



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

AUG 21 2006

Mr. Terry D. McCallister
President
Washington Gas
6801 Industrial Road
Springfield, Virginia 22151

Dear Mr. McCallister:

Pursuant to the Federal polychlorinated biphenyl (PCB) regulations, 40 C.F.R Part 761, the Environmental Protection Agency (EPA) is issuing the enclosed document, entitled "APPROVAL FOR ALTERNATIVE CHARACTERIZATION AND ABANDONMENT PROCEDURES FOR NATURAL GAS PIPELINE" to Washington Gas (WG). This risk-based disposal approval will allow WG to use alternative procedures for characterization of small diameter gas pipeline for polychlorinated biphenyls prior to abandonment.

A public notice of the availability of the draft approval for review and request for comments was published in the Washington Post on May 30, 2006. EPA did not receive any comments on the draft approval during the 30-day public comment period.

This approval shall be effective today and shall remain effective for 10 years. However, EPA may suspend or revoke this approval should WG fail to comply with the approval conditions. Violation of the approval conditions and/or the applicable PCB regulations at 40 C.F.R Part 761 could result in civil and/or criminal penalties. Furthermore, this approval does not relieve WG of the responsibility to comply with all other Federal, State, and local regulations and ordinances that may apply to the activities addressed in this approval.

Please contact Craig E. Yussen at (215) 814-2151 if you have any questions pertaining to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "James J. Burke".

James J. Burke, Director
Waste & Chemicals Management Division

Enclosure

cc: Mary Jean Brady (Washington Gas Co.) w/ enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

IN THE MATTER OF:) APPROVAL FOR ALTERNATIVE
WASHINGTON GAS) CHARACTERIZATION AND
WASHINGTON, DC) ABANDONMENT PROCEDURES
FOR NATURAL GAS PIPELINE

AUTHORITY

This approval for alternative characterization and abandonment procedures for natural gas pipeline systems containing polychlorinated biphenyls (PCBs) is issued pursuant to Section 6(e) of the Toxic Substances Control Act (TSCA), 15 USC § 2605(e), and the Federal PCB regulations at 40 C.F.R. Part 761.

BACKGROUND

Washington Gas (WG) owns and operates a natural gas distribution system in the Washington, D.C. and Springfield, Virginia metropolitan areas. Historical sampling of WG's pipeline system from 1993 indicates that all gate stations (interconnects with natural gas suppliers) indicated the presence of PCBs below 50 parts per million (ppm). Other areas such as drip points and valves in the gas distribution system were suspected by WG to contain PCBs at greater than 50 ppm. An updated study, performed in 1999, of all of WG's major gate stations indicated no presence of PCBs at greater than 50 ppm. Therefore, it was assumed by WG that any source of PCB contamination originated from PCB based oils and lubricants from other suppliers and occur in the pipelines in condensate from high pressure operations.

In June 1998, the Environmental Protection Agency (EPA) amended the Federal PCB regulations at 40 C.F.R. Part 761 to conditionally authorize the use of PCBs in natural gas pipeline systems. The Agency also established procedures for testing, abandoning and disposing of natural gas pipelines contaminated by PCBs. Sections 761.60(b)(5)(iii) and 761.250 describe methods by which to sample pipe for characterization purposes prior to abandonment in place. The natural gas pipeline provisions in the PCB regulations were drafted with interstate natural gas transmission systems in mind rather than local natural gas distribution systems. The interstate transmission pipelines are typically larger diameter pipes in long, relatively straight runs with minimal branching. By contrast local gas distribution systems consist mainly of small diameter (2- inch to 6-inch) supply lines with multiple branches that typically follow the road and street network and smaller diameter (usually less than 1-inch) service lines that run from the street or right-of-way to the meter at the house or building.

Because of the difficulty in sampling small diameter pipe (e.g., less than 6 inches in diameter) using the methods described in 40 C.F.R. Sections 761.60(b)(5)(iii) and 761.250, WG proposed an alternate swab sampling technique similar to that of Atlanta Gas Light Company (AGLC), whose plan was approved by EPA Region IV on August 15, 2000. Therefore, WG has requested EPA Region III to approval its plan as well.

