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

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

NOW THE
OFFICE OF LAND AND
EMERGENCY MANAGEMENT

FEB 16 2017

Ms. Sarah Strano
Arconic Technical Center
100 Technical Drive
New Kensington, Pennsylvania 15068

Dear Ms. Strano:

On August 8, 2016, you notified the EPA that Alcoa Inc. will separate into two different companies. You stated that on November 1, 2016, Alcoa Incorporated changed its name to Arconic Incorporated and a new "spin off" entity was created called Alcoa Corporation. Research on polychlorinated biphenyls (PCB) is continuing under Arconic Incorporated. You requested to modify the existing Toxic Substance Control Act (TSCA) approval issued to Alcoa Inc. on August 11, 2014 to reflect the new company name, Arconic Incorporated. The newly created Alcoa Corporation will not be involved with PCB research and does not require a PCB approval.

Furthermore, you have indicated that the address has changed for Alcoa Technical Center, previously located at Alcoa Technical Center, 100 Technical Drive, Alcoa Center, Pennsylvania 15069. The new address will be Arconic Technical Center, 100 Technical Drive, New Kensington, Pennsylvania 15068.

PCB research conducted at Massena, New York will also continue operations under Arconic Inc. and you requested that they remain within this Research & Development approval. Their address will not change and research will continue at Massena Operations, Park Avenue, Massena, New York 13662. However, this address was incomplete in the original approval. The street name and zip code are now included in the modified approval.

The EPA has identified no deficiencies in the request for transferring the approval from Alcoa Inc. to Arconic Inc., and EPA issues the amended approval to Arconic Inc. All conditions of the approval will remain the same and the expiration date will remain August 11, 2019, which is five years from the issuance of the original approval. Enclosed are two pages of the approval that have been modified to reflect this change. Please replace the two pages of the approval issued on August 11, 2014 with these modified pages.

Please contact Josh Smeraldi of my staff at Smeraldi.Josh@epa.gov or at (703) 308-0041 if you have any questions regarding this approval.

Sincerely,

Barnes Johnson, Director
Office of Resource Conservation and Recovery

cc: Mark Bean
Jim Haklar
Kelly Bunker

Modified in accordance with the approval modification dated February 16, 2016.
Actual modifications are shown in track changes.

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

APPROVAL TO CONDUCT RESEARCH AND DEVELOPMENT TESTS TO DISPOSE OF POLYCHLORINATED BIPHENYLS (PCBS)

ARCONIC, INC.
ARCONIC TECHNICAL CENTER
100 TECHNICAL DRIVE
NEW KENSINGTON, PENNSYLVANIA 15068

R&D BENCH-SCALE STUDIES TO DETERMINE THE EFFECTIVENESS OF ENHANCED BIOLOGICAL DEGRADATION AND OTHER TREATMENT METHODS FOR PCB-CONTAMINATED MATRICES

and

ARCONIC, INC.
MASSENA OPERATIONS
PARK AVENUE
MASSENA, NEW YORK 13662

R&D STUDIES TO EVALUATE THE EFFECTIVENESS OF PILOT FIELD BIODEGRADATION UNITS AND OTHER TREATMENT METHODS FOR PCB-CONTAMINATED SEDIMENT AND SLUDGE

ISSUED PURSUANT TO 40 CFR 761.60 (j)

Modified in accordance with the approval modification dated February 16, 2016.
Actual modifications are shown in track changes.

BACKGROUND

Alcoa Technical Center Pittsburgh, Pennsylvania

On May 1, 1993, Alcoa submitted an application to conduct research and development (R&D) on the enhancement of biological degradation of PCB-contaminated waste matrices belonging to Alcoa and located in the Alcoa Technical Center, Pennsylvania. These studies have been and will continue to be carried out in controlled laboratory settings, either directly by or under the supervision of trained Alcoa technical personnel.

Alcoa Massena Operations

On March 17, 1994, Alcoa submitted an application to conduct R&D on the biological degradation of PCBs in soils, sediments, and sludges that contain PCBs at Alcoa's Massena, New York facility (hereafter called the Massena Operations).

