U.S. Environmental Protection Agency (EPA) grants approval to Southwest Pipe Services (SPS) to use the decontamination procedures prescribed in the federal regulations at 40 CFR 761.79(c)(3), as limited in this approval, for an unconventional polychlorinated biphenyl (PCB) contamination source in natural gas pipelines subject to the conditions of the enclosed approval. This approval is issued pursuant to Section 6(e)(1) of the Toxic Substances Control Act (TSCA) and the Federal PCB Regulations, § 761.79(h). This approval is applicable on a nationwide basis, because SPS intends to use these alternative decontamination procedures in more than one EPA Region. The approval is effective upon the EPA's signature and, unless specified otherwise in Conditions 6 and 7, expires five years from the aforementioned signature date.

The self-implementing procedures to decontaminate a non-porous surface in contact with free-flowing mineral oil dielectric fluid (MODEF) at levels ≤ 10,000 ppm are described in 40 CFR 761.79(c)(3). There are no self-implementing decontamination procedures explicitly applicable to non-porous surfaces in contact with PCB-contaminated natural gas condensate. However, the preamble to the 1998 PCB Disposal Amendments, where the self-implementing procedures were first added to the regulations, states:

> *EPA tested several solvents for use in accordance with performance-based decontamination under § 761.79(c)(3) and (c)(4). EPA did not intend its testing to be limiting, but did not test all potential solvents under all potential conditions. EPA only used MODEF as a surface spiking solution for convenience and because it was expected to be one of the most common sources of PCB contamination on surfaces. Testing results indicated that other solvents and other conditions could be acceptable for decontaminating surfaces that are contaminated with PCBs.*

From SPS's application,

> *"Pipeline condensate is an organic liquid composed of lighter organics that condense out of natural gas when the gas pressure or temperature is reduced, and/or spent compressor lubricating oil that can sometimes enter the pipeline through leaking compressor seals. The chemical composition of pipeline condensate, while somewhat variable, is often compared with kerosene and/or motor oil. Since kerosene is also an approved PODF [performance-based organic decontamination fluid] and can dissolve the same/similar materials, PODFs are expected to be at least as effective at dissolving pipeline condensate as MODEF."*

SPS provided published research that compared the use of several organic decontamination fluids on MODEF and pipeline condensate that is characteristically similar to motor oil and/or kerosene.

The EPA finds that SPS's proposal to decontaminate natural gas pipelines in contact with PCB-contaminated pipeline condensate, if the condensate is characteristically similar to kerosene and/or motor oil, according to the self-implementing procedures in § 761.79(c)(3) is acceptable. This is because, under the circumstances described in this approval and based on published research provided in the application, the procedures specified under § 761.79(c)(3) (decontamination of non-porous surfaces in contact with PCB-contaminated MODEF) are equally effective at dissolving pipeline condensate that is characteristically similar to motor oil and/or kerosene as they are at dissolving MODEF. The Agency finds that the use of § 761.79(c)(3) for decontamination of non-porous surfaces in contact with pipeline condensate that is characteristically similar to motor oil and/or kerosene would not present unreasonable risk of injury to health or the environment. SPS is responsible for determining prior to using this approval that the pipeline condensate is both less than 10,000 ppm PCBs and characteristically similar to motor oil and/or kerosene. SPS must comply with all other applicable requirements in § 761.79 and part 761.

A violation of any condition of this approval or any applicable Federal regulations may subject SPS to enforcement action and may be grounds for modification, revocation, or suspension of this approval. Modification, revocation, or suspension of this approval may also result from future EPA rulemaking(s) with respect to PCBs, or from new information gathered by SPS and/or the EPA.

Please contact Karen Swetland-Johnson of my staff at (703) 308-8421 if you have any questions regarding this approval.

