

RESPONSIVENESS SUMMARY FOR THE AVIAN EGG INJECTION STUDY PLAN

HUDSON RIVER NATURAL RESOURCE DAMAGE ASSESSMENT

HUDSON RIVER NATURAL RESOURCE TRUSTEES

STATE OF NEW YORK

U.S. DEPARTMENT OF COMMERCE

U.S. DEPARTMENT OF THE INTERIOR

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TABLE OF CONTENTS

INTRODUCTION **1**

PUBLIC COMMENTS RECEIVED **2**

REFERENCES **9**

This *Responsiveness Summary for the Avian Egg Injection Study Plan, Hudson River Natural Resource Damage Assessment*, was prepared by the Hudson River Natural Resource Trustees (Trustees) — New York State, the U.S. Department of Commerce, and the U.S. Department of the Interior. The Trustees are working cooperatively to conduct a Natural Resource Damage Assessment (NRDA) for the Hudson River. This Responsiveness Summary provides Trustee agency responses to public comments on and questions about the Trustees' *Study Plan for Avian Egg Injection Study, Draft for Public Review and Comment*, dated February 14, 2006, released by the Trustees for public review and comment.

INTRODUCTION

Pursuant to the Hudson River Natural Resource Damage Assessment (NRDA) Plan (Hudson River Natural Resource Trustees 2002), the Trustees developed a *Study Plan for Avian Egg Injection Study for the Hudson River, Draft for Public Review and Comment* (Draft Avian Egg Injection Study Plan) (Hudson River Natural Resource Trustees 2006a). On February 28, 2006, the Draft Avian Egg Injection Study Plan was released by the Trustees to the public. In that Draft Avian Egg Injection Study Plan, the Trustees asked the public and the party(ies) responsible for the contamination to review the Draft Avian Egg Injection Study Plan and provide feedback on the proposed approach. The Draft Avian Egg Injection Study Plan noted that the Trustees sought public input to help them in planning and conducting an assessment that is scientifically valid, cost effective, and that incorporates a broad array of perspectives.

A Notice of Availability of the Draft Avian Egg Injection Study Plan was announced in the Federal Register on March 15, 2006. Availability of the Draft Avian Egg Injection Study Plan was also announced by the Trustees on the Hudson River NRDA web sites maintained by the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service (FWS). The Draft Avian Egg Injection Study Plan noted that comments were to be submitted by March 23, 2006. However, the public comment period was subsequently extended through March 31, 2006 via notice on the FWS Hudson River NRDA web site, where the Draft Avian Egg Injection Study Plan was posted.

All comments received on the Draft Avian Egg Injection Study Plan, as part of the peer and public review process, were considered. The Trustees appreciate the input represented by these comments and the effort by commentors to provide their reviews. The Trustees evaluated the comments and, where warranted, incorporated these comments in the Draft Avian Egg Injection Study Plan to produce the *Study Plan for Avian Egg Injection Study, Hudson River Natural Resource Damage Assessment, Final, Public Release Version*, dated May 12, 2006 (Final Avian Egg Injection Study Plan) (Hudson River Natural Resource Trustees 2006b). In the remaining instances, public comments on the Draft Avian Egg Injection Study Plan were addressed by letter to the commentor, acknowledging receipt of comments and providing an initial response and noting that a more detailed Responsiveness Summary (this document) would be provided by the Trustees in the near future.

PUBLIC COMMENTS RECEIVED

Four letters from the public were received in response to the Draft Avian Egg Injection Study Plan: a letter from People for the Ethical Treatment of Animals (PETA), dated March 30, 2006; a letter from The General Electric Company (GE), the Potentially Responsible Party, dated April 13, 2006; and letters from two individuals. The individuals will not be identified by name, although their comments are noted below and addressed in this document. Three other members of the public provided comments via telephone; those comments are also noted below and addressed in this document.

The text of the GE and PETA comment letters is provided below, along with the Trustee response (in italicized text) to the comments. Also provided below is a summary of comments from individual members of the public, via letter and telephone, and Trustee responses (in italicized text) to those comments.

Accordingly, this Responsiveness Summary documents comments that were received, that those comments were considered by the Trustees, and how the Trustees addressed those comments.

Please note that, in general, typographical or grammatical errors in the comment letters have not been corrected in this document; also, references for literature to which commentators refer are not listed in the References section of this document. The Reference section is limited to references identified in the Trustees' response(s).

