FINAL PROJECT AGREEMENT
City of Columbus, Ohio
Project XLC
eXcellence and Leadership for Communities

September 26, 2000

Ohio Environmental Protection Agency
Ohio Department of Health
Honorable Michael Coleman, Mayor, City of Columbus, Ohio
Columbus Childhood Lead Poisoning Prevention Program
City of Columbus Division of Water
United States Environmental Protection Agency

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I. Introduction to the Agreement

A. Project Description and Purpose

Project XL, which stands for "eXcellence and Leadership," is a national pilot program that allows state and local governments, businesses and federal facilities to develop innovative strategies to test better or more cost-effective ways of achieving environmental and public health protection. In exchange, US EPA and the States issue regulatory, program, policy, or procedural flexibility to conduct the experiment. Under Project XL, private businesses, federal facilities, business sectors and state and local governments are conducting experiments that address the following eight Project XL selection criteria:

1. Produce superior environmental results beyond those that would have been achieved under current and reasonably anticipated future regulations or policies;

2. Produce benefits such as cost savings, paperwork reduction, operational flexibility or other types of flexibility that serve as an incentive to both project sponsors and regulators;

3. Are supported by stakeholders;

4. Achieve innovation/pollution prevention or public health protection;

5. Produce lessons or data that are transferable to other facilities;

6. Demonstrate feasibility;

7. Establish accountability through agreed upon methods of monitoring, reporting, and evaluations; and

8. Avoid shifting the risk burden, i.e., do not create worker safety or environmental justice problems as a result of the experiment.

Project XLC, *eXcellence and Leadership for Communities*, was developed to place special emphasis on communities and local

governmental or regional organizations that are interested in creating an XL project. Project XLC encourages potential sponsors to come forward with new approaches to demonstrate community-designed and directed strategies for achieving greater environmental quality consistent with community economic goals. To participate in Project XLC, applicants must develop alternative pollution reduction strategies pursuant to the criteria listed above for XL projects and in addition address three criteria unique to Project XLC: stakeholder involvement, support, and capacity for community participation; economic opportunity; and community planning. Under Project XLC, EPA provides an opportunity to test flexible and innovative strategies for advancing our nation's environmental goals more effectively and efficiently than current regulatory and policy tools or procedures.

A detailed explanation of how the Columbus XLC project meets the above criteria is given in Section IV of this Agreement.

B. Community Description

The City of Columbus, Ohio is the fifteenth largest City in the U.S. and has a population of 685,320 (projected for 2003) and is located in central Ohio. Population has increased approximately 8% in the last decade. In 1998 the median household income for Columbus was $34,791 with a mean household income of $17,397. The City is 206 square miles.

This XLC Project focuses in particular on an area within the City of Columbus where 84 percent of the children with elevated blood lead levels reside. A map of this area is contained in Appendix B of this Agreement. The area of concern falls within 10 zip codes located in predominantly low-income minority neighborhoods, where the housing is generally much older than in the remainder of the City.

C. Purpose of Agreement

This Final Project Agreement ("the Agreement") is a joint statement of the plans, intentions and commitments of the U.S. Environmental Protection Agency ("US EPA"), the State of Ohio, and the City of Columbus to carry out this pilot Project approved for implementation by the City of Columbus Department of Health and the City of Columbus

Water Division.

The Agreement does not create legal rights or obligations and is not an enforceable contract or a regulatory action such as a permit or a rule. This applies to both the substantive and the procedural provisions of this Agreement. While the Parties to the Agreement fully intend to follow these procedures, they are not legally obligated to do so. Flexibility from requirements under the Safe Drinking Water Act and enforceable commitments described in this Agreement will be implemented and become effective through a federal Safe Drinking Water Act variance and a State of Ohio Administrative Action. For more detail, please refer to Section V of this agreement.

All Parties to this Agreement will strive for a high level of cooperation, communication, and coordination to assure successful, effective, and efficient implementation of the Agreement and the Project.

The purpose of this XLC Project is to maximize the City's efforts to reduce lead exposure by providing the City of Columbus with flexibility from regulations that deal with lead in drinking water, so that the City's resources can also be used to address other routes of lead exposure, such as lead paint and dust in the highest risk areas of the City.