Sincerely,

Barnes Johnson

Barnes Johnson, Director
Office of Resource Conservation and Recovery

cc: EPA Regional PCB Coordinators

Enclosure

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF	)	APPROVAL FOR USE OF AN
	)	
SOUTHWEST PIPE SERVICES	)	ALTERNATIVE DECONTAMINATION
	)	
P.O. BOX 2187	)	METHOD FOR POLYCHLORINATED
	)	
ALVIN, TEXAS 77512	)	BIPHENYLS (PCBs)

AUTHORITY

This approval is issued pursuant to Section 6(e)(1) of the Toxic Substances Control Act (TSCA) and the Federal Polychlorinated Biphenyl (PCB) Regulation, 40 CFR 761.79(h).

Failure to comply with the approval conditions specified herein shall constitute a violation of §§ 761.79 and 761.50(a) and may also be a violation of other provisions of the PCB regulations in 40 CFR part 761. A violation of the regulations is a prohibited act under Section 15 of TSCA.

SUMMARY AND FINDINGS

Background information and supporting research related to this approval are included in Appendices I and II.

Southwest Pipe Services Inc. (SPS) is a service company that offers pipe cleaning, salvage and other related services to natural gas transmission and distribution companies. The EPA has carefully assessed SPS's proposed use of the self-implementing decontamination procedures in § 761.79(c)(3) for the decontamination of natural gas pipelines in contact with PCB-contaminated pipeline condensate if the condensate is characteristically similar to kerosene and/or motor oil with concentrations less than or equal to 10,000 ppm and has reviewed the supporting research. The EPA finds that SPS's proposed use of alternative decontamination procedures, in accordance with the conditions of this approval, based on the validation study provided, would fulfill the requirements of § 761.79(h)(2).[a] Thus, pipelines decontaminated pursuant to both § 761.79(c)(3) and the conditions of this approval would meet the standard for unrestricted use without confirmatory surface measurements. Further, the EPA finds that

[a] Roy F. Weston, Inc. "Understanding, Modeling and Controlling the Movement of PCB in Natural Gas Systems." Prepared for the Gas Research Institute under Contract 5093-253-2581. June 2000.

SPS's proposed use of these alternative decontamination procedures, when conducted in accordance with this approval, will not present an unreasonable risk of injury to health or the environment.

This § 761.79(h) approval is solely for the purpose of alternative decontamination of SPS natural gas pipelines. SPS is responsible for determining that the pipeline condensate is both less than 10,000 ppm PCBs and characteristically similar to motor oil and/or kerosene prior to using this approval. SPS shall follow all applicable requirements in § 761.79 and part 761.

EFFECTIVE DATE

This approval is effective upon signature by the Director of the Office of Resource Conservation and Recovery (ORCR) and shall expire five (5) years from the date of signature unless otherwise specified in Conditions 6 and 7.

CONTENTS

DEFINITIONS AND ACRONYMS

Definitions found in 40 CFR 761.3 apply unless otherwise noted below.

"Application" means information submitted to the EPA by SPS to define, represent, or describe SPS's proposed decontamination procedures. This information is encompassed in SPS's "Alternative PCB Decontamination Approval; Self-Implementing Natural Gas Pipe Soaking," dated November 1, 2016, and includes the study prepared for the Gas Research Institute "Understanding, Modeling and Controlling the Movement of PCB in Natural Gas Systems."

"Approval" means the content of this document, the conditions within, and the application.

"Day" means a calendar day, unless otherwise specified.

"Decontamination" means any removal of PCBs from pipelines.

"Director of ORCR" means the Director of the Office of Resource Conservation and Recovery (ORCR), Office of Land and Emergency Management (OLEM), U.S. EPA, Washington, DC. Phone Number: 703-308-8895. Mailing address: USEPA Headquarters, 1200 Pennsylvania Avenue, NW, OLEM/ORCR, Mail Code: 5305P, Washington, DC 20460

"MODEF" means mineral oil dielectric fluid.

"Operation" means the decontamination process for natural gas pipelines under this approval.

