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

JAN 08 2018

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE
NOW THE
OFFICE OF LAND AND
EMERGENCY MANAGEMENT

Ramon P. Harris
Vice President
NFGSC Gas Supply Corporation
6363 Main Street
Williamsville, New York 14221-5887

Dear Mr. Harris:

The Office of Resource Conservation and Recovery (ORCR) of the U.S. Environmental Protection Agency (EPA) grants approval to National Fuel Gas Supply Corporation (NFGSC) to use alternative sampling procedures for characterizing vertical natural gas pipeline that differ from the methodology specified in 40 CFR part 761, subpart M, for determining PCB surface concentration for removal and off-site disposal of natural gas pipe in accordance with 40 CFR 761.60(b)(5), subject to the terms and conditions specified in the enclosed approval. The enclosed approval is issued pursuant to Section 6(e)(1) of the Toxic Substances Control Act (TSCA) and the federal PCB Regulations, 40 CFR 761.61(c). The enclosed approval is applicable on a nationwide basis, because NFGSC has requested approval to use these alternative sampling procedures in more than one EPA Region. The enclosed approval is effective upon EPA's signature and, unless specified otherwise in Condition 8, expires five years from the aforementioned signature date.

NFGSC operates natural gas storage wells and pipelines which are constructed and operated such that certain piping used to inject or withdraw natural gas is in a vertical orientation and potentially PCB-contaminated oil or condensate may flow on the inside and/or outside of the pipe. 40 CFR part 761, subpart M, specifies the sampling requirements for determining PCB concentrations of natural gas pipelines but assumes that natural gas pipelines are horizontally oriented. Furthermore, it does not address a scenario in which fluids would flow along the outside of the pipe. However, 40 CFR 761.60(b)(5)(ii)(B) provides for any component of a natural gas pipeline system to be disposed of as PCB remediation waste in compliance with 40 CFR 761.61, which, among other things, provides for EPA issuance of risk-based approvals for the use of alternative sampling methods. This approval allows NFGSC to vary from 40 CFR 761.247 and select appropriate sampling sites for their vertical pipelines. Specifically, this approval will allow NFGSC to alternatively sample their vertical pipelines such that (1) the number of samples will be no less than the number of samples required in 40 CFR 761.247; (2) the alternative sampling site selection method will be conducted on both the interior and exterior of the pipeline; and (3) the circumference of the pipe will be wipe sampled.

NFGSC proposed to sample the two uppermost segments, the lowermost segment, and four random segments in between. They expected the uppermost segments to have the highest level of contamination

so they proposed to have one less randomly selected segment to sample, as compared to the regulations, and instead sample the second uppermost segment. The total number of samples for the pipeline would not have changed. However, EPA finds that, because the pressure increases with depth, PCBs may condense further down the pipeline. Therefore, the methodology for selecting the pipeline segments to sample will not be modified in this approval and remains unchanged from what is currently required under 40 CFR part 761, subpart M. Furthermore, NFGSC mentioned that their pipe segments have threaded ends and can be disassembled without cutting. The threaded portions of the pipe segments must not be included in the wipe sample because the thread may have been shielded from PCB contamination. This approval is based upon EPA's conclusion that NFGSC's use of the alternative sampling site selection procedure when conducted in accordance with the applicable PCB regulations and in accordance with the terms and conditions of this approval, do not pose an unreasonable risk of injury to health or the environment.

A violation of any condition of the enclosed approval or any applicable federal regulation, may subject NFGSC to enforcement action and may also be grounds for modification, revocation, or suspension of the approval. Modification, revocation, or suspension of the approval may also result from future EPA rulemaking(s) with respect to PCBs, or from new information gathered by NFGSC and/or EPA, for example, during subsequent operations conducted by NFGSC covered by this approval.

Please contact Josh Smeraldi at (703) 308-0441 if you have any questions regarding the enclosed approval.

Sincerely,

Barnes Johnson, Director
Office of Resource Conservation and Recovery

Enclosure

cc: EPA Regional PCB Coordinators

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF	)	APPROVAL TO USE ALTERNATIVE
NATIONAL FUEL GAS SUPPLY CORPORATION	)	SAMPLING SITE SELECTION CRITERIA FOR POLYCHLORINATED BIPHENYLS
6363 MAIN STREET	)	(PCBs) IN NATURAL GAS PIPELINES
WILLIAMSVILLE, NY 14221-5887	)	

AUTHORITY

This approval is issued pursuant to Section 6(e)(1) of the Toxic Substances Control Act (TSCA) and the federal Polychlorinated Biphenyls (PCB) Regulation at 40 CFR 761.61(c).