APPLICABLE REGULATIONS

Requirements for abandonment (in place disposal) of natural gas pipeline systems containing PCBs are set forth in 40 C.F.R. § 761.60(b)(5)(i). Paragraph D of §761.60(b)(5)(i) provides a mechanism for Agency approval of alternative methods of abandonment under §761.61(c) *risk-based disposal approval*, which specifies that the basis for approval is a finding of no unreasonable risk to human health.

DEFINITIONS

All the terms and abbreviations used in this approval shall have the meanings as defined in 40 C.F.R. § 761.3 and § 761.240 unless another definition for a term is cited below for purposes of this approval.

“Abandonment” means removing gas pipeline from the active distribution system by cutting and capping the ends of the obsolete pipeline and leaving it in-place, usually in the ground.

“Cut and cap” means the act of cutting pipe by mechanical means such as a spark less wheel cutter, and capping the ends. Usually performed during pipeline abandonments and/or renewals for the purpose of segregating pipelines.

“Drip” means a small tank attached to a line for purposes of trapping and removing liquids.

“Feed” means the gas supply line to a project area.

“Major modification” means any change to the sampling methods to verify decontamination specified herein or any other changes which affect overall performance or environmental impact.

“Minor modification” means administrative and informational changes, correction to typographical errors, changes to conform with agency guidance or regulations, or any other change which does not affect overall performance or environmental impact.

“Organic liquid” means that portion or phase of pipeline condensate composed of hydrocarbons.

“Project or project area” means a portion of the approximately 10,537 miles of pipe in WG’s natural gas distribution system included in WG’s abandonment/removal program in which the natural gas supply lines and service lines are to be abandoned in place or removed.

"Service" means small diameter pipe (nominally 1 inch or less) that runs from the street supply line to the meter at a house or building.

"Supply line" means gas pipe in a street or right-of-way that is part of the distribution system that delivers gas from pumping stations or other distribution points to one or more service connections.

FINDINGS

1. WG has developed an alternative wipe sampling method to determine PCB concentration on the internal surface of small diameter gas pipe similar to the method developed by AGLC and approved by EPA on August 15, 2000. The standard wipe test developed by EPA may not be practical in pipe having a nominal inside diameter of ≤ 6 inches. Test data submitted by AGLC indicates that its alternate wipe test averaged slightly higher recovery rates for PCB spiked surfaces when compared to the standard wipe test. EPA Region IV has agreed that AGLC's procedure is acceptable for testing small diameter pipe having a nominal inside diameter of ≤ 4 inches on an interim basis when used in a pass/fail mode. Based on EPA Region IV's approval of AGLC plan, as well as EPA Region III's independent review of WG's plan, EPA Region III has concluded that WG's alternate sampling plan is also acceptable for testing small diameter pipe for PCBs.

2. At a minimum, 40 C.F.R. § 761.250(b) requires PCB sampling at all ends of pipeline sections being abandoned. EPA finds that WG's proposed sampling frequency of one sample per 5,000 feet of pipeline is acceptable for large abandonment projects (e.g., greater than three miles of pipeline) but is requiring a sampling frequency of one sample per 2,500 feet of pipeline for projects with less than three miles of pipeline.

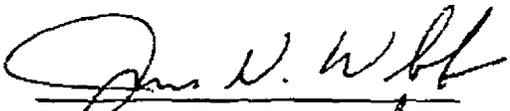
3. EPA has determined that WG's alternative procedures for natural gas pipeline wipe sampling and distribution system characterization for PCBs, when used in conjunction with standard abandonment procedures for PCB contaminated pipeline and in accordance with the approval conditions established herein, will not pose an unreasonable risk of injury to human health or the environment.

APPROVAL

Approval is hereby granted to the WG to characterize pipeline within its natural gas distribution system slated for abandonment for PCB contamination using the procedures and subject to the approval conditions stated herein. This approval shall become effective on the date of signature and shall expire ten (10) years from the date of signature, unless revoked, suspended, or terminated in accordance with the approval conditions stated herein.

This approval does not relieve WG from compliance with applicable Federal, State and local regulatory requirements. This approval does not relieve WG from compliance with the

Federal PCB regulations at 40 C.F.R. Part 761, and any amendments or revisions thereto, except those provisions at 40 C.F.R. § 761.60(b)(5)(i) and (iii) regarding natural gas pipeline abandonment and characterization, to the extent allowed by this approval.