"ORCR" means the Office of Resource Conservation and Recovery, which is an office within EPA's Office of Land and Emergency Management (OLEM), located at EPA Headquarters.

"PCB Regulations" are the regulations at 40 CFR part 761.

"PODF" means performance-based organic decontamination fluid.

"Pipeline condensate" means the organic liquid composed of lighter organics that condense out of natural gas and/or spent compressor lubricating oil, the chemical composition of which is similar to kerosene and/or motor oil, for the purposes of this approval.

CONDITIONS OF APPROVAL

Pursuant to 40 CFR 761.79(h)(2), this approval grants SPS permission to use the decontamination procedures described without requiring confirmatory sampling subject to the conditions below. This approval may reference additional requirements of part 761 but SPS should not rely solely on this approval for all requirements related to PCBs or the disposal of PCB waste. In the event that the information contained in the Application or other supporting documents differs from the conditions specified in this document, the conditions of this document shall govern.

1. Decontamination Procedure

This approval permits SPS to use the self-implementing decontamination procedures in § 761.79(c)(3) for the decontamination of natural gas pipelines in contact with PCB-contaminated pipeline condensate if the condensate is characteristically similar to kerosene and/or motor oil at concentrations ≤ 10,000 ppm, as modified below:

> *Any representative of SPS* decontaminating a non-porous surface in contact with free-flowing *pipeline condensate* at levels ≤ 10,000 ppm PCBs must do so as follows:
> (i) Drain the free-flowing *pipeline condensate* and allow the residual surfaces to drain for an additional 15 hours.
> (ii) Dispose of drained *pipeline condensate* according to paragraph (g) of this section *[§ 761.79(g)]*.
> (iii) Soak the surfaces to be decontaminated in a sufficient amount of clean (containing < 2 ppm PCBs) performance-based organic decontamination fluid (PODF) such that there is a minimum of 800 ml of PODF for each 100 cm^2 of contaminated or potentially contaminated surface for at least 15 hours at ≥ 20 °C.
> (iv) Approved PODFs include:
> (A) Kerosene.
> ~~*(B) Diesel fuel.*~~
> (C) Terpene hydrocarbons.
> ~~*(D) Mixtures of terpene hydrocarbons and terpene alcohols.*~~
> (v) Drain the PODF from the surfaces.
> (vi) Dispose of the drained PODF in accordance with paragraph (g) of this section *[§ 761.79(g)]*.

SPS is responsible for determining and documenting that the pipeline condensate is both less than 10,000 ppm PCBs and characteristically similar to motor oil and/or kerosene prior to using this approval. The use of diesel fuel or terpene alcohols as a PODF is not covered under this approval because evidence specific to the performance of diesel fuel or terpene alcohols as a solvent for pipeline condensate was not provided with the application.

2. Recordkeeping and Reporting Requirements

Throughout the period of decontamination conducted under this approval, SPS shall maintain, at their corporate office:

a) a copy of this approval;

b) the date, location, and quantity of pipeline decontaminated for each site where the approval is used;

c) the field notes and/or data used to determine compliance with Condition 1 of this approval; and

d) the personnel training records required by Condition 4.

Upon expiration of this approval, or if SPS's business is terminated, SPS shall electronically submit all aforementioned records to the Director of ORCR within 90 days of expiration of the approval or termination of business, whichever comes first. Unless specified otherwise, required submissions or correspondence may either be mailed to the Director of ORCR or electronically submitted by email to ORCRpcbs@epa.gov.

3. Agency Approvals/Permits

No operation may commence until SPS has obtained all required approvals/permits from federal, state and local agencies. SPS is responsible for obtaining such approvals/permits.

4. Personnel Training

SPS shall ensure that the personnel directly involved with the decontamination of pipelines covered by this approval are, at a minimum, trained on the following:

a) The nature of PCB contamination likely to be found in natural gas pipelines and SPS's decontamination procedure as stated in this approval;

b) The handling and/or PCB waste disposal requirements for process residuals and other materials generated during the decontamination process as described in § 761.79(g);

c) The spill prevention and cleanup plan including the PCB Spill Cleanup Policy in 40 CFR part 761 subpart G.