Failure to comply with the approval conditions specified herein shall constitute a violation of § 761.61(c) 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 sampling process description are included in Appendices I and II.

EPA finds that National Fuel Gas Supply Corporation's (NFGSC's) use of the alternative sampling site selection procedure for vertically-oriented natural gas pipelines, when conducted in accordance with applicable PCB regulations and in accordance with the terms and conditions of the approval, is more appropriate than using Subpart M and does not pose an unreasonable risk of injury to health or the environment because (1) the resulting number of samples will be no less than the number of samples required in 40 CFR 761.247; (2) the alternative sampling site selection method will be conducted on both the interior and exterior of the pipeline; and, (3) the circumference of the pipe is wipe sampled.

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 Condition 8.

CONTENTS

DEFINITIONS AND ACRONYMS

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

"Application" means all data and materials upon which EPA based its decision to approve NFGSC's process, e.g., information submitted to EPA by NFGSC to define, represent, or describe NFGSC's proposed sampling methods. These data and materials are encompassed in NFGSC's alternate sampling application, dated July 7, 2017.

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

"Calendar year" or "year" means any 365 consecutive days except in the occurrence of a leap year, which contains 366 days. The calendar year does not necessarily begin on January 1st.

"CFR" means the Code of Federal Regulations.

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

"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, N. W., OLEM/ORCR, Mail Code: 5303P, Washington, DC 20460.

"Facility locations" means the locations at which NFGSC operates.

"HQ" means EPA Headquarters.

"Operations" means the pipeline removal and characterization of natural gas pipe under this approval.

"ORCR" means the Office of Resource Conservation and Recovery, located at EPA HQ.

"PCBs" means polychlorinated biphenyls as defined in § 761.3.

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

“Well Head” is the top of the vertical pipeline, near the surface of earth, where natural gas is injected into or withdrawn from the vertical pipeline that leads to or from the underground storage area.

CONDITIONS OF APPROVAL

Per 40 CFR 761.61(c), this approval authorizes NFGSC to use sampling site selection procedures alternative to those in 40 CFR part 761 subpart M. This alternative sampling approval may reference additional requirements of part 761 but NFGSC 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. This approval is solely for the purpose of alternative sampling site selection for characterizing the PCB contamination of vertical storage well pipe.

1. Scope of Approval

   a) This approval authorizes NFGSC to alternatively sample their vertical-oriented pipes such that the alternative sampling site selection method will be conducted on both the interior and exterior of the pipeline and the circumference of the pipe will be wipe sampled.

   b) This approval is solely for the purpose of characterizing NFGSC's storage well natural gas pipe with a vertical orientation if no organic liquids are present. NFGSC is responsible for properly characterizing and disposing of or decontaminating their pipeline and pipeline system components in accordance with all applicable requirements in 40 CFR part 761.

2. Sampling Site Selection Requirements for Vertical Natural Gas Pipe

   All requirements under 40 CFR part 761 subpart M apply with the exception of certain requirements in § 761.247, as specified below. The sampling site selection requirements under § 761.247 are modified as follows:

   a) General
      1) Select the pipe segments to be sampled by following the directions in paragraph (b) of this section.
      2) Locate the proper position along the length of the pipe segment that you have selected for sampling, by following the directions in paragraph (c) of this section.
      3) Select the proper sampling position around the circumference of the pipe segment that you have selected for sampling, by following the directions in paragraph (d) of this section.
      ~~4) Prior to removing pipe from the ground or lifting the pipe from its location during former operations, mark the top side of the pipe.~~
      5) Do not sample if there are free-flowing liquids in the pipe segment. Free-flowing liquids must be removed prior to sampling.
   b) Selecting pipe segments to sample. Select the pipe segment(s) that you will sample from a length of pipe or group of pipe segments, as follows:
      1) Do not sample a pipe segment that is longer than 12.2 meters (40 feet). If a segment is longer than 12.2 meters in length, cut the segment so that all resulting segments are 12.2 meters or less in length.
      2) Determine which pipe segments to sample as follows:

i) When a length of pipe having seven or fewer segments is removed for purposes of disposal, sample each pipe segment.

ii) When removing a length of pipe having multiple contiguous segments less than 3 miles in total length, take samples from a total of seven segments.

A) Sample the first and the last segment removed.