James J. Burke, Director
Waste & Chemicals Management Division

August 18, 2006

Date

INDEX

	PAGE
Authority	1
Background	1
Applicable Regulations	2
Definitions	2
Findings	3
Approval	4
Index	5

APPROVAL CONDITIONS

A. Effect of Approval	6
B. Severability	6
C. Approval Compliance	6
D. Approval Revocation/Suspension	6
E. Approval Expiration and Continuation	7
F. Approval Renewal	7
G. Approval Modification	7
H. Inspections	7
I. Project Plans	8
J. Pipeline Characterization	8
K. Analysis	9
L. Application of Sampling Results	9
M. Quality Assurance	10
N. Disposal	10

Appendix A

APPROVAL CONDITIONS

A. Effect of Approval

1. Issuance of this approval does not convey property rights of any part or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights or any infringement of state or local laws or regulations.
2. Compliance with these approval conditions does not establish a defense to any other law that provides protection from any unreasonable risk to public health and the environment, including the Federal PCB regulations at 40 C.F.R. Part 761.
3. This approval does not relieve WG from compliance with all applicable Federal, State and local regulatory requirements, including the Federal PCB regulations at 40 C.F.R. Part 761.

B. Severability

The provisions of this approval are severable, and if any provision of this approval or if the application of any provision of this approval is held invalid, the remainder of this approval shall not be affected thereby.

C. Approval Compliance

1. WG must comply with and operate in accordance with the provisions of the Federal PCB regulations at 40 C.F.R. Part 761 and with the approval conditions stated herein.
2. These approval conditions are based on the facts, representations, and certifications made by WG in its approval application dated January 30, 2006 and any subsequent written communication with the Agency. In the event that these approval conditions are inconsistent with the approved application materials, WG must abide by the approval conditions stated herein.

D. Approval Suspension/Revocation

1. Departure from these approval conditions, the approved application materials or approved modification(s) to this approval, or the Federal PCB regulations without the prior written approval of EPA may result in the immediate suspension of this approval and/or the commencement of proceedings to revoke this approval and/or appropriate enforcement action under any or all applicable statutes and regulations.

2. This approval may be suspended or revoked at any time by EPA when it has reason to believe that WG's pipeline abandonment activities present an unreasonable risk to human health or the environment.

E. Approval Expiration and Continuation

1. This approval shall expire ten (10) years from the date of EPA's issuance of this approval.

2. This approval and its conditions herein will remain in effect beyond the approval expiration date if WG has submitted a timely, complete and adequate notice of intent to continue the approval and, through no fault of WG, EPA has not issued an approval renewal.

F. Approval Renewal

1. To continue the PCB storage and processing activities granted by this approval after the expiration date of this approval, WG must notify EPA by written notice of intention to continue the approval at least 180 days, but not more than 270 days prior to the expiration date of this approval.

2. EPA may require WG to submit additional information in connection with the renewal of this approval. EPA shall review the submitted information and determine if this approval is to be renewed.

G. Approval Modification

WG shall notify EPA in writing of any intended modification of this approval or WG's approved application. A major modification to this approval or the final application shall be made only upon the written approval of the EPA Regional Administrator or his/her designee. A minor modification to this approval or the application shall be made upon the written concurrence of the Toxics Programs and Enforcement Branch Chief of EPA, Region 3.

H. Inspections

WG shall allow EPA authorized representative(s) to, at reasonable times:

1. Inspect any records, data, etc., generated in support of work carried out under the terms of this approval or the federal PCB regulations;

2. Take sample(s) for the purpose of assessing compliance with this approval or the Federal PCB regulations; and

3. Inspect WG's activities relative to this approval or the Federal PCB regulations.

I. Project Plans

1. At least thirty (30) calendar days before beginning pipeline characterization work in a project area WG shall submit a project plan and schedule to EPA for review. The project plan shall include a color-coded map of the project area depicting the layout of pipeline to be abandoned or removed, the layout of any replacement pipe, cut and cap locations and proposed PCB sampling locations.

2. EPA may request additional sampling points or changes to proposed sampling locations. If EPA does not respond within twenty (20) calendar days of receiving the project plan, WG may assume that it is complete and acceptable and proceed with the project characterization work.