The training materials shall be kept on site in a location accessible to all personnel during working hours. Personnel should be formally trained every twelve months.

5. Ownership Transfer

This approval may not be transferred to a new owner until: (1) a request to modify this approval and transfer ownership is submitted to the Director of ORCR; and (2) the Director of ORCR has approved such ownership transfer request. The date of transfer of this approval shall be the date the Director of ORCR provides written approval of the transfer. The transferee shall not operate pursuant to this approval unless the EPA has amended this approval to reflect the new ownership. The approval may include additional/different approval requirements that may be deemed necessary to apply to the new owner.

6. Approval Expiration Date

This approval shall become effective upon signature of the Director of ORCR and expire five (5) years from the date the approval becomes effective except as otherwise specified below.

7. Approval Renewal

If SPS intends to continue to decontaminate under the terms of this approval beyond the expiration date of this approval, SPS shall submit a complete approval renewal application request at least 180 days prior to the expiration date of this approval. If SPS submits this information to EPA at least 180 days prior to the expiration date of this approval, this approval continues in force (i.e., does not expire) until the EPA either issues an approval renewal, a conditional approval renewal, or an approval request denial. SPS will not be allowed to operate under revised operating conditions until the EPA issues SPS a renewed and/or modified approval that reflects such revised operating conditions. If SPS does not submit a complete approval renewal application request to the EPA at least 180 days prior to the expiration date of this approval, this approval will expire as specified in Condition 6.

A complete approval renewal application is considered to be, at a minimum, information that was submitted in previous requests for approval with appropriate modifications or updates based on proposed revisions to the original approval, which may include revised operating and testing procedures.

DECISION TO APPROVE SPS'S REQUEST TO USE ALTERNATIVE DECONTAMINATION PROCEDURES

1. Approval under 40 CFR 761.79(h) to use the decontamination procedures defined in the federal regulations under § 761.79(c)(3), as limited in this approval, for an unconventional contamination source (pipeline condensate) in natural gas pipelines is hereby granted to Southwest Pipe Services (SPS) of Alvin, Texas, subject to the conditions expressed in this approval, and consistent with the materials and data included in the application. Where there are discrepancies between this document and the application, this document must be followed.

2. The EPA finds that SPS's proposal to decontaminate natural gas pipelines in contact with PCB-contaminated pipeline condensate if the condensate is characteristically similar to kerosene and/or motor oil according to the self-implementing procedures in § 761.79(c)(3) is acceptable because, under the circumstances described in this approval, the procedures specified under § 761.79(c)(3) (decontamination of non-porous surfaces in contact with PCB-contaminated MODEF) are equally effective at dissolving pipeline condensate that is characteristically similar to motor oil and/or kerosene as they are at dissolving MODEF. Although § 761.79(c)(3) was designed for decontamination of surfaces in contact with MODEF that is contaminated with PCBs, the agency finds that the use of § 761.79(c)(3) for decontamination of surfaces in contact with pipeline condensate that is characteristically similar to motor oil and/or kerosene would not present unreasonable risk of injury to health or the environment.

3. The EPA reserves the right to impose additional conditions or revoke this approval when it has reason to believe that the continued operation of SPS's alternative decontamination process does not adequately meet the applicable decontamination levels, may present an unreasonable risk of injury to health or the environment, when new information requires changes, or if the EPA issues new regulations or standards applicable to PCB approvals.

4. Any departure from the conditions of this approval or the terms expressed in the application must receive prior written authorization from the Director of ORCR.

5. SPS shall be responsible for the actions of its employees and contractors when those actions are within the scope of implementing SPS's decontamination process/procedures.