On November 1, 2016, Alcoa Incorporated separated into two different companies, one of which being Arconic Incorporated. As a result, Alcoa Technical Center was renamed to Arconic Technical Center (ATC) and Alcoa Massena Operations is now Arconic Massena Operations.

Approval

This approval is issued to:

- ATC, Pennsylvania to conduct further R&D on the enhancement of biological degradation and other treatment methods, specified herein, for PCB-contaminated waste matrices from various Arconic facilities, and

- Massena Operations, Massena, New York, to evaluate field pilot scale R&D processes for biodegradation of PCBs and other pilot-scale treatment methods, specified herein, at the Massena facility.

Definitions

"Alcoa" means "Arconic" for the remaining pages of this approval, as modified on February 16, 2016.

Authority

This approval to conduct R&D on PCB disposal is issued pursuant to Section 6(e)(1) of the Toxic Substances Control Act (TSCA) and the Federal PCB Regulations, 40 CFR 761.60(j)(2) and(3).

Effective Dates

This R&D approval will become effective on the date of signature and will expire five years from the date of signature, except as provided in condition 15.

DESCRIPTION OF R&D ACTIVITIES

ATC, Pennsylvania

Alcoa will study samples of solid and liquid wastes obtained from PCB-contaminated sites belonging to Alcoa to develop and evaluate techniques for the enhancement of biological technologies for later use in full-scale remediation of the contaminated sites. These studies will evaluate the potential use of biological technologies to treat PCBs to concentrations which do not pose a risk of injury to health and the environment without producing adverse by-products.

Previous research has shown that certain congeners of PCBs do biodegrade in the environment and in laboratory studies, but at a very slow rate. No process has been demonstrated to the EPA that accelerates PCB biodegradation to rates necessary to make such a process commercially viable. It has also been demonstrated that PCBs found in soil and sludge matrices can be biodegraded, but treatment of all PCB congeners to below levels that do not pose a risk of injury to health and the environment has not been achieved. Thus, physical and/or chemical pretreatment to increase the bioavailability may enhance biodegradation by lowering achievable treatment levels for all PCB congeners.

There are research findings to suggest that the biodegradation of sparingly soluble, hydrophobic organic molecules like PCBs, found in soil and sludge matrices, may be limited by the physical availability or proximity of these compounds to the microbial surfaces, rather than by the inability of the microorganisms to metabolize the compounds. If these findings are correct, relevant physical characteristics of PCB congeners in soils and sludges, such as adsorption/desorption rates and solubilities, can be compiled from the available literature and supplemented with laboratory studies to provide projections about the rates of biodegradation of the congeners.

When values for aqueous solubilities, octanol-water partition coefficients, and Henry's Law constants were compiled for the PCB congeners and correlated with the level of chlorination of the PCB congeners, the results suggest that, as the degree of chlorination and hence the molecular weight of the PCB congeners increase, the degree of bioavailability of the congeners should decrease. In addition, the concentration of PCB congeners remaining after traditional biodegradation should reach some irreducible plateau, and the distribution of the remaining PCB congener population should have shifted towards the more highly chlorinated congeners. This parallels the findings in General Electric's Hudson River studies carried out in the summer of 1991. The lower chlorinated PCB congeners biodegraded more rapidly and to lower concentrations.

In addition to biodegradation research, the ATC may also evaluate the effectiveness of other PCB treatment techniques which may include any of the following:

a. Soil/sludge sorption testing in combination with surfactant screening.
b. Chemical oxidant screening.
c. Soil pan biodegradation studies simulating land treatment.

d. Biological slurry reactor testing.
e. Natural media filtration for enhanced long-term biodegradation of low concentrations of PCBs contained in water from various Alcoa domestic facilities.
f. Bench-scale in situ sequestration studies using activated carbon or other adsorbent materials.
g. Fluidized carbon bed bioreactor studies for biologically treating wastewater; and
h. Adsorption/desorption testing of soil/sludge, or oil matrices to determine site-specific partition coefficients for PCB congeners.

The Massena Operations, New York

The ongoing Land Treatment Unit (LTU) field pilot tests at the Massena Operations facility are designed to evaluate the biodegradation potential of PCBs and polynuclear aromatic hydrocarbons (PAHs) contained in soils and sediments.