J. Pipeline Characterization

1. The pipeline to be abandoned or removed in each project area shall be reviewed by WG's respective service centers, responsible for the individual projects, in conjunction with the technical or engineering department to identify low points for inspection and determine the number and location of samples to be collected.

2. For each pipeline abandonment or removal project area, WG shall characterize the project area pipeline for PCB contamination by analyzing organic liquids collected at any existing condensate collection points (drips), representative low points to be selected by WG, and cut ends. If no organic liquids are present, WG shall drain free-flowing liquids and collect wipe samples at selected cut ends.

3. WG shall follow the wipe sampling procedures at 40 C.F.R. 761 Subpart M for characterization of pipeline having a nominal inside diameter of > 6 inches. WG shall use the approved alternative small diameter wipe sampling procedure proposed in its January 30, 2006 application to characterize pipeline having a nominal inside diameter of ≤ 6 inches.

4. Low point inspections - The pipeline in each project area will be characterized by inspecting representative low points at a frequency of one low point per 5,000 feet of pipe or part thereof.

5. Cut end sampling - WG shall sample the most upstream cut end(s) of the feed(s) or supply line(s) to a project area. If a project area contains less than 2,500 feet of pipe for abandonment, the feed cut end sample(s) will be used to characterize the pipe within the project area. Additional samples will be collected from selected cut ends and representative low points previously inspected for liquids at the following frequencies:

- a. For project areas containing < 3 miles of pipeline slated for abandonment, at least one sample shall be collected per 2,500 feet or part thereof.
 - b. For project areas containing \geq 3 miles of pipeline slated for abandonment, at least one sample shall be collected per 5,000 feet or part thereof.
6. Pipeline characterization samples shall be collected from various, evenly distributed locations across the project area.

K. Analysis

The PCB levels determined for liquid and wipe samples shall be reported as total PCBs calculated by comparison to the relevant Aroclor standards -- i.e., Aroclor 1242, 1248, 1254 and 1260, etc. Samples shall be analyzed in accordance with the methodologies specified in 40 C.F.R. § 761.60(g) or § 761.253, as applicable.

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L. Application of Sampling Results

1. The results of PCB testing on gas pipeline characterization samples shall be used to determine the regulatory classification of pipeline within the project area. Pipeline shall be classified as PCB pipe if testing a liquid sample or a wipe sample yields the following results:
 - a. The PCB concentration of a liquid sample is \geq 50 parts per million (ppm);
 - b. The PCB concentration for a standard wipe sample is reported at > 10 micrograms per 100 square centimeters; or
 - c. The PCB concentration for a sample collected using WG's alternative wipe test is reported as any value above the laboratory detection limit.
2. The resulting pipeline classification shall apply to the pipeline at a sample point and all sections of pipeline down stream of a sample point unless and until a second sample is collected downstream of the first sample that changes the pipeline classification.
3. Pipeline sections containing PCBs below the levels specified in Condition L.1 may be abandoned in accordance with WG's best management practices.
4. Pipelines sections classified as PCB pipe shall be abandoned in accordance with the requirements of 40 C.F.R. § 761.60(b)(5)(i).

M. Quality Assurance

WG has developed a Quality Assurance Plan (QAP) for pipeline characterization in its January 30, 2006 application to ensure the PCB data collected is suitable for its intended use. WG shall follow the procedures outlined in the QAP in conducting all pipeline characterization work under the terms of this approval.

N. Disposal

1. Any liquids containing PCBs ≥ 50 ppm removed, spilled, or otherwise released from a natural gas pipeline system shall be disposed of in accordance with 40 C.F.R. § 761.61(a)(5)(iv).
2. Material contaminated by spills or other releases of PCBs ≥ 50 ppm from a natural gas pipeline system shall be disposed of in accordance with 40 C.F.R. § 761.61 or § 761.79, as applicable.
3. Non-liquid sampling equipment, cleaning materials and personal protective equipment (PPE) waste at any concentration, including non-porous surfaces, and other non-liquid materials such as rags, gloves, booties, other disposable PPE and similar materials resulting from pipeline characterization work or cleanup activities shall be disposed of in accordance with 40 C.F.R. § 761.61(a)(5)(v).

is this done?