LETTER FROM GENERAL ELECTRIC, DATED APRIL 13, 2006

General Comments:

Before addressing the specifics of the Plan, we would like it understood that by providing these comments GE does not indicate any agreement that the results of the study will have any relevance to the determination of injury to natural resources in the Hudson River Valley. Whether the study is implemented in accordance with the Plan as currently written or even as modified in accordance with our comments, it is a lab study which involves substantially altering the natural condition of avian eggs. As a result, we question whether the study's results will have any relevance whatsoever with respect to injury determination.

The DOI regulations at 43 CFR Section 11.62 (f)(4)(i)(E) explicitly approve the use of laboratory experiments as acceptable proof of biological injury in the field.

The Plan provides a general overview of the trustees' design for an avian egg injection study proposed to begin in 2006. However, similar to the trustees' 2002 NRDA Plan and 2004 Avian Investigations for the Hudson River Study Plan, the Avian Egg Injection Study Plan does not provide the level of detail on the work to be conducted needed to provide an opportunity for meaningful comment. The lack of detail on all aspects of the proposed work (i.e., focal species, test compounds and concentrations, injection and incubation methods, endpoint assessment methods, analytical chemistry methods, and statistical analysis) prevents an understanding of how the trustees plan to collect the data, interpret the results or use the findings. Moreover, the conspicuous lack of detail in the Plan is inconsistent with the trustees' commitment in the NRDA Plan concerning study designs (page 39) to ensure that study plans will include detailed information, consistent with the Department of the Interior (DOI) regulations (43 CFR 11.31). The lack of such detail in the Plan is also inconsistent with the trustees' assurance in the Responsiveness Summary for the NRDA Plan (July 2003, page 2) that study plans that supplement the NRDA Plan will provide the level of specificity lacking in that document needed to satisfy the DOI requirements.

Regarding level of detail, Section 4.0 of the Draft Avian Egg Injection Study Plan identified species the Trustees were considering evaluating, how the PCBs to be injected would be selected, and the endpoints under consideration by the Trustees. The Trustees' Final Avian Egg Injection Study Plan includes additional details and clarification beyond that provided in the Draft Avian Egg Injection Study Plan regarding species, endpoints, PCBs to be injected and other study elements. In particular, the Final Avian Egg Injection Study Plan includes, as Appendix A, the Principal Investigators' (PIs') Work Plan for Tree Swallow, American Kestrel and Chicken Egg Injection Studies. This document includes Standard Operating Procedures (SOPs) for egg injection, egg incubation, endpoint assessment, hypotheses to be tested and statistical methods to be used.

The level of specificity in the Final Avian Egg Injection Study Plan is consistent with the DOI regulations at 43 CFR Section 11.31. The Final Avian Egg Injection Study Plan includes information regarding sampling locations, study design, numbers and types of samples to be collected, and analyses to be performed.

In addition, similar to the 2004 Avian Investigation Study Plan, the release date and comment period of the Avian Egg Injection Study Plan allows little or no time for the trustees to consider or implement any comments prior to initiation of the work.

The Trustees' desire to keep the assessment moving along in a timely fashion and to provide an opportunity for public input into the process, while taking into consideration the life histories of the avian species of interest, necessitated a tight schedule for planning. The Trustees completed peer and public review activities before the 2006 avian egg injection began, providing for revisions of the work as warranted by consideration of those reviews.

Until such time as the Plan is modified to provide missing information as outlined in the attached comments, neither GE nor the public will have a meaningful opportunity to provide comment on the Plan. Until such an opportunity to comment is provided, the trustees should not proceed with implementation of the Plan.

As a result of the peer and public review process, the Draft Avian Egg Injection Study Plan has been modified to include additional details and clarification in the Final Avian Egg Injection Study Plan, including but not limited to those noted above. However, none of the public comments received on the Draft Avian Egg Injection Study Plan warrants revision of the Study Plan to the extent that a new public notice and comment period is needed. Nor are the revisions and additional detail that are part of the Final Avian Egg Injection Study Plan so significantly different from the Draft Avian Egg Injection Study Plan that a second public review process is justified.