The LTUs were constructed to evaluate the effectiveness of the biological degradation of PCBs and PAHs in contaminated sediments and sludges from Massena's former 60-Acre Lagoon, Waste Oil Lagoon, and Soluble Oil Lagoon. Four LTU beds were constructed and are approximately 4 feet wide by approximately 30 feet long and have sloped bottoms to promote drainage. The bottoms have plastic liners, on top of which are sequential layers of crushed aggregate, clean soil, and a layer of PCB-contaminated sediment. In addition, a geotextile landscape cloth was placed on top of the PCB-contaminated sediment and subsequently covered with between 4 and 6 inches of clean PCB-free top soil. These covering layers are necessary for mass balance calculations at the end of the study and for protection of the environment from accidental contamination. Alcoa will continue the long-term monitoring of the LTUs for biodegradation of PCBs and PAHs.

Even though the land treatment studies will contain no control units (units without treatment for comparison purposes), conclusions about the role of microorganisms in the degradation of PCBs can be drawn by comparison of the results from the land treatment studies from prior PCB biodegradation studies. If biological degradation is occurring, comparison of the degradation patterns of PCB congeners from ongoing and historical studies will show similar results. When the degradation pattern of PCB congeners is compared, Alcoa expects congeners with the lowest levels of chlorination will degrade more rapidly than congeners with the highest levels of chlorination.

In addition, Alcoa may initiate the following studies at the Massena Operations:

- Natural media filtration studies to evaluate the effectiveness of a natural media filter in removing PCBs from water, and over the long-term, to evaluate the biological degradation of PCBs collected in the natural media filter.
- Pilot-scale in-situ sequestration (capping) studies to evaluate the effectiveness of activated carbon or other adsorbent materials in reducing diffusion rates for PCBs in sediment.

These studies would be undertaken in lined beds or other lined containment units to prevent the release of PCBs into the environment.

CONDITIONS OF APPROVAL

1. Unless specified otherwise, the following conditions apply to both the ATC and the Massena Operations facilities.

2. Advance Notification: Prior to the commencement of each R&D project listed in Alcoa's application, Alcoa must provide a written 30-day advance notice of each R&D project to:

- the Regional Administrator for the EPA region where the project is taking place,
- the state environmental protection agency for the state where the project is taking place, and
- the local environmental protection agency having jurisdiction over the site where the project is taking place.

Alcoa must submit an application for new R&D projects not listed in Alcoa's current application. In addition, if samples being tested in the project originated off-site, Alcoa must notify the following:

- the Regional Administrator for the EPA region where the samples were taken,
- the state environmental protection agency for the state where the samples were taken, and
- the local environmental protection agency having jurisdiction over the site where the samples were taken.

Notification should follow the format described in the Appendix to this document, and must include, at a minimum, a brief outline of the treatability testing program, the approximate dates of the testing, and the estimated length of the testing. Copies of these notifications must also be sent to the Director, Office of Resource Conservation and Recovery (ORCR)(5301P), 1200 Pennsylvania Avenue, NW, Washington, DC 20460

3. Other Permits and Approvals: Prior to commencing the tests, Alcoa must obtain any other required federal, state or local permits or approvals. During the course of the testing, Alcoa shall comply with all conditions and requirements of such permits or approvals.

4. Feedstock and Restrictions:

ATC, Pennsylvania

PCB-contaminated soil, sludge, water and/or oil samples used in these treatability studies will be obtained from PCB-contaminated sites owned by Alcoa, or its subsidiaries, that are located within the continental United States or its territories, and from public bodies of water, adjacent to or downstream from Alcoa's properties. For any one project:

- a maximum of approximately 300 pounds of soil and/or sludge ranging in concentration from 1 parts per million (ppm) to 10,000 ppm PCBs may be used.
- a maximum of 500 gallons of water ranging in concentration from 0.5 parts per billion (ppb) to 100 ppm PCBs may be used.
- a maximum of two liters of oil ranging in concentration from 2 ppm to 5,000 ppm PCBs may be used.