B) Select the five additional segments according to one of the two following procedures:

1) Assign all segments a unique sequential number. Then select five numbers using a random number table or random number generator. If the random number generator or random number table produces either the first pipe segment, the last pipe segment, or any previously selected segment, select another random number until there are seven different numbers, each corresponding to a different pipe segment.

2) Divide the total number of segments by six. Round the resulting quotient off to the nearest whole number. The resulting number is the interval between the segments you will sample. For example, cut a 2.9 mile length of pipeline into 383 segments of approximately 40 feet each. Sample the first (number 1) and last (number 383) segments. To determine which additional five segments to sample, divide the total number of segments, 383, by 6. Round up the resulting number in this example, 63.8, to the next whole number, 64. Add 64 to the number of each preceding pipe segment five separate times to select five additional pipe segments for sampling. In this example, the first pipe segment has the number 1, add 64 to 1 to select segment 65. Next, add 64 to 65 to select segment 129. Continue in this fashion to select all seven segments: 1, 65, 129, 193, 257, 321, and 383.

iii) When removing a length of pipe having multiple contiguous segments more than 3 miles in total length for purposes of disposal, take samples of each segment that is 1/2 mile distant from the segment previously sampled. Sample a minimum of seven segments.

c) Selecting the sampling position - length. Select the sampling position along the *interior and exterior* lengths of the pipe segment, as follows:

1) Take *interior and exterior pipe* samples at the end ~~upstream of the former gas flow~~ of each segment removed *that was closest to the well head*.

i) *Do not sample the threads on the pipe when collecting a wipe sample.*

ii) *If the sample site location selected in the procedure at paragraph (c)(1) of this pipe segment is a threaded surface, then move the sample site further away from the end of the pipe or pipe segment until there is no such threaded surface.*

iii) *If the sample site location selected in the procedure at paragraph (c)(1) of this pipe segment is a threaded surface in the interior of a pipe and the surface is inaccessible to collect a wipe sample, then follow one of the three options listed below in (c)(5).*

2) If the pipe segment is cut with a torch or other high temperature heat source, take the sample at least 15 cm (6 inches) ~~inside~~ *from* the cut end of the pipe segment.

3) If the pipe segment is cut with a saw or other mechanical device, take the sample at least 2 cm (1 inch) ~~inside~~ *from* the end of the pipe segment.

4) If the sample site location selected in the procedure at paragraph (c)(2) or (c)(3) of this section is a porous surface (for example, there is significant corrosion so that the

wipe material will be shredded), then move the sample site further ~~inside~~ along the pipe segment (away from the end of the pipe or pipe segment) until there is no such porous surface. For purposes of this subpart, natural gas pipe with a thin porous corrosion preventive coating is a non-porous surface.

5) If there is not a non-porous surface accessible by paragraphs (c)(2) and (c)(3) of this section, use one of the following three options:
   i) Sample the ~~downstream~~ *opposite* end of the pipe segment using the same sample site location procedure as ~~for the upstream end~~ *stated in paragraphs (c)(1), (2), (3), and (4) of this section.*
   ii) Select another pipe segment using the random selection procedure described in paragraph (b) of this section.
   iii) If there is no other pipe segment in the population to be sampled and both ends of a pipe segment have porous surfaces at all possible sample collection sites, then assume that the pipe segment contains ≥50 ppm PCB but <500 ppm PCB.

d) Selecting the sample position - circumference. ~~Based on the mark on the top of the pipe segment made prior to removing pipe from the ground or lifting the pipe from its location during former operations, sample the inside center of the bottom of the pipe being sampled. Make sure the sample is centered on the bottom of the pipe segment; that is, sample an equal area on both sides of the middle of the bottom of the pipe segment for the entire length of the sample.~~
   1) A band of surface area that encircles the interior of the pipe must be calculated based on the interior diameter such that a minimum area of 100 cm^2 is sampled.
   2) A band of surface area that encircles the exterior of the pipe must be calculated based on the exterior diameter such that a minimum area of 100 cm^2 is sampled.

3. Recordkeeping and Reporting Requirements

a) Throughout the period of removing and characterizing vertical-oriented natural gas pipelines conducted under this approval, NFGSC shall maintain, at their corporate office:

   1) A copy of this approval;

   2) The date, location, and quantity of pipe characterized for each site where this approval is used;

   3) The names of the NFGSC personnel supervising the pipe characterization;

   4) The field notes and/or data used to determine compliance with Condition 2 of this approval, signed and dated by the supervising individual; and

   5) The name of NFGSC personnel who have been trained and the date of their training, as required by Condition 5.

b) Upon expiration of this approval, or if NFGSC's business is terminated, NFGSC shall 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.