Washington
Gas

Quality Assurance Plan for PCB Pipe Sampling in Small-Diameter Natural Gas Pipelines

Washington Gas
6801 Industrial Road
Springfield, Virginia 22151

January 30, 2006

Table of Contents

1.0	INTRODUCTION	2
2.0	BACKGROUND	2
2.1	<i>History of PCBs in the Washington Gas System</i>	2
2.2	<i>Description of Impacted Areas</i>	3
3.0	PROJECT MANAGEMENT	3
4.0	PROPOSED SAMPLING PLAN	4
4.1	<i>Sampling Process Design</i>	4
4.2	<i>Sampling Methods, Handling, and Request for Analysis</i>	4
4.3	<i>Analytical Methods and Quality Control</i>	4
4.4	<i>Data Quality Objectives</i>	4
4.5	<i>Data Management</i>	5
4.6	<i>Data Verification</i>	5
4.7	<i>Data Validation</i>	5
5.0	TRAINING	6

APPENDICES

APPENDIX A - WASHINGTON GAS CHAIN OF CUSTODY FORM

APPENDIX B - PROCEDURE FOR COLLECTING WIPE SAMPLES FOR PCB ANALYSIS FROM NATURAL GAS PIPELINES

APPENDIX C - AGLC SMALL DIAMETER PIPE WIPE SAMPLING PROCEDURE AND DATA VALIDATION

1.0 Introduction

Washington Gas has developed this Quality Assurance Plan for Sampling Small Diameter Pipe as a procedure for defining and outlining our compliance with the PCB Megarule. Specifically, the Plan sets forth the company's plans for implementing a new sampling technique to characterize small-diameter pipe for PCB contamination. The information that follows in this document will discuss the history of PCB contamination in the Washington Gas distribution system, the efforts made to date to properly characterize and manage natural gas piping in regard to PCBs, and the plan for sampling small diameter pipe systems. The purpose of this Plan is to supplement the existing PCB characterization and management program to allow Washington Gas to better determine the presence of PCBs in our small-pipe distribution system, and properly abandon and dispose of contaminated pipe systems.

Under the PCB-Megarule, natural gas piping with internal diameters of less than six inches cannot be sampled using the wipe-sampling technique that is outlined in the regulation. Consequently, Washington Gas must routinely grout small pipe systems when they are being abandoned as part of routine system upgrades. Currently, Washington Gas has 10,537 miles of natural gas main in service with an internal diameter of less than six inches. Approximately 17 miles of this main are abandoned each year, along with thousands of feet of service lines. The costs of grouting are extremely onerous for these abandonments. In 2006, Washington Gas estimates that, under the current requirements, grouting costs alone could exceed two million dollars.

Washington Gas is seeking approval from US EPA Region III to utilize an alternative sampling technique for natural gas piping with an internal diameter of less than six inches. Current wipe sampling techniques are limited to pipes with internal diameters of six inches or more under the PCB Megarule. Washington Gas will use this alternative sampling technique to characterize small-diameter pipe for PCB across our franchise territory. The approval of this alternative sampling technique and the associated Quality Assurance Plan will ensure that Washington Gas is compliant with TSCA regulations while being able to cost-effectively characterize and manage abandoned and removed PCB-contaminated pipe segments.

Washington Gas has based this Quality Assurance Plan on a quality assurance project plan that was submitted to US EPA Region IV by Atlanta Gas Light Company (AGLC). The plan was developed by AGLC after extensive field testing of a new small pipe testing technique. Region IV received this document and subsequently granted approval for the alternative sampling plan. The AGLC study showed that Arocolor recovery rates with the small-pipe sampling technology were actually higher than the recovery rate from the large-pipe wipe test that is detailed in the Megarule. A copy of the AGLC Small Diameter Pipe Wipe Sampling Procedure and Data Validation Procedures has been included as Appendix C. Washington Gas will use a pipe swabbing technique that is identical to the procedure EPA Region IV approved for AGLC.

WGLC has used it since

2.0 Background

2.1 History of PCBs in the Washington Gas System

To determine if there were sources of PCBs in the distribution system, managers at plants, gate stations, and other areas where the potential existed for PCB-contaminated materials to enter the natural gas system were contacted. After review of historical procurement records, material safety data sheets (MSDS's), and operating records, it was determined that there was no history of PCB-contaminated product usage at any Washington Gas facility.