6. SPS shall assume full responsibility for compliance with this approval and all applicable federal, state and local regulations that apply to SPS, including, but not limited to, any spill, pollutant release, incident, or other reporting requirements.

7. The EPA reserves the right for its employees or agents to inspect SPS's decontamination operations covered by this approval at any location and at any reasonable time.

8. Violations of any applicable regulations or conditions of this approval may be subject to enforcement action and may result in termination of this approval. Violation of any requirement of this approval is a violation of 40 CFR 761.79 and may also be a violation of other provisions of 40 CFR part 761. A violation of the regulations is a prohibited act under Section 15 of TSCA.

APR 06 2017

Date

Barnes Johnson
Director,
Office of Resource Conservation and Recover

APPENDIX I

BACKGROUND

Southwest Pipe Services Inc. (SPS) is a service company that offers pipe cleaning, salvage and other related services to natural gas transmission and distribution companies. Due to integrity issues, many SPS customers are removing old segments of natural gas pipe, the internal surface of which may have residual PCB contamination from contact with residual pipeline condensate. In order for SPS to decontaminate pipelines that were contaminated with PCBs from pipeline condensate, SPS must do confirmation sampling in accordance with 40 CFR 761.79(b)(3)(i)(A). SPS does not wish to use confirmation sampling procedures because the required sampling site selection methodology is difficult to use on natural gas pipelines. Instead of using confirmation sampling under § 761.79(b)(3)(i)(A), SPS requests to follow the self-implementing decontamination procedures in § 761.79(c)(3), which do not require confirmation sampling. Because the natural gas pipelines are contaminated with pipeline condensate rather than mineral oil dielectric fluid, as listed in the self-implementing procedures, SPS must seek an approval. SPS requests only an approval that would allow use of existing decontamination procedures that are otherwise only allowed to be used for surfaces contaminated by a specific type of PCB contaminated fluid (i.e., MODEF); their decontamination process, as described in their application, would follow the procedures listed in § 761.79(c)(3).

The EPA received an application, dated November 1, 2016, from SPS for a § 761.79(h)(2) approval to use the self-implementing decontamination procedures in § 761.79(c)(3) for natural gas pipelines contaminated with pipeline condensate which is characteristically similar to kerosene and/or motor oil rather than MODEF. The regulations at § 761.79(h) allow the EPA to approve alternative decontamination procedures, provided the alternative procedure will not pose an unreasonable risk of injury to health or the environment. The self-implementing procedures at § 761.79(c)(3) are only approved for non-porous surfaces in contact with free-flowing MODEF at levels ≤10,000 ppm PCBs. However, the preamble to the 1998 PCB Disposal Amendments, where the self-implementing procedures were first added to the regulations, states:

> *EPA tested several solvents for use in accordance with performance-based decontamination under § 761.79(c)(3) and (c)(4). EPA did not intend its testing to be limiting, but did not test all potential solvents under all potential conditions. EPA only used MODEF as a surface spiking solution for convenience and because it was expected to be one of the most common sources of PCB contamination on surfaces. Testing results indicated that other solvents and other conditions could be acceptable for decontaminating surfaces that are contaminated with PCBs.*

Based on SPS's application, the pipeline condensate is expected to behave similarly to kerosene and/or motor oil, depending on its composition. Kerosene is an approved PODF, and chemically will dissolve kerosene. From the research conducted by the Gas Research Institute, the PODFs studied (kerosene and terpenes) dissolved motor oil at similar rates and to similar extents as MODEF[b].

[b] Roy F. Weston, Inc. "Understanding, Modeling and Controlling the Movement of PCB in Natural Gas Systems." Prepared for the Gas Research Institute under Contract 5093-253-2581. June 2000.