4. Agency Approvals/Permits:

NFGSC's operations may not commence until NFGSC has obtained all required approvals/permits from federal, state, and local agencies. NFGSC is responsible for obtaining such approvals/permits.

5. Personnel Training

a) NFGSC shall ensure that the personnel directly involved with the sampling procedures covered by this approval are familiar with the requirements of this approval.

b) NFGSC personnel shall be formally trained every 12 months. Training materials shall be kept on site at each site where this approval is used in a location accessible to all personnel during working hours. At a minimum, NFGSC shall train personnel on the following:

1) The sampling procedures under this approval;

2) The nature of PCB contamination likely to be found in natural gas pipelines and NFGSC's operations as stated in this approval;

3) The handling and/or PCB waste disposal requirements for process residuals and other materials generated during the characterization process;

4) Spill prevention and cleanup, including requirements in the PCB Spill Cleanup Policy in 40 CFR part 761, subpart G.

6. Ownership Transfer

a) If NFGSC intends to transfer ownership and the transferee wants to operate under the same or similar terms as this approval, NFGSC shall notify the Director of ORCR, in writing, at least 90 days before transferring ownership. NFGSC shall also submit to the Director of ORCR, at least 90 days before such transfer, a notarized affidavit signed by the transferee that states the transferee is seeking approval to alternatively sample natural gas pipeline. Failure of NFGSC to provide EPA with this required written documentation of the transfer within the specified time frame would be a violation of this approval and the approval would immediately terminate upon the transfer of ownership.

b) After receiving the notification described in paragraph (a) of this section, EPA may:

1) Issue an amended operating approval substituting the transferee's company name for NFGSC's name;

2) Require the transferee to apply for a new PCB approval by submitting either a complete application or a partial application for approval (e.g., that focuses on information that demonstrates the transferee has the ability to comply with the terms and conditions of this approval, such as a summary of company personnel

qualifications and previous trainings that are relevant to complying with the terms and conditions of this approval, or a summary of previous compliance history, if applicable); or

3) A combination thereof.

c) The transferee shall not operate unless EPA either has amended this approval to allow for such operation or has issued a new approval to the transferee.

7. 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 in Condition 8.

8. Approval Continuation, Modification, and Renewal

a) If NFGSC intends to continue sampling under the terms of this approval beyond the expiration date of this approval, NFGSC shall submit a complete approval renewal application to EPA at least 180 days prior to the expiration date of this approval. NFGSC may request the modification or update of approval terms or conditions as part of its approval renewal application.

1) A complete approval renewal application is considered to be, at a minimum, information that was submitted in previously approved sampling approval requests, with appropriate modifications or updates based on proposed revisions to the original approval. For example, if NFGSC is seeking approval to use a new characterization sampling procedure for their vertical storage well pipelines, the approval application shall reflect those changes.

2) NFGSC is encouraged to contact the ORCR HQ in advance of 180 days prior to the expiration date of this approval if NFGSC intends to renew this approval. This is especially important if NFGSC wants to make changes to sampling requirements. Under those circumstances, NFGSC will not be allowed to operate under revised sampling requirements until EPA issues NFGSC a fully renewed, and revised approval.

b) If NFGSC submits the information in paragraph (a) of this section 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 EPA issues an approval renewal, a conditional approval renewal, or an approval request denial.

c) If NFGSC does not submit a complete approval renewal application to EPA at least 180 days prior to the expiration date of this approval, this approval will expire as specified in Condition 7.

d) NFGSC will not be allowed to operate under revised operating conditions until EPA issues NFGSC a fully renewed, and revised, operating approval.

DECISION TO APPROVE NFGSC'S REQUEST TO USE ALTERNATIVE SAMPLING SITE SELECTION CRITERIA

1. Approval under 40 CFR 761.61(c) to use alternative sampling site selection criteria for characterizing vertical storage well natural gas pipe to determine PCB concentration is hereby granted to National Fuel Gas Supply Corporation (NFGSC) of Williamsville, NY, subject to the terms and conditions expressed in this approval and consistent with the materials included in the application submitted to EPA by NFGSC on July 7, 2017.