The Washington Gas Environment Department reviewed historical PCB sampling records and interviewed Operations personnel regarding the types of potential sources that could be in the system. From historical sampling results, all gate stations (interconnects with natural gas suppliers) yielded PCB results that were below 50 ppm by 1993. It was determined that there are still several drip points and valves in the distribution system that may contain condensate with PCB concentrations exceeding 50 ppm. In accordance with the EPA PCB Megarule, these drips and valves are not defined as sources.

Washington Gas conducted an updated study of all major gate stations in 1999 to determine possible PCB contamination. Analysis of liquid samples indicated that PCBs were detected at only one of the gate stations, and at levels below 50 ppm. Wipe and liquid samples from the other gate stations did not indicate the presence of PCBs.

The source of PCBs in the Washington Gas distribution cannot be conclusively determined. Given the fact that no record of using PCB-containing products has been found within the system, the likely source is past contamination from upstream natural gas suppliers. Many of these suppliers have identified that they historically used oils and lubricants that contained PCBs. These lubricants entered the natural gas system, where were likely transmitted to the Washington Gas distribution system.

2.2 Description of Impacted Areas

Washington Gas has found that the migration of PCBs is influenced by changes in pressure and the movement of condensate liquid (heavy weight hydrocarbons and other compounds that separate from the natural gas due to changes in pressure and/or temperature) in the system. Condensate acts as a solvent to hold the PCBs in solution. During times of high natural gas demand, changes in pressure can mobilize condensate, and relocate them until pressure reduces to the level that allows condensates to settle in low points within the system. Therefore, both liquid and wipe sampling techniques must be used to properly characterize a given pipe run for PCB contamination. Washington Gas has found through historical sampling activity that condensate is not readily encountered during abandonments, and that wipe sampling is the only method available for PCB detection. PCB concentrations in the Washington Gas system appear to have attenuated over the active period of sampling from 1981 to present. However, the locations of PCB-contaminated samples have not yielded a consistent pattern that would allow the location of the contamination to be tracked. The majority of samples over 50 ppm have been taken from the Washington, D.C. portion of the system; this area is the terminus for many of the larger distribution pipelines in the system.

3.0 Project Management

The Washington Gas Environment Department manages the overall PCB compliance program. These responsibilities include development of the PCB sampling field kits; receipt of the samples and coordination of their delivery to the contract laboratory; management of the sampling data; and coordination with field personnel. Managers and Supervisors in the Field Operations Department are responsible for taking the PCB wipe samples in the field, as well as grouting activities for contaminated large and small diameter pipe systems. Overall, quality assurance for the program will be the responsibility of the Supervisor, Environment Department.

4.0 Proposed Small Pipe Sampling Plan

4.1 Sampling Process Design

Wipe samples will be collected on an as needed basis, consistent with Washington Gas's operations and maintenance activities. All abandoned and removed pipe segments will be characterized for PCB concentrations through liquid sampling or wipe sampling. When available, liquid sampling data will be used to characterize pipe segments for up to one year after the collection and analysis of the sample.

For all natural gas replacement and abandonment projects, the Environment Department will review construction plans and make recommendations for sampling locations. One sample will be taken every 2,500 feet of pipe. The sample will be taken on the "upstream" end of the pipe. For areas of less than 2,500 feet, one sample will be utilized to characterize all of the pipe in that section. The objective of the sampling points is to accurately characterize the system to be abandoned.

4.2 Sampling Methods, Handling, and Request for Analysis

A copy of the sampling methods, an inventory of the sampling kit, and a chain of custody form have been included in the Appendix of this document. Washington Gas will be using a contract laboratory for this effort. Phase Separation Science of Baltimore, Maryland or another licensed contract laboratory will conduct the analysis work. Results will be faxed to the Washington Gas Quality Assurance/Quality Control (QA/QC) laboratory for distribution to the Supervisor, Environment Department. The Washington Gas QA/QC lab will not perform any of the analysis, but will instead be a point of contact between the field and the contract laboratory. The QA/QC lab will oversee the logistics of transporting samples to the contract laboratory as well as tracking the receipt of data.