Solid and liquid waste matrices used in the treatability studies will be sampled and analyzed for PCBs at the beginning of the studies, and at intervals for the duration of the studies, until the treatment has reduced the concentration of PCBs to less than 3 parts per billion for water; 2 ppm for oils, soils, sediments, sludges, and porous surfaces; and 10 micrograms per 100 square centimeters for non-porous surfaces, with the exceptions discussed in the following paragraph.

While the levels cited in the previous paragraph for the various media are the same as the TSCA cleanup levels, part of the treatability testing is to test various biodegradation approaches and enhancements that may not meet the cleanup levels cited. Untreated materials and treated materials not meeting these levels will be disposed as described in Condition 5, "Process Waste Management," of this document.

<u>The Massena Operations, New York</u>

The type and extent of PCB contamination at the site of the Massena Operations have been thoroughly characterized and reported. The PCBs in soils, sediments and other media at the Massena Operations are primarily Aroclor 1242 and 1248, with low levels of Aroclor 1260.

From the results of laboratory treatability studies and other tests, Alcoa has decided to study various R&D biodegradation processes on a pilot scale, using sediments, soils, sludges, or water that contain PCBs from the site. These processes include: 1) the existing LTUs, 2) the natural media filtration of water that contains low concentrations of PCBs to evaluate the long-term biodegradation of PCBs; and 3) a pilot-scale in-situ sequestration (capping) study to evaluate the effectiveness of activated carbon and other materials in reducing diffusion rates for PCBs in sediment.

<u>Both the ATC, Pennsylvania and the Massena Operations, New York</u>

Samples of material evaluated in these treatability studies will be collected and analyzed for PCBs using gas chromatography and/or mass spectrometry at the beginning of the experiment and then at appropriate intervals for the duration of the project. The EPA-approved procedures to be used during the sampling and analysis portions of the research project are outlined in the following documents:

- "Draft Guidelines for Permit Applications and Demonstration Test Plans for PCB Disposal by Non-Thermal Alternative Methods," August 21, 1986;

- "Quality Assurance and Quality Control Procedures for Demonstrating PCB Destruction in Filing for a PCB Disposal Permit," USEPA, June 28, 1983;
- "Recommended Analytical Requirements for PCB Data Generated On Site During Non-Thermal PCB Destruction Tests," March 19, 1986; and
- "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" QAMS-005/80, Office of Research and Development, USEPA, December 29, 1980.

All PCB waste and treatment residues generated during the test(s) will be managed as described in Condition 5 of this document, "Process Waste Management."

5. Process Waste Management:

Both the ATC and the Massena Operations shall store all PCB wastes (treated and untreated PCB materials, testing samples, spent laboratory samples, residuals, untreated samples, contaminated media or instrumentation, clothing, etc.) in compliance with § 761.65(b) in addition to the following site-specific requirements:

ATC, Pennsylvania

All waste generated as a result of this process must be disposed of as if it contained the original concentration of the feedstock received at the ATC from off-site Alcoa locations, unless, through representative sampling and analysis, Alcoa can demonstrate that the waste contains less than 3 ppb PCBs for water; 2 ppm PCBs for oil, soils, sediments, sludges, and porous surfaces; and 10 micrograms PCBs per 100 square centimeters for non-porous surfaces. At the completion of the studies under this approval, Alcoa shall decontaminate equipment, including containers, following procedures at 40 CFR 761.79(b) (3) and (4) or 761.79(c). For unrestricted use or discharge of water, Alcoa must ensure that the PCB level is $\leq$ 0.5 ppb. Water containing PCBs between 0.5 ppb and 3 ppb shall be discharged to a NPDES-permitted facility.