Specific Comments:

A. Literature references in support of methods or approach – The Trustees have determined that no pilot study is required based on their review of the avian egg injection literature. The Avian Egg Injection Study Plan states “avian egg injection is a well-established technique to assess the effects of contaminants on a developing avian embryo.” However, the Plan provides no references to published literature that can be used to evaluate the appropriateness of the technique. Citations to key scientific literature should have been provided which explain and validate the experimental techniques to be used.

Citations to scientific literature for this statement are included in the Final Avian Egg Injection Study Plan.

B. Egg Injection protocols – The Plan is non-specific with regard to important methodological issues related to egg-injection studies. For example, no specific information regarding the carrier solution to be used, injection volume, site of injection within the egg (e.g., air cell or albumen), or incubation techniques is provided. A recent paper by Heinz et al. (2006) indicates how critical these factors can be in affecting the outcome of injection studies. Specific details (Standard Operating Procedures) on the injection and incubation methods planned to test in 2006 (Year 1) should be set forth in detail in the Plan in order to allow reviewers an adequate opportunity to evaluate the appropriateness of those methods in comparison to methods used in previous studies.

SOPs for egg injection and incubation are included in the Final Avian Egg Injection Study Plan.

C. Focal species – The Plan lists 11 species for evaluation, all but two of which (American kestrel and great blue heron) have been previously studied in avian investigations conducted by the trustees on the Hudson River. However, the focal species for this investigation are not named, other than noting that at least two species will be chosen from the 11 stated species, or other not specifically named in the Plan. Any scientifically valid study plan should include a definitive list of test species. Based on the experience the trustees have gained in collected eggs from these species on the Hudson River, the knowledge gained on egg exposure data (through the 2002 avian egg exposure preliminary investigation), and the unspecified avian toxicity and egg incubation literature they reference, the trustees should be able to identify the primary species to be studied in Year 1 and provide justification for those selections. Alternate species should be identified in case, for any reason, sufficient eggs cannot be collected from the primary target species.

The Final Avian Egg Injection Study Plan identifies the test avian species for 2006: American kestrel (Falco sparverius), tree swallow (Tachycineta bicolor) and domestic chicken (Gallus domesticus).

D. Context for possible chicken injection studies - The Plan notes that egg injection studies may also be conducted using domestic chickens as a point of reference. The Plan should specifically discuss how results from this component of the study would be used in evaluating injury endpoints for avian resources of the Hudson River.

The egg injection experiment with chickens will inform a species sensitivity comparison.

E. Test chemicals - In the methods section (Section 4.0), it is stated that trials will be conducted using select PCBs (individual congeners and/or a mixture reflective of chemical exposure in the Hudson River region) or other relevant compounds. The Plan should provide more detail regarding the test compounds. What specific congeners would be tested? What would be the composition of the representative PCB mixture? What compounds are being referred to by the term “other relevant compounds”?

PCB 126 will be tested. A PCB mixture made up of individual PCB congeners that fits a similar profile to the mixture of PCBs occurring in the eggs of birds nesting in the Upper Hudson River Basin will also be tested. The Final Avian Egg Injection Plan (Appendix B) includes information on the PCB congener mixture and its composition.

The reference to “other relevant compounds” has been removed from the Final Avian Egg Injection Study Plan.

F. Location of egg collection - The Plan provides no specific geographic location regarding where eggs will be collected other than they need to be obtained from areas that are not contaminated with chemicals of concern of the Hudson River. This lack of specificity is inconsistent with study plan requirements as specified in the Hudson River NRDA plan (Hudson River Natural Resource Trustees 2002). Presumably the Trustees should have some target locations under consideration, particularly if they plan to establish nest boxes in 2006 in time to collect eggs from cavity nesting species. The Plan should provide target locations, or at least general geographic areas from where eggs will be collected.

The Final Avian Egg Injection Study Plan provides information on geographic locations from which samples will be collected for injection and incubation. Eggs of American kestrel will be obtained from Patuxent Wildlife Research Center, Maryland. Eggs of tree swallows will be obtained from Patuxent National Wildlife Refuge, Maryland, and from a breeding colony on Great Sacandaga Lake, New York. Chicken eggs will be acquired in the Summer and/or Fall of 2006 from a commercial supplier.

Tree swallow eggs will also be collected from a contaminated portion of the Upper Hudson River, New York; these eggs will not be injected with PCBs but will be incubated and assessed for endpoints.