Based on the findings from the Gas Research Institute report, the EPA finds that SPS's proposal to decontaminate natural gas pipelines in contact with PCB-contaminated pipeline condensate which is characteristically similar to kerosene and/or motor oil according to the self-implementing procedures in § 761.79(c)(3) is acceptable because, under the circumstances described in this approval, the procedures specified under § 761.79(c)(3) (decontamination of non-porous surfaces in contact with PCB-contaminated MODEF) are equally effective at dissolving pipeline condensate as they are at dissolving MODEF. Although § 761.79(c)(3) was designed for decontamination of surfaces in contact with MODEF, the agency finds that the use of § 761.79(c)(3) for decontamination of surfaces in contact with pipeline condensate would not present unreasonable risk of injury to health or the environment.

APPENDIX II

SUPPORTING INFORMATION

From SPS's application:
"Pipeline condensate is an organic liquid composed of lighter organics that condense out of natural gas when the gas pressure or temperature is reduced, and/or spent compressor lubricating oil that can sometimes enter the pipeline through leaking compressor seals. The chemical composition of pipeline condensate, while somewhat variable, is often compared with kerosene and/or motor oil. Since kerosene is also an approved PODF and can dissolve the same/similar materials, PODFs are expected to be at least as effective at dissolving pipeline condensate as MODEF."

SPS's application also highlighted the relevant conclusions from the Gas Research Institute report[c]:
"Conclusions from the study that support this specific proposal include the following:

- "Terpene-based solvents… have better solvency than the conventional hydrocarbon-based solvents such as hexane, octane, etc. Preliminary laboratory testing… supports the use of terpenes for PCB removal from pipelines" (p. 4-11)
- "Among those solvents [typically considered for PCB decontamination] … terpenes have better solvency than hydrocarbons and are environmentally acceptable. …the observed PCB solubility in the terpenes is better than the predicted solubility." (p. 4-17)
- "Ethyl acetate and terpenes are considered to be the two best solvents [for desorbing PCB-containing oils and greases] for most solid surfaces." (p. 4-18)
- The calculated solubility of PCBs in terpenes exceeds 5% for PCB homologs up to heptachlorobiphenyl, i.e. Aroclors 1260 and below. (Figure 4-5)
- Terpenes have the highest solvent efficiency of any of the solvents tested for any of the solid surfaces tested. (Table 4-7)
- Terpenes are the fastest acting solvents for lubricants and greases, are faster acting on mineral oil than other PODFs like kerosene, and are equally effective on mineral oil and other lubricants like motor oil and petroleum jelly (Table 4-8, emphasis added).

Table 4-8. Dissolution of lubricants and valve greases by various organic solvents.

Solvent	Mineral Oil	Motor Oil SAE-30	Petroleum Jelly	Hydrocarbon Based Grease (Lubriseal)	Silicone Based Grease (Corning)	Valve Grease I	Valve Grease II	Valve Grease III	Valve Grease IV
Isooctane	++	+	+	ND	PD	ND	ND	ND	ND
Kerosene	++	++	+	PD	PD	ND	ND	ND	ND
Methanol	ND	ND	ND	ND	ND	PD, C	ND	ND	ND
Acetone	ND.	ND	ND	ND	ND	MD, C	PD, C	PD, C	PD, C
Ethyl Acetate	C	C	C	ND	C	MD, C	PD, C	PD, C	PD, C
MIBK	++	++	C	ND	ND	ND	PD, C	PD, C	PD, C
Toluene	+++	++	ND	ND	C	D	MD, C	MD, C	MD
Methylene Chloride	+++	+++	C	ND	PD	C	C	C	PD, C
Terpenes	+++	+++	+++	+	C	ND	MD, C	PD	MD

¥ ND: Do not desolve; PD: Partly desolved; MD: Mostly desolved; D: Dissolved; C: Form colloid
+,++,+++ represent the rate of desolution, where +++ is the fastest and + is the slowest.

[c] Roy F. Weston, Inc. "Understanding, Modeling and Controlling the Movement of PCB in Natural Gas Systems." Prepared for the Gas Research Institute under Contract 5093-253-2581. June 2000.