D. Signatories

The Parties to this Final Project XLC Agreement are the US EPA, Ohio Environmental Protection Agency (OEPA), Ohio Department of Health (ODH), and the City of Columbus, Ohio.

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II. Executive Summary

Summary of Project

In the past, in an effort to supply the highest possible quality of water to its citizens, Columbus made certain changes to the method it uses to treat drinking water. Inadvertently, the treatment change caused an increase in the level of lead in the drinking water. Under the Federal and State drinking water regulations, if the lead levels rise above the limit established by US EPA and OEPA, the City must begin sampling lead service lines (LSLs) immediately and replacing those lines that contribute high levels of lead.

This project tests a potentially more effective means of addressing health concerns from lead through a program run by the Columbus Health Department and the Columbus Department of Trade and Development, the Lead Safe Columbus Program (LSCP), and will, in addition, involve closer coordination on drinking water treatment issues. Through this project, the US EPA will suspend the LSL sampling and replacement provisions for up to three years beginning if and when the City exceeds the lead limit, provided this occurs within six years of making a treatment change. In exchange for this regulatory flexibility, the Columbus Division of Water will, subject to annual City Council and City Auditor approval, contribute $300,000 a year for 15 years, beginning January 1, 2001, to the LSCP.

The LSCP provides free blood testing, public education, medical intervention for lead-poisoned children, and grants and loans for lead abatement to residents of Columbus in high-risk areas. The LSCP targets an area consisting of twenty-five high-risk census tracts within ten zip codes in older, predominantly low-income, minority neighborhoods in Columbus, where 84% of all elevated blood lead levels in the City were found.

III. Detailed Project Description

This project takes a multi-media approach to controlling lead by allowing the City to utilize some of the City's drinking water resources to abate a known health hazard through an exposure pathway other than,

and in addition to, drinking water (i.e., household lead paint and dust). It allows the City's Water Division flexibility from LSL sampling and replacement requirements in the drinking water regulations in working through technical issues associated with making treatment adjustments.

The City of Columbus operates a public water system which must comply with national primary drinking water regulations promulgated under the Safe Drinking Water Act (SDWA). Columbus has a good compliance history for lead in the drinking water. The City is also currently maintaining optimal treatment for lead.

In the past, Columbus has made certain changes to its water treatment process, and inadvertently caused an increase in the lead levels in the water. Columbus is concerned that it may need to make treatment changes in the future that may likewise impact lead levels. Under the Federal and State drinking water regulations, if the drinking water in customers' homes exceeds the "Action Level" (AL) of 15 µg/L of lead in more than 10 percent of drinking water tap samples (i.e., exceeds the AL as a 90th percentile value), the City must begin sampling LSLs immediately and replacing those lines that contribute more than 15 µg/L of lead.

Through this project, the US EPA will allow the City a temporary suspension of the LSL sampling and replacement provisions for up to three years beginning if and when the City exceeds the lead AL, provided this occurs within six years of making a treatment change. In exchange for this flexibility, the City Division of Water will contribute $300,000 a year for 15 years to the LSCP, beginning January 1, 2001. The City Division of Water's annual commitment to contribute $300,000 to the LSCP is contingent on annual approval of this transfer by the City Council and City Auditor[1].

The LSCP will use the $300,000 per year to provide free blood testing, public education, medical intervention for lead-poisoned children, and up

[1]Any subsequent reference to the City of Columbus Division of Water's commitment to transfer $300,000 to the LSCP will assume and be contingent on the necessary annual approvals from the Columbus City Council and City Auditor.

to $100,000 in grants per year for lead abatement to residents of Columbus in the high-risk areas identified in Appendix B. In addition, the LSCP will work with the Department of Trade and Development to provide low interest loans for larger projects. The high-risk area consists of twenty-five high-risk census tracts within ten zip codes in older, predominantly low-income, minority neighborhoods in Columbus, where 84% of all elevated blood lead levels in the City were found. The LSCP will also provide blood testing for all children under six at all sites where lead levels at the tap exceed 15 µg/L.