G. Methods to age eggs in the wild – The Plan states that egg injections will be made on, or before, embryonic day 3. Heinz et al. (2006) demonstrated that for chickens even a one-day difference in embryonic development can alter the survival of embryos injected with methylmercury. Therefore, accurate aging of eggs appears to be crucial to ensure that all injections occur at the same standardized developmental state. Details on nest-monitoring techniques that will be used to ensure that eggs can be reliably aged prior to treatment should be provided in the Plan.

The Final Avian Egg Injection Study Plan contains SOPs for egg collection that address nest-monitoring to determine the stage of the eggs relative to initiation of incubation. Additionally, the SOPs note the use of candling to examine eggs for embryonic development, upon receipt by the laboratory, to assess embryonic age.

H. Chemical analysis of collected eggs – As noted above, the trustees intend to collect eggs from unspecified locations without contaminants of concern on the Hudson River. However, for the histological, morphological, and biochemical endpoints to be evaluated, there are many chemicals other than those of concern on the Hudson River that can potentially adversely affect these endpoints. The Plan is non-specific regarding what other chemicals will be analyzed in eggs other than noting that “analytes may include congener-specific PCBs, including the non-ortho congeners, polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and polybrominated diphenyl ethers (PBDEs), and organochlorine pesticides, as determined appropriate by the Trustees.” The complete suite of analytes should be specified in the Plan and analytical results evaluated before starting the studies to ensure that all chemicals that could have potentially confounding effects on results are adequately characterized and to ensure that eggs collected from the designated collection locations are suitable for use in PCB-injection experiments.

Per the Final Avian Egg Injection Study Plan, analyses may be conducted for the following contaminants: congener-specific PCBs, including the non-ortho congeners, polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), polybrominated diphenyl ethers (PBDEs), organochlorine pesticides, and metals. In order to minimize analytical costs, and reduce the overall cost associated with the project, the Trustees may conduct the chemical analyses in stages, using initial work to inform subsequent decisions regarding which analyses to conduct on which samples. The laboratories performing analytical work will be contracted to follow the Trustees’ Analytical Quality Assurance Plan for the Hudson River NRDA (Hudson River Natural Resource Trustees 2005).

The Trustees’ desire to keep the assessment moving along in a timely fashion and to provide an opportunity for public input into the process, while taking into consideration the life histories of the avian species of interest, precluded a full characterization of potential contaminants in eggs prior to egg injection work. However, the Trustee reviewed available data on biota from the sample collection locations and considered other relevant information beforehand in order to determine whether it was appropriate to proceed with use of eggs from the selected locations. Chemical analyses on eggs from these locations will be conducted to establish levels of existing contamination, if any.

I. Methods for determining dose ranges – The proposed design for the study, as shown in Table 1 of the Plan, indicates that 6 different doses of the test compound(s) will be evaluated, along with untreated and vehicle only treatments. Presumably the doses and dose range to be used will be

dependent on the compound(s) to be tested and the relative sensitivity of the test species. However, the study design gives no indication how the dose range will be determined, or whether the doses established will be environmentally relevant (i.e., comparable to concentrations found in eggs of wild birds breeding along the Hudson River). The Plan should address the following issues: (1) Will a scoping study be used to determine an appropriate range? (2) Is the range being developed based on existing data or published literature? (3) If prior studies are the basis of the dose range, they should be referenced in the study plan.

The Trustees have conducted scoping studies using laboratory animals and have critically reviewed the toxicology literature to inform the dose(s) and dose range(s) in the avian egg injection experiments. As the scoping studies are not injury studies but are method development the Trustees have not released for public or peer review documentation regarding the planning, implementation or results of those studies.

J. Target samples sizes – Table 1 of the Plan indicates that the study would require a total of 350 eggs per species. The Plan should state how the sample size for each treatment was derived. If the target number of eggs cannot be attained, the Plan should state whether the investigators have an alternative study design (either fewer doses of fewer eggs/dose); whether the investigators developed this treatment regime on an *a priori* statistical design; and what alternative design would be used if fewer eggs were available.

Per Appendix A to the Final Avian Egg Injection Study Plan, assignment to treatment group will be made under guidance of the study's statistical consultant. That consultant will consider factors including sample size, statistical power, sampling day, eggs per breeding pair, and estimated median lethal dose, in providing guidance on treatment group assignments. The goal will be to maximize the number of eggs per independent parent within each treatment group and to obtain data demonstrating a normal distribution. Treatment groups will be prioritized based on data from other avian studies. If the target number of eggs cannot be obtained, the PIs will evaluate which treatment groups can be eliminated to maximize sample size and dose response information. As the Final Avian Egg Injection Study Plan notes, a larger number of treatments are anticipated for tree swallows, with limited treatments for kestrels. There should be no sample size issues with chicken eggs as eggs will be obtained from a commercial supplier.

