UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OCT 8 1998

HDodohara:hd/OPPT-NPCD-FOB/10-6-98/7404/260-3959/Rm E837/D08B:"dem-amnd.wpd"
FOB Chron:Read File/DS File/Subject File/Author File
Trial Burn 2, amend, TOCDF, Army, DFS, chemical agent

Mr. Thaddeus A. Ryba, Project Manager
Department of the Army
Program Manager, Chemical Demilitarization

Mr. James F. Colburn
EG&G Defense Materials
Aberdeen Proving Ground, MD 21010-5401

Dear Messrs. Ryba and Colburn:

Responding to comments submitted by the Army Program Manager, Chemical Demilitarization (PMCD) September 23, 1998, the National Program Chemicals Division (NPCD) of the U.S. Environmental Protection Agency (EPA) amends the approval dated September 21, 1998 to perform the TSCA PCB Disposal Demonstration Test Burn II at the Deseret Chemical Depot, Tooele, Utah. Enclosure 1 contains responses to the comments and Enclosure 2 contains the pages containing the amended passages (in bold text). Please replace the appropriate pages in the approval.

Sincerely,

John W. Melone, Director
National Program Chemicals Division

Enclosure

cc: PCB Coordinators
Regions IV, V, VI, VIII, X

FOB File

CONCURRENCES

SYMBOL	7404	7404						
SURNAME	Dodohara	Bay						
DATE	10/6/98	10/6/98						

EPA Form 1320-1A (1/90)

OFFICIAL FILE COPY

Responses to
TOCDF Questions/Comments
on the Sept. 21, 1998 TSCA PCB Disposal Test Burn II
(RCRA/TSCA Trial Burn 1998) Approval

1. Cover Letter, p. 1, 1st Para.: Regarding interim operations. Is this automatic upon completion of the requirements in Condition 9, or are approval letters required?

   Response: The initial five weeks of interim operations are automatic, i.e., as soon as Trial Burn II has been completed, meeting provisions in Condition 9.a..(3). Subsequent periods of interim operations will require approval.

2. Cover Letter, p. 2, 1st Para.: Approval is effective through December 31, 1998. Is this inclusive of the 5 - 15 weeks of interim operations? If not, then an extension would be required to operate for the full 15 weeks, provided we meet the submittal requirements.

   Response: This approval covers only operations related to the demonstration. Interim operations are covered by Condition 9. Operations beyond the initial five weeks of interim operations will be approved under separate letters.

3. Approval, p. 1, Effective Date: Interim operations may not be completed by December 31, 1998.

   Response: See Response 2.

4. Approval, p. 3, Condition 4: The list of references in the Phase 3 AEHA Hazardous Waste Study No. 37-26-1345-87 was reviewed to confirm that the documents listed in this condition were followed, but none listed. Need to confirm this is not a problem.

   Response: The analytical facilities were audited by blind check sample procedures and an on-site visit by EPA laboratory personnel. Use of the same analytical facility by TOCDF will be acceptable.

5. Approval, p. 3, Condition 4: The current schedule for the DFS Trial Burn is the week of November 9, 1998, which includes the Veteran Day holiday. Will EPA support during this week be a problem?

   Response: EPA will support this schedule.

6. Approval,, p. 3, Condition 6:

   a. Need confirmation that the waste listed as "Retort discharge (bottom ash)" is what TOCDF considers to be Heated Discharge Ash (HDC) ash, i.e., residue discharged from the HDC and not residue retained in the kiln.

Response: The Retort discharge (bottom ash) is identical to the Heated Discharge Ash (HDC ash).

b. There is not a waste stream that fits the description of "carbon filter media from the ECR."

Response: If a carbon bed unit dedicated to the ECR does not exist, then a unit that treats the air from the ECR must be selected.

c. Since the Brine Reduction Area (BRA) is not operational, there will be no "solids from the waste water concentration/dryer" available for characterization.

Response: If the BRA is not operational during the demonstration, then the brine must be characterized.

7. Approval, p. 4, Condition 6.A: Need confirmation that the parameter listed "EP toxicity test" is what is now known as "TCLP."

Response: The test required is TCLP.

8. Approval, p. 6, Condition 9.a.(3): For consistency with the RCRA ATB Plan, the statement regarding "no more than a total of two hours when rocket feed is shut off," should be "no single feed stoppage of more than two hours," rather than a cumulative total.