2. EPA finds that NFGSC's use of alternative sampling site selection procedures, when conducted in accordance with the PCB regulations and in accordance with the terms and conditions of this approval, is more appropriate than using Subpart M and will not pose an unreasonable risk to health or the environment because (1) the resulting number of samples will be no less than the number of samples required in 40 CFR 761.247; (2) the alternative sampling site selection method will be conducted on both the interior and exterior of the pipeline; and, (3) the circumference of the pipe will be wipe sampled.

3. EPA reserves the right to impose additional conditions or revoke this approval when it has reason to believe that NFGSC's alternative sampling site selection process does not adequately characterize PCB contamination in NFGSC's vertical storage well natural gas pipe; may pose an unreasonable risk of injury to health or the environment; new information requires changes; or if EPA issues new regulations or standards that impact terms or conditions of this approval.

4. EPA will make best efforts, taking into account the nature of the risk, to provide reasonable advance notice to NFGSC and to provide opportunity for NFGSC to comment on any modifications to or termination of the approval. EPA may require NFGSC to immediately suspend operations while EPA is deciding whether to impose approval modifications or to terminate this approval.

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

6. NFGSC shall be responsible for the actions of its employees and contractors that assist with NFGSC's operations when those actions are related to performance of NFGSC's pipeline sampling process.

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

8. EPA reserves the right for its employees or agents to inspect NFGSC's pipeline sampling activities at any location at any reasonable time.

9. Violation of any applicable regulations or condition 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 761.61(c) and 761.50(a) and may also

be a violation of other provisions of 40 CFR part 761. A violation of the PCB regulations is a prohibited act under Section 15 of TSCA.

JAN 08 2018

Date

Barnes Johnson, Director
Office of Resource Conservation and Recovery

APPENDIX I

COMPANY BACKGROUND

National Fuel Gas Supply Corporation (NFGSC) of Williamsville, New York, is an interstate transporter of natural gas and a subsidiary of National Fuel Gas Corporation. NFGSC operates natural gas transmission pipelines and approximately 1,200 underground storage wells among 30 storage fields in western New York and northwest Pennsylvania (EPA Regions 2 and 3). In certain circumstances, NFGSC natural gas storage well configurations include tubing installed within casings that confine and convey the storage gas. The tubing for storage wells typically ranges between 2-3/8 and 3-1/2 inches in outer diameter and is installed vertically within a well bore by connecting 30-foot long segments of pipe using threaded connections on each end. The wells have depths ranging from 700 to 6,100 feet. The gas can be transferred through the tubing, outside the tubing (i.e., using the well bore), or both inside and outside the tubing. As such, PCB-contaminated oil or condensate may adhere to the interior and exterior surfaces of the pipe.

When the well is shut down, the well is filled with kill brine to stop the flow of gas before the piping is removed from the well. Once the piping is removed and disassembled, it must be characterized to determine disposal requirements. 40 CFR 761.60(b)(5) states that natural gas pipelines are to be characterized by analyzing organic liquid condensate from collection points or, if there are no liquids, wipe samples must be collected according to Subpart M. Although not stated explicitly, Subpart M appears to assume that all natural gas pipe is horizontally oriented. Furthermore, it does not contemplate a scenario in which fluids would flow along the outside of a pipe. As such, there does not appear to be a suitable procedure to characterize vertically-oriented storage well tubing where oil and/or condensate may flow on the exterior surface. The alternative sampling method as stated within this approval is nearly identical to requirements in Subpart M but with a few minor changes to account for the vertical orientation of the pipes and for PCB contamination on the exterior of the pipe.

NFGSC submitted to EPA an application requesting an alternative sampling method, dated July 7, 2017. In NFGSC's application, they proposed to collect seven interior and seven exterior wipe samples when characterizing their vertical storage well piping. Additionally, given there is no gravitationally defined "bottom" where condensate would naturally gather on the vertical pipes, NFGSC proposed to wipe sample the circumference of the pipe. NFGSC proposed to sample the two uppermost segments, the lowermost segment, and four random segments in between. They expected the uppermost segments to have the highest level of contamination so they proposed to have one less randomly selected segment to sample, as compared to the regulations, and instead sample the second uppermost segment. The total number of samples for the pipeline would not have changed. However, EPA does not agree because the pressure will increase with depth which will increase the likelihood of oil condensation. So there may be higher levels of PCB contamination further down the pipeline. Therefore, the methodology for selecting the pipeline segments to sample will not be modified in this approval and remains unchanged from what is currently required under 40 CFR part 761, subpart M.

APPENDIX II

STORAGE WELL PIPING DIAGRAM