If Columbus identifies a treatment change (as defined in the Glossary of Terms), the Columbus Water Division will consult with OEPA and US EPA Region 5 prior to making the treatment change. Once OEPA approves the proposed treatment change, Columbus will conduct monitoring in accordance with Section IV.G of this Agreement. Should the tap monitoring indicate a trend of increasing lead levels, the Columbus Division of Water will consult with OEPA and US EPA Region 5, and take steps to reverse the trend. Should Columbus exceed the lead AL, as a 90th percentile value, the City will take aggressive action, short of sampling and replacing LSLs, to minimize the public's exposure to elevated levels of lead and provide public education to consumers on how to minimize lead exposure. Specifically, the City will attempt to reduce lead levels through expeditious but considered treatment modification(s), and conduct targeted public education. If, despite the City's best efforts, Columbus is unable to keep the lead levels below the lead AL, the City will be granted a window of flexibility (up to three years in length) within which to lower the lead levels below the AL, without having to sample and/or replace LSLs.

If the City is unable to bring the lead levels down below the lead AL after three years, or if the City is unable to keep lead levels from rising above 30 µg/L as a 90th percentile value, the City will be required to immediately implement the LSL sampling and replacement requirements in accordance with Ohio Administrative Code Rule 3745-81-84, beginning with the sampling, and if necessary, replacement of 7 percent of the total number of LSLs in the City within one year from the end of the three year period or the exceedence of the upper limit of 30 µg/L as a 90th percentile value, whichever occurs first. Columbus may discontinue sampling and

replacing lead service lines in accordance with Ohio Administrative Code Rule 3745-81-84(G).

If the City is successful in maintaining low lead levels (i.e., does not exceed the lead AL within six years after making a treatment change), the opportunity to use the three year window of flexibility will expire. Should it be necessary in the future, if the City does not exceed the lead AL during the first six-year option period, US EPA would have the discretion to establish a second "six-year option period" with a three year window of flexibility for the City's use during the 15 year project duration.

This project would not allow flexibility from the public education provisions of the LCR. The City would still be required to conduct public education in accordance with 40 C.F.R. 141.85 of the LCR and Ohio Administrative Code Rule 3745-81-85 if the AL is exceeded at any time.

IV. Project XLC Acceptance Criteria

A. Superior Environmental Performance (SEP)

There are two parts to demonstrating whether a project provides SEP. The first part (Tier 1) of the analysis must show that this XLC project will provide equivalent public health protection as compliance with the LCR. The second part (Tier 2) of the analysis must show that this project goes beyond providing equivalent public health protection, and in fact will provide superior environmental performance. Based on a qualitative analysis, US EPA believes this project meets the Tier 1 and Tier 2 criteria of public health protection for the reasons outlined below.

Like most metropolitan areas in the United States, some children are exposed to lead from lead service lines connecting the drinking water distribution system to the individual home, and some children are exposed to lead-based paint in their homes. Moreover, some children may be exposed to lead from both sources. By today's standards, children are considered to be at risk if their blood lead concentration exceeds 10 micrograms per deciliter of blood (• g/dL).

US EPA performed a comparative benefit analysis to evaluate the

public health impacts of this XLC project.[2] The analysis in the City of Columbus consisted of 20 areas defined by zip codes. The total number of children in the 20 areas is not known, but for the purposes of this analysis US EPA assumed 40,000 children live in the 20 zip code area.

The LSCP will focus its efforts on a 10-zip code area within this 20 zip code area, in the center of the City. Old homes containing lead-based paint are concentrated in this 10-zip code focus area. The two categories evaluated in the comparative benefit analysis were (1) children (ages 0 to 6) living outside the 10-zip code focus area, but still within the 20 zip code area, in homes that were served by lead service lines and that contained no lead-based paint and (2) children living inside the 10-zip code focus area in homes that contain lead-based paint, some of which may also be served by lead service lines.

The analysis indicated that the benefits from addressing exposure from the lead-based paint substantially exceeded the benefits from addressing the lead service lines. According to the City of Columbus, there are 28,802 lead service lines in the City's water system and most of the lead service lines serve the 10-zip code focus area near the center of the City. US EPA assumes that an unknown number of lead service lines serve non-residential facilities.