LETTER FROM PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS, DATED MARCH 30, 2006

INTRODUCTION

The harmful effects of PCBs are well documented. Widespread concern over their adverse effects on human health and the environment led to legislation under the Toxic Substances Control Act (TSCA) in the 1970s which resulted in banning their production and use in nearly all circumstances. In humans, PCB exposure has been associated with developmental effects and neurobehavioral deficits in children born to mothers exposed to dietary sources of PCBs during pregnancy (Fein et al. 1984; Jacobson et al. 1985, 1990a, b). Occupational exposure to PCBs has also been associated with increased cancer risk and other effects on the cardiovascular, hepatic, immune, musculoskeletal, endocrine, gastrointestinal, and dermal systems (reviewed by Johnson et al., 1999, for the U.S. Department of Health and Human Services).

The adverse effects of PCBs on developing chicks are also well documented and include mortality, physical deformities of the heart, eyes, limbs and beak, brain asymmetry, liver lesions, and edema, as well as aberrant reproductive behavior (Gilbertson et al., 1991; Bosveld and Van den Berg, 1994; Bosveld, 1995; Henshel et al., 1997; Henshel, 1998; Hoffman et al., 1998, Secord et al., 1999).

The Trustees recognize that PCBs can be harmful to fish and wildlife, including birds. As the Hudson River NRDA Plan notes, birds exposed to PCBs may exhibit reduced hatching rates, embryo mortality, physical deformations, and changes in brain chemistry (Hoffman et al. 1998, Tillitt et al. 1993, and van den Berg et al. 1992).

Although PETA supports the Trustees' ultimate goal of restoring natural habitats damaged by PCB contamination, deliberately subjecting hundreds or thousands of birds to the suffering caused by PCB exposure will contribute nothing to the achievement of this goal.

In conducting a natural resource damage assessment, the Trustees have an obligation under applicable law to restore natural resources that have been injured by hazardous substance contamination. In addition, the Trustees are obligated to calculate, and may obtain, compensation for natural resource injuries and the loss of the services they provide between the onset of the injury and full restoration. In order for the Trustees to fulfill their obligations in this case, studies like the avian egg injection study must be conducted. These studies are expected to provide information not currently available in the literature.

EFFECTS OF PCBs ON DEVELOPING CHICKS HAVE BEEN THOROUGHLY STUDIED

In a preliminary investigation of egg exposure conducted by the Trustees in 2002, eggs of eleven species of birds collected in the assessment area were analyzed for 48 PCB congeners and the concentration ranges of PCBs in these eggs were determined. The results of completed but still unpublished subsequent investigations are expected to characterize the relationships between PCB concentrations in nest sample eggs and reproductive success and the presence of gross deformities in embryos and hatchlings. Although the Trustees do not identify exactly which species they would include in the proposed egg injection study or which PCB congeners they would test, the effects of PCB exposure on several of the species from which they may choose have been investigated previously. In many cases, no and/or lowest observed adverse effect levels (NOAEL, LOAEL) or LD50 values of various PCB congeners or total PCBs for physical and behavioral effects have already been determined for these species. As cited in the draft proposal, Secord et al. (1999) correlated concentrations of total PCBs in tree swallow eggs and hatchlings from the Hudson River area with aberrant reproductive behavior, failure of eggs to develop and death of developed embryos, establishing an LOAEL for total PCBs (McCarty and Secord 1999; Secord et al., 1999) in this species. Hoffman et al. (1998) compared the effects of two PCB congeners in American kestrels, common terns and domestic chickens by egg injection studies, noting beak deformities, edema and reduced growth in developing chicks of all three species. LD50 values were established for kestrels and terns. NOAELs and LOAELs for total PCBs in terns had been determined previously (Bosveld and Van den Berg, 1994; Becker et al., 1993; Hoffman et al., 1993). Hart et al. (1991), Sanderson et al. (1994), and Henshel et al. (1995) correlated concentrations of various PCB congeners in great blue heron eggs and hatchlings with brain asymmetry, beak, head and body deformities, and edema, establishing NOAELs and LOAELs. Thiel et al. (1988) determined NOAELs and LOAELs of TCDD for aberrant reproductive behavior in field studies of the Eastern bluebird. Many additional studies of terns and gulls, (Yamashita et al., 1988; Kubiak et al., 1989; Becker et al., 1993; Tillitt et al., 1993; Auman et al., 1997; Bosveld et al., 2000) as well as raptors (Wiemeyer et al., 1984; Elliott et al., 1996, 2001; Woodford et al., 1998) have been reported. Since species sensitivity to PCBs has been observed to vary along taxonomic lines (Eisler, 1986; Bosveld and Van den Berg 1994, Kennedy et al. 1996; Hoffman et al., 1998), results in these species should be predictive of results in other species native to the assessment area such as spotted sandpiper, belted kingfisher and Eastern screech owl.