The Massena Operations, New York

At the end of the treatability studies undertaken under this approval, Alcoa will dispose of the treatment residues either: 1) in accordance with the TSCA disposal regulations for PCB remediation waste at 40 CFR 761.61, or (2) in accordance with approval by the EPA Region II Administrator unless, through representative sampling and analysis, Alcoa can demonstrate that the waste contains less than 3 ppb PCBs for water; 2 ppm PCBs for oil, soils, sediments, sludges, and porous surfaces; and 10 micrograms PCBs per 100 square centimeters for non-porous surfaces. In addition, Alcoa shall decontaminate equipment, including containers, following procedures at 40 CFR 761.79(b) (3) and (4), or 761.79(c). For unrestricted use or discharge of water, Alcoa must ensure that the PCB level is $\leq$ 0.5 ppb. Water containing PCBs between 0.5 ppb and 3 ppb shall be discharged to a NPDES-permitted facility.

6. Process Monitoring/Recordkeeping:

Both the ATC and the Massena Operations shall comply with the recordkeeping requirements found in §761.180 in addition to the following site-specific requirements:

ATC, Pennsylvania

Sampling and analysis will be conducted on all PCB-contaminated solid and liquid matrices used in any R&D project conducted to establish baseline conditions and subsequently to monitor various parameters during the project. Analysis of the PCB concentration of the samples will be carried out with a congener-specific analytical method (e.g., Method 1668A or Method 8082) found in §761.60(g)(1)(iii). The results of all sampling, analytical, and monitoring activities must be recorded throughout the R&D activity and include the following:

a. initial PCB concentration of all samples of solid and liquid matrices analyzed;

b. final PCB concentration of all samples of solid and liquid matrices analyzed;

c. rate(s) of PCB degradation monitored in study samples;

d. the PCB concentration of any air samples analyzed to measure potential PCB losses through volatilization;

e. if appropriate, specific partition coefficients between soil/sludge and water, and between oil and water; and

f. PCB concentration of any waste streams.

Alcoa shall develop a written quality assurance/quality control plan and shall maintain it at the ATC. Alcoa shall apply the goals and procedures in their quality assurance/quality control plan to all sampling and analysis under this approval and shall maintain all records in accordance with Section 6 of TSCA.

The Massena Operations, New York

Alcoa shall sample and analyze all PCB-contaminated soils and sediments used in field pilot-scale treatment projects to establish baseline conditions and subsequently to monitor various parameters during the project. Alcoa shall design the sampling methods to ensure that the samples collected are representative of the material being treated. Alcoa shall analyze the PCB concentration of the samples with a congener-specific analytical method (e.g., Method 1668A or Method 8082) found in §761.60(g)(1)(iii).

Alcoa shall suitably record the results of all sampling, analytical, and monitoring activities throughout the R&D activity, including:

a. initial PCB concentration of all samples of solid and liquid matrices analyzed;

b. final PCB concentration of all samples of solid and liquid matrices analyzed;

c. rate(s) of PCB degradation monitored in sediment samples;

d. the PCB concentration of any air samples analyzed to measure potential PCB losses through volatilization;

e. PCB concentration of any waste streams;

f. PCB degradation rate limiting factors noted or hypothesized during the experiment; and

g. experimental variables and the effect on the experiments of altering those variables.

Alcoa shall develop a written quality assurance/quality control plan and shall maintain it at the Massena Operations. Alcoa shall apply the goals and procedures in their quality assurance/quality control plan to all sampling and analysis under this approval and shall maintain all records in accordance with Section 6 of TSCA.

7. R&D Test Report: Alcoa shall submit a formal, final test report to the Director of ORCR no later than 120 days after the completion date of treatability studies applied to the major project scope, or after the expiration date of this approval (if not subsequently renewed), whichever comes first.

The R&D test reports shall include, at a minimum, the following items:

a. Certification Letter. This letter, signed by an authorized official of Alcoa, must certify, on behalf of the applicant, that the tests were carried out in accordance with the conditions of this approval, and that the results of all determinations are included in the report. Any changes or deviations from the conditions of this approval must be authorized in advance by the Director of ORCR and documented in writing in the report;

b. Project Description. Detailed description of the study objectives, conditions and operations, and a discussion of operational problems, if any, and corrective actions;

c. Chronology of significant events;

d. Quality Assurance (QA) Report. This report shall address all the QA objectives, including whether precision and accuracy objectives were met, as well as results of quality control samples, performance audit samples, and systems audits;

e. Waste Disposition Information. Alcoa shall provide a summary of the final disposition

of wastes generated during the treatability studies. Alcoa will retain the associated waste documentation, such as copies of manifests and certificates of destruction, on file at the facility for a period of five years from the date of this approval's expiration. If Alcoa applies for, and is given, approval to operate under a renewed R&D approval, the five years would apply to the ultimate expiration of its renewed R&D approval; and

f. Results and a discussion of the results.