The City estimates that the number of children living outside the 10 zip-code focus area of the City that are served by lead service lines but do not live in homes with lead-based paint to be 2,500. US EPA made two simplifying assumptions for this analysis which include 1) lead-based paint is not significantly present outside the 10-zip code focus area and 2) most of the 28,802 lead service lines in the City of Columbus are concentrated in the 10-zip code focus area and/or serve non-residential facilities. US EPA's model indicates that the number of children in this second category with elevated blood lead levels would be approximately 3%, or 68 children. According to US EPA's model, replacing the lead service lines for children in this category would reduce the number of

[2]Comparative Benefits Analysis, Project XLC: Columbus, Ohio, Robert W. Elias, PhD, National Center for Environmental Assessment, US EPA, Research Triangle Park, NC 27711, August 1, 2000. The document is available at www.epa.gov/ProjectXL/columbus/ .

children with elevated blood lead levels by 1%, or 28 children.

The City tested 18,400 children in the 10-zip code focus area in 1995-97. This blood lead level testing indicated that as many as 20% of those children living in the 10-zip code focus area had elevated blood lead levels (>10 ug/dL). The comparative benefit analysis estimates 27,000 children with elevated lead levels which is higher than the City's data would have indicated. US EPA is using this higher estimate because the City did not identify all the children in the 10-zip code focus area, and because the population may have grown since 1995-97.

Based on US EPA's models, the LSCP under Project XLC may be able to reduce the number of children at risk (those with blood lead levels >10 ug/dL) in this 10-zip code area by as many as 7500 or 28% of the total number of children in the focus area. The benefits that would be gained by removing lead service lines were evaluated for the children in the 10-zip code area and were found to be insignificant compared to the combined benefits of parental education and lead-based paint removal.

B. Benefits

Some of the significant elements of the benefits projected to be gained by this project are:

1. From 1995-1997, the Lead-Safe Columbus Program (LSCP) reduced the overall rate of elevated blood lead levels (EBLLs) in Columbus by 19%, on a budget of $500,000 per year. Out of 603 children with EBLLs, 587 had their blood lead reduced by at least 5 micrograms of lead per deciliter of blood (• g/dL), and 190 had their blood lead reduced by 15 • g/dL or more. This project will maintain funding to LSCP at a minimum of $300,000 a year, beginning January 1, 2001, and ending December 31, 2015, and is expected to continue to achieve similar results.

2. The LSCP will target twenty-five high risk census tracts within ten zip codes in older, predominantly low-income minority neighborhoods in Columbus, where 84% of all EBLLs in the City were found.

3. The LSCP will provide free blood screening at its monthly clinic and

probe screens within the community.

4. The LSCP will offer to test all (including medicaid eligible) children under six at all sites where the lead level at the tap exceeds the AL.

5. The LSCP will offer free screening to all children under 6 living in a building where an EBLL was found. Free screening will be provided in a clinic within the Columbus Health Department on the second Thursday of each month.
6. The LSCP will provide medical case management for all children with EBLLs greater than or equal to 15 • g/dL.

7. The LSCP will conduct lead hazard risk assessments for all children with EBLLs equal to or greater than 15 • g/dL. The City will check for lead in drinking water in all cases of EBLLs. The LSCP will conduct lead hazard risk assessments for all privately-owned, low-income residences built before 1978 which apply for rehabilitation activity funding from the Department of Trade and Development (DTD). Privately-owned residences of low-income residents from high-risk areas will be recruited to receive assessments and financial assistance in performing lead-hazard abatement.

8. The LSCP will provide public education/outreach materials in high-risk areas as follows:

    a. Direct mail: The program will provide Lead Information Packets (LIPS) to the parents of all children tested with a blood lead level of 10 ug/L or greater by direct mail. The packets will provide educational brochures designed to assist the parents in preventing/reducing the risk of and impact of lead hazards.

    b. Professional Outreach: Educational brochures will be provided to medical providers and clinics serving high-risk neighborhoods for distribution to their patients.

    c. Community Groups: The program will work with community groups, fairs and social service agencies serving the target neighborhoods (Head Start Programs, Health Fairs, Columbus Metropolitan Housing Authority, etc.,) to distribute materials