4.3 Analytical Methods and Quality Control

Washington Gas Supervisors will conduct all field sampling. Each Supervisor has been trained to conduct PCB wipe sampling. Additional training will be conducted using the small-diameter pipe swabbing technique. The Washington Gas QA/QC laboratory will assemble the sampling kits, receive all field samples, and coordinate analysis of the samples with a contract laboratory. The Supervisors will have the option of bringing the samples directly to the in-house QA/QC laboratory for shipment to the contract laboratory, or having the contract laboratory pick up the samples directly from the project site.

As part of the quality control process, the WG QA/QC lab will insert one field blank into every tenth sampling kit. This will allow Washington Gas to track the consistency and accuracy of the sampling effort, and ensure that proper handling of samples is being conducted. The field blanks will be analyzed and included in the tracking system of PCB sampling results.

4.4 Data Quality Objectives

Analytical results obtained from small-diameter pipe testing will be used to characterize the pipe for its PCB content. If any PCBs are detected above the laboratory detection limit per

Contract

EPA Method. 8082, then the pipe section that was tested will be assumed to be PCB-contaminated. Any removed sections of pipe from this system will be handled according to current PCB Megarule requirements. Any sections to be abandoned in place will be grouted to at least 50 percent of the interior capacity of the pipe, in line with the requirements detailed in the PCB Megarule.

4.5 Data Management

The sampling results will be submitted via email, fax, or US Mail to the Washington Gas QA/QC laboratory. The QA/QC laboratory will log the results and submit the analytical information to the Washington Gas Supervisor, Environment Department. The Washington Gas Environment Department will be responsible for the receipt and management of all PCB sampling data, as well as transmittal of analytical results to the Construction Group. For all pipe sections where PCBs have been detected, the Construction Supervisor will coordinate and oversee all grouting or removal activities, as well as ensure that removed pipe sections are brought to the Washington Gas' Springfield Operations Center for proper storage. All contaminated pipe sections are decontaminated on a regular basis by Washington Gas (on July 3, 2000 Washington Gas received approval from US EPA Region III for a performance based decontamination process for PCB piping).

4.6 Data Verification

The Washington Gas Construction Supervisors will be responsible either for taking all samples and ensuring their delivery to the Washington Gas QA/QC lab, or directly to the contract laboratory. The QA/QC lab will log the samples and coordinate the shipment to the contract laboratory. The QA/QC lab will also submit a copy of the chain of custody form to the WG Environment Department at the time of sample submission. Any discrepancies relating to lost or late data will be handled by the Supervisor, Environment Department.

4.7 Data Validation

Washington Gas has based this small-diameter pipe wipe sampling procedure and data validation program on a small-pipe sampling methodology developed by Atlanta Gas Light Company (AGLC). This program was approved by US EPA Region IV on September 18, 2001. A copy of the AGLC Small Diameter Pipe Wipe Sampling Procedure and Data Validation Procedures has been included as Appendix C.

The Washington Gas QA/QC laboratory will ensure that all samples are analyzed by the contract laboratory per the proper EPA testing methodology (e.g., EPA Method 8082). Washington Gas will also ensure that the contract laboratory maintains all necessary credentials and certifications to conduct the required analysis. The contractor laboratory will be required to conduct the analysis in the necessary time, and will ensure that data is submitted in a timely manner to the QA/QC laboratory. The Supervisor, Environment Department will also examine the data for any abnormalities, and will contact the contractor laboratory as needed to clarify any anomalies. The Environment Department will also be the repository of all current and historical sampling data. These records will be made available for EPA review upon request.

5.0 Training

All personnel involved with the PCB sampling project will be trained on PCB wipe sampling techniques, proper handling and storage of pipe, and specific health and safety practices. The training will be conducted on an annual basis for current employees and on an as-needed basis for new and recently promoted employees. All training will be documented with an attendance sheet. Environment, the WG Training Department, and the Construction Manager will keep a copy of the training sheet.

APPENDICES

APPENDIX A

WASHINGTON GAS CHAIN OF CUSTODY FORM

APPENDIX B

PROCEDURE FOR COLLECTING WIPE SAMPLES FOR PCB ANALYSIS FROM NATURAL GAS PIPELINES