In addition, each year on the date of signature of this approval, Alcoa shall submit short summaries of its treatability studies and available status reports to the Director of ORCR.

8. Facility Inspection: EPA employees shall have access to the Alcoa laboratories at the ATC and the field pilot-scale units at the Massena Operations during the treatability tests for purposes of inspection, observation, or sampling. This access is subject to the normal safety requirements placed on Alcoa personnel.

9. Facility Security: The ATC laboratories in Pennsylvania and the pilot-scale field unit at the Massena Operations, New York, shall be secured (e.g., fence, alarm system, etc.) to restrict public access to the area. Any personal injury occurring as a result of the R&D activities at the Massena Operations in New York must be reported to the Director of the Program Implementation and Information Division in ORCR (703-308-8042) and Jim Haklar, EPA's Region II PCB Coordinator, (732-906-6817)(Fax Number 212-637-4437), by the next regular business day. Any personal injury occurring as a result of the R&D activities at the ATC in Pennsylvania must be reported to the Director of the Program Implementation and Information Division in ORCR (703-308-8042) and to Kelly Bunker, EPA's Region III PCB Coordinator (215-814-2177) (Fax Number 215-814-3114), by the next regular business day.

10. Safety and Health: Alcoa must take all necessary precautionary measures to ensure that the operation of the treatability studies on enhancement of PCB biodegradation and the pilot-scale treatments comply with applicable safety and health standards as required by federal, state, and local laws, regulations and ordinances.

11. PCB Spills: Any spills or release of PCB materials shall be promptly controlled and cleaned up in accordance with the guidance given in the TSCA PCB Spill Cleanup Policy and procedures (see 52 Federal Register 10688, April 2, 1987 and regulations at 40 CFR 761.61 and 40 CFR 761.120). In addition, a written report describing the spill, operations involved, and cleanup actions must be submitted to the Director of ORCR and either to EPAs' Region II (if the spill occurred at the Massena Operations) or Region III PCB coordinator (if the spill occurred at the ATC), within five business days of the spill or release.

PCB spills also must be reported in accordance with the PCB spill reporting requirements prescribed under Section 311 of the Clean Water Act for discharges to navigable waters, under the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund), and any other applicable federal, state, or local reporting requirements.

12. Personnel Training: Alcoa is responsible for ensuring that personnel directly involved with handling PCBs or PCB-contaminated material during the Alcoa treatability studies have been trained and are demonstrably familiar with the general requirements of this R&D approval. At a minimum, this training shall encompass:

a. the type of material that may be treated during the testing;

b. basic reporting and recordkeeping requirements under this R&D approval, and the location of records at the test site;

c. notification requirements;

d. waste disposal requirements for process wastes generated during the treatability testing; and

e. basic health and safety measures to be used during all treatability testing.

This R&D approval and all records required by the conditions set forth in this document must be available to Alcoa personnel involved with the treatability studies.

13. PCB Transport Restrictions: PCB-contaminated soil and sediment received at the ATC or the Massena Operations for research and development may only be shipped from the sites for purposes of proper disposal or for further study at an offsite location approved for R&D for PCB disposal. PCB material transported for purposes of disposal must be marked in accordance with 40 CFR Part 761.40 and the DOT requirements of Title 49 CFR Parts 171 through 180. Such requirements include placarding and labeling all PCBs. Alcoa shall use manifests pursuant to subpart K of §761 for all R&D PCB wastes being transported from the ATC or the Massena Operations to an approved PCB storage or disposal facility. However, §761.207 through 761.218 do not apply if the residuals or treated samples are returned either to the physical location where the samples were collected or a location where other regulated PCBs from the physical location where the samples were collected are being stored for disposal.