The Trustees' 2002 avian egg preliminary investigation evaluated regional avian contamination with PCBs; that study was not directed at establishing injury or determining causation, two important components of damage assessment that the avian egg injection study will inform.

The Trustees do not concur in PETA's assessment that no additional information relevant to the NRDA will result from the avian egg injection study. Although the adverse effects of PCBs on developing avian embryos have been tested in some species, including American kestrel, those tests have not used the mix of PCB congeners found on the Hudson River. PCB congeners differ both in their physical properties and in their effects on fish and wildlife.

The first year of the avian egg injection study will entail injection of PCB 126 into tree swallow eggs and injection of a Hudson River PCB mixture into American kestrel eggs and chicken eggs. This is work that has not been done previously. The scientific literature contains no PCB egg injection studies conducted with tree swallows. The mixture of PCBs found in Hudson River biota has not been tested on developing embryos of any avian species. Egg injection studies using tree swallows, American kestrels and chickens, using PCB 126 or the Hudson River PCB mixture, as the Trustees will conduct, are anticipated to provide the Trustees valuable information regarding the impact of these contaminants on these bird species, whether injury exists as defined by applicable regulations, and the environmental restoration needed to address those injuries.

DRAFT PROPOSAL IS UNCLEAR ON ESSENTIAL POINTS

As noted elsewhere, the draft proposal identifies neither which species will be studied nor which PCB congeners will be tested and is even vague about which endpoints will be measured. In addition, the results of preliminary studies necessary for the evaluation of the proposed study have not yet been published.

As noted above, Section 4.0 of the Draft Avian Egg Injection Study Plan identified species the Trustees were considering evaluating, how the PCBs to be injected would be selected, and the endpoints under consideration by the Trustees. Further detail regarding species, endpoints, and PCBs to be injected is contained within the Final Avian Egg Injection Study Plan and its Appendix A, the PIs' Work Plan for Tree Swallow, American Kestrel and Chicken Egg Injection Studies.

SUMMARY AND RECOMMENDATIONS

The Trustees have already identified the PCB congeners present in the eggs of representative avian species from the assessment area and determined their concentrations. Field studies currently under review are expected to document injuries to bird populations and correlate them to PCB concentrations. The adverse effects of PCBs on developing chicks have been thoroughly studied in many of the same species or other taxonomically-related species which may be reasonably expected to produce similar results. NOAELs, LOAELs and/or LD50s have been established as have toxic equivalency factors for many PCB congeners and effects.

No additional information instrumental in determining the extent to which PCBs have damaged the assessment area will be gained by deliberately subjecting hundreds or thousands of additional birds to the suffering caused by PCB exposure. In addition, the draft proposal is unclear with regard to the most essential parameters of the study. We therefore strongly object to this proposed study and urge the Hudson River Natural Resource Trustees to delete it from their assessment.

A detailed response was provided by the Trustees earlier in this document with regard to the effects of PCBs on developing chicks, NOAELs, LOAELs, and LD50s. Studies such as the avian egg injection study must be conducted for the Trustees to fulfill their obligations in this case under applicable law.

LETTERS AND PHONE CALLS FROM INDIVIDUAL MEMBERS OF THE PUBLIC

Five members of the public called or wrote the Trustees expressing opposition to the proposed study for reasons essentially the same as those expressed in the PETA letter.

As noted above, in order for the Trustees to fulfill their obligations in this case, studies like this avian egg injection study must be conducted.

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