Response: Incinerator demonstration burns for TSCA have always had the working policy of "no more than a total of two hours when feed is shut off." During demonstrations, however, the permit writer has the prerogative to evaluate the cause of the feed shut offs. If the cause is minor, such as thermocouples burning out, then the permit writer may allow continuation of the demonstration.

9. Approval, p.6, Condition 9.b: The TOCDF interpretation of this paragraph is that 5 weeks of interim operation are granted upon completion of the RCRA/TSCA Trial Burn 998 and that an additional 10 weeks are granted upon submittal of the data required by Condition 9.a.(4).a, b, and C, however te explicit language in this paragraph doesn't quite say that. Request clarification. Also, does EPA have to acknowledge receipt of data or issue an approval of the 10 week extension?

Response: See Responses 1 and 2.

10. Approval, p. 6, Condition: Since all waste streams generated from the DFS have been fully characterized for PCBs during prior testing and the results have demonstrated these waste streams to be non-TSCA waste, will EPA accept the existing waste profiles to allow disposal of these waste streams in non-TSCA landfills or incinerators?

Response: This approval is intended for repeat of the initial RCRA/TSCA Trial Burn and requires duplication of the sampling and analysis.

11. Approval, p. 7, Condition 12.A: For consistency with the RCRA automatic waste feed cutoff, request that the lower kiln speed limit be changed from "0.5" rpm to "0.33" rpm.

Response: The lower kiln speed limit is amended to 0.33 rpm.

12. Approval, p. 7, Condition 12.C: The reference to "Condition 6" should be "Condition 7."

Response: The reference has been changed to "Condition 7."

13. Approval, p. 8, Condition 12.G(I): For all of the monitoring operations listed in Condition 7, with the exception of O_2, CO, and CO_2, there is no mechanism for an automatic waste feed cutoff. Therefore, recommend deleting "automatically" in paragraph G.

Response: Paragraph G has been amended..

14. Approval, p. 8, Condition 12.G(ii): There is not a direct mechanism to automatically stop waste feed in the event of a failure of "PCB rate and quantity measuring and recording equipment."

Response: An operator-activated procedure is acceptable in batch-type operations.

15. Approval, p. 8, Condition 13:

a. TOCDF interprets these requirements to apply to each "run" of the RCRA/TSCA Trial Burn 1998, rather than each "batch of PCB-contaminated M55 firing tubes." Request clarification.

Response: Requirements apply to each test run.

b. Are these requirements for the RCRA/TSCA Trial Burn 1998 only, or inclusive of shakedown and interim operations?

Response: These provisions apply to the Trial Burn, shakedown and interim operations.

16. Approval, p. 8, Condition 15: Interim operations may not be complete by December 31, 1998.

Response: See Response 1 & 2.

17. Approval, p. 9, Condition 16: Requires compilation of information within 60 days following completion of the Demonstration Test Burn, however, most of this information will be compiled in the final report and won't be available until roughly 15 weeks following completion of the Demonstration Test Burn. Request that this be made consistent with the final report requirement of 15 weeks.

    Response: Condition 16 is amended appropriately.

Enclosure 2

Revised Pages to the TSCA PCB Disposal Demonstration
Test Burn II, September 21, 1998

purpose, 3 ppb) or that the discharge is controlled under an existing National Pollutant Discharge Elimination System (NPDES) permit.

11. Process Waste Disposal: All wastes generated by the TOCDF DFS process (filter media, sludge, solvent or other effluent, etc.), which have been found to contain 2 ppm or more PCBs, as calculated by comparison to an external standard homolog peak having the nearest retention time to each appropriate PCB peak to be quantified, must be disposed of in a PCB disposal facility approved by EPA under 40 CFR Part 761.60. Analytical methods specified in the application for PCBs in different phases (water, solids and oil) must be used by the Army in making such determinations.

12. Process Restrictions: The TOCDF DFS shall operate at the following conditions whenever PCBs are being incinerated:

A. The residence time for the afterburner combustion zone shall be a minimum two seconds, and the operating temperature shall be a minimum of 2000° F;

The dwell time of material in the Kiln Retort will be determined by the revolution of the kiln within a range from **0.33** to 2.0 rpm;

B. The stack excess oxygen shall be 3% minimum as measured in undiluted discharged combustion gas;

C. The combustion efficiency shall be a minimum of 99.9%, computed as follows:

$$\text{combustion efficiency} = \frac{C_{co_2}}{C_{co_2} + C_{co}} \text{ X } 100, \text{ where}$$

C_{co_2} = concentration of carbon dioxide by volume; and
C_{co} = concentration of carbon monoxide by volume.

The combustion efficiency shall be recorded at least every 15 minutes from analytical data supplied from the monitoring requirements specified in Condition 7;

D. The particulate emission rate shall be less than 0.08 grains/dscf and the HCl emissions shall be no greater than 4 lb/hr or if greater than 4 lb/hr, the removal rate shall be greater than 99%;

E. The rate and quantity of PCBs fed shall be measured and recorded at least every 15 minutes;

F. The Kiln Retort and Afterburner combustion zones outlet temperature shall be continuously measured and recorded;

G. Unless a contingency plan is submitted by the incinerator owner or operator and approved by the Director of the National Program Chemicals Division, and the contingency plan indicates what alternative measures the incinerator owner or operator will take if the flow of PCB feed material to the TOCDF DFS shall stop automatically, the flow of PCB feed material shall stop automatically when any one or more of the following conditions occur:

(i) **Failure of any of the components of the continuous emission monitoring system.**

(ii) Failure of the PCB rate and quantity measuring and recording equipment estimated in Condition (3);

(iii) Excess oxygen falls below 3% by volume;

(iv) Failure to achieve a minimum 99.9% combustion efficiency; and

5. The incinerator outlet temperature drops below the temperature specified in Condition 11(A).

13. Process Monitoring: Provisions must be made to assure that the following process elements are suitably monitored and recorded for each **test run** of PCB-contaminated M55 firing tubes processed:

A. Quantity and M55 rockets charged into the Deactivation Furnace System;

B. Quantity and PCB concentration in process waste generated (i.e., sludge, filter media, water, spent solvent or other effluent), including vent gases or other emissions;

C. Temperature and pressure of reaction in at least one-half hour intervals;

D. Date, time and duration of run; and

E. Name of operator and supervisor.

14. Process Failure: If the quality control testing as described in the Demonstration Test Burn plan and the EPA guidelines reveals that the PCBs are not being adequately destroyed, disposal activities may be ordered by EPA representatives to cease until adequate explanation is given and corrective measures are taken. A written report detailing the problem and solution shall be filed with the EPA within five business days.

15. Expiration Dates: This approval shall expire on December 31, 1998.

16. Recordkeeping: The Army TOCDF shall collect and maintain for a period of five years from the date of the Demonstration Test Burn, the following information:

A. Continuous and short interval data described below:

(i) Rate and quantity of PCBs fed into the combustion system;

(ii) Temperature of the combustion operations; and

(iii) Stack emissions, including oxygen, carbon monoxide and carbon dioxide.

B. Data and records on the monitoring of stack emissions and combustion efficiency as required by these conditions;

C. The total weight in kilograms of any solid residues generated by the incineration of PCBs during the demonstration, and the total weight in kilograms of any solid residues disposed of by the facility and the location of the solids disposed;

D. The type and amount of PCB waste and other raw materials incinerated;

E. The location, manufacturer (if known), and serial number (if any) of any equipment from which PCBs were processed;

F. A copy of each gas chromatogram from the test required by Conditions 4 and 6;

G. The date(s), time and duration of the Demonstration Test Burn;

H. The name, address and telephone number of the operator and supervisor.

The documents must be compiled within **15 weeks** following completion of the Demonstration Test Burn, must be kept at one centralized location, and must be available for inspection by authorized representatives of the EPA upon request. The Army TOCDF or its authorized agents must also maintain the records required by 40 CFR 761.180. If the Army TOCDF or its agents terminate business, these records or their copies must be submitted to the Director of the National Program Chemicals Division.

17. Safety and Health Standards: The Army TOCDF or its agents must take all necessary precautionary measures to ensure that operation of the TOCDF DFS unit is in compliance with the applicable safety and health standards, as required by Federal, State and local regulations and ordinances.

18. Facility Security: The TOCDF DFS unit shall be secured (e.g., fence, alarm system, etc.) at the test site to restrict public access to the area.

19. PCB Releases and Spills: Any spills of PCBs or other fluids shall be promptly contained and cleaned up. In addition, a written report describing the spill, operations involved, and cleanup actions must be submitted to EPA Region VIII within five (5) business days.

TOCDF Questions/Comments on September 21, 1998 Approval to Perform TSCA PCB Disposal Demonstration Test Burn II (RCRA/TSCA Trial Burn 1998)

1. Cover Letter, p. 1, 1st Para.: Regarding interim operations. Is this automatic upon completion of the requirements in Condition 9, or are approval letters required?

2. Cover Letter, p. 2, 1st Para.: Approval is effective through December 31, 1998. Is this inclusive of the 5 – 15 weeks of interim operations? If not, then an extension would be required to operate for the full 15 weeks, provided we meet the submittal requirements.

3. Approval, p. 1, Effective Date: Interim operations may not be completed by December 31, 1998.

4. Approval, p. 3, Condition 4: Joe – The list of references in the Phase 3 AEHA Hazardous Waste Study No. 37-26-1345-87 was reviewed to confirm that the documents listed in this condition were followed, but none were listed. Need to confirm that this is not a problem.

5. Approval, p. 3, Condition 4: The current schedule for the DFS Trial Burn is the week of November 9, 1998, which includes the Veterans Day holiday. Will EPA support during this week be a problem?

6. Approval, p. 3, Condition 6:

   a. Need confirmation that the waste listed as "Retort discharge (bottom ash)" is what TOCDF considers to be Heated Discharge Ash (HDC) ash, i.e., residue discharged from the HDC and not residue retained in the kiln.

   b. There is not a waste stream that fits the description of "carbon filter media from the ECR".

   c. Since the Brine Reduction Area (BRA) is not operational, there will be no "solids from the waste water concentration/dryer" available for characterization.

7. Approval, p. 4, Condition 6.A: Need confirmation that the parameter listed as "EP toxicity test" is what is now known as "TCLP".

8. Approval, p. 6, Condition 9.a.(3): For consistency with the RCRA ATB Plan, the statement regarding "no more than a total of two hours when rocket feed is shut off", should be "no single feed stoppage of more than two hours", rather than a cumulative total.

9. Approval, p. 6, Condition 9.b: The TOCDF interpretation of this paragraph is that 5 weeks of interim operation are granted upon completion of the RCRA/TSCA Trial Burn 1998 and that an additional 10 weeks are granted upon submittal of the data required by Condition 9.a.(4).A, B, and C, however the explicit language in this paragraph doesn't quite say that. Request clarification. Also, does EPA have to acknowledge receipt of data or issue an approval of the 10 week extension?

10. Approval, p. 6, Condition 10: Since all waste streams generated from the DFS have been fully characterized for PCBs during prior testing and the results have demonstrated these waste

TOCDF Questions/Comments on September 21, 1998 Approval to Perform TSCA PCB Disposal Demonstration Test Burn II (RCRA/TSCA Trial Burn 1998)

streams to be non-TSCA waste, will EPA accept the existing waste profiles to allow disposal of these waste streams in non-TSCA landfills or incinerators?

11. Approval, p. 7, Condition 12.A: For consistency with the RCRA automatic waste feed cutoff, request that the lower kiln speed limit be changed from "0.5" to "0.33" rpm.

12. Approval, p. 7, Condition 12.C: The reference to "Condition 6" should be "Condition 7".

13. Approval, p. 8, Condition 12.G(i): For all of the monitoring operations listed in Condition 7, with the exception of O_2, CO, and CO_2, there is no mechanism for an automatic waste feed cutoff. Therefore, recommend deleting "automatically" in paragraph G.

14. Approval, p. 8, Condition 12.G(ii): There is not a direct mechanism to automatically stop waste feed in the event of a failure of "PCB rate and quantity measuring and recording equipment".

15. Approval, p. 8, Condition 13:

    a. TOCDF interprets these requirements to apply to each "run" of the RCRA/TSCA Trial Burn 1998, rather than each "batch of PCB-contaminated M55 firing tubes". Request clarification.

    b. Are these requirements for the RCRA/TSCA Trial Burn 1998 only, or inclusive of shakedown and interim operations?

16. Approval, p. 8, Condition 15: Interim operations may not be completed by December 31, 1998.

17. Approval, p. 9, Condition 16: Requires compilation of information within 60 days following completion of the Demonstration Test Burn, however, most of this information will be compiled in the final report and won't be available until roughly 15 weeks following completion of the Demonstration Test Burn. Request that this be made consistent with the final report requirement of 15 weeks.