14. Process/Equipment Modifications: Unless written approval is given by an authorized EPA representative, any departure from the conditions (i.e., modifications) of this R&D approval must receive prior written authorization from the Director of ORCR. Verbal requests that are approved must be followed within ten working days by written notification from Alcoa describing all verbally approved modifications. In this context, modifications are defined as any deviations from the approved conditions or from the data and materials that have been received by this Agency from Alcoa regarding the operation of the treatability testing program at the ATC and at the Massena Operation field pilot-scale treatment studies.

15. Approval Effective Dates: This R&D approval shall become effective on the date of signature and shall expire five years after the date of signature.

Alcoa may apply for a renewal of the approval at least 90 calendar days before the expiration date. Based on the short summaries of its studies and available status reports submitted by Alcoa, as required in Condition 7, the EPA will make a determination as to whether to renew this R&D approval.

This approval and all conditions herein will remain in effect beyond the approval's expiration date if 1) Alcoa has submitted a timely, complete request for renewal and, through no fault of Alcoa, ORCR has not issued a new approval; and 2) the EPA has not denied Alcoa's request for approval renewal. If the EPA chooses to deny Alcoa's request for approval renewal, the EPA may grant an extension of the existing approval for a short period of time to allow for the completion of activities that are specified in the expired approval.

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

17. Compliance Responsibility: Alcoa shall be responsible for any authorized Alcoa operation and shall assume full responsibility for any failure to comply with all applicable Federal, State, and local regulations, including the conditions of this approval. Violation of any applicable Federal regulations will be subject to enforcement action, and may be grounds for termination of this approval. This approval may be rescinded at any time for failure to comply with the terms and conditions herein, or for any other reasons which the EPA deems necessary to protect public health and the environment. Furthermore, receipt of evidence: (1) showing that the nature of the R&D has substantially changed from the effective day of this approval; (2) showing that there was misrepresentation of any material fact in any Alcoa submittal; or (3) that all relevant facts were not disclosed to the EPA; may constitute sufficient cause for termination, suspension or modification of this approval, in addition to any other legal or equitable relief or remedy the EPA chooses to pursue under applicable law.

Under the above conditions, and given the circumstances under which the R&D tests will be conducted, the Director of ORCR finds, pursuant to 40 CFR Part 761.60(e), that these tests will not present an unreasonable risk of injury to health or the environment.

Approval to conduct R&D on the enhancement of biological degradation of PCBs and other waste treatment methods, specified herein, at the ATC, Pennsylvania and on the biodegradation of PCB-contaminated sediments and other treatment methods, specified herein, in the Massena Operations, New York is hereby granted to Alcoa, subject to the conditions expressed herein. A status report summarizing progress of the project since the inception of the studies in 1994 and highlighting improvement in the degradation of PCB content of the test matrices, shall be submitted to the Director of ORCR no later than 120 days after receipt of the analysis from each sampling event performed by ATC and the Massena Operations personnel, or with the annual reports, whichever comes first.

Alcoa must comply with all applicable terms and conditions of this approval, and failure to do so will be considered a violation of the PCB Regulations (40 CFR 761) and the Toxic Substances Control Act, 15 USC 2601. This R&D approval is valid only at the ATC in Pennsylvania and the Massena Operations in Massena, New York.

8/11/2014
Date

Barnes Johnson
Barnes Johnson, Director
Office of Resource Conservation and Recovery

APPENDIX

EXAMPLE THIRTY DAY NOTIFICATION FORM

****

Company Name, Address, Phone Number, and Contact Person:

Person, Organizational Affiliation/Title, and Phone Number for:

EPA Regional Contact:
State Contact:
Local (Town/City/County) Contact:

Nature of the Disposal Activity:

Kind of PCB Disposal/Treatment Process:

Kinds of Material Containing PCBs:

Numbers and Sizes of Pieces of Equipment Containing PCBs:

Quantity of Solids and/or Volume of Liquids Containing PCBS:

Concentration(s) of PCBs in the Material to be Treated:

Location

Street Address or Other Identifier for All Sites:

Telephone Contact and Address for Site Manager:

Dates of Testing

Start Date:

Estimated Finish Date:

Brief outline of the treatability testing program: