

USACHPPM

**U.S. Army Center for Health Promotion
and Preventive Medicine**



**HAZARDOUS WASTE MANAGEMENT CONSULTATION
NO. 37-26-1296-96
79TH ARCOM, NEW JERSEY
APRIL - DECEMBER 1995**

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REPLY TO
ATTENTION OF

JS0094

MCHB-DC-EHM (40)

02 JUL 1996

MEMORANDUM FOR District Engineer, U.S. Army Corps of Engineers, Baltimore District,
ATTN: CENAB-PP-E (Ms. Michelle Vuotto), P.O. Box 1715,
Baltimore, MD 21203-1715

SUBJECT: Hazardous Waste Management Consultation No. 37-26-1296-96, 79th ARCOM,
New Jersey

One copy of this report is enclosed. Additional assistance in implementing the recommendations contained in this report or comments and concerns may be discussed with the undersigned at DSN 584-3651 or commercial (410) 671-3651.

FOR THE COMMANDER:

JOHN J. RESTA, P.E.
Program Manager

Hazardous and Medical Waste Program

Encl

CF (w/encl):
HQDA(DAIM-ED)
CDR, MEDCOM, ATTN: MCHO-CL-W
CDR, 79TH ARCOM, ATTN: AFRC-CPC-EN-WG

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EXECUTIVE SUMMARY
HAZARDOUS WASTE MANAGEMENT CONSULTATION NO. 37-26-1296-96
79TH ARMY RESERVE COMMAND, NEW JERSEY
APRIL - DECEMBER 1995

1. **PURPOSE.** The purpose of this study was to identify which electrical transformers are owned by the 79th Army Reserve Command (ARCOM) activities and to determine if the associated dielectric fluid contained polychlorinated biphenyls (PCBs).
2. **SUMMARY.** Telephonic and written correspondence with local utility companies was conducted to determine which electrical transformers servicing the centers were owned by the 79th ARCOM. A site visit involving USACHPPM personnel and a utility representative confirmed ownership of transformers that could not be determined by correspondence. Transformers located at the Sievers-Sandberg U.S. Army Reserve Center (USARC), Kilmer USARC, and the Cavens Point USARC were sampled between 11 and 15 December 1995, by USACHPPM personnel and linesmen from the 287th Engineering Detachment, U.S. Army Reserve (USAR). The sampling procedure employed was delineated in a sampling plan developed by the Hazardous and Medical Waste Program of the USACHPPM. All other electrical transformers located at 79th ARCOM centers were either determined to be owned by the local utility or not under the jurisdiction of the 79th ARCOM.
3. **CONCLUSIONS**
 - a. A total of three centers in New Jersey have electrical transformers owned by the 79th ARCOM. Electrical transformers at the reserve centers located at Fort Dix and Picatinny Arsenal were determined to be under the jurisdiction of the installation Environmental Management Office of these respective jurisdictions.
 - b. The sampling mission identified two large (500 KVA) pad-mounted transformers at the Sievers-Sandburg USARC that contained 430,000 ppm for PCBs and two pad-mounted transformers that contained 530 ppm and 1450 ppm, respectively. These transformers were classified as PCB-containing in accordance with 40 CFR 761.30 (equipment over 500 ppm for PCBs). These transformers were located in buildings that were part of an abandoned NIKE missile site at the Center. Three pole-mounted transformers and a pad-mounted transformer at the Sievers-Sandburg USARC and four pole-mounted transformers at the Cavens Point USARC were classified as PCB-contaminated in accordance with 40 CFR 761.30 (equipment between 50 and 500 ppm for PCBs).
 - c. Seventy-four additional electrical transformers: 39 at the Sievers-Sandburg USARC, 8 at the Kilmer USARC and 27 at the Cavens Point USARC were determined to be non-PCB.

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4. RECOMMENDATIONS.

a. Sievers-Sandburg USARC: The pad-mounted transformers at the abandoned NIKE site should be removed from service, and disposed of as PCB transformers. All other electrical transformers located at the site should be labeled as PCB contaminated (50-500 ppm) or non-PCB (<50 ppm) in accordance with 40 CFR 761.45.

b. Kilmer USARC: The site is currently under contract to have electrical transformers replaced; transformers removed from the site should be re-used or properly disposed of as non-PCB transformers. Transformers remaining in service should be labeled as non-PCB in accordance with 40 CFR 761.45.

c. Cavens Point USARC: Electrical transformers located at the site should be labeled as PCB contaminated (50-500ppm) or non-PCB (<50 ppm) in accordance with 40 CFR 761.45. Transformers that have been abandoned in place should be properly disposed of in accordance with 40 CFR 761.45.

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HAZARDOUS WASTE MANAGEMENT CONSULTATION NO. 37-26-1296-96
79TH ARMY RESERVE COMMAND, NEW JERSEY
APRIL -DECEMBER 1995

1. REFERENCES. Information was obtained from document reviews, facility manager interviews, local utility companies, and site visits. Appendix A contains a complete reference list.
2. AUTHORITY.
 - a. Scoping Report and Work Plan, U.S. Army Corps of Engineers, CENAB-PL-EM, 31 August 1994, subject: ECAAR Follow-Up Actions for the 79th ARCOM.
 - b. Telephone conversation between Ms. Betsy Kimmerly, U.S. Army Corps of Engineers - Baltimore District, Maryland, and 2LT Lisa Selke, USACHPPM, 11 January 1995, subject: Beginning Work on the Polychlorinated Biphenyl Transformer Survey.
3. PURPOSE. The purpose of this survey is to collect data for identifying the 79th Army Reserve Command Center (ARCOM) electrical transformers as containing polychlorinated biphenyls (PCBs) or mineral oil (non-PCB) and to oversee sampling if needed.
4. REGULATIONS.
 - a. The Toxic Substances Control Act (TSCA), Title 40 of the Code of Federal Regulations (CFR) Part 761.30, requires that transformers containing dielectric fluid in excess of 500 parts per million (ppm) be labeled as PCB-containing transformers and registered with fire response personnel and the building owner. In order to remain in service, PCB-containing transformers must be replaced with non-PCB equipment, retro filled with non-PCB oil and reclassified, or retrofitted with electrical surge protection and inspected on a quarterly basis.
 - b. Executive Order 12856 has committed Federal facilities to comply with the Emergency Planning and Community Right-to-Know Act (EPCRA). In addition, the Executive Order has established pollution prevention (P2) goals for reducing the release and/or offsite transfer of certain chemicals by 50 percent by 1999. Compliance with the TSCA provides Community Right-to-Know information and reduces the potential for a toxic release in the spirit of Executive Order 12856.

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5. BACKGROUND.

- a. The 79th Army Reserve Command (ARCOM) is comprised of 16 active reserve operations throughout New Jersey. Each operation has various missions associated with the preparation and training of combat, combat service, and combat service support troops. The ownership of electrical transformers at these operations was unknown. A survey to determine ownership of electrical transformers and testing of transformers determined to be the property of the 79th ARCOM for polychlorinated biphenyls was requested by the U.S. Army Corps of Engineers, Baltimore District. These facilities and their status are delineated in the Table.
- b. Polychlorinated biphenyls were the primary dielectric fluid used in transformer oil for several years. It was a nonflammable, dense, viscous liquid ideal for cooling the electrical coils in high current equipment. The usage and handling of PCBs was regulated by the USEPA subsequent to the assessment of safety and environmental concerns. Polychlorinated biphenyls are a carcinogen that have been scientifically proven to bioaccumulate by being stored in the fatty tissues of organisms that ingest or absorb PCBs, becoming concentrated in higher organisms that prey upon them. The regulation of PCBs protects human health and the environment by recommending the removal of PCB-containing equipment and requiring additional protection against accidental spills for PCB equipment remaining in service.
- c. The Toxic Substances Control Act (TSCA) states that the owner of PCB transformers are responsible for maintenance and possible releases to the environment (Appendix B). Leased facilities and those utilizing utility-owned equipment are exempted from liability unless a contractual agreement or negligence on the part of Reserve personnel is involved. Therefore, only the Federally-owned transformers containing PCBs cause concern in this regard.
- d. Transformers which exceed a concentration of 500 ppm require labeling as a PCB-containing transformer, registration with the local fire department, and quarterly inspections for integrity to be noted in the installation files according to 40 CFR 761.30, sections vi through ix, and 761.40 Subpart C, "Marking Requirements". Transformers determined to be PCB-containing can remain in service provided they are retrofitted with electrical surge protection (such as a current limiting fuse) and automatic-disconnect equipment to de-energize the transformer in the event of over-pressure or overheating in accordance with 40 CFR 761.30, section v. A PCB-containing transformer may be reclassified as PCB-contaminated or non-PCB by replacing the dielectric fluid with non-PCB oil and re-sampling in accordance with conditions stated in 40 CFR 761.30, section v. These options vary with the type of transformer, the location, and the method of installation. In most cases, action must be taken within 18 months of the discovery of a transformer containing over 500 ppm PCBs. Replacement of the PCB transformer with a non-PCB transformer may be a cost effective option when considering the age

of the transformer and costs associated with retrofitting or reclassification. Transformers discovered to contain between 50 and 500 ppm for PCBs are classified as PCB-contaminated; these transformers require labeling as PCB-contaminated but can remain in service without modification for the life of the transformer. Consult Title 40 CFR 761 in Appendix B for complete details.

e. Complying with 40 CFR 761 without removing the PCB-containing transformer leaves potential for a release should the transformer begin to leak. Cleaning up PCB spills is expensive, and may involve soil removal and ground water remediation. Eliminating the potential for an expensive spill reflects the spirit of the Pollution Prevention portion of Executive Order 12856.

| TABLE - 79TH ARCOM FACILITIES; NEW JERSEY; TRANSFORMER STATUS | |
|---|---------------|
| <u>Reserve Facility</u> | <u>Status</u> |
| 2nd BDE Motor Pool, Ft. Dix | Tenant |
| BPC Kilmer, Ft. Dix | Tenant |
| Brittin USARC, Lodi | Utility-owned |
| Cavens Point USARC, Jersey City | 79th; PCB |
| ECS #27, Ft. Dix | Tenant |
| Hamilton USARC, Lodi | Utility-owned |
| Kelly USARC, Ft. Dix | Tenant |
| Kilmer USARC, Edison | 79th; non-PCB |
| Monmouth USFRC, Red Bank | Utility-owned |
| NCO Academy, Ft. Dix | Tenant |
| Regional Training Site Intelligence, Ft. Dix | Tenant |
| Sievers-Sandburg USARC, Pedricktown | 79th; PCB |

| | |
|------------------------------|---------------|
| Somervell USARC, Mt. Freedom | Utility-owned |
| Stock USARC, Northfield | Utility-owned |
| Stryker USARC, Trenton | Utility-owned |
| Weigel USARC, Edison | Utility-owned |

Notes:

Tenant - The Reserve facility is a tenant on another Federal facility (i.e., military installation).

Utility-owned - The electrical power used by these facilities emanates from transformers which are owned by the local utility.

79th; PCB - These facilities possess transformers which are owned by the 79th ARCOM, who maintains operational, maintenance, and regulatory responsibility. The dielectric fluids have been characterized as containing PCBs.

79th; non-PCB - Same as above, except dielectric fluids characterized as not containing PCBs.

6. DISCUSSION.

a. Facility managers at the U.S. Army Reserve Centers (USARCs) were interviewed to determine if electrical transformers used by their Centers were owned by the 79th ARCOM. Local utility representatives were also contacted to determine the disposition of electrical transformers servicing the centers. Transformers that could not be determined by other means of correspondence, were confirmed by a site visit involving USACHPPM personnel and a representative from the local utility.

b. Transformers located at the Sievers-Sandberg USARC, Kilmer USARC, and the Cavens Point USARC were sampled for PCB-containing oils on 11 through 15 December 1995. Field supervision for the mission was conducted by USACHPPM; mission support was provided by electrical linesmen from the 287th Engineering Detachment USAR, located in Attleboro, MA. All sampling was conducted according to the sampling plan and site safety and health plan prepared by the Hazardous and Medical Waste Program at USACHPPM found in Appendix C. Laboratory analysis was accomplished using the ASTM method D4059 by the USACHPPM Directorate of Laboratory Sciences at APG, MD.

7. FINDINGS.

a. A total of 13 Centers in New Jersey were determined to be serviced by transformers that were not owned by 79th ARCOM. These Centers either did not have a transformer on the property, were serviced by utility owned transformers, or were a tenant activity at a Federal installation. The TSCA regulations (Appendix B) exempts these facilities from liability unless a contractual agreement or negligence is involved. A complete listing of these centers can be in the Table and in Appendix D.

b. Electrical transformers at the Kilmer USARC were determined to be non-PCB through sampling conducted by USACHPPM on 14 December, 1995. Observations made at these Centers can be found in Appendix D; laboratory analyses for the Kilmer USARC can be found in Appendix E, Table 1.

c. Two Reserve Centers had Federally-owned transformers that were determined to be PCB-contaminated (50-500 ppm for PCBs) or PCB-containing transformers (over 500 ppm for PCBs), as defined by 40 CFR 761.40 (see Appendix B). Activities at these Centers and sampling results are summarized below.

(1) Sievers-Sandburg USARC, Edison, NJ

(a) Two General Electric 500 KVA pad mounted transformers were located in a missile launch control building (Missile Master) that was part of an abandoned NIKE missile site at the center. One transformer (serial # C-504108) was sampled (sample PT22P) and found to be PCB-containing (430,000 ppm); the second transformer (serial # C-504107) could not be sampled for fear of causing damage to the equipment. The second transformer was assumed to be PCB-containing for the following reasons: the serial numbers indicated that the transformers were manufactured in sequence and probably filled from the same batch of dielectric fluid, both transformers were listed as containing 'Pyranol' a General Electric brand name for PCB-containing oil, and both were manufactured during the 1956-1960 timeframe (when PCB use was prevalent). Three Westinghouse 50 KVA pad mounted transformers located in an auxiliary building at the NIKE site were also sampled. Two transformers, (serial # 57E3514, and # 57E3516) were PCB-containing, holding 530 ppm (sample PT24P) and 1450 ppm (sample PT25P) respectively. The third transformer (serial # 57E3511) was PCB-contaminated, containing 161 ppm for PCBs (sample PT23P). An oil-cooled switch located in the auxiliary building was sampled and found to be non-PCB. These transformers should be removed from service immediately and disposed of in an appropriate manner. They are located in areas no longer used by the Center, precluding the need for continuous power supply. Further, the relative age (greater than 36 years) of this equipment would make it difficult to effectively retrofit with

another dielectric fluid and use for an extended period of time. Costs would prove extreme for the brief payback period that would incur.

(b) A total of 41 transformers (in addition to those at the NIKE site) were sampled on December 11 through 13, 1995. A pole-mounted transformer (serial # D442572-59P; sample PT15P) located adjacent to building 474 and a pole-mounted oil switch (serial # 46093; sample PT20P) located by building 404 were found to be PCB-contaminated, containing 86 ppm and 120 ppm PCBs respectively. A pole-mounted transformer (serial # 2426-4; sample PT33P) located in a parade field by route 130 was PCB-contaminated (150 ppm PCBs). The remaining transformers were determined to be non-PCB. Laboratory analyses can be found in Appendix E, Table 2.

(2) Cavens Point USARC, Jersey City, NJ.

(a) A total of 21 transformers (1 pad-mounted and 20 pole-mounted) which support the Center were sampled on December 14 through 15, 1995. Two pole-mounted transformers (serial # 15410, and 15407; samples PT58C and PT60C) located by building 198 and two pole-mounted transformers (serial # 15409 and 15404; samples PT68C and PT70C) located adjacent to building 204 contained PCB levels between 40 ppm, and 42 ppm. These transformers had reportedly not been in use for many years, as the serviced buildings had been unused/abandoned. The necessity of retaining such utilities should be reviewed. In these instances it would appear prudent to remove the transformers in question and dispose of appropriately. Also, access to the dielectric fluids in these pieces of equipment was limited at the time of this investigation. Therefore, samples were collected from the surface of each reservoir. The PCBs, which are viscous and possess a high-molecular weight, may have settled to the bottom of the reservoirs after such extended periods of disuse. The fluids in question are considered to be PCB-contaminated (between 50-500 ppm), as a conservative assumption, due to these considerations and the elevated concentrations observed in the surface samples. As depicted, these transformers should be removed and handled as PCB-contaminated equipment for final disposition. All other transformers located at the site were contained less than 19 ppm PCBs and are classified as non-PCB. The corresponding laboratory analyses can be found in Appendix E, Table 3.

(b) A total of nine transformers at the Cavens Point USARC were located in outlying areas east of building 204 that are no longer used by the center. Some of these transformers remained energized, while others had been abandoned in place. These transformers presented a potential fire and environmental hazard due to the age and poor condition of the poles and overhead wires to which they are attached. The entire area has not been used by the Center for several years. If there are no plans to revitalize this region, remove all transformers and dispose of in an appropriate manner.

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8. RECOMMENDATIONS.

a. Kilmer USARC: The site is currently under contract to have electrical transformers replaced; transformers removed from the site should be re-used or properly disposed of as non-PCB transformers. Transformers remaining in service should be labeled as non-PCB in accordance with 40 CFR 761.45.

b. Sievers-Sandburg USARC: The pad-mounted transformers at the abandoned NIKE site should be removed from service and disposed of as PCB-containing transformers. Transformers determined to contain between 50ppm and 500ppm PCBs (samples PT15P, and PT33P) should be labeled as PCB-contaminated in accordance with 40 CFR 761.45 and remain in service. All other transformers located at the site should be labeled as non-PCB and remain in service. Refer to Table 2, Appendix E and the site plan for transformer locations and PCB determination.

c. Cavens Point USARC: Transformers determined to contain between 40ppm and 500ppm PCBs (samples PT58C, PT60C, PT68C and PT70C) should be labeled as PCB-contaminated, as described in paragraph 7c(2)(a) of this report, and remain in service. All other transformers located at the site should be labeled as non-PCB. Transformers servicing areas no longer used by the Center should be taken out of service for disposal or reuse. Electrical transformers that have been abandoned in place should be properly disposed of in accordance with 40 CFR 761.45. Refer to Table 3, Appendix E and the site plan for transformer locations and PCB determination.



RICHARD DANIELS

1LT, MS

Hazardous and Medical Waste Program

REVIEWED:



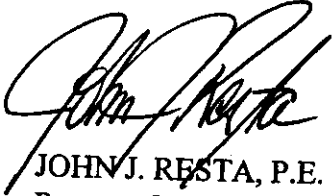
THOMAS R. RUNYON

Team Leader, Special Studies and Technologies
Hazardous and Medical Waste Program

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APPROVED:

A handwritten signature in black ink, appearing to read "John J. Resta". The signature is written in a cursive style with a large initial "J" and "R".

JOHN J. RESTA, P.E.

Program Manager

Hazardous and Medical Waste

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APPENDIX A

REFERENCES AND POINTS OF CONTACT

REFERENCES

1. Title 40, Code of Federal Regulations, 1993 rev, Part 761, Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and use Prohibitions.
2. Toxic Substances Control Act, as amended (15 USC 2601).
3. Public Law 99-499, Emergency Planning and Community Right-to-Know Act of 1986.
4. Executive Order 12856, Federal Compliance with Right-to Know Laws and Pollution Prevention Requirements, 3 August 1993.
5. Memorandum, U.S. Department of Defense, subject: Implementing Guidance for Executive Order 12856: "Federal Compliance with Community Right-to-Know Laws and Pollution Prevention Requirements."
6. Army Regulation 200-1, Environmental Protection and Enhancement, 1990.

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RESERVE CENTER POINTS OF CONTACT

1. Camden, NJ: Mr. Bomgart @ (609) 662-3476; SFC Nelson V. Britton, USARC
2. Edison, NJ:
Mr. Thomas @ (908) 572-0517; Kilmer USARC
Mr. Diorio @ (908) 287-0469; Weigel USARC
3. Ft. Dix, NJ:
Ms. Pauletta LaBonte @ (609) 562-4249, Real Property; Ft. Dix
Mr. McDevitt @ (609) 562-3661; ECS #27
SSG Capuano @ (609) 562-4179; Regional Training Site Intelligence
SGM George @ (609) 562-3001; NCO Academy
Mr. Ness @ (609) 562-5546; Kelly USARC
Mr. Stankiewicz @ (609) 562-3774; BPC Kilmer
SFC Fisher @ (609) 562-4253; 2nd BDE Motorpool
4. Jersey City, NJ: Mr. Marshall @ (201) 333-3445; Caven Point USARC
5. Lodi, NJ: Mr. McLean @ (201) 845-3354; Hamilton USARC
6. Mount Freedom, NJ: Mr. Schiano @ (201) 539-8510; Somervell USARC
7. Northfield, NJ: Mr. Schiano @ (201) 539-8510; Stock USARC
8. Pedricktown, NJ: Mr. Poe @ (609) 299-2879; Sievers-Sandberg USARC
9. Picatinny Arsenal, NJ: Mrs. Fetherholf @ (201) 724-5047
10. Red Bank, NJ: Mr. Gertler @ (908) 530-8150; Monmouth AFRC
11. Trenton, NJ: Mr. Gisbon @ (609) 587-0988; Stryker USARC

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UTILITY COMPANY POINTS OF CONTACT

1. Atlantic Electric Company
Mr. Jim Cahill @ (609) 863-7900
Mr. John Conlow @ (609) 645-4795
2. Jersey City Power and Light
Mr. Frank Dux @ (201) 644-4151
Mr. Jim Powers @ (201) 989-2364
3. Public Service Electric & Gas
Ms. Judy Ballerine @ (201) 330-6590
Mr. George Bowley @ (609) 799-6853
Mr. Bill Liddy @ (908) 764-3005

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APPENDIX B

TITLE 40 CFR 761

Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and use Prohibitions

The regulations most relevant to this study are Subpart B, 761.30; (Authorizations), Subpart C, 761.40; (Marking Requirements), and 761.45; (Marking Formats).

(c) In issuing this ruling, the panel may determine that one or more participants who have requested cross-examination have the same or similar interests and should be required to choose a single representative for purposes of cross-examination by that single representative without identifying the representative further. Subpoenas for witnesses may be issued where necessary.

(d) Within one week after the insertion into the record of the ruling under paragraph (b) of this section, the hearing at which the cross-examination will be conducted will begin. One or more members of the original panel will preside for EPA. The panel will have authority to conduct cross-examination on behalf of any participant, although as a general rule this right will not be exercised. The panel will also have authority to modify the governing ruling in any respect and to make new rulings on group representation under section 6(c)(3)(C) of TSCA. A verbatim transcript of the hearing will be made.

(e)(1) No later than the time set for requesting cross-examination, a hearing participant may request that other alternative methods of clarifying the record (such as informal conferences or the submittal of additional information) be used. Such requests may be submitted either in lieu of cross-examination requests, or in conjunction with them.

(2) The panel in passing on a cross-examination request may, as a precondition to ruling on its merits, require that alternative means of clarifying the record be used whether or not that has been requested under paragraph (e)(1) of this section. In such a case, the results of the use of such alternative means will be made available to the person requesting cross-examination for a one-week comment period, and the panel will make a final ruling on cross-examination within one week thereafter.

(f) Waivers or extensions of any deadline in this section applicable to persons other than EPA may be granted on the record of the hearing by the person chairing it or in writing by the Hearing Chairman.

§750.41 Final rule.

(a) As soon as feasible after the deadline for submittal of reply comments, EPA will issue a final rule. EPA will also publish at that time:

(1) A list of all material added to the record (other than public comments and material from the hearing record) which has not previously been listed in a FEDERAL REGISTER document, and

(2) The effective date of the rule.

(b) Pursuant to the delegation of authority made in the Preamble to the Final Regulation for the PCB Manufacturing, Processing, Distribution in Commerce and Use Prohibitions, the Assistant Administrator for Prevention, Pesticides and Toxic Substances will grant or deny petitions under section 6(e)(3)(B) of TSCA submitted pursuant to §750.31. The Assistant Administrator will act on such petitions subsequent to opportunity for an informal hearing pursuant to this rule.

(c) In determining whether to grant an exemption to the PCB ban, EPA will apply the two standards enunciated in section 6(e)(3)(B) of TSCA.

PART 761—POLYCHLORINATED BIPHENYLS (PCBs) MANUFACTURING, PROCESSING, DISTRIBUTION IN COMMERCE, AND USE PROHIBITIONS

Subpart A—General

Sec.

- 761.1 Applicability.
- 761.3 Definitions.
- 761.19 References.

Subpart B—Manufacturing, Processing, Distribution in Commerce, and Use of PCBs and PCB Items

- 761.20 Prohibitions.
- 761.30 Authorizations.

Subpart C—Marking of PCBs and PCB Items

- 761.40 Marking requirements.
- 761.45 Marking formats.

Subpart D—Storage and Disposal

- 761.60 Disposal requirements.
- 761.65 Storage for disposal.
- 761.70 Incineration.

Environmental Protection Agency

- 761.75 Chemical waste landfills.
- 761.79 Decontamination.

Subpart E—Exemptions

- 761.80 Manufacturing, processing, and distribution in commerce exemptions.

Subpart F—(Reserved)

Subpart G—PCB Spill Cleanup Policy

- 761.120 Scope.
- 761.123 Definitions.
- 761.125 Requirements for PCB spill cleanup.
- 761.130 Sampling requirements.
- 761.135 Effect of compliance with this policy and enforcement.

Subparts H—I (Reserved)

Subpart J—General Records and Reports

- 761.180 Records and monitoring.
- 761.185 Certification program and retention of records by importers and persons generating PCBs in excluded manufacturing processes.
- 761.187 Reporting importers and by persons generating PCBs in excluded manufacturing processes.
- 761.193 Maintenance of monitoring records by persons who import, manufacture, process, distribute in commerce, or use chemicals containing inadvertently generated PCBs.

Subpart K—PCB Waste Disposal Records and Reports

- 761.202 EPA identification numbers.
- 761.205 Notification of PCB waste activity (EPA Form 7710-53).
- 761.207 The manifest—general requirements.
- 761.208 Use of the manifest.
- 761.209 Retention of manifest records.
- 761.210 Manifest discrepancies.
- 761.211 Unmanifested waste report.
- 761.215 Exception reporting.
- 761.218 Certificate of Disposal.

AUTHORITY: 15 U.S.C. 2605, 2607, 2611, 2614, and 2616.

Subpart A—General

§761.1 Applicability.

(a) This part establishes prohibitions of, and requirements for, the manufacture, processing, distribution in commerce, use, disposal, storage, and marking of PCBs and PCB items.

(b) This part applies to all persons who manufacture, process, distribute in commerce, use, or dispose of PCBs or PCB items. Substances that are regu-

lated by this rule include, but are not limited to, dielectric fluids, contaminated solvents, oils, waste oils, heat transfer fluids, hydraulic fluids, paints, sludges, slurries, dredge spoils, soils, materials contaminated as a result of spills, and other chemical substances or combination of substances, including impurities and byproducts and any byproduct, intermediate or impurity manufactured at any point in a process. Most of the provisions of this part apply to PCBs only if PCBs are present in concentrations above a specified level. For example, subpart D applies generally to materials at concentrations of 50 parts per million (ppm) and above. Also certain provisions of subpart B apply to PCBs inadvertently generated in manufacturing processes at concentrations specified in the definition of "PCB" under §761.3. No provision specifying a PCB concentration may be avoided as a result of any dilution, unless otherwise specifically provided.

(c) Definitions of the terms used in these regulations are in subpart A. The basic requirements applicable to disposal and marking of PCBs and PCB items are set forth in subpart D—Disposal of PCBs and PCB items and in subpart C—Marking of PCBs and PCB items. Prohibitions applicable to PCB activities are set forth in subpart B—Manufacture, Processing, Distribution in Commerce, and Use of PCBs and PCB items. Subpart B also includes authorizations from the prohibitions. Subparts C and D set forth the specific requirements for disposal and marking of PCBs and PCB items.

(d) Section 15 of the Toxic Substances Control Act (TSCA) states that failure to comply with these regulations is unlawful. Section 16 imposes liability for civil penalties upon any person who violates these regulations, and the Administrator can establish appropriate remedies for any violations subject to any limitations included in section 16 of TSCA. Section 16 also subjects a person to criminal prosecution for a violation which is knowing or willful. In addition, section 17 authorizes Federal district courts to enjoin activities prohibited by these regulations, compel the taking of actions required by these regulations, and issue

orders to seize PCBs and PCB items manufactured, processed or distributed in violation of these regulations.

(e) These regulations do not preempt other more stringent Federal statutes and regulations.

(f) Unless and until superseded by any new more stringent regulations issued under EPA authorities, or any permits or any pretreatment requirements issued by EPA, a state or local government that affect release of PCBs to any particular medium:

(1) Persons who inadvertently manufacture or import PCBs generated as unintentional impurities in excluded manufacturing processes, as defined in §761.3, are exempt from the requirements of subpart B of this part, provided that such persons comply with subpart J of this part, as applicable.

(2) Persons who process, distribute in commerce, or use products containing PCBs generated in excluded manufacturing processes defined in §761.3 are exempt from the requirements of subpart B provided that such persons comply with subpart J of this part, as applicable.

(3) Persons who process, distribute in commerce, or use products containing recycled PCBs defined in §761.3, are exempt from the requirements of subpart B of this part, provided that such persons comply with subpart J of this part, as applicable.

(4) Except as provided in §761.20 (d) and (e), persons who process, distribute in commerce, or use products containing excluded PCB products as defined in §761.3, are exempt from the requirements of subpart B of this part.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979, as amended at 49 FR 28189, July 10, 1984; 53 FR 24220, June 27, 1988]

§761.3 Definitions.

For the purpose of this part:

Administrator means the Administrator of the Environmental Protection Agency, or any employee of the Agency to whom the Administrator may either herein or by order delegate his authority to carry out his functions, or any person who shall by operation of law be authorized to carry out such functions.

Agency means the United States Environmental Protection Agency.

Annual document log means the detailed information maintained at the facility on the PCB waste handling at the facility.

Annual report means the written document submitted each year by each disposer and commercial storer of PCB waste to the appropriate EPA Regional Administrator. The annual report is a brief summary of the information included in the annual document log.

Byproduct means a chemical substance produced without separate commercial intent during the manufacturing or processing of another chemical substance(s) or mixture(s).

Capacitor means a device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:

(1) **Small capacitor** means a capacitor which contains less than 1.36 kg (3 lbs.) of dielectric fluid. The following assumptions may be used if the actual weight of the dielectric fluid is unknown: A capacitor whose total volume is less than 1,639 cubic centimeters (100 cubic inches) may be considered to contain less than 1.36 kg (3 lbs.) of dielectric fluid and a capacitor whose total volume is more than 3,278 cubic centimeters (200 cubic inches) must be considered to contain more than 1.36 kg (3 lbs.) of dielectric fluid. A capacitor whose volume is between 1,639 and 3,278 cubic centimeters may be considered to contain less than 1.36 kg (3 lbs.) of dielectric fluid if the total weight of the capacitor is less than 4.08 kg (9 lbs.).

(2) **Large high voltage capacitor** means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates at 2,000 volts (a.c. or d.c.) or above.

(3) **Large low voltage capacitor** means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates below 2,000 volts (a.c. or d.c.).

Certification means a written statement regarding a specific fact or representation that contains the following language:

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that

the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Chemical substance, (1) except as provided in paragraph (2) of this definition, means any organic or inorganic substance of a particular molecular identity, including: Any combination of such substances occurring in whole or part as a result of a chemical reaction or occurring in nature, and any element or uncombined radical.

(2) Such term does not include: Any mixture; any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide; tobacco or any tobacco product; any source material, special nuclear material, or byproduct material (as such terms are defined in the Atomic Energy Act of 1954 and regulations issued under such Act); any article the sale of which is subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or section 4221 or any provisions of such Code); and any food, food additive, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug, and Cosmetic Act) when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device.

Chemical waste landfill means a landfill at which protection against risk of injury to health or the environment from migration of PCBs to land, water, or the atmosphere is provided from PCBs and PCB items deposited therein by locating, engineering, and operating the landfill as specified in §761.75.

Commerce means trade, traffic, transportation, or other commerce:

(1) Between a place in a State and any place outside of such State, or

(2) Which affects trade, traffic, transportation, or commerce described in paragraph (1) of this definition.

Commercial storer of PCB waste means the owner or operator of each facility which is subject to the PCB storage facility standards of §761.65, and who engages in storage activities involving PCB waste generated by others, or PCB waste that was removed while servicing the equipment owned by others and brokered for disposal. The receipt of a fee or any other form of compensation for storage services is not necessary to qualify as a commercial storer of PCB waste. It is sufficient under this definition that the facility stores PCB waste generated by others or the facility removed the PCB waste while servicing equipment owned by others. A generator who stores only the generator's own waste is subject to the storage requirements of §761.65, but is not required to seek approval as a commercial storer. If a facility's storage of PCB waste at no time exceeds 500 liquid gallons of PCBs, the owner or operator is not required to seek approval as a commercial storer of PCB waste.

Designated facility means the off-site disposer or commercial storer of PCB waste designated on the manifest as the facility that will receive a manifested shipment of PCB waste.

Disposal means intentionally or accidentally to discard, throw away, or otherwise complete or terminate the useful life of PCBs and PCB items. Disposal includes spills, leaks, and other uncontrolled discharges of PCBs as well as actions related to containing, transporting, destroying, degrading, decontaminating, or confining PCBs and PCB items.

Disposer of PCB waste, as the term is used in subparts J and K of this part, means any person who owns or operates a facility approved by EPA for the disposal of PCB waste which is regulated for disposal under the requirements of subpart D of this part.

Distribute in commerce and **Distribution in Commerce** when used to describe an action taken with respect to a chemical substance, mixture, or article containing a substance or mixture means to sell, or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of the substance, mixture, or article; or

to hold or the holding of, the substance, mixture, or article after its introduction into commerce.

Emergency Situation for continuing use of a PCB Transformer exists when:

(1) Neither a non-PCB Transformer nor a PCB-Contaminated transformer is currently in storage for reuse or readily available (i.e., available within 24 hours) for installation.

(2) Immediate replacement is necessary to continue service to power users.

EPA identification number means the 12-digit number assigned to a facility by EPA upon notification of PCB waste activity under §761.205.

Excluded manufacturing process means a manufacturing process in which quantities of PCBs, as determined in accordance with the definition of inadvertently generated PCBs, calculated as defined, and from which releases to products, air, and water meet the requirements of paragraphs (1) through (5) of this definition, or the importation of products containing PCBs as unintentional impurities, which products meet the requirements of paragraphs (1) and (2) of this definition.

(1) The concentration of inadvertently generated PCBs in products leaving any manufacturing site or imported into the United States must have an annual average of less than 25 ppm, with a 50 ppm maximum.

(2) The concentration of inadvertently generated PCBs in the components of detergent bars leaving the manufacturing site or imported into the United States must be less than 5 ppm.

(3) The release of inadvertently generated PCBs at the point at which emissions are vented to ambient air must be less than 10 ppm.

(4) The amount of inadvertently generated PCBs added to water discharged from a manufacturing site must be less than 100 micrograms per resolvable gas chromatographic peak per liter of water discharged.

(5) Disposal of any other process wastes above concentrations of 50 ppm PCB must be in accordance with subpart D of this part.

Excluded PCB products means PCB materials which appear at concentra-

tions less than 50 ppm, including but not limited to:

(1) Non-Aroclor inadvertently generated PCBs as a byproduct or impurity resulting from a chemical manufacturing process.

(2) Products contaminated with Aroclor or other PCB materials from historic PCB uses (investment casting waxes are one example).

(3) Recycled fluids and/or equipment contaminated during use involving the products described in paragraphs (1) and (2) of this definition (heat transfer and hydraulic fluids and equipment and other electrical equipment components and fluids are examples).

(4) Used oils, provided that in the cases of paragraphs (1) through (4) of this definition:

(i) The products or source of the products containing < 50 ppm concentration PCBs were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.

(ii) The products or source of the products containing < 50 ppm concentrations PCBs were legally manufactured, processed, distributed in commerce, or used, i.e., pursuant to authority granted by EPA regulation, by exemption petition, by settlement agreement, or pursuant to other Agency-approved programs;

(iii) The resulting PCB concentration (i.e. below 50 ppm) is not a result of dilution, or leaks or spills of PCBs in concentrations over 50 ppm.

Fluorescent light ballast means a device that electrically controls fluorescent light fixtures and that includes a capacitor containing 0.1 kg or less of dielectric.

Generator of PCB waste means any person whose act or process produces PCBs that are regulated for disposal under subpart D of this part, or whose act first causes PCBs or PCB items to become subject to the disposal requirements of subpart D of this part, or who has physical control over the PCBs when a decision is made that the use of the PCBs has been terminated and therefore is subject to the disposal requirements of subpart D of this part. Unless another provision of this part specifically requires a site-specific meaning, "generator of PCB waste" includes all of the sites of PCB waste

generation owned or operated by the person who generates PCB waste.

Impurity means a chemical substance which is unintentionally present with another chemical substance.

In or Near Commercial Buildings means within the interior of, on the roof of, attached to the exterior wall of, in the parking area serving, or within 30 meters of a non-industrial non-substation building. Commercial buildings are typically accessible to both members of the general public and employees, and include: (1) Public assembly properties, (2) educational properties, (3) institutional properties, (4) residential properties, (5) stores, (6) office buildings, and (7) transportation centers (e.g., airport terminal buildings, subway stations, bus stations, or train stations).

Incinerator means an engineered device using controlled flame combustion to thermally degrade PCBs and PCB items. Examples of devices used for incineration include rotary kilns, liquid injection incinerators, cement kilns, and high temperature boilers.

Industrial building means a building directly used in manufacturing or technically productive enterprises. Industrial buildings are not generally or typically accessible to other than workers. Industrial buildings include buildings used directly in the production of power, the manufacture of products, the mining of raw materials, and the storage of textiles, petroleum products, wood and paper products, chemicals, plastics, and metals.

Laboratory means a facility that analyzes samples for PCBs and is unaffiliated with any entity whose activities involve PCBs.

Leak or leaking means any instance in which a PCB Article, PCB Container, or PCB Equipment has any PCBs on any portion of its external surface.

Manifest means the shipping document EPA form 8700-22 and any continuation sheet attached to EPA form 8700-22, originated and signed by the generator of PCB waste in accordance with the instructions included with the form and subpart K of this part.

Manned Control Center means an electrical power distribution control room where the operating conditions of a

PCB Transformer are continuously monitored during the normal hours of operation (of the facility), and, where the duty engineers, electricians, or other trained personnel have the capability to deenergize a PCB Transformer completely within 1 minute of the receipt of a signal indicating abnormal operating conditions such as an overtemperature condition or overpressure condition in a PCB Transformer.

Manufacture means to produce, manufacture, or import into the customs territory of the United States.

Manufacturing process means all of a series of unit operations operating at a site, resulting in the production of a product.

Mark means the descriptive name, instructions, cautions, or other information applied to PCBs and PCB items, or other objects subject to these regulations.

Marked means the marking of PCB items and PCB storage areas and transport vehicles by means of applying a legible mark by painting, fixation of an adhesive label, or by any other method that meets the requirements of these regulations.

Market/Marketers means the processing or distributing in commerce, or the person who processes or distributes in commerce, used oil fuels to burners or other marketers, and may include the generator of the fuel if it markets the fuel directly to the burner.

Mineral Oil PCB Transformer means any transformer originally designed to contain mineral oil as the dielectric fluid and which has been tested and found to contain 500 ppm or greater PCBs.

Mixture means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction; except that such term does include any combination which occurs, in whole or in part, as a result of a chemical reaction if none of the chemical substances comprising the combination is a new chemical substance and if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical sub-

stances comprising the combination were combined.

Municipal solid wastes means garbage, refuse, sludges, wastes, and other discarded materials resulting from residential and non-industrial operations and activities, such as household activities, office functions, and commercial housekeeping wastes.

Non-PCB Transformer means any transformer that contains less than 50 ppm PCB; except that any transformer that has been converted from a PCB Transformer or a PCB-Contaminated Transformer cannot be classified as a non-PCB Transformer until reclassification has occurred, in accordance with the requirements of §761.30(a)(2)(v).

On site means within the boundaries of a contiguous property unit.

PCB and PCBs means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance. Refer to §761.1(b) for applicable concentrations of PCBs. PCB and PCBs as contained in PCB items are defined in §761.3. For any purposes under this part, inadvertently generated non-Aroclor PCBs are defined as the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50 and dichlorinated biphenyls by 5.

PCB Article means any manufactured article, other than a PCB Container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. "PCB Article" includes capacitors, transformers, electric motors, pumps, pipes and any other manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the PCB Article.

PCB Article Container means any package, can, bottle, bag, barrel, drum, tank, or other device used to contain PCB Articles or PCB Equipment, and whose surface(s) has not been in direct contact with PCBs.

PCB Container means any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles and whose surface(s) has been in direct contact with PCBs.

PCB-Contaminated Electrical Equipment means any electrical equipment, including but not limited to transformers (including those used in railway locomotives and self-propelled cars), capacitors, circuit breakers, reclosers, voltage regulators, switches (including sectionalizers and motor starters), electromagnets, and cable, that contain 50 ppm or greater PCB, but less than 500 ppm PCB. Oil-filled electrical equipment other than circuit breakers, reclosers, and cable whose PCB concentration is unknown must be assumed to be PCB-Contaminated Electrical Equipment. (See §761.30(a) and (h) for provisions permitting reclassification of electrical equipment containing 500 ppm or greater PCBs to PCB-Contaminated Electrical Equipment).

PCB Equipment means any manufactured item, other than a PCB Container or a PCB Article Container, which contains a PCB Article or other PCB Equipment, and includes microwave ovens, electronic equipment, and fluorescent light ballasts and fixtures.

PCB Item is defined as any PCB Article, PCB Article Container, PCB Container, or PCB Equipment, that deliberately or unintentionally contains or has a part of it any PCB or PCBs.

PCB Transformer means any transformer that contains 500 ppm PCB or greater.

PCB waste(s) means those PCBs and PCB Items that are subject to the disposal requirements of subpart D of this part.

Person means any natural or judicial person including any individual, corporation, partnership, or association; any State or political subdivision thereof; any interstate body; and any department, agency, or instrumentality of the Federal Government.

Posing an exposure risk to food or feed means being in any location where human food or animal feed products could be exposed to PCBs released from a PCB Item. A PCB Item poses an exposure risk to food or feed if PCBs released in any way from the PCB Item

have a potential pathway to human food or animal feed. EPA considers human food or animal feed to include items regulated by the U.S. Department of Agriculture or the Food and Drug Administration as human food or animal feed; this includes direct additives. Food or feed is excluded from this definition if it is used or stored in private homes.

Process means the preparation of a chemical substance or mixture, after its manufacture, for distribution in commerce:

(1) In the same form or physical state as, or in a different form or physical state from, that in which it was received by the person so preparing such substance or mixture, or

(2) As part of an article containing the chemical substance or mixture.

Qualified incinerator means one of the following:

(1) An incinerator approved under the provisions of §761.70. Any level of PCB concentration can be destroyed in an incinerator approved under §761.70.

(2) A high efficiency boiler which complies with the criteria of §761.60(a)(2)(iii)(A), and for which the operator has given written notice to the appropriate EPA Regional Administrator in accordance with the notification requirements for the burning of mineral oil dielectric fluid under §761.60(a)(2)(iii)(B).

(3) An incinerator approved under section 3005(e) of the Resource Conservation and Recovery Act (42 U.S.C. 6925(e)) (RCRA).

(4) Industrial furnaces and boilers which are identified in 40 CFR 260.10 and 40 CFR 279.61(a)(1) and (2) when operating at their normal operating temperatures (this prohibits feeding fluids, above the level of detection, during either startup or shutdown operations).

Quantifiable Level/Level of Detection means 2 micrograms per gram from any resolvable gas chromatographic peak, i.e. 2 ppm.

Recycled PCBs means those PCBs which appear in the processing of paper products or asphalt roofing materials from PCB-contaminated raw materials. Processes which recycle PCBs must meet the following requirements:

(1) There are no detectable concentrations of PCBs in asphalt roofing

material products leaving the processing site.

(2) The concentration of PCBs in paper products leaving any manufacturing site processing paper products, or in paper products imported into the United States, must have an annual average of less than 25 ppm with a 50 ppm maximum.

(3) The release of PCBs at the point at which emissions are vented to ambient air must be less than 10 ppm.

(4) The amount of Aroclor PCBs added to water discharged from an asphalt roofing processing site must at all times be less than 3 micrograms per liter (µg/L) for total Aroclors (roughly 3 parts per billion (3 ppb)). Water discharges from the processing of paper products must at all times be less than 3 micrograms per liter (µg/L) for total Aroclors (roughly 3 ppb), or comply with the equivalent mass-based limitation.

(5) Disposal of any other process wastes at concentrations of 50 ppm or greater must be in accordance with subpart D of this part.

Retrofit means to remove PCB or PCB-contaminated dielectric fluid and to replace it with either PCB, PCB-contaminated, or non-PCB dielectric fluid.

Rupture of a PCB Transformer means a violent or non-violent break in the integrity of a PCB Transformer caused by an overtemperature and/or overpressure condition that results in the release of PCBs.

Sale for purposes other than resale means sale of PCBs for purposes of disposal and for purposes of use, except where use involves sale for distribution in commerce. PCB Equipment which is first leased for purposes of use any time before July 1, 1979, will be considered sold for purposes other than resale.

Small quantities for research and development means any quantity of PCBs (1) that is originally packaged in one or more hermetically sealed containers of a volume of no more than five (5.0) milliliters, and (2) that is used only for purposes of scientific experimentation or analysis, or chemical research on, or analysis of, PCBs, but not for research or analysis for the development of a PCB product.

Storage for disposal means temporary storage of PCBs that have been designated for disposal.

Transfer facility means any transportation-related facility including loading docks, parking areas, and other similar areas where shipments of PCB waste are held during the normal course of transportation. Transport vehicles are not transfer facilities under this definition, unless they are used for the storage of PCB waste, rather than for actual transport activities. Storage areas for PCB waste at transfer facilities are subject to the storage facility standards of §761.65, but such storage areas are exempt from the approval requirements of §761.65(d) and the record-keeping requirements of §761.180, unless the same PCB waste is stored there for a period of more than 10 consecutive days between destinations.

Transporter of PCB waste means, for the purposes of subpart K of this part, any person engaged in the transportation of regulated PCB waste by air, rail, highway, or water for purposes other than consolidation by a generator.

Transport vehicle means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (e.g., trailer, railroad freight car) is a separate transport vehicle.

Totally enclosed manner means any manner that will ensure no exposure of human beings or the environment to any concentration of PCBs.

Waste Oil means used products primarily derived from petroleum, which include, but are not limited to, fuel oils, motor oils, gear oils, cutting oils, transmission fluids, hydraulic fluids, and dielectric fluids.

(Sec. 6, Pub. L. 94-460, 90 Stat. 2020 (16 U.S.C. 2605)
[49 FR 25229, June 20, 1984, as amended at 49 FR 28189, July 10, 1984; 49 FR 29008, July 19, 1984; 49 FR 44638, Nov. 8, 1984; 50 FR 29199, July 17, 1985; 50 FR 32176, Aug. 9, 1985; 53 FR 24220, June 27, 1988; 53 FR 27327, July 19, 1988; 54 FR 52745, Dec. 21, 1989; 55 FR 26205, June 27, 1990; 58 FR 32061, June 8, 1993]

§761.19 References.

- (a) [Reserved]
- (b) *Incorporations by reference.* The following material is incorporated by

reference, and is available for inspection at the Office of the Federal Register Information Center, 800 North Capitol Street, NW., suite 700, Washington, DC. These incorporations by reference were approved by the Director of the Office of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the FEDERAL REGISTER. Copies of the incorporated material may be obtained from the TSCA Public Docket Office (TS-793), Rm. NE-G004, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, or from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

| References | CFR Citation |
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| ASTM D 93 - 80 Standard Test Methods for Flash Point by Pensky-Martens Closed Tester. | §761.60(a)(3)(ii)(B)(4); §761.75(a)(3)(ii)(B)(4) |
| ASTM D 129-84 (Reapproved 1978) Standard Test Method for Sulfur in Petroleum Products (General Bomb Method). | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 240-87 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuel by Bomb Calorimeter. | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 482-87 Standard Test Method for Ash from Petroleum Products. | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 824-88 Standard Test Method for Residuum Carbon Residue of Petroleum Products. | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 908-87 Standard Test Method for Chlorine in New and Used Petroleum Products (Bomb Method). | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 923-88 Standard Test Method for Sampling Electrical Insulating Liquids. | §761.60(a)(1)(ii)(B); (a)(2)(ii)(B) |
| ASTM D 923-89 Standard Methods of Sampling Electrical Insulating Liquids. | §761.60(a)(1)(ii)(B); (a)(2)(ii)(B) |
| ASTM D 1296-87 Standard Test Method for Sulfur in Petroleum Products (Lamp Method). | §761.60(a)(3)(ii)(B)(4) |

| References | CFR Citation |
|--|-------------------------|
| ASTM D 1798-83 (Reapproved 1990) Standard Test Method for Water and Sediment in Fuel Oils by the Centrifuge Method (Laboratory Procedure). | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 2158-89 Standard Test Method for Residues in Liquefied Petroleum (LP) Gases. | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 2709-86 Standard Test Method for Water and Sediment in Distillate Fuels by Centrifuge. | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 2784-89 Standard Test Method for Sulfur in Liquefied Petroleum Gases (Oxy-hydrogen Burner or Lamp). | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 3178-84 Standard Test Methods for Carbon and Hydrogen in the Analytic Sample of Coke and Coal. | §761.60(a)(3)(ii)(B)(4) |
| ASTM D 3278-89 Standard Test Methods for Flash Point of Liquids by Setflash Closed-Cup Apparatus. | §761.75(a)(3)(ii)(B)(4) |
| ASTM E 258-87 (Reapproved 1987) Standard Test Method for Total Nitrogen Inorganic Material by Modified KJELDAHL Method. | §761.60(a)(3)(ii)(B)(4) |

[47 FR 22096, May 21, 1982, as amended at 49 FR 29007, July 18, 1984; 49 FR 28848, Sept. 19, 1984; 53 FR 10391, Mar. 31, 1988; 53 FR 12324, Apr. 15, 1988; 53 FR 21641, June 9, 1988; 57 FR 13323, Apr. 16, 1992]

Subpart B—Manufacturing, Processing, Distribution in Commerce, and Use of PCBs and PCB Items

§761.20 Prohibitions.

Except as authorized in §761.30, the activities listed in paragraphs (a) and (d) of this section are prohibited pursuant to section 6(e)(2) of TSCA. The requirements set forth in paragraphs (b) and (c) of this section concerning export and import of PCBs for purposes of disposal and PCB Items for purposes of disposal are established pursuant to section 6(e)(1) of TSCA. Subject to any exemptions granted pursuant to section 6(e)(3)(B) of TSCA, the activities listed in paragraphs (b) and (c) of this section are prohibited pursuant to section 6(a)(3)(A) of TSCA. In addition, the Administrator hereby finds, under

the authority of section 12(a)(2) of TSCA, that the manufacture, processing, and distribution in commerce of PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater present an unreasonable risk of injury to health within the United States. This finding is based upon the well-documented human health and environmental hazard of PCB exposure, the high probability of human and environmental exposure to PCBs and PCB Items from manufacturing, processing, or distribution activities; the potential hazard of PCB exposure posed by the transportation of PCBs or PCB Items within the United States; and the evidence that contamination of the environment by PCBs is spread far beyond the areas where they are used. In addition, the Administrator hereby finds, for purposes of section 6(e)(2)(C) of TSCA, that any exposure of human beings or the environment to PCBs, as measured or detected by any scientifically acceptable analytical method, may be significant, depending on such factors as the quantity of PCBs involved in the exposure, the likelihood of exposure to humans and the environment, and the effect of exposure. For purposes of determining which PCB Items are totally enclosed, pursuant to section 6(e)(2)(C) of TSCA, since exposure to such items may be significant, the Administrator further finds that a totally enclosed manner is a manner which results in no exposure to humans or the environment to PCBs. The following activities are considered totally enclosed: distribution in commerce of intact, nonleaking electrical equipment such as transformers (including transformers used in railway locomotives and self-propelled cars), capacitors, electromagnets, voltage regulators, switches (including sectionalizers and motor starters), circuit breakers, reclosers, and cable that contain PCBs at any concentration and processing and distribution in commerce of PCB Equipment containing an intact, nonleaking PCB Capacitor. See paragraph (c)(1) of this section for provisions allowing the distribution in commerce of PCBs and PCB Items.

(a) No persons may use any PCB, or any PCB Item regardless of concentra-

tion, in any manner other than in a totally enclosed manner within the United States unless authorized under §761.30, except that:

(1) An authorization is not required to use those PCBs or PCB Items which consist of excluded PCB products as defined in §761.3.

(2) An authorization is not required to use those PCBs or PCB Items resulting from an excluded manufacturing process or recycled PCBs as defined in §761.3, provided all applicable conditions of §761.1(f) are met.

(3) An authorization is not required to use those PCB Items which contain or whose surfaces have been in contact with excluded PCB products as defined in §761.3.

(4) An authorization is not required to apply sewage sludges, contaminated with PCBs below 50 ppm, to land when regulated by authorities under the Clean Water Act and the Resource Conservation and Recovery Act.

(b) No person may manufacture PCBs for use within the United States or manufacture PCBs for export from the United States without an exemption except that:

(1) No person may manufacture PCBs for use within the United States or manufacture PCBs for export from the United States without an exemption, except that an exemption is not required for PCBs manufactured in an excluded manufacturing process as defined in §761.3, provided that all applicable conditions of §761.1(f) are met.

(2) PCBs at concentrations less than 50 ppm may be imported or exported for purposes of disposal.

(c) No persons may process or distribute in commerce any PCB, or any PCB Item regardless of concentration, for use within the United States or for export from the United States without an exemption, except that an exemption is not required to process or distribute in commerce PCBs or PCB Items resulting from an excluded manufacturing process as defined in §761.3, or to process or distribute in commerce recycled PCBs as defined in §761.3, or to process or distribute in commerce excluded PCB products as defined in §761.3, provided that all applicable conditions of §761.1(f) are met. In addition, the activities described in paragraphs (c) (1)

through (5) of this section may also be conducted without an exemption, under the conditions specified therein.

(1) PCBs at concentrations of 50 ppm or greater, or PCB Items with PCB concentrations of 50 ppm or greater, sold before July 1, 1979 for purposes other than resale may be distributed in commerce only in a totally enclosed manner after that date.

(2) PCBs at concentrations of 50 ppm or greater, or PCB Items with PCB concentrations of 50 ppm or greater may be processed and distributed in commerce in compliance with the requirements of this Part for purposes of disposal in accordance with the requirements of §761.60.

(3) PCBs or PCB Items may be exported for disposal until May 1, 1980, if an export notice is submitted at least thirty (30) days before the first shipment in any calendar year leaves the customs territory of the United States. Export notices must be submitted to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. The generator of the PCB waste material intended for disposal, or an agent acting on his behalf, must certify to the best of his knowledge and belief that the information is complete and accurate. Each notice should contain the following information:

(i) Name, company name, address, and telephone number of the owner of the PCB waste material to be exported and the name and address of any person or agent acting on his behalf;

(ii) Estimated quantity of wastes to be shipped during the calendar year and the estimated number of shipments to be made and the dates when such shipments are expected to leave the customs territory of the United States;

(iii) Description of the PCBs or PCB Items being exported;

(iv) Country(s) of destination for the shipments;

(v) Name and address of facility(s) receiving the shipment and person(s) responsible for receiving the shipment(s).

(vi) Method(s) of disposal and precautions taken to control release into the environment.

(vii) No less than 30 days after the end of each calendar quarter (March 31, June 30, September 30, and December 31) during which PCBs were exported for disposal, each person exporting the PCBs must submit a report to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. The report shall list the quantity of PCB wastes in each shipment made during the quarter and include the date when each shipment left the customs territory of the United States and the information specified in paragraphs (c)(3) (i) and (iii) through (vi) of this section. If the quantity of wastes shipped during the calendar year exceeds by 25 percent or more the estimated quantities reported in paragraph (c)(3)(ii) of this section, a special export notice must be submitted to the TSCA Document Processing Center (TS-790) at the address given in paragraph (c)(3) of this section, at least 30 days before any additional shipments leave the customs territory of the United States and the notice shall include the information specified in paragraphs (c)(3) (i) through (vi) of this section.

(viii) Any person expecting to export PCB wastes for disposal in calendar year 1980 must submit an export notice at least thirty (30) days before the first shipment leaves the customs territory of the United States to the TSCA Document Processing Center (TS-790) at the address given in paragraph (c)(3) of this section, and the notice shall contain the information listed in paragraphs (c)(3) (i) through (vi) of this section.

(4) PCBs, at concentrations of less than 50 ppm, or PCB Items, with concentrations of less than 50 ppm, may be processed and distributed in commerce for purposes of disposal.

(5) Equipment, structures, or other materials that were contaminated with PCBs because of spills from, or proximity to, a PCB Item >50 ppm, and which are not otherwise authorized for use or distribution in commerce under this part, may be distributed in commerce, provided that these materials were decontaminated in accordance with applicable EPA PCB spill cleanup policies

in effect at the time of the decontamination or, if not previously decontaminated, at the time of the distribution in commerce.

(d) The use of waste oil that contains any detectable concentration of PCB as a sealant, coating, or dust control agent is prohibited. Prohibited uses include, but are not limited to, road oiling, general dust control, use as a pesticide or herbicide carrier, and use as a rust preventative on pipes.

(e) In addition to any applicable requirements under 40 CFR Part 279, subparts G and H, marketers and burners of used oil who market (process or distribute in commerce) for energy recovery, used oil containing any quantifiable level of PCBs are subject to the following requirements:

(1) *Restrictions on marketing.* Used oil containing any quantifiable level of PCBs (2 ppm) may be marketed only to:

(i) Qualified incinerators as defined in 40 CFR 761.3.

(ii) Marketers who market off-specification used oil for energy recovery only to other marketers who have notified EPA of their used oil management activities, and who have an EPA identification number where an identification number is required by 40 CFR 279.73. This would include persons who market off-specification used oil who are subject to the requirements at 40 CFR part 279 and the notification requirements of 40 CFR 279.73.

(iii) Burners identified in 40 CFR 279.61(a)(1) and (2). Only burners in the automotive industry may burn used oil generated from automotive sources in used oil-fired space heaters provided the provisions of 40 CFR 279.23 are met. The Regional Administrator may grant a variance for a boiler that does not meet the 40 CFR 279.61(a)(1) and (2) criteria after considering the criteria listed in 40 CFR 260.32 (a) through (f). The applicant must address the relevant criteria contained in 40 CFR 260.32 (a) through (f) in an application to the Regional Administrator.

(2) *Testing of used oil fuel.* Used oil to be burned for energy recovery is presumed to contain quantifiable levels (2 ppm) of PCB unless the marketer obtains analyses (testing) or other information that the used oil fuel does not contain quantifiable levels of PCBs.

(i) The person who first claims that a used oil fuel does not contain quantifiable level (2 ppm) PCB must obtain analyses or other information to support that claim.

(ii) Testing to determine the PCB concentration in used oil may be conducted on individual samples, or in accordance with the testing procedures described in §761.60(g)(2). However, for purposes of this part, if any PCBs at a concentration of 50 ppm or greater have been added to the container or equipment, then the total container contents must be considered as having a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of this part.

(iii) Other information documenting that the used oil fuel does not contain quantifiable levels (2 ppm) of PCBs may consist of either personal, special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the oil contains no detectable PCBs.

(3) *Restrictions on burning.* (i) Used oil containing any quantifiable levels of PCB may be burned for energy recovery only in the combustion facilities identified in paragraph (e)(1) of this section when such facilities are operating at normal operating temperatures (this prohibits feeding these fuels during either startup or shutdown operations). Owners and operators of such facilities are "burners" of used oil fuels.

(ii) Before a burner accepts from a marketer the first shipment of used oil fuel containing detectable PCBs (2 ppm), the burner must provide the marketer a one-time written and signed notice certifying that:

(A) The burner has complied with any notification requirements applicable to "qualified incinerators" (§761.3) or to "burners" regulated under 40 CFR part 279, subpart G.

(B) The burner will burn the used oil only in a combustion facility identified in paragraph (e)(1) of this section and identify the class of burner he qualifies.

(4) *Recordkeeping requirements.* The following recordkeeping requirements are in addition to the recordkeeping requirements for marketers found in 40

CFR 279.72(b), 279.74(a), (b) and (c), and 279.75, and for burners found in 40 CFR 279.65 and 279.66.

(i) *Marketers.* Marketers who first claim that the used oil fuel contains no detectable PCBs must include among the records required by 40 CFR 279.72(b) and 279.74(b) and (c), copies of the analysis or other information documenting his claim, and he must include among the records required by 40 CFR 279.74(a) and (c) and 279.75, a copy of each certification notice received or prepared relating to transactions involving PCB-containing used oil.

(ii) *Burners.* Burners must include among the records required by 40 CFR 279.65 and 279.66, a copy of each certification notice required by paragraph (e)(3)(ii) of this section that he sends to a marketer.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020, (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 49 FR 25241, June 20, 1984; 49 FR 28190, July 10, 1984; 49 FR 44638, Nov. 8, 1984; 53 FR 12534, Apr. 15, 1988; 53 FR 24220, June 27, 1988; 58 FR 15435, Mar. 23, 1993; 58 FR 34205, June 23, 1993]

§761.30 Authorizations.

The following non-totally enclosed PCB activities are authorized pursuant to section 8(e)(2)(B) of TSCA:

(a) *Use in and servicing of transformers (other than railroad transformers).* PCBs at any concentration may be used in transformers (other than in railroad locomotives and self-propelled railroad cars) and may be used for purposes of servicing including rebuilding these transformers for the remainder of their useful lives, subject to the following conditions:

(1) *Use conditions.* (i) As of October 1, 1985, the use and storage for reuse of PCB Transformers that pose an exposure risk to food or feed is prohibited.

(ii) As of October 1, 1990, the use of network PCB Transformers with higher secondary voltages (secondary voltages equal to or greater than 480 volts, including 480/277 volt systems) in or near commercial buildings is prohibited. Network PCB Transformers with higher secondary voltages which are removed from service in accordance with this requirement must either be reclassified to PCB Contaminated or non-

PCB status, placed into storage for disposal, or disposed.

(iii) Except as otherwise provided, as of October 1, 1985, the installation of PCB Transformers, which have been placed into storage for reuse or which have been removed from another location, in or near commercial buildings is prohibited.

(A) The installation of PCB Transformers on or after October 1, 1985, however, and their use thereafter, is permitted either in an emergency situation, as defined in §761.3, or in situations where the transformer has been retrofilled and is being placed into service in order to qualify for reclassification under paragraph (a)(2)(v) of this section.

(B) Installation of a PCB Transformer in an emergency situation is permitted when done in accordance with the following:

(i) Documentation to support the reason for the emergency installation of a PCB Transformer must be maintained at the owner's facility and completed within 30 days after installation of the PCB Transformer. The documentation must include, but is not limited to:

(i) The type of transformer, i.e., radial or lower or higher network, that requires replacement.

(ii) The type(s) of transformers, i.e., radial or lower or higher network, that must be used for replacement.

(iii) The date of transformer failure.

(iv) The date of subsequent replacement.

(v) The type of transformer, i.e., radial or lower or higher network, installed as a replacement.

(vi) A statement describing actions taken to locate a non-PCB or PCB-Contaminated transformer replacement.

(2) Such emergency installation is permitted until October 1, 1990, and the use of any PCB Transformer installed on such an emergency basis is permitted for 1 year from the date of installation or until October 1, 1990, whichever is earlier.

(3) PCB Transformers installed for emergency purposes may be subsequently reclassified; however, the transformer must be effectively reclassified to a non-PCB or PCB-Contaminated status within 1 year after instal-

lation or by October 1, 1990, whichever is earlier because the transformer was initially installed in an emergency situation.

(C) Installation of a retrofilled PCB Transformer for reclassification purposes is permitted when it is done in accordance with the following:

(i) Those who installed transformers for reclassification purposes must maintain on the owner's premises, completed within 30 days of installation, the following information:

(i) The date of installation.

(ii) The type of transformer, i.e., radial or lower or higher network, installed.

(iii) The PCB concentration, if known, at the time of installation.

(iv) The retrofill and reclassification schedule.

(2) For purposes of this paragraph, the installation of retrofilled PCB Transformers for purposes of reclassification under paragraph (a)(2)(v) of this section is permitted until October 1, 1990.

(i) However, the use of a retrofilled PCB Transformer installed for reclassification purposes is limited to 18 months after installation or until October 1, 1990, whichever is earlier.

(ii) Retrofilled mineral oil PCB Transformers may be installed for reclassification purposes indefinitely after October 1, 1990.

(iii) Once a retrofilled transformer has been installed for reclassification purposes, it must be tested 3 months after installation to ascertain the concentration of PCBs. If the PCB concentration is below 50 ppm, the transformer can be reclassified as a non-PCB Transformer. If the PCB concentration is between 50 and 500 ppm, the transformer can be reclassified as a PCB-Contaminated transformer. If the PCB concentration remains at 500 ppm or greater, the entire process must either be repeated until the transformer has been reclassified to a non-PCB or PCB-Contaminated transformer in accordance with paragraph (a)(2)(v) of this section or the transformer must be removed from service.

(D) Owners who installed PCB Transformers in emergency situations or for reclassification purposes between October 1, 1985 and September 1, 1988 must

notify the Regional Administrator in writing by October 3, 1988 of such installation. The notification for emergency installation must include the information in paragraph (a)(1)(iii)(B)(i) through (vi) of this section. The notification for reclassification must include the information in paragraph (a)(1)(iii)(C)(i) through (iv) of this section. All PCB Transformers installed in an emergency situation or installed for reclassification purposes are subject to the requirements of this Part 761.

(iv) As of October 1, 1990, all higher secondary voltage radial PCB Transformers, in use in or near commercial buildings, and lower secondary voltage network PCB Transformers not located in sidewalk vaults in or near commercial buildings (network transformers with secondary voltages below 480 volts) that have not been removed from service as provided in paragraph (a)(1)(iv)(B) of this section, must be equipped with electrical protection to avoid transformer ruptures caused by high current faults. As of February 25, 1991, all lower secondary voltage radial PCB Transformers, in use in or near commercial buildings, must be equipped with electrical protection to avoid transformer ruptures caused by high current faults.

(A) Current-limiting fuses or other equivalent technology must be used to detect sustained high current faults and provide for the complete deenergization of the transformer (within several hundredths of a second in the case of higher secondary voltage radial PCB Transformers and within tenths of a second in the case of lower secondary voltage network PCB Transformers), before transformer rupture occurs. Lower secondary voltage radial PCB Transformers must be equipped with electrical protection as provided in paragraph (a)(1)(iv)(E) of this section. The installation, setting, and maintenance of current-limiting fuses or other equivalent technology to avoid PCB Transformer ruptures from sustained high current faults must be completed in accordance with good engineering practices.

(B) All lower secondary voltage network PCB Transformers not located in sidewalk vaults (network transformers

with secondary voltages below 480 volts), in use in or near commercial buildings, which have not been protected as specified in paragraph (a)(1)(iv)(A) of this section by October 1, 1990, must be removed from service by October 1, 1993.

(C) As of October 1, 1990, owners of lower secondary voltage network PCB Transformers, in use in or near commercial buildings which have not been protected as specified in paragraph (a)(1)(iv)(A) of this section and which are not located in sidewalk vaults, must register in writing those transformers with the EPA Regional Administrator in the appropriate region. The information required to be provided in writing to the Regional Administrator includes:

(i) The specific location of the PCB Transformer(s).

(2) The address(es) of the building(s) and the physical location of the PCB Transformer(s) on the building site(s).

(3) The identification number(s) of the PCB Transformer(s).

(D) As of October 1, 1993, all lower secondary voltage network PCB Transformers located in sidewalk vaults (network transformers with secondary voltages below 480 volts) in use near commercial buildings must be removed from service.

(E) As of February 25, 1991, all lower secondary voltage radial PCB Transformers must be equipped with electrical protection, such as current-limiting fuses or other equivalent technology, to detect sustained high current faults and provide for the complete deenergization of the transformer or complete deenergization of the faulted phase of the transformer within several hundredths of a second. The installation, setting, and maintenance of current-limiting fuses or other equivalent technology to avoid PCB Transformer ruptures from sustained high current faults must be completed in accordance with good engineering practices.

(v) As of October 1, 1990, all radial PCB Transformers with higher secondary voltages (480 volts and above, including 480/277 volt systems) in use in or near commercial buildings must, in addition to the requirements of paragraph (a)(1)(iv)(A) of this section, be

equipped with protection to avoid transformer ruptures caused by sustained low current faults.

(A) Pressure and temperature sensors (or other equivalent technology which has been demonstrated to be effective in early detection of sustained low current faults) must be used in these transformers to detect sustained low current faults.

(B) Disconnect equipment must be provided to insure complete deenergization of the transformer in the event of a sensed abnormal condition (e.g., an overpressure or overtemperature condition in the transformer), caused by a sustained low current fault. The disconnect equipment must be configured to operate automatically within 30 seconds to 1 minute of the receipt of a signal indicating an abnormal condition from a sustained low current fault, or can be configured to allow for manual deenergization from a manned on-site control center upon the receipt of an audio or visual signal indicating an abnormal condition caused by a sustained low current fault. Manual deenergization from a manned on-site control center must occur within 1 minute of the receipt of the audio or visual signal indicating an abnormal condition caused by a sustained low current fault. If automatic operation is selected and a circuit breaker is utilized for disconnection, it must also have the capability to be manually opened if necessary.

(C) The enhanced electrical protective system required for the detection of sustained low current faults and the complete and rapid deenergization of transformers must be properly installed, maintained, and set sensitive enough (in accordance with good engineering practices) to detect sustained low current faults and allow for rapid and total deenergization prior to PCB Transformer rupture (either violent or non violent rupture) and release of PCBs.

(vi) As of December 1, 1985, all PCB Transformers (including PCB Transformers in storage for reuse) must be registered with fire response personnel with primary jurisdiction (that is, the fire department or fire brigade which would normally be called upon for the initial response to a fire involving the

equipment). Information required to be provided to fire response personnel includes:

(A) The location of the PCB Transformer(s) (the address(es) of the building(s) and the physical location of the PCB Transformer(s) on the building site(s) and for outdoor PCB Transformers, the location of the outdoor substation).

(B) The principal constituent of the dielectric fluid in the transformer(s) (e.g., PCBs, mineral oil, or silicone oil).

(C) The name and telephone number of the person to contact in the event of a fire involving the equipment.

(vii) As of December 1, 1985, PCB Transformers in use in or near commercial buildings must be registered with building owners. For PCB Transformers located in commercial buildings, PCB Transformer owners must register the transformers with the building owner of record. For PCB Transformers located near commercial buildings, PCB Transformer owners must register the transformers with all owners of buildings located within 30 meters of the PCB Transformer(s). Information required to be provided to building owners by PCB Transformer owners includes but is not limited to:

(A) The specific location of the PCB Transformer(s).

(B) The principal constituent of the dielectric fluid in the transformer(s) (e.g., PCBs, mineral oil, or silicone oil).

(C) The type of transformer installation (e.g., 208/120 volt network, 280/120 volt radial, 208 volt radial, 480 volt network, 480/277 volt network, 480 volt radial, 480/277 volt radial).

(viii) As of December 1, 1985, combustible materials, including, but not limited to paints, solvents, plastics, paper, and sawn wood must not be stored within a PCB Transformer enclosure (i.e., in a transformer vault or in a partitioned area housing a transformer); within 5 meters of a transformer enclosure, or, if unenclosed (unpartitioned), within 5 meters of a PCB Transformer.

(ix) A visual inspection of each PCB Transformer (as defined in the definition of "PCB Transformer" under §761.3) in use or stored for reuse shall be performed at least once every 3 months. These inspections may take place any time during the 3-month pe-

riods: January-March, April-June, July-September, and October-December as long as there is a minimum of 30 days between inspections. The visual inspection must include investigation for any leak of dielectric fluid on or around the transformer. The extent of the visual inspections will depend on the physical constraints of each transformer installation and should not require an electrical shutdown of the transformer being inspected.

(x) If a PCB Transformer is found to have a leak which results in any quantity of PCBs running off or about to run off the external surface of the transformer, then the transformer must be repaired or replaced to eliminate the source of the leak. In all cases any leaking material must be cleaned up and properly disposed of according to disposal requirements of § 761.60. Cleanup of the released PCBs must be initiated as soon as possible, but in no case later than 48 hours of its discovery. Until appropriate action is completed, any active leak of PCBs must be contained to prevent exposure of humans or the environment and inspected daily to verify containment of the leak. Trenches, dikes, buckets, and pans are examples of proper containment measures.

(xi) If a PCB Transformer is involved in a fire-related incident, the owner of the transformer must immediately report the incident to the National Response Center (toll-free 1-800-424-8802; in Washington, DC 202-426-2675). A fire-related incident is defined as any incident involving a PCB Transformer which involves the generation of sufficient heat and/or pressure (by any source) to result in the violent or non-violent rupture of a PCB Transformer and the release of PCBs. Information must be provided regarding the type of PCB Transformer installation involved in the fire-related incident (e.g., high or low secondary voltage network transformer, high or low secondary voltage simple radial system, expanded radial system, primary selective system, primary loop system, or secondary selective system or other systems) and the readily ascertainable cause of the fire-related incident (e.g., high current fault in the primary or secondary or low current fault in secondary). The

owner of the PCB Transformer must also take measures as soon as practically and safely possible to contain and control any potential releases of PCBs and incomplete combustion products into water. These measures include, but are not limited to:

(A) The blocking of all floor drains in the vicinity of the transformer.

(B) The containment of water runoff.

(C) The control and treatment (prior to release) of any water used in subsequent cleanup operations.

(xii) Records of inspection and maintenance history shall be maintained at least 3 years after disposing of the transformer and shall be made available for inspection, upon request by EPA. Such records shall contain the following information for each PCB Transformer:

(A) Its location.

(B) The date of each visual inspection and the date that leak was discovered, if different from the inspection date.

(C) The person performing the inspection.

(D) The location of any leak(s).

(E) An estimate of the amount of dielectric fluid released from any leak.

(F) The date of any cleanup, containment, repair, or replacement.

(G) A description of any cleanup, containment, or repair performed.

(H) The results of any containment and daily inspection required for uncorrected active leaks.

(xiii) A reduced visual inspection frequency of at least once every 12 months applies to PCB Transformers that utilize either of the following risk reduction measures. These inspections may take place any time during the calendar year as long as there is a minimum of 180 days between inspections.

(A) A PCB Transformer which has impervious, undrained, secondary containment capacity of at least 100 percent of the total dielectric fluid volume of all transformers so contained or

(B) A PCB Transformer which has been tested and found to contain less than 60,000 ppm PCBs (after 3 months of in service use if the transformer has been serviced for purposes of reducing the PCB concentration).

(xiv) An increased visual inspection frequency of at least once every week applies to any PCB Transformer in use

or stored for reuse which poses an exposure risk to food or feed. The user of a PCB Transformer posing an exposure risk to food is responsible for the inspection, recordkeeping, and maintenance requirements under this section until the user notifies the owner that the transformer may pose an exposure risk to food or feed. Following such notification, it is the owner's ultimate responsibility to determine whether the PCB Transformer poses an exposure risk to food or feed.

(xv) In the event a mineral oil transformer, assumed to contain less than 500 ppm of PCBs as provided in § 761.3, is tested and found to be contaminated at 500 ppm or greater PCBs, it will be subject to all the requirements of this Part 761. In addition, efforts must be initiated immediately to bring the transformer into compliance in accordance with the following schedule:

(A) Report fire-related incidents, effective immediately after discovery.

(B) Mark the PCB transformer within 7 days after discovery.

(C) Mark the vault door, machinery room door, fence, hallway or other means of access to the PCB Transformer within 7 days after discovery.

(D) Register the PCB Transformer in writing with fire response personnel with primary jurisdiction and with the building owner, within 30 days of discovery.

(E) Install electrical protective equipment on a radial PCB Transformer and a non-sidewalk vault, lower secondary voltage network PCB Transformer in or near a commercial building within 18 months of discovery or by October 1, 1990, whichever is later.

(F) Remove a non-sidewalk vault, lower secondary voltage network PCB Transformer in or near a commercial building, if electrical protective equipment is not installed, within 18 months of discovery or by October 1, 1993, whichever is later.

(G) Remove a lower secondary voltage network PCB Transformer located in a sidewalk vault in or near a commercial building, within 18 months of discovery or by October 1, 1993, whichever is later.

(H) Retrofill and reclassify a radial PCB Transformer or a lower or higher secondary voltage network PCB Trans-

former, located in other than a sidewalk vault in or near a commercial building, within 18 months or by October 1, 1990, whichever is later. This is an option in lieu of installing electrical protective equipment on a radial or lower secondary voltage network PCB Transformer located in other than a sidewalk vault or of removing a higher secondary voltage network PCB Transformer or a lower secondary voltage network PCB Transformer, located in a sidewalk vault, from service.

(I) Retrofill and reclassify a lower secondary voltage network PCB Transformer, located in a sidewalk vault, in or near a commercial building within 18 months or by October 1, 1993, whichever is later. This is an option in lieu of installing electrical protective equipment or removing the transformer from service.

(J) Retrofill and reclassify a higher secondary voltage network PCB Transformer, located in a sidewalk vault, in or near a commercial building within 18 months or by October 1, 1990, whichever is later. This is an option in lieu of other requirements.

(2) *Service conditions.* (i) Transformers classified as PCB-Contaminated Electrical Equipment (as defined in the definition of "PCB-Contaminated Electrical Equipment" under § 761.3) may be serviced (including rebuilding) only with dielectric fluid containing less than 500 ppm PCB.

(ii) Any servicing (including rebuilding) of PCB Transformers (as defined in the definition of "PCB Transformer" under § 761.3) that requires the removal of the transformer coil from the transformer casing is prohibited. PCB Transformers may be serviced (including topping off) with dielectric fluid at any PCB concentration.

(iii) PCBs removed during any servicing activity must be captured and either reused as dielectric fluid or disposed of in accordance with the requirements of § 761.60. PCBs from PCB Transformers must not be mixed with or added to dielectric fluid from PCB-Contaminated Electrical Equipment.

(iv) Regardless of its PCB concentration, dielectric fluids containing less than 500 ppm PCB that are mixed with fluids that contain 500 ppm or greater PCB must not be used as dielectric

fluid in any electrical equipment. The entire mixture of dielectric fluid must be considered to be greater than 500 ppm PCB and must be disposed of in an incinerator that meets the requirements in §761.70.

(v) A PCB Transformer may be converted to PCB-Contaminated Electrical Equipment or to a non-PCB Transformer and a transformer that is classified as PCB-Contaminated Electrical Equipment may be reclassified to a non-PCB Transformer by draining, refilling and/or otherwise servicing the transformer. In order to reclassify, the transformer's dielectric fluid must contain less than 500 ppm PCB (for conversion to PCB-Contaminated Electrical Equipment) or less than 50 ppm PCB (for conversion to a non-PCB Transformer) after a minimum of three months of in-service use subsequent to the last servicing conducted for the purpose of reducing the PCB concentration in the transformer. In-service means that the transformer is used electrically under loaded conditions that raise the temperature of the dielectric fluid to at least 50° Centigrade. The Director, Chemical Management Division may grant, without further rulemaking, approval for the use of alternative methods that simulate the loaded conditions of in-service use. All PCBs removed from transformers for purposes of reducing PCB concentrations are subject to the disposal requirements of §761.60.

(vi) Any dielectric fluid containing 50 ppm or greater PCB used for servicing transformers must be stored in accordance with the storage for disposal requirements of §761.65.

(vii) Processing and distribution in commerce of PCBs for purposes of servicing transformers is permitted only for persons who are granted an exemption under TSCA 6(e)(3)(B).

(b) *Use in and servicing of railroad transformers.* PCBs may be used in transformers in railroad locomotives or railroad self-propelled cars ("railroad transformers") and may be processed and distributed in commerce for purposes of servicing these transformers in a manner other than a totally enclosed manner subject to the following conditions:

(1) *Use restrictions.* (i) After July 1, 1983, the number of railroad transformers containing a PCB concentration greater than 60,000 ppm (6.0 percent on a dry weight basis) in use by any affected railroad organization may not exceed two-thirds of the total railroad transformers containing PCBs in use by that organization on January 1, 1982.

(ii) After January 1, 1984, the number of railroad transformers containing a PCB concentration greater than 60,000 ppm in use by any affected railroad organization may not exceed one-third of the total railroad transformers containing PCBs in use by that organization on January 1, 1982.

(iii) After July 1, 1984, use of railroad transformers that contain dielectric fluids with a PCB concentration greater than 60,000 ppm is prohibited.

(iv) After July 1, 1985, the number of railroad transformers containing a PCB concentration greater than 1,000 ppm (0.1 percent on a dry weight basis) in use by any affected railroad organization may not exceed two-thirds of the total railroad transformers containing PCBs in use by that organization on July 1, 1984.

(v) After January 1, 1986, the number of railroad transformers containing a PCB concentration greater than 1,000 ppm in use by any affected railroad organization may not exceed one-third of the total railroad transformers containing PCBs in use by that organization on July 1, 1984.

(vi) After July 1, 1986, use of railroad transformers that contain dielectric fluids with a PCB concentration greater than 1,000 ppm is prohibited.

(vii) The concentration of PCBs in the dielectric fluid contained in railroad transformers must be measured:

(A) Immediately upon completion of any authorized servicing of a railroad transformer conducted for the purpose of reducing the PCB concentration in the dielectric fluid in the transformer, and

(B) Between 12 and 24 months after each servicing conducted in accordance with paragraph (b)(1)(vii)(A) of this section;

(C) The data obtained as a result of paragraphs (b)(1)(vii)(A) and (B) of this

section shall be retained until January 1, 1991.

(2) *Servicing restrictions.* (1) If the coil is removed from the casing of a railroad transformer (e.g., the transformer is rebuilt), after January 1, 1982, the railroad transformer may not be refilled with dielectric fluid containing a PCB concentration greater than 50 ppm;

(ii) After January 1, 1982, railroad transformers may only be serviced with dielectric fluid containing less than 60,000 ppm PCBs, except as provided in paragraph (b)(2)(i) of this section;

(iii) After January 1, 1984, railroad transformers may only be serviced with dielectric fluid containing less than 1000 ppm PCB, except as provided in paragraph (b)(2)(i) of this section;

(iv) Dielectric fluid may be filtered through activated carbon or otherwise industrially processed for the purpose of reducing the PCB concentration in the fluid;

(v) Any PCB dielectric fluid that is used to service PCB railroad transformers must be stored in accordance with the storage for disposal requirements of §761.65;

(vi) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing railroad transformers is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(vii) A PCB Transformer may be converted to a PCB-Contaminated Transformer or to a non-PCB Transformer by draining, refilling, and/or otherwise servicing the railroad transformer. In order to reclassify, the railroad transformer's dielectric fluid must contain less than 500 ppm (for conversion to PCB-Contaminated Transformer) or less than 50 ppm PCB (for conversion to a non-PCB Transformer) after a minimum of three months of in-service use subsequent to the last servicing conducted for the purpose of reducing the PCB concentration in the transformer.

(c) *Use in and servicing of mining equipment.* PCBs may be used in mining equipment and may be processed and distributed in commerce for purposes of servicing mining equipment in a manner other than a totally enclosed

manner until January 1, 1982, subject to the following conditions:

(1) PCBs may be added to motors in mining equipment in mines or mining areas until January 1, 1982;

(2) PCB motors in loader-type mining equipment must be rebuilt as air-cooled or other non-PCB-containing motors whenever the motor is returned to a service shop for servicing;

(3) PCB motors in continuous miner-type equipment may be rebuilt as PCB motors until January 1, 1980;

(4) Any PCBs that are on hand to service or repair mining equipment must be stored in accordance with the storage for disposal requirements of §761.65;

(5) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing mining equipment is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(d) *Use in heat transfer systems.* After July 1, 1984, intentionally manufactured PCBs may be used in heat transfer systems in a manner other than a totally enclosed manner at a concentration level of less than 50 ppm provided that the requirements of paragraphs (d)(1) through (5) of this section are met.

(1) Each person who owns a heat transfer system that ever contained PCBs at concentrations above 50 ppm must test for the concentration of PCBs in the heat transfer fluid of such a system no later than November 1, 1979, and at least annually thereafter. All test sampling must be performed at least three months after the most recent fluid refilling. When a test shows that the PCB concentration is less than 50 ppm, testing under this paragraph is no longer required.

(2) Within six months of a test performed under paragraph (d)(1) of this section that indicates that a system's fluid contains 50 ppm or greater PCB (0.005% on a dry weight basis), the system must be drained of the PCBs and refilled with fluid containing less than 50 ppm PCB. Topping-off with heat transfer fluids containing PCB concentrations of less than 50 ppm is permitted.

(3) After November 1, 1979, no heat transfer system that is used in the

manufacture or processing of any food, drug, cosmetic or device, as defined in section 201 of the Federal Food, Drug, and Cosmetic Act, may contain transfer fluid with 50 ppm or greater PCB (0.005% on a dry weight basis).

(4) Addition of fluids containing PCB concentrations greater than 50 ppm is prohibited.

(5) Data obtained as a result of paragraph (d)(1) of this section must be retained for five years after the heat transfer system reaches 50 ppm PCB.

(e) *Use in hydraulic systems.* After July 1, 1984, intentionally manufactured PCBs may be used in hydraulic systems in a manner other than a totally enclosed manner at a concentration level of less than 50 ppm provided that the requirements in paragraphs (e)(1) through (5) of this section are met.

(1) Each person who owns a hydraulic system that ever contained PCBs at concentrations above 50 ppm must test for the concentration of PCBs in the hydraulic fluid of each system no later than November 1, 1979, and at least annually thereafter. All test sampling must be performed at least three months after the most recent fluid refilling. When a test shows that the PCB concentration is less than 50 ppm, testing under this paragraph is no longer required.

(2) Within six months of a test under paragraph (e)(1) of this section that indicates that a system's fluid contains 50 ppm or greater PCB (0.005% on a dry weight basis), the system must be drained of the PCBs and refilled with fluid containing less than 50 ppm PCB. Topping-off with hydraulic fluids containing PCB concentrations less than 50 ppm to reduce PCB concentrations is permitted.

(3) Addition of PCBs at concentrations of greater than 50 ppm is prohibited.

(4) Hydraulic fluid may be drained from a hydraulic system and filtered, distilled, or otherwise serviced in order to reduce the PCB concentration below 50 ppm.

(5) Data obtained as a result of paragraph (e)(1) of this section must be retained for five years after the hydraulic system reaches 50 ppm.

(f) *Use in carbonless copy paper.* Carbonless copy paper containing PCBs may be used in a manner other than a totally enclosed manner indefinitely.

(g) *Pigments.* Diarylide and Phthalocyanin pigments that contain 50 ppm or greater PCB may be processed, distributed in commerce, and used in a manner other than a totally enclosed manner until January 1, 1982, except that after July 1, 1979, processing and distribution in commerce of diarylide or phthalocyanin pigments that contain 50 ppm or greater PCB is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(h) *Use in and servicing of electromagnets, switches and voltage regulators.* PCBs at any concentration may be used in electromagnets, switches (including sectionalizers and motor starters), and voltage regulators and may be used for purposes of servicing this equipment (including rebuilding) for the remainder of their useful lives, subject to the following conditions:

(i) *Use conditions.* (i) After October 1, 1985, the use and storage for reuse of any electromagnet which poses an exposure risk to food or feed is prohibited if the electromagnet contains greater than 500 ppm PCBs.

(ii) A visual inspection of each electromagnet subject to paragraph (h)(1)(i) of this section, shall be performed at least once every week according to the conditions contained in §761.30(a)(1)(iii) and (iv).

(2) *Servicing conditions.* (i) Servicing (including rebuilding) any electromagnet, switch, or voltage regulator with a PCB concentration of 500 ppm or greater which requires the removal and rework of the internal components is prohibited.

(ii) Electromagnets, switches, and voltage regulators classified as PCB-Contaminated Electrical Equipment (as defined in the definition of "PCB-Contaminated Electrical Equipment" under §761.3) may be serviced (including rebuilding) only with dielectric fluid containing less than 500 ppm PCB.

(iii) PCBs removed during any servicing activity must be captured and either reused as dielectric fluid or disposed of in accordance with the requirements of §761.60. PCBs from

electromagnets switches, and voltage regulators with a PCB concentration of at least 500 ppm must not be mixed with or added to dielectric fluid from PCB-Contaminated Electrical Equipment.

(iv) Regardless of its PCB concentration, dielectric fluids containing less than 500 ppm PCB that are mixed with fluids that contain 500 ppm or greater PCB must not be used as dielectric fluid in any electrical equipment. The entire mixture of dielectric fluid must be considered to be greater than 500 ppm PCB and must be disposed of in an incinerator that meets the requirements of §761.70.

(v) An electromagnet, switch or voltage regulator with a PCB concentration of at least 500 ppm may be converted to PCB-Contaminated Electrical Equipment or to a non-PCB classification and PCB-Contaminated Electrical Equipment may be reclassified to a non-PCB classification by draining, refilling and/or otherwise servicing the equipment. In order to be reclassified, the equipment's dielectric fluid must contain less than 500 ppm PCB (for conversion to PCB-Contaminated Electrical Equipment) or less than 50 ppm PCB (for conversion to a non-PCB classification) after a minimum of three months of in-service use subsequent to the last servicing conducted for the purpose of reducing the PCB concentration in the equipment. In-service use means the equipment is used electrically under loaded conditions. The Assistant Administrator may grant, without further rulemaking, approval for the use of alternative methods that simulate the loaded conditions of in-service use. All PCBs removed from this equipment for purposes of reducing PCB concentrations are subject to the disposal requirements of §761.60.

(vi) Any dielectric fluid containing 50 ppm or greater PCB used for servicing electromagnets, switches, or voltage regulators must be stored in accordance with the storage for disposal requirements of §761.65.

(vii) Processing and distribution in commerce of PCBs for purposes of servicing electromagnets, switches or voltage regulators is permitted only for persons who are granted an exemption under TSCA 6(e)(3)(B).

(i) *Use in compressors and in the liquid of natural gas pipelines.* PCBs may be used indefinitely in the compressors and in the liquids of natural gas pipelines at a concentration level of less than 50 ppm provided that they are marked in accordance with §761.45(a).

(j) *Small quantities for research and development.* PCBs may be used in small quantities for research and development, as defined in §761.3, in a manner other than a totally enclosed manner, indefinitely. Manufacture, processing, and distribution in commerce of PCBs in small quantities for research and development is permitted only for persons who have been granted an exemption under TSCA section 6(e)(3)(B).

(k) *Microscopy mounting medium.* PCBs may be used as a permanent microscopic mounting medium in a manner other than a totally enclosed manner indefinitely. Manufacture, processing, and distribution in commerce of PCBs for purposes of use as a mounting medium are permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(l) *Use in capacitors.* PCBs at any concentration may be used in capacitors, subject to the following conditions:

(1) *Use conditions.* (i) After October 1, 1988, the use and storage for reuse of PCB Large High Voltage Capacitors and PCB Large Low Voltage Capacitors which pose an exposure risk to food or feed is prohibited.

(ii) After October 1, 1988, the use of PCB Large High Voltage Capacitors and PCB Large Low Voltage Capacitors is prohibited unless the capacitor is used within a restricted-access electrical substation or in a contained and restricted-access indoor installation. A restricted-access electrical substation is an outdoor, fenced or walled-in facility that restricts public access and is used in the transmission or distribution of electric power. A contained and restricted-access indoor installation does not have public access and has an adequate roof, walls, and floor to contain any release of PCBs within the indoor location.

(2) [Reserved]

(m) *Use in and servicing of circuit breakers, reclosers and cable.* PCBs at any concentration may be used in circuit breakers, reclosers, and cable and

may be used for purposes of servicing this electrical equipment (including rebuilding) for the remainder of their useful lives, subject to the following conditions:

(1) *Servicing conditions.* (i) Circuit breakers, reclosers, and cable may be serviced (including rebuilding) only with dielectric fluid containing less than 50 ppm PCB.

(ii) Any circuit breaker, recloser or cable found to contain at least 50 ppm PCBs may be serviced only in accordance with the conditions contained in 40 CFR 761.30(h)(2).

(2) [Reserved]

(n) *Microscopy immersion oil.* PCBs may be used as an immersion oil in fluorescence microscopy, in a manner other than a totally enclosed manner indefinitely. Manufacture, processing, and distribution in commerce of PCBs for purposes of use as a low fluorescence immersion oil are permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(o) *Optical liquids.* PCBs may be used as optical liquids in a manner other than a totally enclosed manner indefinitely. Manufacture, processing, and distribution in commerce of PCBs for purposes of use as optical liquids are permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020, 2025 (15 U.S.C. 2605)

[44 FR 31542, May 31, 1979, Redesignated at 47 FR 19527, May 6, 1982, and amended at 47 FR 37357, Aug. 25, 1983; 48 FR 135, Jan. 3, 1983; 49 FR 25241 and 25242, June 20, 1984; 49 FR 28190, and 28202, July 10, 1984; 50 FR 29199, July 17, 1985; 53 FR 12524, Apr. 15, 1988; 53 FR 24221, June 27, 1988; 53 FR 27323, July 19, 1988; 54 FR 28419, July 6, 1989; 55 FR 45804, Oct. 31, 1990; 55 FR 49045, Nov. 26, 1990; 58 FR 15809, Mar. 24, 1993; 58 FR 34205, June 23, 1993]

Subpart C—Marking of PCBs and PCB Items

§761.40 Marking requirements.

(a) Each of the following items in existence on or after July 1, 1978 shall be marked as illustrated in Figure 1 in §761.45(a): The mark illustrated in Figure 1 is referred to as M_L throughout this subpart.

(1) PCB Containers;

(2) PCB Transformers at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal from use if not already marked. [Marking of PCB-Contaminated Electrical Equipment is not required];

(3) PCB Large High Voltage Capacitors at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal from use if not already marked;

(4) Equipment containing a PCB Transformer or a PCB Large High Voltage Capacitor at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal of the equipment from use if not already marked;

(5) PCB Large Low Voltage Capacitors at the time of removal from use;

(6) Electric motors using PCB coolants (See also paragraph (e) of this section).

(7) Hydraulic systems using PCB hydraulic fluid (See also paragraph (e) of this section);

(8) Heat transfer systems (other than PCB Transformers) using PCBs (See also paragraph (e) of this section);

(9) PCB Article Containers containing articles or equipment that must be marked under paragraphs (a) (1) through (8) of this section;

(10) Each storage area used to store PCBs and PCB Items for disposal.

(b) As of October 1, 1978, each transport vehicle shall be marked on each end and side with M_L as described in §761.45(a) if it is loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of PCBs in the liquid phase or with one or more PCB Transformers (See also paragraph (e) of this section).

(c) As of January 1, 1979, the following PCB Articles shall be marked with mark M_L as described in §761.45(a):

(1) All PCB Transformers not marked under paragraph (a) of this section [marking of PCB-Contaminated Electrical Equipment is not required];

(2) All PCB Large High Voltage Capacitors not marked under paragraph (a) of this section

(i) Will be marked individually with mark M_L , or

(ii) If one or more PCB Large High Voltage Capacitors are installed in a protected location such as on a power

pole, or structure, or behind a fence; the pole, structure, or fence shall be marked with mark M_L , and a record or procedure identifying the PCB Capacitors shall be maintained by the owner or operator at the protected location.

(d) As of January 1, 1979, all PCB Equipment containing a PCB Small Capacitor shall be marked at the time of manufacture with the statement, "This equipment contains PCB Capacitor(s)". The mark shall be of the same size as the mark M_L .

(e) As of October 1, 1979, applicable PCB Items in paragraphs (a) (1), (6), (7), and (8) of this section containing PCBs in concentrations of 50 to 500 ppm and applicable transport vehicles in paragraph (b) of this section loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of liquid PCBs in concentrations of 50 ppm to 500 ppm shall be marked with mark M_L as described in §761.45(a).

(f) Where mark M_L is specified but the PCB Article or PCB Equipment is too small to accommodate the smallest permissible size of mark M_L , mark M_B as described in §761.45(b), may be used instead of mark M_L .

(g) Each large low voltage capacitor, each small capacitor normally used in alternating current circuits, and each fluorescent light ballast manufactured ("manufactured", for purposes of this sentence, means built) between July 1, 1978 and July 1, 1998 that do not contain PCBs shall be marked by the manufacturer at the time of manufacture with the statement, "No PCBs". The mark shall be of similar durability and readability as other marking that indicate electrical information, part numbers, or the manufacturer's name. For purposes of this paragraph marking requirement only is applicable to items built domestically or abroad after June 30, 1978.

(h) All marks required by this subpart must be placed in a position on the exterior of the PCB Items or transport vehicles so that the marks can be easily read by any persons inspecting or servicing the marked PCB Items or transport vehicles.

(i) Any chemical substance or mixture that is manufactured after the effective date of this rule and that contains less than 500 ppm PCB (0.05% on

a dry weight basis), including PCB that is a byproduct or impurity, must be marked in accordance with any requirements contained in the exemption granted by EPA to permit such manufacture and is not subject to any other requirement in this subpart unless so specified in the exemption. This paragraph applies only to containers of chemical substances or mixtures. PCB articles and equipment into which the chemical substances or mixtures are processed, are subject to the marking requirements contained elsewhere in this subpart.

(j) PCB Transformer locations shall be marked as follows:

(1) Except as provided in paragraph (j)(2) of this section, as of December 1, 1985, the vault door, machinery room door, fence, hallway, or means of access, other than grates and manhole covers, to a PCB Transformer must be marked with the mark M_L as required by paragraph (a) of this section.

(2) A mark other than the M_L mark may be provided all of the following conditions are met:

(i) The program using such an alternative mark was initiated prior to August 15, 1985, and can be substantiated with documentation.

(ii) Prior to August 15, 1985, coordination between the transformer owner and the primary fire department occurred, and the primary fire department knows, accepts, and recognizes what the alternative mark means, and that this can be substantiated with documentation.

(iii) The EPA Regional Administrator in the appropriate region is informed in writing of the use of the alternative mark by October 3, 1988 and is provided with documentation that the program began before August 15, 1985, and documentation that demonstrates that prior to that date the primary fire department knew, accepted and recognized the meaning of the mark, and included this information in firefighting training.

(iv) The Regional Administrator will either approve or disapprove in writing the use of an alternative mark within 30 days of receipt of the documentation of a program.

(3) Any mark placed in accordance with the requirements of this section

at which the measurements required under paragraph (a)(2)(iii)(B)(3) of this section were taken.

(D) Any person burning mineral oil dielectric fluid in a boiler obtains the following information and retains the information for five years at the boiler location:

(1) The data required to be collected under paragraphs (a)(2)(A) (6) and (7) of this section; and

(2) The quantity of mineral oil dielectric fluid burned in the boiler each month;

(iv) In a facility that is approved in accordance with §761.60(e). For the purpose of burning mineral oil dielectric fluid, an applicant under §761.60(e) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in paragraph (a)(2)(iii) of this section, or a §761.70 approved incinerator.

(3) Liquids, other than mineral oil dielectric fluid, containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, shall be disposed of:

(i) In an incinerator which complies with §761.70;

(ii) In a chemical waste landfill which complies with §761.75 if information is provided to the owner or operator of the chemical waste landfill that shows that the waste does not exceed 500 ppm PCB and is not an ignitable waste as described in §761.75(b)(8)(iii);

(iii) In a high efficiency boiler provided that.

(A) The boiler complies with the following criteria:

(1) The boiler is rated at a minimum of 50 million BTU/hour;

(2) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(3) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(4) The waste does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(5) The waste is not fed into the boiler unless the boiler is operating at its

normal operating temperature (this prohibits feeding these fluids during either start up or shut down operations);

(6) The owner or operator of the boiler must:

(i) Continuously monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning waste fluid; or

(ii) If the boiler will burn less than 30,000 gallons of waste fluid per year, measure and record the carbon monoxide concentration and excess oxygen percentage in the stack gas at regular intervals of no longer than 60 minutes while burning waste fluid;

(7) The primary fuel feed rate, waste fluid feed rate, and total quantities of both primary fuel and waste fluid fed to the boiler must be measured and recorded at regular intervals of no longer than 15 minutes while burning waste fluid; and

(8) The carbon monoxide concentration and the excess oxygen percentage must be checked at least once every hour that the waste is burned. If either measurement falls below the levels specified in this rule, the flow of waste to the boiler shall be stopped immediately.

(B) Prior to any person burning these liquids in the boiler, approval must be obtained from the EPA Regional Administrator for the EPA Region in which the boiler is located and any persons seeking such approval must submit to the EPA Regional Administrator a request containing at least the following information:

(1) The name and address of the owner or operator of the boiler and the address of the boiler;

(2) The boiler rating in units of BTU/hour;

(3) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when low concentration PCB liquid is burned;

(4) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack;

(5) The type of waste to be burned (e.g., hydraulic fluid, contaminated fuel oil, heat transfer fluid, etc.);

(6) The concentration of PCBs and of any other chlorinated hydrocarbon in the waste and the results of analyses using the American Society of Testing and Materials (ASTM) methods as follows: Carbon and hydrogen content using ASTM D-3178-84, nitrogen content using ASTM E-258-67 (Reapproved 1987), sulfur content using ASTM D-2784-89, D-1268-87, or D-129-84, chlorine content using ASTM D-808-87, water and sediment content using either ASTM D-2709-88 or ASTM D-1796-83 (Reapproved 1990), ash content using D-482-87, calorific value using ASTM D-240-87, carbon residue using either ASTM D-2158-89 or D-524-88, and flash point using ASTM D-93-90.

(7) The quantity of wastes estimated to be burned in a thirty (30) day period;

(8) An explanation of the procedures to be followed to insure that burning the waste will not adversely affect the operation of the boiler such that combustion efficiency will decrease.

(C) On the basis of the information in paragraph (a)(3)(iii)(B) of this section and any other available information, the Regional Administrator may, at his discretion, find that the alternate disposal method will not present an unreasonable risk of injury to health or the environment and approve the use of the boiler;

(D) When burning PCB wastes, the boiler must operate at a level of output no less than the output at which the measurements required under paragraph (a)(3)(iii)(B)(3) of this section were taken; and

(E) Any person burning liquids in boilers approved as provided in paragraph (a)(3)(iii)(C) of this section, must obtain the following information and retain the information for five years at the boiler location:

(1) The data required to be collected in paragraphs (a)(3)(iii)(A) (6) and (7) of this section;

(2) The quantity of low concentration PCB liquid burned in the boiler each month.

(3) The analysis of the waste required by paragraph (a)(3)(iii)(B)(6) of this section taken once a month for each

month during which low concentration PCB liquid is burned in the boiler.

(iv) In a facility that is approved in accordance with §761.60(e). For the purpose of burning liquids, other than mineral oil dielectric fluid, containing 50 ppm or greater PCB, but less than 500 ppm PCB, an applicant under §761.60(e) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in §761.60(a)(2)(iii), or a §761.70 incinerator.

(4) Any non-liquid PCBs at concentrations of 50 ppm or greater in the form of contaminated soil, rags, or other debris shall be disposed of:

(i) In an incinerator which complies with §761.70; or

(ii) In a chemical waste landfill which complies with §761.75.

NOTE: Except as provided in §761.75(b)(8)(ii), liquid PCBs shall not be processed into non-liquid forms to circumvent the high temperature incineration requirements of §761.60(a).

(5) All dredged materials and municipal sewage treatment sludges that contain PCBs at concentrations of 50 ppm or greater shall be disposed of:

(i) In an incinerator which complies with §761.70,

(ii) In a chemical waste landfill which complies with §761.75; or

(iii) Upon application, using a disposal method to be approved by the Agency's Regional Administrator in the EPA Region in which the PCBs are located. Applications for disposal in a manner other than prescribed in paragraph (a)(5) (i) or (ii) of this section must be made in writing to the Regional Administrator. The application must contain information that, based on technical, environmental, and economic considerations, indicates that disposal in an incinerator or chemical waste landfill is not reasonable and appropriate, and that the alternate disposal method will provide adequate protection to health and the environment. The Regional Administrator may request other information that he or she believes to be necessary for evaluation of the alternate disposal method. Any approval by the Regional Administrator shall be in writing and may contain any appropriate limitations on the approved alternate method

must be placed in the locations described in paragraph (j)(1) of this section and in a manner that can be easily read by emergency response personnel fighting a fire involving this equipment.

(44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 47 FR 37359, Aug. 25, 1982; 50 FR 29201, July 17, 1985; 50 FR 32178, Aug. 9, 1985; 53 FR 12524, Apr. 15, 1988; 53 FR 27329, July 19, 1988)

§761.45 Marking formats.

The following formats shall be used for marking:

(a) *Large PCB Mark—M_L*. Mark M_L shall be as shown in Figure 1, letters and striping on a white or yellow background and shall be sufficiently durable to equal or exceed the life (including storage for disposal) of the PCB Article, PCB Equipment, or PCB Container. The size of the mark shall be at least 15.25 cm (6 inches) on each side. If the PCB Article or PCB Equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 5 cm (2 inches) on each side.

(b) *Small PCB Mark—M_s*. Mark M_s shall be as shown in Figure 2, letters and striping on a white or yellow background, and shall be sufficiently durable to equal or exceed the life (including storage for disposal) of the PCB Article, PCB Equipment, or PCB Container. The mark shall be a rectangle 2.5 by 5 cm (1 inch by 2 inches). If the PCB Article or PCB Equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 1 by 2 cm (.4 by .8 inches).

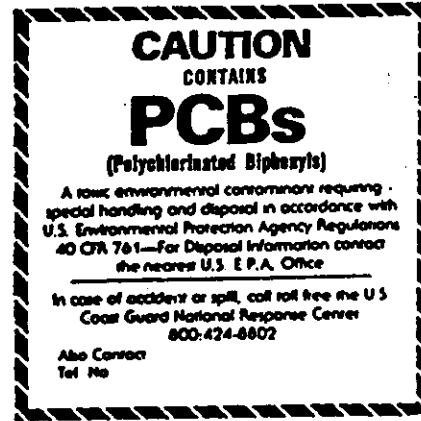


Figure 1

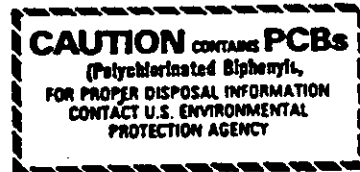


Figure 2

(44 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982)

Subpart D—Storage and Disposal

NOTE: This subpart does not require removal of PCBs and PCB Items from service and disposal earlier than would normally be the case. However, when PCBs and PCB Items are removed from service and disposed of, disposal must be undertaken in accordance with these regulations. PCBs (including soils and debris) and PCB Items which have been placed in a disposal site are considered to be "in service" for purposes of the applicability of this subpart. This subpart does not require PCBs and PCB Items landfilled prior to February 17, 1978 to be removed for disposal. However, if such PCBs or PCB Items are removed from the disposal site, they must be disposed of in accordance with

this subpart. Other subparts are directed to the manufacture, processing, distribution in commerce, and use of PCBs and may result in some cases in disposal at an earlier date than would otherwise occur.

§761.60 Disposal requirements.

(a) *PCBs*. (1) Except as provided in paragraphs (a)(2), (3), (4), and (5) of this section, PCBs at concentrations of 50 ppm or greater must be disposed of in an incinerator which complies with §761.70.

(2) Mineral oil dielectric fluid from PCB-contaminated Electrical Equipment containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, must be disposed of in one of the following:

(i) In an incinerator that complies with §761.70;

(ii) In a chemical waste landfill that complies with §761.75 if information is provided to the owner or operator of the chemical waste landfill that shows that the mineral oil dielectric fluid does not exceed 500 ppm PCB and is not an ignitable waste as described in §761.75(b)(8)(iii);

(iii) In a high efficiency boiler provided that:

(A) The boiler complies with the following criteria:

(1) The boiler is rated at a minimum of 50 million BTU hours;

(2) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(3) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(4) The mineral oil dielectric fluid does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(5) The mineral oil dielectric fluid is not fed into the boiler unless the boiler is operating at its normal operating temperature (this prohibits feeding these fluids during either start up or shut down operations);

(6) The owner or operator of the boiler:

(i) Continuously monitors and records the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning mineral oil dielectric fluid; or

(ii) If the boiler will burn less than 30,000 gallons of mineral oil dielectric fluid per year, measures and records the carbon monoxide concentration and excess oxygen percentage in the stack gas at regular intervals of no longer than 60 minutes while burning mineral oil dielectric fluid.

(7) The primary fuel feed rates, mineral oil dielectric fluid feed rates, and total quantities of both primary fuel and mineral oil dielectric fluid fed to the boiler are measured and recorded at regular intervals of no longer than 15 minutes while burning mineral oil dielectric fluid.

(8) The carbon monoxide concentration and the excess oxygen percentage are checked at least once every hour that mineral oil dielectric fluid is burned. If either measurement falls below the levels specified in this rule, the flow of mineral oil dielectric fluid to the boiler shall be stopped immediately.

(B) Thirty days before any person burns mineral oil dielectric fluid in the boiler, the person gives written notice to the EPA Regional Administrator for the EPA Region in which the boiler is located and that the notice contains the following information:

(1) The name and address of the owner or operator of the boiler and the address of the boiler;

(2) The boiler rating in units of BTU/hour;

(3) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when mineral oil dielectric fluid is burned; and

(4) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack.

(C) When burning mineral oil dielectric fluid, the boiler must operate at a level of output no less than the output

for disposal. In addition to these regulations, the Regional Administrator shall consider other applicable Agency guidelines, criteria, and regulations to ensure that the discharges of dredged material and sludges that contain PCBs and other contaminants are adequately controlled to protect the environment. The person to whom such approval is issued must comply with all limitations contained in the approval.

(6) When storage is desired prior to disposal, PCBs at concentrations of 50 ppm or greater shall be stored in a facility which complies with §761.65.

(b) *PCB Articles*—(1) *Transformers*. (i) PCB Transformers shall be disposed of in accordance with either of the following:

(A) In an incinerator that complies with §761.70; or

(B) In a chemical waste landfill which complies with §761.75; *Provided*, That the transformer is first drained of all free flowing liquid, filled with solvent, allowed to stand for at least 18 hours, and then drained thoroughly. PCB liquids that are removed shall be disposed of in accordance with paragraph (a) of this section. Solvents may include kerosene, xylene, toluene and other solvents in which PCBs are readily soluble. Precautionary measures should be taken, however, that the solvent flushing procedure is conducted in accordance with applicable safety and health standards as required by Federal or State regulations.

(ii) [Reserved]

(2) *PCB Capacitors*. (i) The disposal of any capacitor shall comply with all requirements of this subpart unless it is known from label or nameplate information, manufacturer's literature (including documented communications with the manufacturer), or chemical analysis that the capacitor does not contain PCBs.

(ii) Any person may dispose of PCB Small Capacitors as municipal solid waste, unless that person is subject to the requirements of paragraph (b)(2)(iv) of this section.

(iii) Any PCB Large High or Low Voltage Capacitor which contains 500 ppm or greater PCBs, owned by any person, shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator that complies with §761.70; or

(B) Until March 1, 1981, disposal in a chemical waste landfill that complies with §761.75.

(iv) Any PCB Small Capacitor owned by any person who manufactures or at any time manufactured PCB Capacitors or PCB Equipment and acquired the PCB Capacitors in the course of such manufacturing shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator which complies with §761.70; or

(B) Until March 1, 1981, disposal in a chemical waste landfill which complies with §761.75.

(v) Notwithstanding the restrictions imposed by paragraph (b)(2)(iii)(B) or (b)(2)(iv)(B) of this section, PCB capacitors may be disposed of in PCB chemical waste landfills that comply with §761.75 subsequent to March 1, 1981, if the Assistant Administrator for Prevention, Pesticides and Toxic Substances publishes a notice in the FEDERAL REGISTER declaring that those landfills are available for such disposal and explaining the reasons for the extension or reopening. An extension or reopening for disposal of PCB capacitors that is granted under this subsection shall be subject to such terms and conditions as the Assistant Administrator may prescribe and shall be in effect for such period as the Assistant Administrator may prescribe. The Assistant Administrator may permit disposal of PCB capacitors in EPA approved chemical waste landfills after March 1, 1981, if in his opinion,

(A) Adequate incineration capability for PCB capacitors is not available, or

(B) The incineration of PCB capacitors will significantly interfere with the incineration of liquid PCBs, or

(C) There is other good cause shown.

As part of this evaluation, the Assistant Administrator will consider the impact of his action on the incentives to construct or expand PCB incinerators.

(vi) Prior to disposal in a §761.75 chemical waste landfill, all large PCB capacitors, and all small PCB capacitors described in paragraph (b)(2)(iv) of this section, shall be placed in one of the Department of Transportation

specification containers identified in §761.65(e)(6) or in containers that comply with 49 CFR 178.118 (specification 17H containers). Large PCB capacitors which are too big to fit inside one of these containers shall be placed in a container with strength and durability equivalent to the DOT specification containers. In all cases, interstitial space in the container shall be filled with sufficient absorbent material (such as sawdust or soil) to absorb any liquid PCBs remaining in the capacitors.

(3) *PCB hydraulic machines*. PCB hydraulic machines containing PCBs at concentrations of 50 ppm or greater such as die casting machines may be disposed of as municipal solid waste or salvage provided that the machines are drained of all free-flowing liquid and the liquid is disposed of in accordance with the provisions of paragraph (a) of this section. If the PCB liquid contains 1000 ppm PCB or greater, then the hydraulic machine must be flushed prior to disposal with a solvent containing less than 50 ppm PCB under transformer solvents at paragraph (b)(1)(i)(B) of this section and the solvent disposed of in accordance with paragraph (a) of this section.

(4) *PCB-Contaminated Electrical Equipment*. All PCB-Contaminated Electrical Equipment except capacitors shall be disposed of by draining all free flowing liquid from the electrical equipment and disposing of the liquid in accordance with paragraph (a)(2) or (3) of this section. The disposal of the drained electrical equipment is not regulated by this rule. Capacitors that contain between 50 and 500 ppm PCBs shall be disposed of in an incinerator that complies with §761.70 or in a chemical waste landfill that complies with §761.75.

(5) *Other PCB Articles*. (i) PCB articles with concentrations at 500 ppm or greater must be disposed of:

(A) In an incinerator that complies with §761.70; or

(B) In a chemical waste landfill that complies with §761.75, provided that all free-flowing liquid PCBs have been thoroughly drained from any articles before the articles are placed in the chemical waste landfill and that the

drained liquids are disposed of in an incinerator that complies with §761.70.

(ii) PCB Articles with a PCB concentration between 50 and 500 ppm must be disposed of by draining all free flowing liquid from the article and disposing of the liquid in accordance with paragraph (a)(2) or (3) of this section. The disposal of the drained article is not regulated by this rule.

(6) *Storage of PCB Articles*. Except for a PCB Article described in paragraph (b)(2)(ii) of this section and hydraulic machines that comply with the municipal solid waste disposal provisions described in paragraph (b)(3) of this section, any PCB Article, with PCB concentrations at 50 ppm or greater, shall be stored in accordance with §761.65 prior to disposal.

(c) *PCB Containers*. (1) Unless decontaminated in compliance with §761.79 or as provided in paragraph (c)(2) of this section, a PCB container with PCB concentrations at 500 ppm or greater shall be disposed of:

(i) In an incinerator which complies with §761.70, or

(ii) In a chemical waste landfill that complies with §761.75; provided that if there are PCBs in a liquid state, the PCB Container shall first be drained and the PCB liquid disposed of in accordance with paragraph (a) of this section.

(2) Any PCB Container used to contain only PCBs at a concentration less than 500 ppm shall be disposed of as municipal solid wastes; provided that if the PCBs are in a liquid state, the PCB Container shall first be drained and the PCB liquid shall be disposed of in accordance with paragraph (a) of this section.

(3) Prior to disposal, a PCB container with PCB concentrations at 50 ppm or greater shall be stored in a facility which complies with §761.65.

(d) *Spills*. (1) Spills and other uncontrolled discharges of PCBs at concentrations of 50 ppm or greater constitute the disposal of PCBs.

(2) PCBs resulting from the clean-up and removal of spills, leaks, or other uncontrolled discharges, must be stored and disposed of in accordance with paragraph (a) of this section.

(3) These regulations do not exempt any person from any actions or liabilities.

ity under other statutory authorities, including but not limited to the Clean Water Act, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

(e) Any person who is required to incinerate any PCBs and PCB Items under this subpart and who can demonstrate that an alternative method of destroying PCBs and PCB Items exists and that this alternative method can achieve a level of performance equivalent to §761.70 incinerators or high efficiency boilers as provided in paragraphs (a)(2)(iv) and (a)(3)(iv) of this section, may submit a written request to either the Regional Administrator or the Director, Chemical Management Division for an exemption from the incineration requirements of §761.70 or §761.60. Requests for approval of alternate methods that will be operated in more than one region must be submitted to the Director, Chemical Management Division except for research and development involving less than 500 pounds of PCB material (see paragraph (1)(2) of this section). Requests for approval of alternate methods that will be operated in only one region must be submitted to the appropriate Regional Administrator. The applicant must show that his method of destroying PCBs will not present an unreasonable risk of injury to health or the environment. On the basis of such information and any available information, the Regional Administrator or the Director, Chemical Management Division may, in his discretion, approve the use of the alternate method if he finds that the alternate disposal method provides PCB destruction equivalent to disposal in a §761.70 incinerator or a §761.60 high efficiency boiler and will not present an unreasonable risk of injury to health or the environment. Any approval must be stated in writing and may contain such conditions and provisions as the Regional Administrator or Director, Chemical Management Division deems appropriate. The person to whom such waiver is issued must comply with all limitations contained in such determination.

(f)(1) Each operator of a chemical waste landfill, incinerator, or alternative to incineration approved under

paragraph (e) of this section shall give the following written notices to the state and local governments within whose jurisdiction the disposal facility is located:

(i) Notice at least thirty (30) days before a facility is first used for disposal of PCBs required by these regulations; and

(ii) At the request of any state or local government, annual notice of the quantities and general description of PCBs disposed of during the year. This annual notice shall be given no more than thirty (30) days after the end of the year covered.

(iii) The Regional Administrator may reduce the notice period required by paragraph (f)(1)(i) of this section from thirty days to a period of no less than five days in order to expedite interim approval of the chemical waste landfill located in Sedgwick County, Kansas.

(2) Any person who disposes of PCBs under a paragraph (a)(5)(iii) of this section incineration or chemical waste landfilling waiver shall give written notice at least thirty (30) days prior to conducting the disposal activities to the state and local governments within whose jurisdiction the disposal is to take place.

(g) *Testing procedures.* (1) Owners or users of mineral oil dielectric fluid electrical equipment may use the following procedures to determine the concentration of PCBs in the dielectric fluid:

(i) Dielectric fluid removed from mineral oil dielectric fluid electrical equipment may be collected in a common container, provided that no other chemical substances or mixtures are added to the container. This common container option does not permit dilution of the collected oil. Mineral oil that is assumed or known to contain at least 50 ppm PCBs must not be mixed with mineral oil that is known or assumed to contain less than 50 ppm PCBs to reduce the concentration of PCBs in the common container. If dielectric fluid from untested, oil-filled circuit breakers, reclosers, or cable is collected in a common container with dielectric fluid from other oil-filled electrical equipment, the entire contents of the container must be treated as PCBs at a concentration of at least

50 ppm, unless all of the fluid from the other oil-filled electrical equipment has been tested and shown to contain less than 50 ppm PCBs.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common containers or the individual electrical equipment to determine the PCB concentration, except that if any PCBs at a concentration of 500 ppm or greater have been added to the container or equipment then the total container contents must be considered as having a PCB concentration of 500 ppm or greater for purposes of complying with the disposal requirements of this subpart. For purposes of this subparagraph, representative samples of mineral oil dielectric fluid are either samples taken in accordance with ASTM D 923-86 or ASTM D 923-89 or samples taken from a container that has been thoroughly mixed in a manner such that any PCBs in the container are uniformly distributed throughout the liquid in the container.

(2) Owners or users of waste oil may use the following procedures to determine the PCB concentration of waste oil:

(i) Waste oil from more than one source may be collected in a common container, provided that no other chemical substances or mixtures, such as non-waste oils, are added to the container.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common containers or the individual electrical equipment to determine the PCB concentration. Except, That if any PCBs at a concentration of 500 ppm or greater have been added to the container or equipment then the total container contents must be considered as having a PCB concentration of 500 ppm or greater for purposes of complying with the disposal requirements of this subpart. For purposes of this paragraph, representative samples of mineral oil dielectric fluid are either samples taken in accordance with ASTM D 923-86 or ASTM D 923-89 or samples taken from a container that has been thoroughly mixed in a manner such that

any PCBs in the container are uniformly distributed throughout the liquid in the container.

(b) Requirements for export and import of PCBs for purposes of disposal and PCB Items for purposes of disposal are found in §761.20.

(i) *Approval authority for disposal methods.* (1) The officials (the Director, Chemical Management Division and the Regional Administrators) designated in §§761.60(e) and 761.70(a) and (b) to receive requests for approval of PCB disposal activities are the primary approval authorities for these activities. Notwithstanding, the Director, Chemical Management Division may, at his/her discretion, assign the authority to review and approve any aspect of a disposal system to the Office of Prevention, Pesticides and Toxic Substances or to a Regional Administrator.

(2) Except for activity authorized under §761.30(j), research and development (R and D) into PCB disposal methods using a total of less than 500 pounds of PCB material (regardless of PCB concentration) will be reviewed and approved by the appropriate EPA Regional Administrator and research and development using 500 pounds or more of PCB material (regardless of PCB concentration) will be reviewed by the approval authorities set out in §§761.60(e) and 761.70(a) and (b).

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2606)

[44 FR 31642, May 31, 1979, as amended at 44 FR 54297, Sept. 19, 1979; 45 FR 20475, Mar. 23, 1980. Redesignated at 47 FR 19527, May 5, 1982, and amended at 47 FR 37359, Aug. 25, 1982; 48 FR 5730, Feb. 8, 1983; 48 FR 13185, Mar. 30, 1983; 49 FR 16125, Apr. 7, 1984; 49 FR 28191, July 10, 1984; 49 FR 36548, Sept. 19, 1984; 53 FR 10391, Mar. 31, 1988; 53 FR 12524, Apr. 15, 1988; 53 FR 21641, June 9, 1988; 54 FR 22595, May 23, 1989; 57 FR 13323, Apr. 16, 1992; 58 FR 16809, Mar. 24, 1993]

§761.65 Storage for disposal.

This section applies to the storage for disposal of PCBs at concentrations of 50 ppm or greater and PCB Items with PCB concentrations of 50 ppm or greater.

(a) Any PCB Article or PCB Container stored for disposal before January 1, 1983, shall be removed from storage and disposed of as required by this

part before January 1, 1984. Any PCB Article or PCB Container stored for disposal after January 1, 1983, shall be removed from storage and disposed of as required by subpart D of this part within one year from the date when it was first placed into storage.

(b) Except as provided in paragraph (c) of this section, after July 1, 1978, owners or operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following requirements:

(1) The facilities shall meet the following criteria:

(i) Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB Items;

(ii) An adequate floor which has continuous curbing with a minimum six inch high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB Article or PCB Container stored therein or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored therein, whichever is greater;

(iii) No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area;

(iv) Floors and curbing constructed of continuous smooth and impervious materials, such as Portland cement concrete or steel, to prevent or minimize penetration of PCBs; and

(v) Not located at a site that is below the 100-year flood water elevation.

(2) [Reserved]

(c)(1) The following PCB Items may be stored temporarily in an area that does not comply with the requirements of paragraph (b) of this section for up to thirty days from the date of their removal from service, provided that a notation is attached to the PCB Item or a PCB Container (containing the item) indicating the date the item was removed from service:

(i) Non-leaking PCB Articles and PCB Equipment;

(ii) Leaking PCB Articles and PCB Equipment if the PCB Items are placed in a non-leaking PCB Container that contains sufficient sorbent materials to absorb any liquid PCBs remaining in the PCB Items;

(iii) PCB Containers containing non-liquid PCBs such as contaminated soil, rags, and debris; and

(iv) PCB Containers containing liquid PCBs at a concentration between 50 and 500 ppm, provided a Spill Prevention, Control and Countermeasure Plan has been prepared for the temporary storage area in accordance with 40 CFR Part 112. In addition, each container must bear a notation that indicates that the liquids in the drum do not exceed 500 ppm PCB.

(2) Non-leaking and structurally undamaged PCB Large High Voltage Capacitors and PCB-Contaminated Electrical Equipment that have not been drained of free flowing dielectric fluid may be stored on pallets next to a storage facility that meets the requirements of paragraph (b) of this section. PCB-Contaminated Electrical Equipment that has been drained of free flowing dielectric fluid is not subject to the storage provisions of §761.65. Storage under this subparagraph will be permitted only when the storage facility has immediately available unfilled storage space equal to 10 percent of the volume of capacitors and equipment stored outside the facility. The capacitors and equipment temporarily stored outside the facility shall be checked for leaks weekly.

(3) Any storage area subject to the requirements of paragraph (b) or paragraph (c)(1) of this section shall be marked as required in subpart C—§761.40(a)(10).

(4) No item of movable equipment that is used for handling PCBs and PCB Items in the storage facilities and that comes in direct contact with PCBs shall be removed from the storage facility area unless it has been decontaminated as specified in §761.79.

(5) All PCB Articles and PCB Containers in storage shall be checked for leaks at least once every 30 days. Any leaking PCB Articles and PCB Containers and their contents shall be transferred immediately to properly marked non-leaking containers. Any spilled or leaked materials shall be immediately cleaned up, using sorbents or other adequate means, and the PCB-contaminated materials and residues shall be disposed of in accordance with §761.60(a)(4).

(6) Except as provided in paragraph (c)(7) of this section, any container used for the storage of liquid PCBs shall comply with the Shipping Container Specification of the Department of Transportation (DOT), 49 CFR 178.80 (Specification 5 container without removable head), 178.82 (Specification 5B container without removable head), 178.102 (Specification 6D overpack with Specification 2S(§178.35) or 2SL(§178.35a) polyethylene containers) or 178.116 (Specification 17E container). Any container used for the storage of non-liquid PCBs shall comply with the specifications of 49 CFR 178.80 (Specification 5 container), 178.82 (Specification 5B container) or 178.115 (Specification 17C container). As an alternate, containers larger than those specified in DOT Specifications 5, 5B, or 17C may be used for non-liquid PCBs if the containers are designed and constructed in a manner that will provide as much protection against leaking and exposure to the environment as the DOT Specification containers, and are of the same relative strength and durability as the DOT Specification containers.

(7) Storage containers for liquid PCBs can be larger than the containers specified in paragraph (c)(6) of this section provided that:

(i) The containers are designed, constructed, and operated in compliance with Occupational Safety and Health Standards, 29 CFR 1910.106, *Flammable and combustible liquids*. Before using these containers for storing PCBs, the design of the containers must be reviewed to determine the effect on the structural safety of the containers that will result from placing liquids with the specific gravity of PCBs into the containers (see 29 CFR 1910.106(b)(1)(i)(7)).

(ii) The owners or operators of any facility using containers described in paragraph (c)(7)(i) of this section, shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan as described in Part 112 of this title. In complying with 40 CFR Part 112, the owner or operator shall read "oil(s)" as "PCB(s)" whenever it appears. The exemptions for storage capacity, 40 CFR 112.1(d)(2), and the amendment of SPCC plans by the Regional Administrator, 40 CFR 112.4,

shall not apply unless some fraction of the liquids stored in the container are oils as defined by section 311 of the Clean Water Act.

(8) PCB Articles and PCB Containers shall be dated on the article or container when they are placed in storage. The storage shall be managed so that the PCB Articles and PCB Containers can be located by the date they entered storage. Storage containers provided in paragraph (c)(7) of this section, shall have a record that includes for each batch of PCBs the quantity of the batch and date the batch was added to the container. The record shall also include the date, quantity, and disposition of any batch of PCBs removed from the container.

(9) Owners or operators of storage facilities shall establish and maintain records as provided in §761.180.

(d) *Approval of commercial storers of PCB waste.* (1) All commercial storers of PCB waste shall have interim approval to operate commercial facilities for the storage of PCB waste until August 2, 1990. Commercial storers of PCB waste are prohibited from storing any PCB waste at their facilities after August 2, 1990 unless they have submitted by August 2, 1990 a complete application for a final storage approval under paragraph (d)(2) of this section. The period of interim approval shall continue until the Regional Administrator (or the Director of the Chemical Management Division (Director, CMD) in cases involving commercial storage ancillary to a facility approved for disposal by the Director, CMD) makes a final decision on the storage application at which time such interim approval shall terminate.

(2) The Regional Administrator for the region in which the storage facility is located (or the Director, CMD, if the commercial storage area is ancillary to a facility approved for disposal by the Director, CMD) shall grant written, final approval to engage in the commercial storage of PCB waste upon a determination by the Regional Administrator or the Director, CMD, that the criteria in paragraph (d)(2)(i) through (d)(2)(vi) of this section have been met by the applicant:

(i) The applicant, its principals, and its key employees responsible for the

establishment or operation of the commercial storage facility are qualified to engage in the business of commercial storage of PCB waste.

(ii) The facility possesses the capacity to handle the quantity of PCB waste which the owner or operator of the facility has estimated will be the maximum quantity of PCB waste that will be handled at any one time at the facility.

(iii) The owner or operator of the facility has certified compliance with the storage facility standards in paragraphs (b) and (c)(7) of this section.

(iv) The owner or operator has developed a written closure plan for the facility that is deemed acceptable by the Regional Administrator (or the Director, CMD, if the commercial storage is ancillary to a disposal facility permitted by the Director, CMD) under the closure plan standards of paragraph (e) of this section.

(v) The owner or operator has included in the application for final approval a demonstration of financial responsibility for closure that meets the financial responsibility standards of paragraph (g) of this section.

(vi) The operation of the storage facility will not pose an unreasonable risk of injury to health or the environment.

(vii) The environmental compliance history of the applicant, its principals, and its key employees shall be deemed to constitute a sufficient basis for denial of approval whenever in the judgment of the Regional Administrator (or Director, CMD) two or more related civil violations or a single environmental criminal conviction evidence a pattern or practice of non compliance that demonstrate the applicant's unwillingness or inability to achieve and maintain its operations in a compliance status.

(3) Applicants for storage approvals shall submit a written application that includes any relevant information bearing upon the qualifications of the facility's principals and key employees to engage in the business of commercial storage of PCB wastes. This information shall include, but is not limited to:

(i) The identification of the owner and the operator of the facility, includ-

ing all general partners of a partnership, any limited partner of a partnership, any stockholder of a corporation or any participant in any other type of business organization or entity who owns or controls, directly or indirectly, more than 5 percent of each partnership, corporation, or other business organization and all officials of the facility who have direct management responsibility for the facility.

(ii) The identification of the person responsible for the overall operations of the facility (i.e., a plant manager, superintendent, or a person of similar responsibility) and the supervisory employees who are or will be responsible for the operation of the facility.

(iii) Information concerning the technical qualifications and experience of the persons responsible for the overall operation of the facility and the employees responsible for handling PCB waste or other wastes.

(iv) Information concerning any past State or Federal environmental violations involving the same business or another business with which the principals or supervisory employees were affiliated directly that occurred within 5 years preceding the date of submission and which relate directly to violations that resulted in either a civil penalty (irrespective of whether the matter was disposed of by an adjudication or by a without prejudices settlement) or judgment of conviction whether entered after trial or a plea, either of guilt or nolo contendere or civil injunctive relief and involved storage, disposal, transport, or other waste handling activities.

(v) A list of all companies currently owned or operated in the past by the principals or key employees identified in paragraphs (d)(3)(i) and (d)(3)(ii) of this section that are or were directly or indirectly involved with waste handling activities.

(vi) The owner's or operator's estimate of maximum PCB waste quantity to be handled at the facility.

(vii) A written statement certifying compliance with paragraph (b) or (c) of this section and containing a certification as defined in §761.3.

(viii) A written closure plan for the facility, as described in paragraph (e) of this section.

(ix) The current closure cost estimate for the facility, as described in paragraph (f) of this section.

(x) A demonstration of financial responsibility to close the facility, as described in paragraph (g) of this section.

(4) The written approval issued by the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director, CMD) shall include, but not be limited to, the following:

(i) The determination that the applicant has satisfied the requirements set forth in paragraph (d)(2) of this section, and a brief statement setting forth the basis for the determination.

(ii) Incorporation of the closure plan submitted by the facility owner or operator and approved by the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director, CMD).

(iii) A condition imposing a maximum PCB storage capacity which the facility shall not exceed during its PCB waste storage operations. The maximum storage capacity imposed under this condition shall not be greater than the estimated maximum inventory of PCB waste included in the owner's or operator's application for final approval.

(iv) Such other conditions as deemed necessary by the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director, CMD) to ensure that the operations of the PCB storage facility will not pose an unreasonable risk of injury to health or the environment.

(5) Storage areas at transfer facilities are exempt from the requirement to obtain approval as a commercial storer of PCB waste under this paragraph, unless the same PCB waste is stored at these facilities for a period of time greater than 10 consecutive days between destinations.

(6) Storage areas at RCRA-permitted facilities may be exempt from the separate TSCA storage approval requirements in this paragraph (d) upon a showing to the Regional Administrator's satisfaction that the facility's existing RCRA closure plan is substan-

tially equivalent to this rule's closure plan standards, and that such facility's closure cost estimate and financial assurance demonstration account for maximum PCB waste inventories, and the requirements of paragraph (d)(3)(i) through (d)(3)(v) and (d)(3)(vii) of this section are met. A pay-in period of longer than 3 years after approval of the storage facility pursuant to this rule, will be acceptable to EPA if that pay-in period has already been established for a valid RCRA facility or previously approved TSCA facility.

(7) Storage areas ancillary to TSCA-approved disposal facilities may be exempt from a separate facility approval provided all of the following conditions are met:

(i) The current disposal approval contains an expiration date.

(ii) The current disposal approval's closure and financial responsibility conditions specifically extend to storage areas ancillary to disposal.

(iii) The current disposal approval's closure and financial responsibility conditions provide for annual adjustments for inflation, and for modification when changes in operation would affect closure costs.

(iv) The current disposal approval contains conditions on closure and financial responsibility that are at least as stringent as those in paragraphs (e) and (g) of this section. However, the provision for a 3-year closure trust pay-in period, as specified in paragraph (g)(1)(i) of this section, would be waived in a case in which an approved TSCA facility or RCRA facility that covers PCB storage has a longer pay-in period for the trust.

(v) The current disposal approval satisfies the requirements of paragraph (d)(3)(i) through (d)(3)(v) of this section.

(8) The approval of any existing TSCA-approved disposal facility ancillary to a commercial storage facility that is deficient in any of the conditions of paragraph (d)(7)(i) through (d)(7)(v) of this section shall be called in by the Regional Administrator or the Director, CMD, if it was the Director, CMD who issued it. The approval shall be modified to meet the requirements of paragraph (d)(7) of this section within 180 days of the effective

cept that owners or operators who use the financial test or corporate guarantee shall adjust their closure cost estimates for inflation within 30 days after the close of the storer's fiscal year. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its *Survey of Current Business*. The Implicit Price Deflator for Gross National Product is included in a monthly publication titled *Economic Indicators*, which is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The inflation factor used in the latter method is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The adjustment to the closure cost estimate is then made by multiplying the most recent closure cost estimate by the latest inflation factor.

(3) Where the Regional Administrator (or the Director, CMD, if he approved the closure plan) approves a modification to the facility's closure plan, and that modification increases the cost of closure, the owner or operator shall revise the closure cost estimate no later than 30 days after the modification is approved. Any such revision shall also be adjusted for inflation in accordance with paragraph (f)(2) of this section.

(4) The owner or operator of the facility shall keep at the facility during its operating life the most recent closure cost estimate, including any adjustments resulting from inflation or from modifications to the closure plan.

(g) *Financial assurance for closure.* A commercial storer of PCB waste shall establish financial assurance for closure of each PCB storage facility that he owns or operates. In establishing financial assurance for closure, the commercial storer of PCB waste may choose from the following financial assurance mechanisms or any combination of mechanisms:

(1) The "closure trust fund," as specified in §264.143(a) of this chapter, except for paragraph (a)(3) of §264.143. For purposes of this paragraph, the following provisions also apply:

(i) Payments into the trust fund shall be made annually by the owner or operator over the remaining operating life of the facility as estimated in the closure plan, or over 3 years, whichever period is shorter. This period of time is hereafter referred to as the "pay-in period." For an existing facility, the first payment must be made within 30 calendar days after EPA has notified the facility of its conditional approval. Interim approval to operate is canceled and the application is denied if EPA does not receive verification that the payment was made in that 30-day period.

(ii) For a new facility, the first payment into the closure trust fund shall be made before EPA grants final approval of the application and before the facility may accept the initial shipment of PCB waste for commercial storage. A receipt from the trustee shall be submitted by the owner or operator to the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director CMD) before this initial delivery of PCB waste. The first payment shall be at least equal to the current closure cost estimate, divided by the number of years in the pay-in period, except as provided in paragraph (g)(7) of this section for multiple mechanisms. Subsequent payments shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by subtracting the current value of the trust fund from the current closure cost estimate, and dividing this difference by the number of years remaining in the pay-in period.

(iii) If an owner or operator of a facility existing on the effective date of this paragraph establishes a trust fund to meet the financial assurance requirements of this paragraph, and the value of the trust fund is less than the current closure cost estimate when a final approval is granted for the facility, the amount of the current closure cost estimate still to be paid into the trust fund shall be paid in over the pay-in period as defined in paragraph (g)(1)(i) of this section. Payments shall continue to be made no later than 30 days after each anniversary date of the

first payment made into the trust fund. The amount of each payment shall be determined by subtracting the current value of the trust fund from the current closure cost estimate, and dividing this difference by the number of years remaining in the pay-in period.

(iv) The submission of a trust agreement with the wording specified in §264.151(a)(1) of this chapter, including any reference to hazardous waste management facilities, shall be deemed to be in compliance with the requirement to submit a trust agreement under this subpart.

(2) The "surety bond guaranteeing payment into a closure trust fund," as specified in §264.143(b) of this chapter, including the use of the surety bond instrument specified at §264.151(b) of this chapter and the standby trust specified at §264.143(b)(3) of this chapter. The use of the surety bonds, surety bond instruments, and standby trust agreements specified in §§264.143(b) and 264.151(b) of this chapter shall be deemed to be in compliance with this subpart.

(3)(i) The "surety bond guaranteeing performance of closure," as specified at §264.143(c) of this chapter, except for paragraph (c)(5) of §264.143 of this chapter. The submission and use of the surety bond instrument specified at §264.151(c) of this chapter and the standby trust specified at §264.143(c)(3) of this chapter shall be deemed to be in compliance with the requirements under this subpart relating to the use of surety bonds and standby trust funds.

(ii) For the purposes of this paragraph, and under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Liability is established by a final administrative determination pursuant to section 16 of TSCA that the owner or operator has failed to perform final closure in accordance with the closure plan and other approval or regulatory requirements when required to do so.

(4)(i) The "closure letter of credit" specified in §264.143(d) of this chapter, except for paragraph (d)(8). The submission and use of the irrevocable letter of credit instrument specified in §264.151(d) of this chapter and the

standby trust specified in §264.143(d)(3) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of letters of credit and standby trust funds.

(ii) For the purposes of this paragraph, the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director, CMD) may draw on the letter of credit following a final administrative determination pursuant to section 16 of TSCA that the owner or operator has failed to perform final closure in accordance with the closure plan and other approval or regulatory requirements when required to do so.

(5) "Closure insurance," as specified in §264.143(e) of this chapter, utilizing the certificate of insurance for closure specified at §264.151(e) of this chapter. The use of closure insurance as specified in §264.143(e) of this chapter and the submission and use of the certificate of insurance specified in §264.151(e) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of closure insurance.

(6) The "financial test and corporate guarantee for closure," as described in §264.143(f) of this chapter, including a letter signed by the owner's or operator's chief financial officer as specified at §264.151(f) of this chapter and, if applicable, the written corporate guarantee specified at §264.151(h) of this chapter. The use of the financial test and corporate guarantee specified in §264.143(f) of this chapter, the submission and use of the letter specified in §264.151(f) of this chapter, and the submission and use of the written corporate guarantee specified at §264.151(h) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of financial tests and corporate guarantees.

(7) The use of multiple financial mechanisms, as specified in §264.143(g) of this chapter is permitted.

(h) *Release of owner or operator.* Within 90 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved

date of this final rule, or a separate application for approval of the storage facility may be submitted to the Regional Administrator or the Director, CMD, in the cases where the Director, CMD issued the approval.

(c) *Closure.* (1) A commercial storer of PCB waste shall have a written closure plan that identifies the steps that the owner or operator of the facility shall take to close the PCB waste storage facility in a manner that eliminates the potential for post-closure releases of PCBs which may present an unreasonable risk to human health or the environment. An acceptable closure plan must include, at a minimum, all of the following:

(i) A description of how the PCB storage areas of the facility will be closed in a manner that eliminates the potential for post-closure releases of PCBs into the environment.

(ii) An identification of the maximum extent of storage operations that will be open during the active life of the facility, including an identification of the extent of PCB storage operations at the facility relative to other wastes that will be handled at the facility.

(iii) An estimate of the maximum inventory of PCB wastes that could be handled at one time at the facility over its active life, and a detailed description of the methods or arrangements to be used during closure for removing, transporting, storing, or disposing of the facility's inventory of PCB waste, including an identification of any off-site facilities that will be used.

(iv) A detailed description of the steps needed to remove or decontaminate PCB waste residues and contaminated containment system components, equipment, structures, and soils during closure in accordance with the levels specified in the PCB Spills Cleanup Policy in subpart G of this part, including a description of the methods for sampling and testing of surrounding soils, and the criteria for determining the extent of removal or decontamination.

(v) A detailed description of other activities necessary during the closure period to ensure that any post-closure releases of PCBs will not present unreasonable risks to human health or the environment. This includes activi-

ties such as ground-water monitoring, run-on and run-off control, and facility security.

(vi) A schedule for closure of each area of the facility where PCB waste is stored or handled, including the total time required to close each area of PCB waste storage or handling, and the time required for any intervening closure activities.

(vii) An estimate of the expected year of closure of the PCB waste storage areas, if a trust fund is opted for as the financial mechanism.

(2) A written closure plan determined to be acceptable by the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director, CMD) under this section shall become a condition of any approval granted under paragraph (d), of this section.

(3) A separate and new closure plan need not be submitted in cases where a facility is currently covered by a TSCA approval or a RCRA permit, upon a showing to the satisfaction of the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director, CMD) that the existing closure plan is substantially equivalent to closure plans required under paragraphs (d) through (g) of this section, and that the plan adequately accounts for PCB waste inventories.

(4) The commercial storer of PCB waste shall submit a written request to the Regional Administrator (or the Director, CMD, if he approved the closure plan) for a modification to its storage approval to amend its closure plan, whenever:

(i) Changes in ownership, operating plans, or facility design affect the existing closure plan.

(ii) There is a change in the expected date of closure, if applicable.

(iii) In conducting closure activities, unexpected events require a modification of the approved closure plan.

(5) The Regional Administrator or the Director, CMD, if he approved the closure plan, may modify the existing closure plan under the conditions described in paragraph (e)(4) of this section.

(6) Commercial storers of PCB waste shall comply with the following closure schedule:

(i) The commercial storer shall notify in writing the Regional Administrator or the Director, CMD if he approved the closure plan, at least 60 days prior to the date on which final closure of its PCB storage facility is expected to begin.

(ii) The date when a commercial storer of PCB waste "expects to begin closure" shall be no later than 30 days after the date on which the storage facility received its final quantities of PCB waste. For good cause shown, the Regional Administrator or the Director, CMD if he approved the closure plan, may extend the date for commencement of closure for an additional 30-day period.

(iii) Within 90 days after receiving the final quantity of PCB waste for storage, a commercial storer of PCB waste shall remove all PCB waste in storage at the facility from the facility in accordance with the approved closure plan. For good cause shown, the Regional Administrator or the Director, CMD if he approved the closure plan, may approve a reasonable extension to the period for removal of the PCB waste.

(iv) A commercial storer of PCB waste shall complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final quantity of PCB waste for storage at the facility. For good cause shown, the Regional Administrator or Director, CMD if he approved the closure plan, may approve a reasonable extension to the closure period.

(7) During the closure period, all contaminated system component equipment, structures, and soils shall be disposed of in accordance with the disposal requirements of subpart D of this part, or, if applicable, decontaminated in accordance with the levels specified in the PCB Spills Cleanup Policy at subpart G of this part. When PCB waste is removed from the storage facility during closure, the owner or operator becomes a generator of PCB waste subject to the generator requirements of subpart J of this part.

(8) Within 60 days of completion of closure of each facility for the storage

of PCB waste, the commercial storer of PCB waste shall submit to the Regional Administrator (or Director, CMD if he approved the closure plan), by registered mail, a certification that the PCB storage facility has been closed in accordance with the approved closure plan. The certification shall be signed by the owner or operator and by an independent registered professional engineer.

(9) *Closure cost estimate.* (1) A commercial storer of PCB wastes shall have a detailed estimate, in current dollars, of the cost of closing the facility in accordance with its approved closure plan. The closure cost estimate shall be in writing, be certified by the person preparing it (using the certification defined in § 761.3) and comply with all of the following criteria:

(i) The closure cost estimate shall equal the cost of final closure at the point in the PCB storage facility's active life when the extent and manner of PCB storage operations would make closure the most expensive, as indicated by the facility's closure plan.

(ii) The closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to close the facility, and the third party shall not be either a corporate parent or subsidiary of the owner or operator, or member in joint ownership of the facility.

(iii) The owner or operator shall include in the estimate the current market costs for off-site commercial disposal of the facility's maximum estimated inventory of PCB wastes, except that on-site disposal costs may be used if on-site disposal capacity will exist at the facility at all times over the life of the PCB storage facility.

(iv) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of wastes, facility structures or equipment, land, or other assets associated with the facility at the time of closure.

(2) During the active life of the PCB storage facility, the commercial storer of PCB waste shall adjust annually for inflation the closure cost estimate within 60 days prior to the anniversary date of the establishment of the financial instruments used to demonstrate financial responsibility for closure, ex-

cept that owners or operators who use the financial test or corporate guarantee shall adjust their closure cost estimates for inflation within 30 days after the close of the storer's fiscal year. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its *Survey of Current Business*. The Implicit Price Deflator for Gross National Product is included in a monthly publication titled *Economic Indicators*, which is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The inflation factor used in the latter method is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The adjustment to the closure cost estimate is then made by multiplying the most recent closure cost estimate by the latest inflation factor.

(3) Where the Regional Administrator (or the Director, CMD, if he approved the closure plan) approves a modification to the facility's closure plan, and that modification increases the cost of closure, the owner or operator shall revise the closure cost estimate no later than 30 days after the modification is approved. Any such revision shall also be adjusted for inflation in accordance with paragraph (f)(2) of this section.

(4) The owner or operator of the facility shall keep at the facility during its operating life the most recent closure cost estimate, including any adjustments resulting from inflation or from modifications to the closure plan.

(g) *Financial assurance for closure.* A commercial storer of PCB waste shall establish financial assurance for closure of each PCB storage facility that he owns or operates. In establishing financial assurance for closure, the commercial storer of PCB waste may choose from the following financial assurance mechanisms or any combination of mechanisms:

(1) The "closure trust fund," as specified in §264.143(a) of this chapter, except for paragraph (a)(3) of §264.143. For purposes of this paragraph, the following provisions also apply:

(i) Payments into the trust fund shall be made annually by the owner or operator over the remaining operating life of the facility as estimated in the closure plan, or over 3 years, whichever period is shorter. This period of time is hereafter referred to as the "pay-in period." For an existing facility, the first payment must be made within 30 calendar days after EPA has notified the facility of its conditional approval. Interim approval to operate is canceled and the application is denied if EPA does not receive verification that the payment was made in that 30-day period.

(ii) For a new facility, the first payment into the closure trust fund shall be made before EPA grants final approval of the application and before the facility may accept the initial shipment of PCB waste for commercial storage. A receipt from the trustee shall be submitted by the owner or operator to the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director CMD) before this initial delivery of PCB waste. The first payment shall be at least equal to the current closure cost estimate, divided by the number of years in the pay-in period, except as provided in paragraph (g)(7) of this section for multiple mechanisms. Subsequent payments shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by subtracting the current value of the trust fund from the current closure cost estimate, and dividing this difference by the number of years remaining in the pay-in period.

(iii) If an owner or operator of a facility existing on the effective date of this paragraph establishes a trust fund to meet the financial assurance requirements of this paragraph, and the value of the trust fund is less than the current closure cost estimate when a final approval is granted for the facility, the amount of the current closure cost estimate still to be paid into the trust fund shall be paid in over the pay-in period as defined in paragraph (g)(1)(i) of this section. Payments shall continue to be made no later than 30 days after each anniversary date of the

first payment made into the trust fund. The amount of each payment shall be determined by subtracting the current value of the trust fund from the current closure cost estimate, and dividing this difference by the number of years remaining in the pay-in period.

(iv) The submission of a trust agreement with the wording specified in §264.151(a)(1) of this chapter, including any reference to hazardous waste management facilities, shall be deemed to be in compliance with the requirement to submit a trust agreement under this subpart.

(2) The "surety bond guaranteeing payment into a closure trust fund," as specified in §264.143(b) of this chapter, including the use of the surety bond instrument specified at §264.151(b) of this chapter and the standby trust specified at §264.143(b)(3) of this chapter. The use of the surety bonds, surety bond instruments, and standby trust agreements specified in §264.143(b) and 264.151(b) of this chapter shall be deemed to be in compliance with this subpart.

(3)(i) The "surety bond guaranteeing performance of closure," as specified at §264.143(c) of this chapter, except for paragraph (c)(5) of §264.143 of this chapter. The submission and use of the surety bond instrument specified at §264.151(c) of this chapter and the standby trust specified at §264.143(c)(3) of this chapter shall be deemed to be in compliance with the requirements under this subpart relating to the use of surety bonds and standby trust funds.

(ii) For the purposes of this paragraph, and under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Liability is established by a final administrative determination pursuant to section 16 of TSCA that the owner or operator has failed to perform final closure in accordance with the closure plan and other approval or regulatory requirements when required to do so.

(4)(i) The "closure letter of credit" specified in §264.143(d) of this chapter, except for paragraph (d)(8). The submission and use of the irrevocable letter of credit instrument specified in §264.151(d) of this chapter and the

standby trust specified in §264.143(d)(3) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of letters of credit and standby trust funds.

(ii) For the purposes of this paragraph, the Regional Administrator (or the Director, CMD, if the commercial storage area is ancillary to a disposal facility approved by the Director, CMD) may draw on the letter of credit following a final administrative determination pursuant to section 16 of TSCA that the owner or operator has failed to perform final closure in accordance with the closure plan and other approval or regulatory requirements when required to do so.

(5) "Closure insurance," as specified in §264.143(e) of this chapter, utilizing the certificate of insurance for closure specified at §264.151(e) of this chapter. The use of closure insurance as specified in §264.143(e) of this chapter and the submission and use of the certificate of insurance specified in §264.151(e) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of closure insurance.

(6) The "financial test and corporate guarantee for closure," as described in §264.143(f) of this chapter, including a letter signed by the owner's or operator's chief financial officer as specified at §264.151(f) of this chapter and, if applicable, the written corporate guarantee specified at §264.151(h) of this chapter. The use of the financial test and corporate guarantee specified in §264.143(f) of this chapter, the submission and use of the letter specified in §264.151(f) of this chapter, and the submission and use of the written corporate guarantee specified at §264.151(h) of this chapter shall be deemed to be in compliance with the requirements of this subpart relating to the use of financial tests and corporate guarantees.

(7) The use of multiple financial mechanisms, as specified in §264.143(g) of this chapter is permitted.

(h) *Release of owner or operator.* Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved

closure plan, the Regional Administrator or the Director, CMD, if he approved the closure plan, will notify the owner or operator in writing that the owner or operator is no longer required by this section to maintain financial assurance for final closure of the facility, unless the Regional Administrator or the Director, CMD, if he approved the closure plan, has reason to believe that final closure has not been completed in accordance with the approved closure plan. The Regional Administrator or the Director, CMD, if he approved the closure plan, shall provide the owner or operator with a detailed written statement stating the reasons why he believed closure was not conducted in accordance with the approved closure plan.

(1) *Laboratories and samples.* (1) A laboratory is conditionally exempt from the notification and approval requirements for a commercial storer under §761.65 (d) through (h) when it stores samples held for disposal in a facility that complies with the standards in §761.65(b)(1)(i) through (b)(1)(iv).

(2) A laboratory sample is exempt from the manifesting requirements in §761.208 when:

(i) The sample is being transported to a laboratory for the purpose of testing.

(ii) The sample is being transported back to the sample collector after testing.

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing.

(iv) The sample is being stored in a laboratory before testing.

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector.

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(3) In order to qualify for the exemption in paragraph (1)(2)(i) and (1)(2)(ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with applicable U.S. Department of Transportation (DOT) or U.S. Postal Service (USPS) shipping re-

quirements, found respectively in 49 CFR 173.345 and U.S. Postal Regulations 652.2 and 652.3.

(ii) Assure that the following information accompanies the sample:

(A) The sample collector's name, mailing address, and telephone number.

(B) The laboratory's name, mailing address, and telephone number.

(C) The quantity of the sample.

(D) The date of shipment.

(E) A description of the sample.

(iii) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(4) When the concentration of the PCB sample has been determined, and its use is terminated, the sample must be properly disposed. A laboratory must either manifest the PCB waste to a disposer or commercial storer, as required under §761.208, retain a copy of each manifest, as required under §761.209, and follow up on exception reporting, as required under §761.215 (a) and (b), or return the sample to the sample collector who must then properly dispose of the sample. If the laboratory returns the sample to the sample collector, the laboratory must comply with the shipping requirements set forth in paragraph (1)(3)(i) through (1)(3)(iii) of this section.

(j) *States and the Federal Government.* States and the Federal Government are exempt from the requirements of paragraphs (f) and (g) of this section.

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§761.70 Incineration.

This section applies to facilities used to incinerate PCBs required to be incinerated by this part.

(a) *Liquid PCBs.* An incinerator used for incinerating PCBs shall be approved by an EPA Regional Administrator or the Director, Chemical Management Division pursuant to paragraph (d) of this section. Requests for approval of incinerators to be used in more than

one region must be submitted to the Director, Chemical Management Division, except for research and development involving less than 500 pounds of PCB material (see §761.60(1)(2)). Requests for approval of incinerators to be used in only one region must be submitted to the appropriate Regional Administrator. The incinerator shall meet all of the requirements specified in paragraphs (a) (1) through (9) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (d)(5) of this section. In addition, the incinerator shall meet any other requirements which may be prescribed pursuant to paragraph (d)(4) of this section.

(1) Combustion criteria shall be either of the following:

(i) Maintenance of the introduced liquids for a 2-second dwell time at 1200°C(±100°C) and 3 percent excess oxygen in the stack gas; or

(ii) Maintenance of the introduced liquids for a 1½ second dwell time at 1600°C(±100°C) and 2 percent excess oxygen in the stack gas.

(2) Combustion efficiency shall be at least 99.9 percent computed as follows:

$$\text{Combustion efficiency} = \frac{C_{CO_2}}{(C_{CO_2} + C_{CO})} \times 100$$

where

C_{CO_2} = Concentration of carbon dioxide.

C_{CO} = Concentration of carbon monoxide.

(3) The rate and quantity of PCBs which are fed to the combustion system shall be measured and recorded at regular intervals of no longer than 15 minutes.

(4) The temperatures of the incineration process shall be continuously measured and recorded. The combustion temperature of the incineration process shall be based on either direct (pyrometer) or indirect (wall thermocouple-pyrometer correlation) temperature readings.

(5) The flow of PCBs to the incinerator shall stop automatically whenever the combustion temperature drops below the temperatures specified in paragraph (a)(1) of this section.

(6) Monitoring of stack emission products shall be conducted:

(i) When an incinerator is first used for the disposal of PCBs under the provisions of this regulation;

(ii) When an incinerator is first used for the disposal of PCBs after the incinerator has been modified in a manner which may affect the characteristics of the stack emission products; and

(iii) At a minimum such monitoring shall be conducted for the following parameters:

(a) O_2 ; (b) CO; (c) CO_2 ; (d) Oxides of Nitrogen (NO_x); (e) Hydrochloric Acid (HCl); (f) Total Chlorinated Organic Content (TCOC); (g) PCBs; and (h) Total Particulate Matter.

(7) At a minimum monitoring and recording of combustion products and incineration operations shall be conducted for the following parameters whenever the incinerator is incinerating PCBs:

(i) O_2 ; (ii) CO; and (iii) CO_2 . The monitoring for O_2 and CO shall be continuous. The monitoring for CO_2 shall be periodic, at a frequency specified by the Regional Administrator or Director, Chemical Management Division.

(8) The flow of PCBs to the incinerator shall stop automatically when any one or more of the following conditions occur, unless a contingency plan is submitted by the incinerator owner or operator and approved by the Regional Administrator or Director, Chemical Management Division. The contingency plan indicates what alternative measures the incinerator owner or operator would take if any of the following conditions occur:

(i) Failure of monitoring operations specified in paragraph (a)(7) of this section;

(ii) Failure of the PCB rate and quantity measuring and recording equipment specified in paragraph (a)(3) of this section; or

(iii) Excess oxygen falls below the percentage specified in paragraph (a)(1) of this section.

(9) Water scrubbers shall be used for HCl control during PCB incineration and shall meet any performance requirements specified by the appropriate EPA Regional Administrator or the Director, Chemical Management Division. Scrubber effluent shall be monitored and shall comply with applicable effluent or pretreatment standards, and any other State and Federal laws and regulations. An alternate method of HCl control may be used if

the alternate method has been approved by the Regional Administrator or the Director, Chemical Management Division. (The HCl neutralizing capability of cement kilns is considered to be an alternate method.)

(b) *Nonliquid PCBs.* An incinerator used for incinerating nonliquid PCBs, PCB Articles, PCB Equipment, or PCB Containers shall be approved by the appropriate EPA Regional Administrator or the Director, Chemical Management Division pursuant to paragraph (d) of this section. Requests for approval of incinerators to be used in more than one region must be submitted to the Director, Chemical Management Division, except for research and development involving less than 500 pounds of PCB material (see §761.60(1)(2)). Requests for approval of incinerators to be used in only one region must be submitted to the appropriate Regional Administrator. The incinerator shall meet all of the requirements specified in paragraphs (b)(1) and (2) of this section unless a waiver from these requirements is obtained pursuant to paragraph (d)(5) of this section. In addition, the incinerator shall meet any other requirements that may be prescribed pursuant to paragraph (d)(4) of this section.

(1) The mass air emissions from the incinerator shall be no greater than 0.001g PCB/kg of the PCB introduced into the incinerator.

(2) The incinerator shall comply with the provisions of paragraphs (a)(2), (3), (4), (6), (7), (8)(i) and (ii), and (9) of this section.

(c) *Maintenance of data and records.* All data and records required by this section shall be maintained in accordance with §761.180, Records and monitoring.

(d) *Approval of incinerators.* Prior to the incineration of PCBs and PCB Items the owner or operator of an incinerator shall receive the written approval of the Agency Regional Administrator for the region in which the incinerator is located, or the Director, Chemical Management Division. Approval from the Director, Chemical Management Division may be effective in all ten EPA regions. Such approval shall be obtained in the following manner:

(1) *Application.* The owner or operator shall submit to the Regional Administrator or the Director, Chemical Management Division an application which contains:

- (i) The location of the incinerator;
- (ii) A detailed description of the incinerator including general site plans and design drawings of the incinerator;
- (iii) Engineering reports or other information on the anticipated performance of the incinerator;
- (iv) Sampling and monitoring equipment and facilities available;
- (v) Waste volumes expected to be incinerated;
- (vi) Any local, State, or Federal permits or approvals; and
- (vii) Schedules and plans for complying with the approval requirements of this regulation.

(2) *Trial burn.* (i) Following receipt of the application described in paragraph (d)(1) of this section, the Regional Administrator or the Director, Chemical Management Division shall determine if a trial burn is required and notify the person who submitted the report whether a trial burn of PCBs and PCB Items must be conducted. The Regional Administrator or the Director, Chemical Management Division may require the submission of any other information that the Regional Administrator or the Director, Chemical Management Division finds to be reasonably necessary to determine the need for a trial burn. Such other information shall be restricted to the types of information required in paragraphs (d)(1)(i) through (vii) of this section.

(ii) If the Regional Administrator or the Director, Chemical Management Division determines that a trial burn must be held, the person who submitted the report described in paragraph (d)(1) of this section shall submit to the Regional Administrator or the Director, Chemical Management Division a detailed plan for conducting and monitoring the trial burn. At a minimum, the plan must include:

- (A) Date trial burn is to be conducted;
- (B) Quantity and type of PCBs and PCB Items to be incinerated;
- (C) Parameters to be monitored and location of sampling points;

(D) Sampling frequency and methods and schedules for sample analyses; and

(E) Name, address, and qualifications of persons who will review analytical results and other pertinent data, and who will perform a technical evaluation of the effectiveness of the trial burn.

(iii) Following receipt of the plan described in paragraph (d)(2)(ii) of this section, the Regional Administrator or the Director, Chemical Management Division will approve the plan, require additions or modifications to the plan, or disapprove the plan. If the plan is disapproved, the Regional Administrator or the Director, Chemical Management Division will notify the person who submitted the plan of such disapproval, together with the reasons why it is disapproved. That person may thereafter submit a new plan in accordance with paragraph (d)(2)(ii) of this section. If the plan is approved (with any additions or modifications which the Regional Administrator or the Director, Chemical Management Division may prescribe), the Regional Administrator or the Director, Chemical Management Division will notify the person who submitted the plan of the approval. Thereafter, the trial burn shall take place at a date and time to be agreed upon between the Regional Administrator or the Director, Chemical Management Division and the person who submitted the plan.

(3) *Other information.* In addition to the information contained in the report and plan described in paragraphs (d)(1) and (2) of this section, the Regional Administrator or the Assistant Administrator for Prevention, Pesticides and Toxic Substances may require the owner or operator to submit any other information that the Regional Administrator or the Assistant Administrator for Prevention, Pesticides and Toxic Substances finds to be reasonably necessary to determine whether an incinerator shall be approved.

NOTE: The Regional Administrator will have available for review and inspection an Agency manual containing information on sampling methods and analytical procedures for the parameters required in §761.70(a) (3), (4), (6), and (7) plus any other parameters he/she may determine to be appropriate. Owners or operators are encouraged to review this

manual prior to submitting any report required in §761.70.

(4) *Contents of approval.* (i) Except as provided in paragraph (d)(5) of this section, the Regional Administrator or the Director, Chemical Management Division may not approve an incinerator for the disposal of PCBs and PCB Items unless he finds that the incinerator meets all of the requirements of paragraphs (a) and/or (b) of this section.

(ii) In addition to the requirements of paragraphs (a) and/or (b) of this section, the Regional Administrator or the Director, Chemical Management Division may include in an approval any other requirements that the Regional Administrator or the Director, Chemical Management Division finds are necessary to ensure that operation of the incinerator does not present an unreasonable risk of injury to health or the environment from PCBs. Such requirements may include a fixed period of time for which the approval is valid.

(5) *Waivers.* An owner or operator of the incinerator may submit evidence to the Regional Administrator or the Director, Chemical Management Division that operation of the incinerator will not present an unreasonable risk of injury to health or the environment from PCBs, when one or more of the requirements of paragraphs (a) and/or (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator or the Director, Chemical Management Division may in his/her discretion find that any requirement of paragraphs (a) and (b) of this section is not necessary to protect against such a risk, and may waive the requirements in any approval for that incinerator. Any finding and waiver under this paragraph must be stated in writing and included as part of the approval.

(6) *Persons approved.* An approval will designate the persons who own and who are authorized to operate the incinerator, and will apply only to such persons, except as provided in paragraph (d)(8) of this section.

(7) *Final approval.* Approval of an incinerator will be in writing and signed by the Regional Administrator or the Director, Chemical Management Divi-

sion. The approval will state all requirements applicable to the approved incinerator.

(8) *Transfer of property.* Any person who owns or operates an approved incinerator must notify EPA at least 30 days before transferring ownership in the incinerator or the property it stands upon, or transferring the right to operate the incinerator. The transferor must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA incinerator approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for the transferor's name, or EPA may require the transferee to apply for a new incinerator approval. In the latter case, the transferee must abide by the transferor's EPA approval until EPA issues the new approval to the transferee.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (16 U.S.C. 2605)

[41 FR 31542, May 31, 1979. Redesignated at 47 FR 19527, May 6, 1982, and amended at 48 FR 13185, Mar. 30, 1983; 49 FR 28181, July 10, 1984; 53 FR 12324, Apr. 15, 1988; 58 FR 15809, Mar. 24, 1993]

§761.75 Chemical waste landfills.

This section applies to facilities used to dispose of PCBs in accordance with the part.

(a) *General.* A chemical waste landfill used for the disposal of PCBs and PCB Items shall be approved by the Agency Regional Administrator pursuant to paragraph (c) of this section. The landfill shall meet all of the requirements specified in paragraph (b) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (c)(4) of this section. In addition, the landfill shall meet any other requirements that may be prescribed pursuant to paragraph (c)(3) of this section.

(b) *Technical requirements.* Requirements for chemical waste landfills used for the disposal of PCBs and PCB Items are as follows:

(1) *Soils.* The landfill site shall be located in thick, relatively impermeable formations such as large-area clay

panas. Where this is not possible, the soil shall have a high clay and silt content with the following parameters:

- (i) In-place soil thickness, 4 feet or compacted soil liner thickness, 3 feet;
- (ii) Permeability (cm/sec), equal to or less than 1×10^{-7} ;
- (iii) Percent soil passing No. 200 Sieve, >30;
- (iv) Liquid Limit, >30; and
- (v) Plasticity Index >15.

(2) *Synthetic membrane liners.* Synthetic membrane liners shall be used when, in the judgment of the Regional Administrator, the hydrologic or geologic conditions at the landfill require such a liner in order to provide at least a permeability equivalent to the soils in paragraph (b)(1) of this section. Whenever a synthetic liner is used at a landfill site, special precautions shall be taken to insure that its integrity is maintained and that it is chemically compatible with PCBs. Adequate soil underlining and soil cover shall be provided to prevent excessive stress on the liner and to prevent rupture of the liner. The liner must have a minimum thickness of 30 mils.

(3) *Hydrologic conditions.* The bottom of the landfill shall be above the historical high groundwater table as provided below. Floodplains, shorelands, and groundwater recharge areas shall be avoided. There shall be no hydraulic connection between the site and standing or flowing surface water. The site shall have monitoring wells and leachate collection. The bottom of the landfill liner system or natural in-place soil barrier shall be at least fifty feet from the historical high water table.

(4) *Flood protection.* (i) If the landfill site is below the 100-year floodwater elevation, the operator shall provide surface water diversion dikes around the perimeter of the landfill site with a minimum height equal to two feet above the 100-year floodwater elevation.

(ii) If the landfill site is above the 100-year floodwater elevation, the operators shall provide diversion structures capable of diverting all of the surface water runoff from a 24-hour, 25-year storm.

(5) *Topography.* The landfill site shall be located in an area of low-to mod-

erate relief to minimize erosion and to help prevent landslides or slumping.

(6) *Monitoring systems—(1) Water sampling.* (A) For all sites receiving PCBs, the ground and surface water from the disposal site area shall be sampled prior to commencing operations under an approval provided in paragraph (c) of this section for use as baseline data.

(B) Any surface watercourse designated by the Regional Administrator using the authority provided in paragraph (c)(3)(ii) of this section shall be sampled at least monthly when the landfill is being used for disposal operations.

(C) Any surface watercourse designated by the Regional Administrator using the authority provided in paragraph (c)(3)(ii) of this section shall be sampled for a time period specified by the Regional Administrator on a frequency of no less than once every six months after final closure of the disposal area.

(ii) *Groundwater monitor wells.* (A) If underlying earth materials are homogenous, impermeable, and uniformly sloping in one direction, only three sampling points shall be necessary. These three points shall be equally spaced on a line through the center of the disposal area and extending from the area of highest water table elevation to the area of the lowest water table elevation on the property.

(B) All monitor wells shall be cased and the annular space between the monitor zone (zone of saturation) and the surface shall be completely backfilled with Portland cement or an equivalent material and plugged with Portland cement to effectively prevent percolation of surface water into the well bore. The well opening at the surface shall have a removable cap to provide access and to prevent entrance of rainfall or stormwater runoff. The well shall be pumped to remove the volume of liquid initially contained in the well before obtaining a sample for analysis. The discharge shall be treated to meet applicable State or Federal discharge standards or recycled to the chemical waste landfill.

(iii) *Water analysis.* As a minimum, all samples shall be analyzed for the following parameters, and all data and records of the sampling and analysis

shall be maintained as required in §761.180(d)(1). Sampling methods and analytical procedures for these parameters shall comply with those specified in 40 CFR part 136 as amended in 41 FR 52779 on December 1, 1976.

- (A) PCBs.
- (B) pH.
- (C) Specific conductance.
- (D) Chlorinated organics.

(7) *Leachate collection.* A leachate collection monitoring system shall be installed above the chemical waste landfill. Leachate collection systems shall be monitored monthly for quantity and physicochemical characteristics of leachate produced. The leachate should be either treated to acceptable limits for discharge in accordance with a State or Federal permit or disposed of by another State or Federally approved method. Water analysis shall be conducted as provided in paragraph (b)(6)(iii) of this section. Acceptable leachate monitoring/collection systems shall be any of the following designs, unless a waiver is obtained pursuant to paragraph (c)(4) of this section.

(i) *Simple leachate collection.* This system consists of a gravity flow drainfield installed above the waste disposal facility liner. This design is recommended for use when semi-solid or leachable solid wastes are placed in a lined pit excavated into a relatively thick, unsaturated, homogenous layer of low permeability soil.

(ii) *Compound leachate collection.* This system consists of a gravity flow drainfield installed above the waste disposal facility liner and above a secondary installed liner. This design is recommended for use when semi-liquid or leachable solid wastes are placed in a lined pit excavated into relatively permeable soil.

(iii) *Suction lysimeters.* This system consists of a network of porous ceramic cups connected by hoses/tubing to a vacuum pump. The porous ceramic cups or suction lysimeters are installed along the sides and under the bottom of the waste disposal facility liner. This type of system works best when installed in a relatively permeable unsaturated soil immediately adjacent to the bottom and/or sides of the disposal facility.

(8) *Chemical waste landfill operations.* (i) PCBs and PCB Items shall be placed in a landfill in a manner that will prevent damage to containers or articles. Other wastes placed in the landfill that are not chemically compatible with PCBs and PCB Items including organic solvents shall be segregated from the PCBs throughout the waste handling and disposal process.

(ii) An operation plan shall be developed and submitted to the Regional Administrator for approval as required in paragraph (c) of this section. This plan shall include detailed explanations of the procedures to be used for recordkeeping, surface water handling procedures, excavation and backfilling, waste segregation burial coordinates, vehicle and equipment movement, use of roadways, leachate collection systems, sampling and monitoring procedures, monitoring wells, environmental emergency contingency plans, and security measures to protect against vandalism and unauthorized waste placements. EPA guidelines entitled "Thermal Processing and Land Disposal of Solid Waste" (39 FR 29337, Aug. 14, 1974) are a useful reference in preparation of this plan. If the facility is to be used to dispose of liquid wastes containing between 50 ppm and 500 ppm PCB, the operations plan must include procedures to determine that liquid PCBs to be disposed of at the landfill do not exceed 500 ppm PCB and measures to prevent the migration of PCBs from the landfill. Bulk liquids not exceeding 500 ppm PCBs may be disposed of provided such waste is pretreated and/or stabilized (e.g., chemically fixed, evaporated, mixed with dry inert absorbent) to reduce its liquid content or increase its solid content so that a non-flowing consistency is achieved to eliminate the presence of free liquids prior to final disposal in a landfill. PCB Container of liquid PCBs with a concentration between 50 and 500 ppm PCB may be disposed of if each container is surrounded by an amount of inert sorbent material capable of absorbing all of the liquid contents of the container.

(iii) Ignitable wastes shall not be disposed of in chemical waste landfills. Liquid ignitable wastes are wastes that have a flash point less than 60 degrees

C (140 degrees F) as determined by the following method or an equivalent method: Flash point of liquids shall be determined by a Pensky-Martens Closed Cup Tester, using the protocol specified in ASTM D 93-90, or the Setaflash Closed Tester using the protocol specified in ASTM Standard D-3278-89.

(iv) Records shall be maintained for all PCB disposal operations and shall include information on the PCB concentration in liquid wastes and the three dimensional burial coordinates for PCBs and PCB Items. Additional records shall be developed and maintained as required in §761.180.

(9) *Supporting facilities.* (i) A six foot woven mesh fence, wall, or similar device shall be placed around the site to prevent unauthorized persons and animals from entering.

(ii) Roads shall be maintained to and within the site which are adequate to support the operation and maintenance of the site without causing safety or nuisance problems or hazardous conditions.

(iii) The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials.

(c) *Approval of chemical waste landfills.* Prior to the disposal of any PCBs and PCB Items in a chemical waste landfill, the owner or operator of the landfill shall receive written approval of the Agency Regional Administrator for the Region in which the landfill is located. The approval shall be obtained in the following manner:

(1) *Initial report.* The owner or operator shall submit to the Regional Administrator an initial report which contains:

(i) The location of the landfill;

(ii) A detailed description of the landfill including general site plans and design drawings;

(iii) An engineering report describing the manner in which the landfill complies with the requirements for chemical waste landfills specified in paragraph (b) of this section;

(iv) Sampling and monitoring equipment and facilities available;

(v) Expected waste volumes of PCBs;

(vi) General description of waste materials other than PCBs that are expected to be disposed of in the landfill;

(vii) Landfill operations plan as required in paragraph (b) of this section;

(viii) Any local, State, or Federal permits or approvals; and

(ix) Any schedules or plans for complying with the approval requirements of these regulations.

(2) *Other information.* In addition to the information contained in the report described in paragraph (c)(1) of this section, the Regional Administrator may require the owner or operator to submit any other information that the Regional Administrator finds to be reasonably necessary to determine whether a chemical waste landfill should be approved. Such other information shall be restricted to the types of information required in paragraphs (c)(1) (i) through (ix) of this section.

(3) *Contents of approval.* (i) Except as provided in paragraph (c)(4) of this section the Regional Administrator may not approve a chemical waste landfill for the disposal of PCBs and PCB Items, unless he finds that the landfill meets all of the requirements of paragraph (b) of this section.

(ii) In addition to the requirements of paragraph (b) of this section, the Regional Administrator may include in an approval any other requirements or provisions that the Regional Administrator finds are necessary to ensure that operation of the chemical waste landfill does not present an unreasonable risk of injury to health or the environment from PCBs. Such provisions may include a fixed period of time for which the approval is valid.

The approval may also include a stipulation that the operator of the chemical waste landfill report to the Regional Administrator any instance when PCBs are detectable during monitoring activities conducted pursuant to paragraph (b)(6) of this section.

(4) *Waivers.* An owner or operator of a chemical waste landfill may submit evidence to the Regional Administrator that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when one or more of the requirements of paragraph (b) of this section are not met. On the basis of such

evidence and any other available information, the Regional Administrator may in his discretion find that one or more of the requirements of paragraph (b) of this section is not necessary to protect against such a risk and may waive the requirements in any approval for that landfill. Any finding and waiver under this paragraph will be stated in writing and included as part of the approval.

(5) *Persons approved.* Any approval will designate the persons who own and who are authorized to operate the chemical waste landfill, and will apply only to such persons, except as provided by paragraph (c)(7) of this section.

(6) *Final approval.* Approval of a chemical waste landfill will be in writing and will be signed by the Regional Administrator. The approval will state all requirements applicable to the approved landfill.

(7) *Transfer of property.* Any person who owns or operates an approved chemical waste landfill must notify EPA at least 30 days before transferring ownership in the property or transferring the right to conduct the chemical waste landfill operation. The transferor must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA chemical waste landfill approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for the transferor's name, or EPA may require the transferee to apply for a new chemical waste landfill approval. In the latter case, the transferee must abide by the transferor's EPA approval until EPA issues the new approval to the transferee.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

[44 FR 31942, May 31, 1979. Redesignated at 47 FR 19327, May 6, 1982, and amended at 48 FR 5720, Feb. 8, 1983; 49 FR 28191, July 10, 1984; 53 FR 12524, Apr. 15, 1988; 53 FR 21641, June 9, 1988; 57 FR 13323, Apr. 16, 1992]

§761.79 Decontamination.

(a) Any PCB Container to be decontaminated shall be decontaminated by flushing the internal surfaces of the

container three times with a solvent containing less than 50 ppm PCB. The solubility of PCBs in the solvent must be five percent or more by weight. Each rinse shall use a volume of the normal diluent equal to approximately ten (10) percent of the PCB Container capacity. The solvent may be reused for decontamination until it contains 50 ppm PCB. The solvent shall then be disposed of as a PCB in accordance with §761.60(a). Non-liquid PCBs resulting from the decontamination procedures shall be disposed of in accordance with the provisions of §761.60(a)(4).

(b) Movable equipment used in storage areas shall be decontaminated by swabbing surfaces that have contacted PCBs with a solvent meeting the criteria of paragraph (a) of this section.

NOTE: Precautionary measures should be taken to ensure that the solvent meets safety and health standards as required by applicable Federal regulations.

[44 FR 31942, May 31, 1979. Redesignated at 47 FR 19627, May 6, 1982]

Subpart E—Exemptions

§761.80 Manufacturing, processing and distribution in commerce exemptions.

(a) The Administrator grants the following petitioner(s) an exemption for 1 year to process and distribute in commerce PCBs for use as a mounting medium in microscopy:

(1) McCrone Accessories Components, Division of Walter C. McCrone Associates, Inc., 2820 South Michigan Avenue, Chicago, IL 60616.

(2) [Reserved]

(b) The Administrator grants the following petitioner(s) an exemption for 1 year to process and distribute in commerce PCBs for use as a mounting medium in microscopy, an immersion oil in low fluorescence microscopy and an optical liquid:

(1) R.P. Cargille Laboratories, Inc., 55 Commerce Road, Cedar Grove, N.J. 07009.

(2) [Reserved]

(c) The Administrator grants the following petitioner(s) an exemption for 1 year to export PCBs for use in small quantities for research and development:

(1) Accu-Standard, New Haven, CT. 06503.

(2) [Reserved]

(d) The Administrator grants the following petitioner(s) an exemption for 1 year to import (manufacture) into the United States, small quantities of existing PCB fluids from electrical equipment for analysis:

(1) Unison Transformer Services, Inc., Tarrytown, N.Y. 10591, provided each of the following conditions are met:

(i) The samples must be shipped in 5.0 ml or less, hermetically sealed vials.

(ii) The exemption is limited to no more than 250 total samples per year.

(iii) Unison makes quarterly inspections of its laboratories to ensure that proper safety procedures are being followed.

(iv) Unison annually notifies and describes to EPA its attempts to have samples analyzed abroad.

(2) [Reserved]

(e) [Reserved]

(f) The Administrator grants the following petitioner(s) an exemption for 1 year to manufacture PCBs for use in small quantities for research and development:

(1) California Bionuclear Corp., Sun Valley, CA 91352 (ME-13).

(2) Foxboro Co., North Haven, CT 06473 (ME-6).

(3) ULTRA-Scientific, Inc., Hope, RI 02831 (ME-99.1).

(4) Midwest Research Institute, Kansas City, MO 64110 (ME-70.1).

(5) Pathfinder Laboratories, St. Louis, MO 63146 (A division of Sigma Aldridge Corporation, St. Louis, MO, 63178 (ME-76).

(6) Radian Corp., Austin, TX 78768 (ME-81.2).

(7) Wellington Sciences USA, College Station, TX 77840 (ME-104.1).

(8) Accu-Standard, 25 Science Park, New Haven, CT. 06503.

(g) The Administrator grants a class exemption to all processors and distributors of PCBs in small quantities for research and development provided that the following conditions are met:

(1) All processors and distributors must maintain records of their PCB activities for a period of 5 years.

(2) Any person or company which expects to process or distribute in com-

merce 100 grams (.22 lb) or more PCBs in 1 year must report to EPA identifying the sites of PCB activities and the quantity of PCBs to be processed or distributed in commerce.

(h) The Administrator grants the following petitioner(s) a class exemption to its members for 1 year to process and distribute in commerce non-porous transformer component parts which have been decontaminated of PCB residues and to buy and sell PCB Transformers or PCB-Contaminated Transformers to which only double-rinsed, non-porous component parts have been added:

(1) Electrical Apparatus Service Association, 1331 Baur Boulevard, St. Louis, MO. 63123.

(2) [Reserved]

(i)-(l) [Reserved]

(m) The Administrator grants the following petitioner(s) an exemption for 1 year to process and export small quantities of PCBs for research and development:

(1) Chem Service, Inc., West Chester, PA 19380 (PDE-41).

(2) Foxboro Co., North Haven, CT 06473 (ME-6).

(3) PolyScience Corp., Niles, IL 60048 (PDE-178).

(4) ULTRA-Scientific, Inc., Hope, RI 02831 (PDE-252.1).

(5) Supelco, Inc., Bellefonte, PA 16823-0048 (PDE-41.2).

(6) Radian Corp., Austin, TX 78768 (PDE-182.1).

(n) The 1-year exemption granted to petitioners in paragraphs (a) through (f) and (m) of this section shall be renewed automatically unless a petitioner notifies EPA of any increase in the amount of PCBs to be processed and distributed, imported (manufactured), or exported; or of any change in the manner of processing and distributing, importing (manufacturing), or exporting of PCBs and unless EPA initiates rulemaking to terminate the exemption. Until EPA acts on the petition, the petitioner will be allowed to continue the activities for which it requests exemption.

(o) The 1-year class exemption granted to all processors and distributors of PCBs in small quantities for research and development in paragraph (g) of this section shall be renewed automati-

cally unless information is submitted affecting EPA's conclusion that the class exemption, or the activities of any individual or company included in the exemption, will not pose an unreasonable risk of injury to health or the environment. EPA will evaluate the information, issue a proposed rule for public comment, and issue a final rule affecting the class exemption or individuals or companies included in the class exemption. Until EPA issues a final rule, individuals and companies included in the class exemption will be allowed to continue processing and distributing PCBs in small quantities for research and development.

[56 FR 28999, Sept. 24, 1990]

Subpart F—(Reserved)

Subpart G—PCB Spill Cleanup Policy

Source: 52 FR 10705, Apr. 2, 1987, unless otherwise noted.

§761.120 Scoops.

(a) *General.* This policy establishes criteria EPA will use to determine the adequacy of the cleanup of spills resulting from the release of materials containing PCBs at concentrations of 50 ppm or greater. The policy applies to spills which occur after May 4, 1987.

(1) Existing spills (spills which occurred prior to May 4, 1987, are excluded from the scope of this policy for two reasons:

(i) For old spills which have already been discovered, this policy is not intended to require additional cleanup where a party has already cleaned a spill in accordance with requirements imposed by EPA through its regional offices, nor is this policy intended to interfere with ongoing litigation of enforcement actions which bring into issue PCB spills cleanup.

(ii) EPA recognizes that old spills which are discovered after the effective date of this policy will require site-by-site evaluation because of the likelihood that the site involves more pervasive PCB contamination than fresh spills and because old spills are generally more difficult to clean up than fresh spills (particularly on porous sur-

faces such as concrete). Therefore, spills which occurred before the effective date of this policy are to be decontaminated to requirements established at the discretion of EPA, usually through its regional offices.

(2) EPA expects most PCB spills subject to the TSCA PCB regulations to conform to the typical spill situations considered in developing this policy. This policy does, however, exclude from application of the final numerical cleanup standards certain spill situations from its scope: Spills directly into surface waters, drinking water, sewers, grazing lands, and vegetable gardens. These types of spills are subject to final cleanup standards to be established at the discretion of the regional office. These spills are, however, subject to the immediate notification requirements and measures to minimize further environmental contamination.

(3) For all other spills, EPA generally expects the decontamination standards of this policy to apply. Occasionally, some small percentage of spills covered by this policy may warrant more stringent cleanup requirements because of additional routes of exposure or significantly greater exposures than those assumed in developing the final cleanup standards of this policy. While the EPA regional offices have the authority to require additional cleanup in these circumstances, the Regional Administrator must first make a finding based on the specific facts of a spill that additional cleanup must occur to prevent unreasonable risk. In addition, before a final decision is made to require additional cleanup, the Regional Administrator must notify the Director, Office of Pollution Prevention and Toxics at Headquarters of his/her finding and the basis for the finding.

(4) There may also be exceptional spill situations that requires less stringent cleanup or a different approach to cleanup because of factors associated with the particular spill. These factors may mitigate expected exposures and risks or make cleanup to these requirements impracticable.

(b) *Spills that may require more stringent cleanup levels.* For spills within the scope of this policy, EPA generally retains, under §761.125, the authority to

require additional cleanup upon finding that, despite good faith efforts by the responsible party, the numerical decontamination levels in the policy have not been met. In addition, EPA foresees the possibility of exceptional spill situations in which site-specific risk factors may warrant additional cleanup to more stringent numerical decontamination levels than are required by the policy. In these situations, the Regional Administrator has the authority to require cleanup to levels lower than those included in this policy upon finding that further cleanup must occur to prevent unreasonable risk. The Regional Administrator will consult with the Director, Office of Pollution Prevention and Toxics, prior to making such a finding.

(1) For example, site-specific characteristics, such as short depth to ground water, type of soil, or the presence of a shallow well, may pose exceptionally high potential for ground water contamination by PCBs remaining after cleanup to the standards specified in this policy. Spills that pose such a high degree of potential for ground water contamination have not been excluded from the policy under paragraph (d) of this section because the presence of such potential may not be readily apparent. EPA feels that automatically excluding such spills from the scope of the policy could result in the delay of cleanup—a particularly undesirable outcome if potential ground water contamination is, in fact, a significant concern.

(2) In those situations, the Regional Administrator may require cleanup in addition to that required under §761.125 (b) and (c). However, the Regional Administrator must first make a finding, based on the specific facts of a spill, that additional cleanup is necessary to prevent unreasonable risk. In addition, before making a final decision on additional cleanup, the Regional Administrator must notify the Director of the Office of Pollution Prevention and Toxics of his finding and the basis for the finding.

(c) *Flexibility to allow less stringent or alternative requirements.* EPA retains the flexibility to allow less stringent or alternative decontamination measures based upon site-specific considerations.

EPA will exercise this flexibility if the responsible party demonstrates that cleanup to the numerical decontamination levels is clearly unwarranted because of risk-mitigating factors, that compliance with the procedural requirements or numerical standards in the policy is impracticable at a particular site, or that site-specific characteristics make the costs of cleanup prohibitive. The Regional Administrator will notify the Director of OPPT of any decision and the basis for the decision to allow less stringent cleanup. The purpose of this notification is to enable the Director of OPPT to ensure consistency of spill cleanup standards under special circumstances across the regions.

(d) *Excluded spills.* (1) Although the spill situations in paragraphs (d)(2) (i) through (vi) of this section are excluded from the automatic application of final decontamination standards under §761.125 (b) and (c), the general requirements under §761.125(a) do apply to these spills. In addition, all of these excluded situations require practicable, immediate actions to contain the area of contamination. While these situations may not always require more stringent cleanup measures, the Agency is excluding these scenarios because they will always involve significant factors that may not be adequately addressed by cleanup standards based upon typical spill characteristics.

(2) For the spill situations in paragraphs (d)(2)(i) through (vi) of this section, the responsible party shall decontaminate the spill in accordance with site-specific requirements established by the EPA regional offices.

(i) Spills that result in the direct contamination of surface waters (surface waters include, but are not limited to, "waters of the United States" as defined in Part 122 of this chapter, ponds, lagoons, wetlands, and storage reservoirs).

(ii) Spills that result in the direct contamination of sewers or sewage treatment systems.

(iii) Spills that result in the direct contamination of any private or public drinking water sources or distribution systems.

(iv) Spills which migrate to and contaminate surface waters, sewers, or drinking water supplies before cleanup has been completed in accordance with this policy.

(v) Spills that contaminate animal grazing lands.

(vi) Spills that contaminate vegetable gardens.

(e) *Relationship of policy to other statutes.* (1) This policy does not affect cleanup standards or requirements for the reporting of spills imposed, or to be imposed, under other Federal statutory authorities, including but not limited to, the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA). Where more than one requirement applies, the stricter standard must be met.

(2) The Agency recognizes that the existence of this policy will inevitably result in attempts to apply the standards to situations within the scope of other statutory authorities. However, other statutes require the Agency to consider different or alternative factors in determining appropriate corrective actions. In addition, the types and magnitudes of exposures associated with sites requiring corrective action under other statutes often involve important differences from those expected of the typical, electrical equipment-type spills considered in developing this policy. Thus, cleanups under other statutes, such as RCRA corrective actions or remedial and response actions under SARA may result in different outcomes.

§761.123 Definitions.

For purposes of this policy, certain words and phrases are used to denote specific materials, procedures, or circumstances. The following definitions are provided for purposes of clarity and are not to be taken as exhaustive lists of situations and materials covered by the policy.

Double wash/rinse means a minimum requirement to cleanse solid surfaces (both impervious and nonimpervious) two times with an appropriate solvent

or other material in which PCBs are at least 5 percent soluble (by weight). A volume of PCB-free fluid sufficient to cover the contaminated surface completely must be used in each wash/rinse. The wash/rinse requirement does not mean the mere spreading of solvent or other fluid over the surface, nor does the requirement mean a once-over wipe with a soaked cloth. Precautions must be taken to contain any runoff resulting from the cleansing and to dispose properly of wastes generated during the cleansing.

High-concentration PCBs means PCBs that contain 500 ppm or greater PCBs, or those materials which EPA requires to be assumed to contain 500 ppm or greater PCBs in the absence of testing.

High-contact industrial surface means a surface in an industrial setting which is repeatedly touched, often for relatively long periods of time. Manned machinery and control panels are examples of high-contact industrial surfaces. High-contact industrial surfaces are generally of impervious solid material. Examples of low-contact industrial surfaces include ceilings, walls, floors, roofs, roadways and sidewalks in the industrial area, utility poles, unmanned machinery, concrete pads beneath electrical equipment, curbing, exterior structural building components, indoor vaults, and pipes.

High-contact residential/commercial surface means a surface in a residential/commercial area which is repeatedly touched, often for relatively long periods of time. Doors, wall areas below 6 feet in height, uncovered flooring, windowwalls, fencing, bannisters, stairs, automobiles, and children's play areas such as outdoor patios and sidewalks are examples of high-contact residential/commercial surfaces. Examples of low-contact residential/commercial surfaces include interior ceilings, interior wall areas above 6 feet in height, roofs, asphalt roadways, concrete roadways, wooden utility poles, unmanned machinery, concrete pads beneath electrical equipment, curbing, exterior structural building components (e.g., aluminum/vinyl siding, cinder block, asphalt tiles), and pipes.

Impervious solid surfaces means solid surfaces which are nonporous and thus unlikely to absorb spilled PCBs within

the short period of time required for cleanup of spills under this policy. Impervious solid surfaces include, but are not limited to, metals, glass, aluminum siding, and enameled or laminated surfaces.

Low-concentration PCBs means PCBs that are tested and found to contain less than 500 ppm PCBs, or those PCB-containing materials which EPA requires to be assumed to be at concentrations below 500 ppm (i.e., untested mineral oil dielectric fluid).

Nonimpervious solid surfaces means solid surfaces which are porous and are more likely to absorb spilled PCBs prior to completion of the cleanup requirements prescribed in this policy. Nonimpervious solid surfaces include, but are not limited to, wood, concrete, asphalt, and plasterboard.

Nonrestricted access areas means any area other than restricted access, outdoor electrical substations, and other restricted access locations, as defined in this section. In addition to residential/commercial areas, these areas include unrestricted access rural areas (areas of low density development and population where access is uncontrolled by either man-made barriers or naturally occurring barriers, such as rough terrain, mountains, or cliffs).

Other restricted access (nonsubstation) locations means areas other than electrical substations that are at least 0.1 kilometer (km) from a residential/commercial area and limited by man-made barriers (e.g., fences and walls) to substantially limited by naturally occurring barriers such as mountains, cliffs, or rough terrain. These areas generally include industrial facilities and extremely remote rural locations. (Areas where access is restricted but are less than 0.1 km from a residential/commercial area are considered to be residential/commercial areas.)

Outdoor electrical substations means outdoor, fenced-off, and restricted access areas used in the transmission and/or distribution of electrical power. Outdoor electrical substations restrict public access by being fenced or walled off as defined under §761.30(d)(1)(ii). For purposes of this TSCA policy, outdoor electrical substations are defined as being located at least 0.1 km from a residential/commercial area. Outdoor

fenced-off and restricted access areas used in the transmission and/or distribution of electrical power which are located less than 0.1 km from a residential/commercial area are considered to be residential/commercial areas.

PCBs means polychlorinated biphenyls as defined under §761.3. As specified under §761.1(b), no requirements may be avoided through dilution of the PCB concentration.

Requirements and standards means:

(1) "Requirements" as used in this policy refers to both the procedural responses and numerical decontamination levels set forth in this policy as constituting adequate cleanup of PCBs.

(2) "Standards" refers to the numerical decontamination levels set forth in this policy.

Residential/commercial areas means those areas where people live or reside, or where people work in other than manufacturing or farming industries. Residential areas include housing and the property on which housing is located, as well as playgrounds, roadways, sidewalks, parks, and other similar areas within a residential community. Commercial areas are typically accessible to both members of the general public and employees and include public assembly properties, institutional properties, stores, office buildings, and transportation centers.

Responsible party means the owner of the PCB equipment, facility, or other source of PCBs or his/her designated agent (e.g., a facility manager or foreman).

Soil means all vegetation, soils and other ground media, including but not limited to, sand, grass, gravel, and oyster shells. It does not include concrete and asphalt.

Spill means both intentional and unintentional spills, leaks, and other uncontrolled discharges where the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source, as well as the contamination resulting from those releases. This policy applies to spills of 50 ppm or greater PCBs. The concentration of PCBs spilled is determined by the PCB concentration in the material spilled as opposed to the concentration of PCBs in the material onto which the

PCBs were spilled. Where a spill of untested mineral oil occurs, the oil is presumed to contain greater than 50 ppm, but less than 500 ppm PCBs and is subject to the relevant requirements of this policy.

Spill area means the area of soil on which visible traces of the spill can be observed plus a buffer zone of 1 foot beyond the visible traces. Any surface or object (e.g., concrete sidewalk or automobile) within the visible traces area or on which visible traces of the spilled material are observed is included in the spill area. This area represents the minimum area assumed to be contaminated by PCBs in the absence of precleanup sampling data and is thus the minimum area which must be cleaned.

Spill boundaries means the actual area of contamination as determined by postcleanup verification sampling or by precleanup sampling to determine actual spill boundaries. EPA can require additional cleanup when necessary to decontaminate all areas within the spill boundaries to the levels required in this policy (e.g., additional cleanup will be required if postcleanup sampling indicates that the area decontaminated by the responsible party, such as the spill area as defined in this section, did not encompass the actual boundaries of PCB contamination).

Standard wipe test means, for spills of high-concentration PCBs on solid surfaces, a cleanup to numerical surface standards and sampling by a standard wipe test to verify that the numerical standards have been met. This definition constitutes the minimum requirements for an appropriate wipe testing protocol. A standard-size template (10 centimeters (cm) x 10 cm) will be used to delineate the area of cleanup; the wiping medium will be a gauze pad or glass wool of known size which has been saturated with hexane. It is important that the wipe be performed very quickly after the hexane is exposed to air. EPA strongly recommends that the gauze (or glass wool) be prepared with hexane in the laboratory and that the wiping medium be stored in sealed glass vials until it is used for the wipe test. Further, EPA requires the collection and testing of field blanks and replicates.

[52 FR 10705, Apr. 2, 1987; 52 FR 23397, June 19, 1987]

§761.125 Requirements for PCB spill cleanup.

(a) *General.* Unless expressly limited, the reporting, disposal, and precleanup sampling requirements in paragraphs (a) (1) through (3) of this section apply to all spills of PCBs at concentrations of 50 ppm or greater which are subject to decontamination requirements under TSCA, including those spills listed under §761.120(b) which are excluded from the cleanup standards at paragraphs (b) and (c) of this section.

(1) *Reporting requirements.* The reporting in paragraphs (a)(1) (i) through (iv) of this section is required in addition to applicable reporting requirements under the Clean Water Act (CWA) or the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA). For example, under the National Contingency Plan all spills involving 10 pounds or more by weight of PCBs must currently be reported to the National Response Center (1-800-424-8802). The requirements in paragraphs (a)(1) (i) through (iv) of this section are designed to be consistent with existing reporting requirements to the extent possible so as to minimize reporting burdens on governments as well as the regulated community.

(i) Where a spill directly contaminates surface water, sewers, or drinking water supplies, as discussed under §761.120(d), the responsible party shall notify the appropriate EPA regional office (the Office of Prevention, Pesticides and Toxic Substances Branch) and obtain guidance for appropriate cleanup measures in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(ii) Where a spill directly contaminates grazing lands or vegetable gardens, as discussed under §761.120(d), the responsible party shall notify the appropriate EPA regional office (the Office of Prevention, Pesticides and Toxic Substances Branch) and proceed with the immediate requirements specified under paragraph (b) or (c) of this section, depending on the source of the spill, in the shortest possible time after

discovery, but in no case later than 24 hours after discovery.

(iii) Where a spill exceeds 10 pounds of PCBs by weight and is not addressed in paragraph (a)(1) (i) or (ii) of this section, the responsible party will notify the appropriate EPA regional office (Pesticides and Toxic Substances Branch) and proceed to decontaminate the spill area in accordance with this TSCA policy in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(iv) Spills of 10 pounds or less, which are not addressed in paragraph (a)(1) (i) or (ii) of this section, must be cleaned up in accordance with this policy (in order to avoid EPA enforcement liability), but notification of EPA is not required.

(2) *Disposal of cleanup debris and materials.* All concentrated soils, solvents, rags, and other materials resulting from the cleanup of PCBs under this policy shall be properly stored, labeled, and disposed of in accordance with the provisions of §761.60.

(3) *Determination of spill boundaries in the absence of visible traces.* For spills where there are insufficient visible traces yet there is evidence of a leak or spill, the boundaries of the spill are to be determined by using a statistically based sampling scheme.

(b) *Requirements for cleanup of low-concentration spills which involve less than 1 pound of PCBs by weight (less than 270 gallons of untested mineral oil)—*

(1) *Decontamination requirements.* Spills of less than 270 gallons of untested mineral oil, low-concentration PCBs, as defined under §761.123, which involve less than 1 pound of PCBs by weight (e.g., less than 270 gallons of untested mineral oil containing less than 500 ppm PCBs) shall be cleaned in the following manner:

(i) Solid surfaces must be double washed/rinsed (as defined under §761.123); except that all indoor, residential surfaces other than vault areas must be cleaned to 10 micrograms per 100 square centimeters (10 µg/100 cm²) by standard commercial wipe tests.

(ii) All soil within the spill area (i.e., visible traces of soil and a buffer of 1 lateral foot around the visible traces) must be excavated, and the ground be restored to its original configuration

by back-filling with clean soil (i.e., containing less than 1 ppm PCBs).

(iii) Requirements of paragraphs (b)(1) (i) and (ii) of this section must be completed within 48 hours after the responsible party was notified or became aware of the spill.

(2) *Effect of emergency or adverse weather.* Completion of cleanup may be delayed beyond 48 hours in case of circumstances including but not limited to, civil emergency, adverse weather conditions, lack of access to the site, and emergency operating conditions. The occurrence of a spill on a weekend or overtime costs are not acceptable reasons to delay response. Completion of cleanup may be delayed only for the duration of the adverse conditions. If the adverse weather conditions, or time lapse due to other emergency, has left insufficient visible traces, the responsible party must use a statistically based sampling scheme to determine the spill boundaries as required under paragraph (a)(3) of this section.

(3) *Records and certification.* At the completion of cleanup, the responsible party shall document the cleanup with records and certification of decontamination. The records and certification must be maintained for a period of 5 years. The records and certification shall consist of the following:

(i) Identification of the source of the spill (e.g., type of equipment).

(ii) Estimated or actual date and time of the spill occurrence.

(iii) The date and time cleanup was completed or terminated (if cleanup was delayed by emergency or adverse weather: the nature and duration of the delay).

(iv) A brief description of the spill location.

(v) Precleanup sampling data used to establish the spill boundaries if required because of insufficient visible traces, and a brief description of the sampling methodology used to establish the spill boundaries.

(vi) A brief description of the solid surfaces cleaned and of the double wash/rinse method used.

(vii) Approximate depth of soil excavation and the amount of soil removed.

(viii) A certification statement signed by the responsible party stating that the cleanup requirements have

been met and that the information contained in the record is true to the best of his/her knowledge.

(ix) While not required for compliance with this policy, the following information would be useful if maintained in the records:

(A) Additional pre- or post-cleanup sampling.

(B) The estimated cost of the cleanup by man-hours, dollars, or both.

(c) *Requirements for cleanup of high-concentration spills and low-concentration spills involving 1 pound or more PCBs by weight (270 gallons or more of untested mineral oil).* Cleanup of low-concentration spills involving 1 lb or more PCBs by weight and of all spills of materials other than low-concentration materials shall be considered complete if all of the immediate requirements, cleanup standards, sampling, and recordkeeping requirements of paragraphs (c) (1) through (5) of this section are met.

(1) *Immediate requirements.* The four actions in paragraphs (c)(1) (i) through (iv) of this section must be taken as quickly as possible and within no more than 24 hours (or within 48 hours for PCB Transformers) after the responsible party was notified or became aware of the spill, except that actions described in paragraphs (c)(1) (ii) through (iv) of this section can be delayed beyond 24 hours if circumstances (e.g., civil emergency, hurricane, tornado, or other similar adverse weather conditions, lack of access due to physical impossibility, or emergency operating conditions) so require for the duration of the adverse conditions. The occurrence of a spill on a weekend or overtime costs are not acceptable reasons to delay response. Owners of spilled PCBs who have delayed cleanup because of these types of circumstances must keep records documenting the fact that circumstances precluded rapid response.

(i) The responsible party shall notify the EPA regional office and the NRC as required by §761.125(a)(1) or by other applicable statutes.

(ii) The responsible party shall effectively cordon off or otherwise delineate and restrict an area encompassing any visible traces plus a 3-foot buffer and place clearly visible signs advising per-

sons to avoid the area to minimize the spread of contamination as well as the potential for human exposure.

(iii) The responsible party shall record and document the area of visible contamination, noting the extent of the visible trace area and the center of the visible trace area. If there are no visible traces, the responsible party shall record this fact and contact the regional office of the EPA for guidance in completing statistical sampling of the spill area to establish spill boundaries.

(iv) The responsible party shall initiate cleanup of all visible traces of the fluid on hard surfaces and initiate removal of all visible traces of the spill on soil and other media, such as gravel, sand, oyster shells, etc.

(v) If there has been a delay in reaching the site and there are insufficient visible traces of PCBs remaining at the spill site, the responsible party must estimate (based on the amount of material missing from the equipment or container) the area of the spill and immediately cordon off the area of suspect contamination. The responsible party must then utilize a statistically based sampling scheme to identify the boundaries of the spill area as soon as practicable.

(vi) Although this policy requires certain immediate actions, as described in paragraphs (c)(1)(i) through (iv) of this section, EPA is not placing a time limit on completion of the cleanup effort since the time required for completion will vary from case to case. However, EPA expects that decontamination will be achieved promptly in all cases and will consider promptness of completion in determining whether the responsible party made good faith efforts to clean up in accordance with this policy.

(2) *Requirements for decontaminating spills in outdoor electrical substations.* Spills which occur in outdoor electrical substations, as defined under §761.123, shall be decontaminated in accordance with paragraphs (c)(2)(i) and (ii) of this section. Conformance to the cleanup standards under paragraphs (c)(2)(i) and (ii) of this section shall be verified by post-cleanup sampling as specified under §761.130. At such times as outdoor electrical substations are con-

verted to another use, the spill site shall be cleaned up to the nonrestricted access requirements under paragraph (c)(4) of this section.

(i) Contaminated solid surfaces (both impervious and non-impervious) shall be cleaned to a PCB concentration of 100 micrograms (μg)/100 square centimeters (cm^2) (as measured by standard wipe tests).

(ii) At the option of the responsible party, soil contaminated by the spill will be cleaned either to 25 ppm PCBs by weight, or to 50 ppm PCBs by weight provided that a label or notice is visibly placed in the area. Upon demonstration by the responsible party that cleanup to 25 ppm or 50 ppm will jeopardize the integrity of the electrical equipment at the substation, the EPA regional office may establish an alternative cleanup method or level and place the responsible party on a reasonably timely schedule for completion of cleanup.

(3) *Requirements for decontaminating spills in other restricted access areas.* Spills which occur in restricted access locations other than outdoor electrical substations, as defined under §761.123, shall be decontaminated in accordance with paragraphs (c)(3) (i) through (v) of this section. Conformance to the cleanup standards in paragraphs (c)(3) (i) through (v) of this section shall be verified by postcleanup sampling as specified under §761.130. At such times as restricted access areas other than outdoor electrical substations are converted to another use, the spill site shall be cleaned up to the nonrestricted access area requirements of paragraph (c)(4) of this section.

(i) High-contact solid surfaces, as defined under §761.163 shall be cleaned to 10 $\mu\text{g}/100 \text{ cm}^2$ (as measured by standard wipe tests).

(ii) Low-contact, indoor, impervious solid surfaces will be decontaminated to 10 $\mu\text{g}/100 \text{ cm}^2$.

(iii) At the option of the responsible party, low-contact, indoor, nonimpervious surfaces will be cleaned either to 10 $\mu\text{g}/100 \text{ cm}^2$ or to 100 $\mu\text{g}/100 \text{ cm}^2$ and encapsulated. The Regional Administrator, however, retains the authority to disallow the encapsulation option for a particular spill situation upon finding that the uncertainties associ-

ated with that option pose special concerns at that site. That is, the Regional Administrator would not permit encapsulation if he/she determined that if the encapsulation failed the failure would create an imminent hazard at the site.

(iv) Low-contact, outdoor surfaces (both impervious and nonimpervious) shall be cleaned to 100 $\mu\text{g}/100 \text{ cm}^2$.

(v) Soil contaminated by the spill will be cleaned to 25 ppm PCBs by weight.

(4) *Requirements for decontaminating spills in nonrestricted access areas.* Spills which occur in nonrestricted access locations, as defined under §761.123, shall be decontaminated in accordance with paragraphs (c)(4)(i) through (v) of this section. Conformance to the cleanup standards at paragraphs (c)(4)(i) through (v) of this section shall be verified by postcleanup sampling as specified under §761.130.

(i) Furnishings, toys, and other easily replaceable household items shall be disposed of in accordance with the provisions of §761.60 and replaced by the responsible party.

(ii) Indoor solid surfaces and high-contact outdoor solid surfaces, defined as high contact residential/commercial surfaces under §761.123, shall be cleaned to 10 $\mu\text{g}/100 \text{ cm}^2$ (as measured by standard wipe tests).

(iii) Indoor vault areas and low-contact, outdoor, impervious solid surfaces shall be decontaminated to 10 $\mu\text{g}/100 \text{ cm}^2$.

(iv) At the option of the responsible party, low-contact, outdoor, nonimpervious solid surfaces shall be either cleaned to 10 $\mu\text{g}/100 \text{ cm}^2$ or cleaned to 100 $\mu\text{g}/100 \text{ cm}^2$ and encapsulated. The Regional Administrator, however, retains the authority to disallow the encapsulation option for a particular spill situation upon finding that the uncertainties associated with that option pose special concerns at that site. That is, the Regional Administrator would not permit encapsulation if he/she determined that if the encapsulation failed the failure would create an imminent hazard at the site.

(v) Soil contaminated by the spill will be decontaminated to 10 ppm PCBs by weight provided that soil is excavated to a minimum depth of 10 inches.

The excavated soil will be replaced with clean soil, i.e., containing less than 1 ppm PCBs, and the spill site will be restored (e.g., replacement of turf).

(5) *Records.* The responsible party shall document the cleanup with records of decontamination. The records must be maintained for a period of 5 years. The records and certification shall consist of the following:

(i) Identification of the source of the spill, e.g., type of equipment.

(ii) Estimated or actual date and time of the spill occurrence.

(iii) The date and time cleanup was completed or terminated (if cleanup was delayed by emergency or adverse weather: the nature and duration of the delay).

(iv) A brief description of the spill location and the nature of the materials contaminated. This information should include whether the spill occurred in an outdoor electrical substation, other restricted access location, or in a nonrestricted access area.

(v) Precleanup sampling data used to establish the spill boundaries if required because of insufficient visible traces and a brief description of the sampling methodology used to establish the spill boundaries.

(vi) A brief description of the solid surfaces cleaned.

(vii) Approximate depth of soil excavation and the amount of soil removed.

(viii) Postcleanup verification sampling data and, if not otherwise apparent from the documentation, a brief description of the sampling methodology and analytical technique used.

(ix) While not required for compliance with this policy, information on the estimated cost of cleanup (by man-hours, dollars, or both) would be useful if maintained in the records.

(52 FR 10706, Apr. 2, 1987, as amended at 53 FR 40894, Oct. 19, 1988)

§761.130 Sampling requirements.

Postcleanup sampling is required to verify the level of cleanup under §761.125(c) (2) through (4). The responsible party may use any statistically valid, reproducible, sampling scheme (either random samples or grid samples) provided that the requirements of paragraphs (a) and (b) of this section are satisfied.

(a) The sampling area is the greater of (1) an area equal to the area cleaned plus an additional 1-foot boundary, or (2) an area 20 percent larger than the original area of contamination.

(b) The sampling scheme must ensure 95 percent confidence against false positives.

(c) The number of samples must be sufficient to ensure that areas of contamination of a radius of 2 feet or more within the sampling area will be detected, except that the minimum number of samples is 3 and the maximum number of samples is 40.

(d) The sampling scheme must include calculation for expected variability due to analytical error.

(e) EPA recommends the use of a sampling scheme developed by the Midwest Research Institute (MRI) for use in EPA enforcement inspections: "Verification of PCB Spill Cleanup by Sampling and Analysis." Guidance for the use of this sampling scheme is available in the MRI report "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup." Both the MRI sampling scheme and the guidance document are available from the TSCA Assistance Office, Environmental Protection Agency, Rm. E-543, 401 M St. SW., Washington, DC 20460 (202-554-1404). The major advantage of this sampling scheme is that it is designed to characterize the degree of contamination within the entire sampling area with a high degree of confidence while using fewer samples than any other grid or random sampling scheme. This sampling scheme also allows some sites to be characterized on the basis of composite samples.

(f) EPA may, at its discretion, take samples from any spill site. If EPA's sampling indicates that the remaining concentration level exceeds the required level, EPA will require further cleanup. For this purpose, the numerical level of cleanup required for spills cleaned in accordance with § 761.125(b) is deemed to be the equivalent of numerical cleanup requirements required for cleanups under § 761.125(c)(2) through (4). Using its best engineering judgment, EPA may sample a statistically valid random or grid sampling technique, or both. When using engineering judgment or random "grab"

samples, EPA will take into account that there are limits on the power of a grab sample to dispute statistically based sampling of the type required of the responsible party. EPA headquarters will provide guidance to the EPA regions on the degree of certainty associated with various grab sample results.

§ 761.135 Effect of compliance with this policy and enforcement.

(a) Although a spill of material containing 50 ppm or greater PCBs is considered improper PCB disposal, this policy establishes requirements that EPA considers to be adequate cleanup of the spilled PCBs. Cleanup in accordance with this policy means compliance with the procedural as well as the numerical requirements of this policy. Compliance with this policy creates a presumption against both enforcement action for penalties and the need for further cleanup under TSCA. The Agency reserves the right, however, to initiate appropriate action to compel cleanup where, upon review of the records of cleanup or EPA sampling following cleanup, EPA finds that the decontamination levels in the policy have not been achieved. The Agency also reserves the right to seek penalties where the Agency believes that the responsible party has not made a good faith effort to comply with all provisions of this policy, such as prompt notification of EPA of a spill, recordkeeping, etc.

(b) EPA's exercise of enforcement discretion does not preclude enforcement action under other provisions of TSCA or any other Federal statute. This includes, even in cases where the numerical decontamination levels set forth in this policy have been met, civil or criminal action for penalties where EPA believes the spill to have been the result of gross negligence or knowing violation.

Subparts H and I—(Reserved)

Subpart J—General Records and Reports

§ 761.180 Records and monitoring.

This section contains recordkeeping and reporting requirements that apply

to PCBs, PCB Items, and PCB storage and disposal facilities that are subject to the requirements of the part.

(a) *PCBs and PCB Items in service or projected for disposal.* Beginning February 5, 1990, each owner or operator of a facility, other than a commercial storer or a disposer of PCB waste, using or storing at any one time at least 45 kilograms (99.4 pounds) of PCBs contained in PCB Container(s), or one or more PCB Transformers, or 50 or more PCB Large High or Low Voltage Capacitors shall develop and maintain at the facility, or a central facility provided they are maintained at that facility, all annual records and the written annual document log of the disposition of PCBs and PCB Items. The written annual document log must be prepared for each facility by July 1 covering the previous calendar year (January through December). The annual document log shall be maintained for at least 3 years after the facility ceases using or storing PCBs and PCB Items in the quantities prescribed in this paragraph. Annual records (manifests and certificates of disposal) shall be maintained for the same period. The annual records and the annual document log shall be available for inspection at the facility where they are maintained by authorized representatives of EPA during normal business hours, and each owner or operator of a facility subject to these requirements shall know the location of these records. All records and annual documents required to be prepared and maintained by this section prior to February 5, 1990 shall continue to be maintained at the facility for the same time as the annual records and the annual document log. The annual document required for 1989 shall cover the period from January 1, 1989 to February 5, 1990.

(1) The annual records shall include the following:

(i) All signed manifests generated by the facility during the calendar year.

(ii) All Certificates of Disposal that have been received by the facility during the calendar year.

(2) The written annual document log shall include the following:

(i) The name, address, and EPA identification number of the facility cov-

ered by the annual document log and the calendar year covered by the annual document log.

(ii) The unique manifest number of every manifest generated by the facility during the calendar year, and from each manifest and for unmanifested waste that may be stored at the facility, the following information:

(A) For bulk PCB waste (e.g., in a tanker or truck), its weight in kilograms, the first date it was removed from service for disposal, the date it was placed into transport for off-site storage or disposal, and the date of disposal, if known.

(B) The serial number (if available) or other means of identifying each PCB Article (e.g., transformer or capacitor), the weight in kilograms of the PCB waste in each transformer or capacitor, the date it was removed from service for disposal, the date it was placed in transport for off-site storage or disposal, and the date of disposal, if known.

(C) A unique number identifying each PCB Container, a description of the contents of each PCB Container, such as liquid, soil, cleanup debris, etc., including the total weight of the material in kilograms in each PCB Container, the first date material placed in each PCB Container was removed from service for disposal, and the date each PCB Container was placed in transport for off-site storage or disposal, and the date of disposal (if known).

(D) A unique number identifying each PCB Article Container, a description of the contents of each PCB Article Container, such as pipes, capacitors, electric motors, pumps, etc., including the total weight in kilograms of the content of each PCB Article Container, the first date a PCB Article placed in each PCB Article Container was removed from service for disposal, and the date the PCB Article Container was placed in transport for off-site storage or disposal, and the date of disposal (if known.)

(iii) The total number by specific type of PCB Articles and the total weight in kilograms of PCBs in PCB Articles, the total number of PCB Article Containers and total weight in kilograms of the contents of PCB Article Containers, the total number of PCB

Containers and the total weight in kilograms of the contents of PCB Containers, and the total weight in kilograms of bulk PCB waste that was placed into storage for disposal or disposed during the calendar year.

(iv) The total number of PCB Transformers and total weight in kilograms of PCBs contained in the transformers remaining in service at the end of the calendar year.

(v) The total number of Large High or Low Voltage PCB Capacitors remaining in service at the end of the calendar year.

(vi) The total weight in kilograms of any PCBs and PCB Items in PCB Containers, including the identification of container contents, remaining in service at the facility at the end of the calendar year.

(vii) For any PCBs or PCB Item received from or shipped to another facility owned or operated by the same generator, the information required under paragraph (a)(2)(ii)(A) through (a)(2)(ii)(D) of this section.

(viii) A record of each telephone call, or other means of verification agreed upon by both parties, made to each designated commercial storer or designated disposer to confirm receipt of PCB waste transported by an independent transporter, as required by §761.208.

(b) *Disposers and commercial storers of PCB waste.* Beginning February 5, 1990, each owner or operator of a facility (including high efficiency boiler operations) used for the commercial storage or disposal of PCBs and PCB Items shall maintain annual records on the disposition of all PCBs and PCB items at the facility and prepare and maintain a written annual document log that includes the information required by paragraphs (b)(2) of this section for PCBs and PCB Items that were handled as PCB waste at the facility. The written annual document log shall be prepared by July 1 for the previous calendar year (January through December). The written annual document log shall be maintained at each facility for no longer used for the storage or disposal of PCBs and PCB Items except that, in the case of chemical waste landfills, the annual document log shall be maintained at least 20 years after the chem-

ical waste landfill is no longer used for the disposal of PCBs and PCB Items. The annual records shall be maintained for the same period. The annual records and written annual document log shall be available at the facility for inspection by authorized representatives of the EPA. All records and annual documents required to be prepared and maintained by this section prior to February 5, 1990 shall continue to be maintained at the facility for the same time as the annual records and the annual document log. The annual document for 1989 shall cover the period from January 1, 1989 to February 5, 1990. From the written annual document log the owner or operator of a facility must prepare the annual report containing the information required by paragraphs (b)(3)(i) through (b)(3)(vi) of this section for PCBs and PCB Items that were handled as PCB waste at the facility during the previous calendar year (January through December). The annual report must be submitted by July 15 of each year for the preceding calendar year. If the facility ceases commercial PCB storage or disposal operations, the owner or operator of the facility shall provide at least 60 days advance written notice to the Regional Administrator for the region in which the facility is located of the date the facility intends to begin closure.

(1) The annual records shall include the following:

(i) All signed manifests generated or received at the facility during the calendar year.

(ii) All Certificates of Disposal that have been generated or received by the facility during the calendar year.

(2) The written annual document log shall include the following:

(i) The name, address, and EPA identification number of the storage or disposal facility covered by the annual document log and the calendar year covered by the annual document log.

(ii) For each manifest generated or received by the facility during the calendar year, the unique manifest number and the name and address of the facility that generated the manifest and the following information:

(A) For bulk PCB waste (e.g., in a tanker or truck), its weight in kilograms, the first date PCB waste placed

in the tanker or truck was removed from service for disposal, the date it was received at the facility, the date it was placed in transport for off-site disposal (if applicable), and the date of disposal, (if known).

(B) The serial number or other means of identifying each PCB Article, not in a PCB Container or PCB Article Container, the weight in kilograms of the PCB waste in the PCB Article, the date it was removed from service for disposal, the date it was received at the facility, the date it was placed in transport for off-site disposal (if applicable), and the date of disposal (if known).

(C) The unique number assigned by the generator identifying each PCB Container, a description of the contents of each PCB Container, such as liquid, soil, cleanup debris, etc., including the total weight of the PCB waste in kilograms in each PCB Container, the first date PCB waste placed in each PCB Container was removed from service for disposal, the date it was received at the facility, the date each PCB Container was placed in transport for off-site storage or disposal (as applicable), and the date the PCB Container was disposed of (if known).

(D) The unique number assigned by the generator identifying each PCB Article Container, a description of the contents of each PCB Article Container, such as pipes, capacitors, electric motors, pumps, etc., including the total weight in kilograms of the PCB waste in each PCB Article Container, the first date a PCB Article placed in each PCB Article Container was removed from service for disposal, the date it was received at the facility, the date each PCB Article Container was placed in transport for off-site storage or disposal (as applicable), and the date the PCB Article Container was disposed of (if known).

(E) Disposers of PCB waste shall include the confirmed date of disposal for items in paragraphs (b)(2)(ii)(A) through (b)(2)(ii)(D) of this section.

(iii) For any PCB waste disposed at a facility that generated the PCB waste or any PCB waste that was not manifested to the facility, the information required under paragraph (b)(2)(ii)(A) through (b)(2)(ii)(E) of this section.

(3) The owner or operator of a PCB disposal or commercial storage facility shall submit an annual report, which briefly summarizes the records and annual document log required to be maintained and prepared under paragraphs (b)(1) and (b)(2) of this section, to the Regional Administrator of the EPA region in which the facility is located by July 15 of each year, beginning with July 15, 1991. The first annual report submitted on July 15, 1991, shall be for the period starting February 5, 1990 and ending December 31, 1990. The annual report shall contain no confidential business information. The annual report shall consist of the information listed in paragraphs (b)(3)(i) through (b)(3)(vi) of this section.

(i) The name, address, and EPA identification number of the facility covered by the annual report for the calendar year.

(ii) A list of the numbers of all signed manifests of PCB waste initiated or received by the facility during that year.

(iii) The total weight in kilograms of bulk PCB waste, PCB waste in PCB Transformers, PCB waste in PCB Large High or Low Voltage Capacitors, PCB waste in PCB Article Containers, and PCB waste in PCB Containers in storage at the facility at the beginning of the calendar year, received or generated at the facility, transferred to another facility, or disposed of at the facility during the calendar year. The information must be provided for each of these categories, as appropriate.

(iv) The total number of PCB Transformers, the total number of PCB Large High or Low Voltage Capacitors, the total number of PCB Article Containers, and the total number of PCB Containers in storage at the facility at the beginning of the calendar year, received or generated at the facility, transferred to another facility, or disposed of at the facility during the calendar year. The information must be provided for each of these categories, as appropriate.

(v) The total weight in kilograms of each of the following PCB categories: bulk PCB waste, PCB waste in PCB Transformers, PCB waste in PCB Large High or Low Voltage Capacitors, PCB waste in PCB Article Containers, and PCB waste in PCB Containers remain-

ing in storage for disposal at the facility at the end of the calendar year.

(vi) The total number of PCB Transformers, the total number of PCB Large High or Low Voltage Capacitors, the total number of PCB Article Containers, and the total number of PCB Containers remaining in storage for disposal at the facility at the end of the calendar year.

(vii) The requirement to submit annual reports to the Regional Administrator continues until the submission of the annual report for the calendar year during which the facility ceases PCB storage or disposal operations. Storage operations have not ceased until all PCB waste, including any PCB waste generated during closure, has been removed from the facility.

(4) Whenever a commercial storer of PCB waste accepts PCBs or PCB Items at his storage facility and transfers the PCB waste off-site to another facility for storage or disposal, the commercial storer of PCB waste shall initiate a manifest under subpart K of this part for the transfer of PCBs or PCB Items to the next storage or disposal facility.

NOTE: Any requirements for weights in kilograms of PCBs may be calculated values if the internal volume of PCBs in containers and transformers is known and included in the reports, together with any assumptions on the density of the PCBs contained in the containers or transformers. If the internal volume of PCBs is not known, a best estimate may be used.

(c) *Incineration facilities.* Each owner or operator of a PCB incinerator facility shall collect and maintain for a period of 5 years from the date of collection the following information, in addition to the information required in paragraph (b) of this section:

(1) When PCBs are being incinerated, the following continuous and short-interval data:

(i) Rate and quantity of PCBs fed to the combustion system as required in §761.70(a)(3);

(ii) Temperature of the combustion process as required in §761.70(a)(4); and

(iii) Stack emission product to include O₂, CO, and CO₂ as required in §761.70(a)(7).

(2) When PCBs are being incinerated, data and records on the monitoring of

stack emissions as required in §761.70(a)(6).

(3) Total weight in kilograms of any solid residues generated by the incineration of PCBs and PCB Items during the calendar year, the total weight in kilograms of any solid residues disposed of by the facility in chemical waste landfills, and the total weight in kilograms of any solid residues remaining on the facility site.

(4) When PCBs and PCB Items are being incinerated, additional periodic data shall be collected and maintained as specified by the Regional Administrator pursuant to §761.70(d)(4).

(5) Upon any suspension of the operation of any incinerator pursuant to §761.70(a)(8), the owner or operator of such an incinerator shall prepare a document. The document shall, at a minimum, include the date and time of the suspension and an explanation of the circumstances causing the suspension of operation. The document shall be sent to the appropriate Regional Administrator within 30 days of any such suspension.

(d) *Chemical waste landfill facilities.* Each owner or operator of a PCB chemical waste landfill facility shall collect and maintain until at least 20 years after the chemical waste landfill is no longer used for the disposal of PCBs the following information in addition to the information required in paragraph (b) of this section:

(1) Any water analysis obtained in compliance with §761.75(b)(6)(iii); and

(2) Any operations records including burial coordinates of wastes obtained in compliance with §761.75(b)(8)(ii).

(e) *High efficiency boiler facilities.* Each owner or operator of a high efficiency boiler used for the disposal of liquids between 50 and 600 ppm PCB shall collect and maintain for a period of 5 years the following information, in addition to the information required in paragraph (b) of this section:

(1) For each month PCBs are burned in the boiler the carbon monoxide and excess oxygen data required in §761.60(a)(2)(iii)(A)(8) and §761.60(a)(3)(iii)(A)(8);

(2) The quantity of PCBs burned each month as required in §761.60(a)(2)(iii)(A)(7) and §761.60(a)(3)(iii)(A)(7); and

(3) For each month PCBs (other than mineral oil dielectric fluid) are burned, chemical analysis data of the waste as required in §761.60(a)(3)(iii)(B)(6).

(f) *Retention of special records by storage and disposal facilities.* In addition to the information required to be maintained under paragraphs (b), (c), (d) and (e) of this section, each owner or operator of a PCB storage or disposal facility (including high efficiency boiler operations) shall collect and maintain for the time period specified in paragraph (b) of this section the following data:

(1) All documents, correspondence, and data that have been provided to the owner or operator of the facility by any State or local government agency and that pertain to the storage or disposal of PCBs and PCB Items at the facility.

(2) All documents, correspondence, and data that have been provided by the owner or operator of the facility to any State or local government agency and that pertain to the storage or disposal of PCBs and PCB Items at the facility.

(3) Any applications and related correspondence sent by the owner or operator of the facility to any local, State, or Federal authorities in regard to waste water discharge permits, solid waste permits, building permits, or other permits or authorizations such as those required by §§761.70(d) and 761.75(c).

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605)

(44 FR 31542, May 31, 1979, Redesignated at 47 FR 19527, May 6, 1982, and further redesignated at 47 FR 37360, Aug. 25, 1982; 49 FR 28191, July 10, 1984; 53 FR 12324, Apr. 15, 1988; 54 FR 82750, Dec. 21, 1989; 55 FR 26305, June 7, 1990; 58 FR 34205, June 23, 1993)

§761.185 Certification program and retention of records by importers and persons generating PCBs in excluded manufacturing processes.

(a) In addition to meeting the basic requirements of §761.1(f) and the definition of excluded manufacturing processes at §761.3, manufacturers with processes inadvertently generating PCBs and importers of products containing inadvertently generated PCBs must report to EPA any excluded manufacturing process or imports for which the concentration of PCBs in products

leaving the manufacturing site or imported is greater than 2 micrograms per gram (2 µg/g, roughly 2 ppm) for any resolvable gas chromatographic peak. Such reports must be filed by October 1, 1984 or, if no processes or imports require reports at the time, within 90 days of having processes or imports for which such reports are required.

(b) Manufacturers required to report by paragraph (a) of this section must transmit a letter notifying EPA of the number, the type, and the location of excluded manufacturing processes in which PCBs are generated when the PCB level in products leaving any manufacturing site is greater than 2 µg/g for any resolvable gas chromatographic peak. Importers required to report by paragraph (a) of this section must transmit a letter notifying EPA of the concentration of PCBs in imported products when the PCB concentration of products being imported is greater than 2 µg/g for any resolvable gas chromatographic peak. Persons must also certify the following:

(1) Their compliance with all applicable requirements of §761.1(f), including any applicable requirements for air and water releases and process waste disposal.

(2) Whether determinations of compliance are based on actual monitoring of PCB levels or on theoretical assessments.

(3) That such determinations of compliance are being maintained.

(4) If the determination of compliance is based on a theoretical assessment, the letter must also notify EPA of the estimated PCB concentration levels generated and released.

(c) Any person who reports pursuant to paragraph (a) of this section:

(1) Must have performed either a theoretical analysis or actual monitoring of PCB concentrations.

(2) Must maintain for a period of three years after ceasing process operations or importation, or for seven years, whichever is shorter, records containing the following information:

(i) *Theoretical analysis.* Manufacturers records must include: the reaction or reactions believed to be generating PCBs; the levels of PCBs generated; and the levels of PCBs released. Im-

porters records must include: the reaction or reactions believed to be generating PCBs and the levels of PCBs generated; the basis for all estimations of PCB concentrations; and the name and qualifications of the person or persons performing the theoretical analysis; or

(1) *Actual monitoring.* (A) The method of analysis.

(B) The results of the analysis, including data from the Quality Assurance Plan.

(C) Description of the sample matrix.

(D) The name of the analyst or analysts.

(E) The date and time of the analysis.

(F) Numbers for the lots from which the samples are taken.

(d) The certification required by paragraph (b) of this section must be signed by a responsible corporate officer. This certification must be maintained by each facility or importer for a period of three years after ceasing process operation or importation, or for seven years, whichever is shorter, and must be made available to EPA upon request. For the purpose of this section, a responsible corporate officer means:

(1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.

(2) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25,000,000 (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(e) Any person signing a document under paragraph (d) of this section shall also make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information. Based on my inquiry of the person or persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for fal-

sifying information, including the possibility of fines and imprisonment for knowing violations.

Dated: _____

Signature: _____

(f) This report must be submitted to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, ATTN: PCB Notification. This report must be submitted by October 1, 1984 or within 90 days of starting up processes or commencing importation of PCBs.

(g) This certification process must be repeated whenever process conditions are significantly modified to make the previous certification no longer valid.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605))

(49 FR 28191, July 10, 1984; 49 FR 33019, Aug. 20, 1984, as amended at 53 FR 12524, Apr. 15, 1988; 53 FR 34205, June 23, 1988)

§761.187 Reporting importers and by persons generating PCBs in excluded manufacturing processes.

In addition to meeting the basic requirements of §761.1(f) and the definition of excluded manufacturing process at §761.3, PCB-generating manufacturing processes or importers of PCB-containing products shall be considered "excluded manufacturing processes" only when the following conditions are met:

(a) Data are reported to the EPA by the owner/operator or importer concerning the total quantity of PCBs in product from excluded manufacturing processes leaving any manufacturing site in any calendar year when such quantity exceeds 0.0025 percent of that site's rated capacity for such manufacturing processes as of October 1, 1984; or the total quantity of PCBs imported in any calendar year when such quantity exceeds 0.0025 percent of the average total quantity of such product containing PCBs imported by such importer during the years 1978, 1979, 1980, 1981 and 1982.

(b) Data are reported to the EPA by the owner/operator concerning the total quantity of inadvertently generated PCBs released to the air from excluded manufacturing processes at any manufacturing site in any calendar

year when such quantity exceeds 10 pounds.

(c) Data are reported to the EPA by the owner/operator concerning the total quantity of inadvertently generated PCBs released to water from excluded manufacturing processes from any manufacturing site in any calendar year when such quantity exceeds 10 pounds.

(d) These reports must be submitted to the TSCA Document Processing Center (TS-790), Rm. L-100, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, ATTN: PCB Notification.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605))

(49 FR 28192, July 10, 1984, as amended at 53 FR 12524, Apr. 15, 1988; 53 FR 34205, June 23, 1988)

§761.193 Maintenance of monitoring records by persons who import, manufacture, process, distribute in commerce, or use chemicals containing inadvertently generated PCBs.

(a) Persons who import, manufacture, process, distribute in commerce, or use chemicals containing PCBs present as a result of inadvertent generation or recycling who perform any actual monitoring of PCB concentrations must maintain records of any such monitoring for a period of three years after a process ceases operation or importing ceases, or for seven years, whichever is shorter.

(b) Monitoring records maintained pursuant to paragraph (a) of this section must contain:

(1) The method of analysis.

(2) The results of the analysis, including data from the Quality Assurance Plan.

(3) Description of the sample matrix.

(4) The name of the analyst or analysts.

(5) The date and time of the analysis.

(6) Numbers for the lots from which the samples are taken.

(Sec. 6, Pub. L. 94-469, 90 Stat. 2020 (15 U.S.C. 2605))

(49 FR 28193, July 10, 1984, as amended at 53 FR 34205, June 23, 1988)

Subpart K—PCB Waste Disposal Records and Reports

Source: 44 FR 52752, Dec. 21, 1989, unless otherwise noted.

§761.202 EPA identification numbers.

(a) *General.* Any generator, commercial storer, transporter, or disposer of PCB waste who is required to have an EPA identification number under this subpart must notify EPA of his/her PCB waste handling activities, using the notification procedures and form described in §761.205. EPA will confirm the EPA identification number of facilities already assigned one, and will assign an EPA identification number to facilities that do not have one.

(b) *Prohibitions.* After June 4, 1990:

(1) A generator of PCB waste shall not:

(i) Process, store, dispose of, transport, or offer for transportation PCB waste without having received an EPA identification number from the Agency. A generator of PCB waste who is exempted from notification under §761.205(c)(1) or who notifies EPA in a timely manner under §761.205(c)(2)(i), but has not yet received a unique identification number, shall be regarded as having received from EPA the identification number "40 CFR PART 761."

(ii) Offer the PCB waste to transporters, disposers, or commercial storers of PCB waste who have not received an EPA identification number.

(2) A transporter of PCB waste shall not:

(i) Transport PCB waste without having received an EPA identification number from EPA.

(ii) Deliver PCB waste to transporters, disposers, or commercial storers of PCB waste that have not received an EPA identification number.

(3) A commercial storer of PCB waste shall not accept any PCB waste for storage without having received an EPA identification number from EPA.

(4) A disposer of PCB waste shall not accept any PCB waste for disposal without having received an EPA identification number from EPA. A disposer of PCB waste who owns more than one disposal facility or mobile treatment unit shall not accept waste unless the disposer has received an EPA identi-

fication number for each facility or mobile unit.

(c) *PCB waste handled prior to effective date of this subpart.* Generators (other than generators exempt from notification under § 761.205(o)(1)), commercial storers, transporters, and disposers of PCB waste who are required to have EPA identification numbers under this subpart, and who were engaged in PCB waste handling activities on or prior to February 5, 1990, are not subject to the prohibitions of paragraph (b) of this section if they have applied for an EPA identification number in accordance with the applicable notification procedures of § 761.205. Such persons shall use the EPA identification number "40 CFR PART 761," or a number assigned to the persons by EPA or a State under RCRA, until EPA issues to such persons a specific identification number under § 761.205(a), (b), or (c).

(d) *PCB waste first handled after effective date of this subpart.* Generators (other than generators exempt from notification under § 761.205(o)(1)), commercial storers, transporters, and disposers of PCB waste who are required to have EPA identification numbers under this subpart, and who first engage in PCB waste activities after February 5, 1990, are subject to the prohibitions in paragraph (b) of this section.

§ 761.205 Notification of PCB waste activity (EPA Form 7710-53).

(a)(1) All commercial storers, transporters, and disposers of PCB waste who were engaged in PCB waste handling activities on or prior to February 5, 1990 shall notify EPA of their PCB waste activities by filing EPA Form 7710-53 with EPA by no later than April 4, 1990. Upon receiving the notification form, EPA will assign an EPA identification number to each entity that notifies.

(2) All generators (other than generators exempt from notification under paragraph (c)(1) of this section), commercial storers, transporters, and disposers of PCB waste who first engage in PCB waste handling activities after February 5, 1990, shall notify EPA of their PCB waste activities by filing EPA Form 7710-53 with EPA prior to engaging in PCB waste handling activities.

(3) Any person required to notify EPA under this section shall file with EPA Form 7710-53. Copies of EPA Form 7710-53 are available from the Operation Branch (TS-798), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St. SW, Washington, DC 20460. Descriptive information and instructions for filling in the form are included in paragraphs (a)(4)(i) through (vii) of this section.

(4) All of the following information shall be provided to EPA on Form 7710-53:

(i) The name of the facility, and the name of the owner or operator of the facility.

(ii) EPA identification number, if any, previously issued to the facility.

(iii) The facility's mailing address.

(iv) The location of the facility.

(v) The facility's installation contact and telephone number.

(vi) The type of PCB waste activity engaged in at the facility.

(vii) Signature of the signer of the certification statement, typed or printed name and official title of signer, and date signed.

(viii) EPA has determined that the information in paragraphs (a)(4)(i) through (a)(4)(vii) of this section shall not be treated as confidential business information. This information will be disclosed to the public without further notice to the submitter unless the submitter provides a written justification (submitted with the notification form) which demonstrates extraordinary reasons why the information should be entitled to confidential treatment.

(b) Generators (other than those generators exempt from notification under paragraph (c)(1) of this section), commercial storers, transporters, and disposers of PCB waste who have previously notified EPA or a State of hazardous waste activities under RCRA shall notify EPA of their PCB waste activities under this part by filing EPA Form 7710-53 with EPA by no later than April 4, 1990. The notification shall include the EPA identification number previously issued by EPA or the State and upon receipt of the notification, EPA shall verify and authorize the use of the previously issued identification number for PCB waste activities.

(c)(1) Generators of PCB waste need not notify EPA and receive unique EPA identification numbers under this section, unless their PCB waste activities are described in paragraph (c)(2) of this section. Generators exempted from notifying EPA under this paragraph shall use the generic identification number "40 CFR PART 761" on the manifests, records, and reports which they shall prepare under this subpart, unless such generators elect to use a unique EPA identification number previously assigned to them under RCRA by EPA or a State.

(2) Generators of PCB waste who use, own, service, or process PCBs or PCB items shall notify EPA of their PCB waste activities only if they own or operate PCB storage facilities subject to the storage requirements of § 761.65 (b) or (c)(7). Such generators shall notify EPA in the following manner:

(i) Generators storing PCB waste subject to the storage requirements of § 761.65 (b) or (c)(7) shall notify EPA by filing EPA Form 7710-53 with EPA by no later than April 4, 1990.

(ii) Generators who desire to commence storage of PCB waste after February 5, 1990 shall notify EPA and receive an EPA identification number before they may commence storage of PCBs at their facilities established under § 761.65 (b) or (c)(7).

(iii) A separate notification shall be submitted to EPA for each PCB storage facility owned or operated by generators of PCB waste. Upon receiving these notifications, EPA will assign generators unique EPA identification numbers for each storage facility notifying EPA under this section.

(d) Persons required to notify under this section shall file EPA Form 7710-53 with EPA by mailing the form to the following address: Chief, Operation Branch (TS-798), Office of Pollution Prevention and Toxics, Environmental Protection Agency, Rm. NE-117, 401 M St., SW, Washington, DC 20460.

(e) The requirements under this section to notify EPA and obtain EPA identification numbers shall in no case excuse compliance by any person subject to the 1-year limit on storage prior to disposal under § 761.65(a).

(54 FR 52752, Dec. 21, 1989, as amended at 55 FR 15608, Mar. 24, 1990; 55 FR 34205, June 23, 1990)

§ 761.207 The manifest—general requirements.

(a) A generator who relinquishes control over PCB wastes by transporting, or offering for transport by his own vehicle or by a vehicle owned by another person, PCB waste for commercial off-site storage or off-site disposal shall prepare a manifest on EPA Form 8700-22, and if necessary, a continuation sheet. The generator shall specify:

(1) For each bulk load of PCBs, the identity of the PCB waste, the earliest date of removal from service for disposal, and the weight in kilograms of the PCB waste.

(2) For each PCB Article Container or PCB Container, the unique identifying number, type of PCB waste (e.g., soil, debris, small capacitors), earliest date of removal from service for disposal, and weight in kilograms of the PCB waste contained.

(3) For each PCB Article not in a PCB Container or PCB Article Container, the serial number if available, or other identification if there is no serial number, the date of removal from service for disposal, and weight in kilograms of the PCB waste in each PCB Article.

(b) EPA does not maintain supplies of printed copies of Form 8700-22 for public use, although printed copies of the manifest may be available from State offices. Camera-ready copies of the form are available for printing purposes from State offices, EPA Regional Offices, and EPA Headquarters.

(c) If the State to which the shipment is manifested (i.e., consignment State) supplies the manifest and requires its use, then the generator must use that manifest.

(d) If the consignment State does not supply the manifest, but the State in which the generator is located (i.e., generator State) supplies the manifest and requires its use, then the generator must use that State's manifest.

(e) If both the consignment State and the generator State supply manifests and require their use, the generator must use the consignment State's manifest.

(f) If neither the generator State nor the consignment State supplies the manifest, the generator may obtain the manifest from any source.

(g) A generator shall designate on the manifest one off-site commercial storage or disposal facility approved under this part for the commercial storage or disposal of the PCBs and PCB Items described on the manifest.

(h) If the transporter is unable to deliver the PCB waste to the designated disposer or commercial storer, the transporter must contact the generator of the PCB waste for instructions. The generator shall either designate another approved disposer or commercial storer, or instruct the transporter to return the PCB waste back to the generator.

(i) The manifest which accompanies the PCB waste shall consist of at a minimum the number of copies required to provide the generator, the initial transporter, each subsequent transporter, and the owner or operator of the designated commercial storage or disposal facility with one legible copy each for their records, and one additional copy to be returned to the generator by the owner or operator of the first designated commercial storage or disposal facility.

(j) The requirements of this section apply only to PCB wastes as defined in §761.3. This includes PCB wastes with PCB concentrations below 50 ppm where the PCB concentration below 50 ppm was the result of dilution; these PCB wastes are required, under §761.1(b), to be managed as if they contained PCB concentrations greater than 50 ppm. An example of such a PCB waste is spill cleanup material containing less than 50 ppm PCBs when the spill involved material containing greater than 50 ppm.

§761.208 Use of the manifest.

(a)(1) The generator of PCB waste shall:

(i) Sign the manifest certification by hand.

(ii) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest.

(iii) Retain one copy among its records in accordance with §761.209(a).

(iv) Give to the transporter the remaining copies of the manifest that will accompany the shipment of PCB waste.

(2) For bulk shipments of PCB waste within the United States transported solely by water, the generator shall send three copies of the manifest dated and signed in accordance with this section directly to the owner or operator of the designated commercial storage or disposal facility. Copies of the manifest are not required for each transporter.

(3) For rail shipments of PCB waste within the United States which originate at the site of generation, the generator shall send at least three copies of the manifest dated and signed in accordance with this section to:

(i) The next non-rail transporter, if any.

(ii) The designated commercial storage or disposal facility if transported solely by rail.

(4) When a generator has employed an independent transporter to transport the PCB waste to a commercial storer or disposer, the generator shall confirm by telephone, or by other means of confirmation agreed to by both parties, that the commercial storer or disposer actually received the manifested waste. The generator shall confirm receipt of the waste by close of business the day after he receives the manifest hand-signed by the commercial storer or disposer, in accordance with paragraph (c)(1)(iv) of this section. If the generator has not received the hand-signed manifest within 35 days after the independent transporter accepted the PCB waste, the generator shall telephone, or communicate with by some other agreed-upon means, the disposer or commercial storer to determine whether the PCB waste has actually been received. If the PCB waste has not been received, the generator shall contact the independent transporter to determine the disposition of the PCB waste. If the generator has not received a hand-signed manifest from an EPA-approved facility within 10 days from the date of the telephone call or other agreed upon means of communication, to the independent transporter, the generator shall submit an exception report to the EPA Re-

gional Administrator for the Region in which the generator is located, as specified in §761.215. The generator shall retain a written record of all telephone or other confirmations to be included in the annual document log, in accordance with §761.180.

(b)(1) A transporter shall not accept PCB waste from a generator unless it is accompanied by a manifest signed by the generator in accordance with paragraph (a)(1) of this section, except that a manifest is not required if any one of the following conditions exists:

(i) The shipment of PCB waste consists solely of PCB wastes with PCB concentrations below 50 ppm, unless the PCB concentration below 50 ppm was the result of dilution, in which case §761.1(b) requires that the waste be managed as if it contained PCBs at the concentration prior to dilution.

(ii) The PCB waste is accepted by the transporter for transport only to a storage or disposal facility owned or operated by the generator of the PCB waste.

(2) Before transporting the PCB waste, the transporter shall sign and date the manifest acknowledging acceptance of the PCB waste from the generator. The transporter shall return a signed copy to the generator before leaving the generator's facility.

(3) The transporter shall ensure that the manifest accompanies the PCB waste.

(4) A transporter who delivers PCB waste to another transporter, or to the designated commercial storer or disposer of PCB waste, shall:

(i) Obtain the date of delivery and the handwritten signature of the subsequent transporter of PCB waste, or of the owner or operator of the designated commercial storage or disposal facility on the manifest.

(ii) Retain one copy of the manifest in accordance with §761.209(b).

(iii) Give the remaining copies of the manifest to the accepting transporter of PCB waste, or to the designated commercial storage or disposal facility.

(5) The requirements of paragraphs (b) (3) and (4) of this section shall not apply to transporters of bulk shipments by water if all of the following conditions are met:

(i) The PCB waste is delivered by water (bulk shipment) to the designated commercial storage or disposal facility.

(ii) A shipping paper containing all the information required on the manifest (excluding EPA identification number, generator certification, and signatures) accompanies the PCB waste.

(iii) The transporter delivering the PCB waste obtains the date of delivery and handwritten signature of the owner or operator of the designated commercial storage or disposal facility on either the manifest or the shipping paper.

(iv) The person delivering the PCB waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility.

(v) A copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with §761.209(b).

(6) For shipments involving rail transportation, the requirements of paragraphs (b) (3) and (b)(4) of this section shall not apply. Instead, the requirements described at §263.20(f) of this chapter for the rail transportation of hazardous waste apply to such shipments. The rail transporter shall retain one copy of the manifest or rail shipping paper in accordance with §761.209(b).

(7) The transporter shall deliver the entire quantity of PCB waste accepted from a generator or transporter to either of the following destinations:

(i) The designated commercial storage or disposal facility listed on the manifest.

(ii) The next designated transporter of PCB waste.

(8) If the PCB waste cannot be delivered in accordance with paragraph (b)(7) of this section, the transporter shall contact the generator for further directions and shall revise the manifest and/or return the PCB waste according to the generator's instructions.

(9) No provision of this section shall be construed to affect or limit the applicability of any requirement applicable to transporters of PCB waste under

regulations issued by the Department of Transportation (DOT) and set forth at 49 CFR part 171.

(c)(1) If a commercial storage or disposal facility receives an off-site shipment of PCB waste accompanied by a manifest, the owner or operator, or his agent, shall:

(i) Sign and date each copy of the manifest to certify that the PCB waste covered by the manifest was received.

(ii) Note any significant discrepancies in the manifest (as defined in §761.210(a)(1)) on each copy of the manifest.

(iii) Immediately give the transporter at least one copy of the signed manifest.

(iv) Within 30 days after the delivery, send a copy of the manifest to the generator.

(v) Retain a copy of each manifest among the facility's records in accordance with §761.209(d).

(2) If a commercial storage or disposal facility receives PCB waste from a rail or water (bulk shipment) transporter accompanied by a shipping paper containing all the information required on the manifest except the EPA identification numbers, generator's certification, and signatures, the owner or operator, or his agent, shall:

(i) Sign and date each copy of the manifest or shipping paper to certify that the PCB waste covered by the manifest or shipping paper was received.

(ii) Note any significant discrepancies in the manifest or shipping paper on each copy of the manifest or shipping paper.

(iii) Immediately give the rail or water transporter at least one copy of the manifest or shipping paper, if applicable.

(iv) Within 30 days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within 30 days after delivery, the owner or operator shall send a copy of the shipping paper signed and dated to the generator.

(v) Retain at the commercial storage or disposal facility a copy of the manifest and shipping paper, if signed in lieu of the manifest, in accordance with §761.209(d).

(3) Whenever an off-site shipment of PCB waste is initiated from a commercial storage or disposal facility, the owner or operator of the commercial storage or disposal facility shall comply with the manifest requirements that apply to generators of PCB waste.

§761.209 Retention of manifest records.

(a) A generator of PCB waste shall keep a copy of each manifest signed in accordance with §761.208(a)(1) until the generator receives a signed copy from the designated commercial storage or disposal facility which received the PCB waste. The copy signed by the commercial storer or disposer shall be retained for at least 3 years from the date the PCB waste was accepted by the initial transporter. A generator subject to annual document requirements under §761.180 shall retain copies of each manifest for the period required by §761.180(a).

(b)(1) A transporter of PCB waste shall keep a copy of the manifest signed by the generator, transporter, and the next designated transporter, if applicable, or the owner or operator of the designated commercial storage or disposal facility. This copy shall be retained for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(2) For shipments of PCB waste delivered to the designated commercial storage or disposal facility by water (bulk shipment), each water (bulk shipment) transporter shall retain a copy of the shipping paper described in §761.208(b)(5)(ii) for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(3) For shipments of PCB waste by rail within the United States:

(i) The initial rail transporter shall keep a copy of the manifest and the shipping paper required to accompany the PCB waste for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(ii) The final rail transporter shall keep a copy of the signed manifest, or the required shipping paper if signed by the designated facility in lieu of the manifest, for a period of at least 3 years from the date the PCB waste was accepted by the initial transporter.

(c) The owner or operator of a PCB commercial storage or disposal facility that receives off-site shipments of PCB waste shall retain at the facility for at least 3 years a copy of each manifest or shipping paper that the owner or operator signs in accordance with §761.208(o)(1) or (c)(3).

(d) The periods of record retention required by this section shall be extended automatically during the course of any outstanding enforcement action regarding the regulated activity.

[54 FR 52752, Dec. 21, 1989, as amended at 55 FR 34205, June 23, 1993]

§761.210 Manifest discrepancies.

(a) Manifest discrepancies are differences between the quantity or type of PCB waste designated on the manifest or shipping paper and the quantity or type of PCB waste actually delivered to and received by a designated facility.

(1) Significant discrepancies in quantity are:

(i) Variations greater than 10 percent in weight of PCB waste in containers.

(ii) Any variation in piece count, such as a discrepancy of one PCB Transformer or PCB Container or PCB Article Container in a truckload.

(2) Significant discrepancies in type of PCB waste are obvious differences which may be discovered by inspection or waste analysis, such as the substitution of solids for liquids or the substitution of high concentration PCBs (above 500 ppm) with lower concentration materials.

(b) Upon discovering a significant discrepancy, the owner or operator of the designated commercial storage or disposal facility shall attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy is not resolved within 15 days after receiving the PCB waste, such owner or operator shall immediately submit to the Regional Administrator for the Region in which the designated facility is located a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

[54 FR 52752, Dec. 21, 1989, as amended at 55 FR 34205, June 23, 1993]

§761.211 Unmanifested waste report.

(a) After April 4, 1990, if a PCB commercial storage or disposal facility receives any shipment of PCB waste from an off-site source without an accompanying manifest or shipping paper (where required in place of a manifest), and any part of the shipment consists of any PCB waste regulated for disposal, then the owner or operator of the commercial storage or disposal facility shall attempt to contact the generator, using information supplied by the transporter, to obtain a manifest or to return the PCB waste.

(b) If the owner or operator of the commercial storage or disposal facility cannot contact the generator of the PCB waste, he shall notify the Regional Administrator of the EPA region in which his facility is located of the unmanifested PCB waste so that the Regional Administrator can determine whether further actions are required before the owner or operator may store or dispose of the unmanifested PCB waste.

(c) Within 15 days after receiving the unmanifested PCB waste, the owner or operator shall prepare and submit a report to the Regional Administrator for the Region in which the commercial storage or disposal facility is located and to the Regional Administrator for the Region in which the PCB waste originated, if known. The report may be submitted on EPA Form 8700-13B, or by a written letter designated "Unmanifested Waste Report." The report shall include the following information:

(1) The EPA identification number, name, and address of the PCB commercial storage or disposal facility.

(2) The date the commercial storage or disposal facility received the unmanifested PCB waste.

(3) The EPA identification number, name, and address of the generator and transporter, if available.

(4) A description of the type and quantity of the unmanifested PCB waste received at the facility.

(5) A brief explanation of why the waste was unmanifested, if known.

(6) The disposition made of the unmanifested waste by the commercial storage or disposal facility, including:

(i) If the waste was stored or disposed by that facility, was the generator identified and was a manifest subsequently supplied.

(ii) If the waste was sent back to the generator, why and when.

[54 FR 52752, Dec. 21, 1989, as amended at 58 FR 34205, June 23, 1993]

§761.218 Exception reporting.

(a) A generator of PCB waste, who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated PCB commercial storage or disposal facility within 35 days of the date the waste was accepted by the initial transporter, shall immediately contact the transporter and/or the owner or operator of the designated facility to determine the status of the PCB waste.

(b) A generator of PCB waste shall submit an Exception Report to the Regional Administrator for the Region in which the generator is located if the generator has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter. The Exception Report shall include the following:

(1) A legible copy of the manifest for which the generator does not have confirmation of delivery.

(2) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the PCB waste and the results of those efforts.

(c) A disposer of PCB waste shall submit a One-year Exception Report to the Regional Administrator for the Region in which the disposal facility is located whenever the following occurs:

(1) The disposal facility receives PCBs or PCB Items on a date more than 9 months from the date the PCBs or PCB Items were removed from service for disposal, as indicated on the manifest or continuation sheet; and

(2) Because of contractual commitments or other factors affecting the facility's disposal capacity, the disposer of PCB waste could not dispose of the affected PCBs or PCB Items within 1 year of the date of removal from service for disposal.

(d) A generator or commercial storer of PCB waste who manifests PCBs or PCB Items to a disposer of PCB waste shall submit a One-year Exception Report to the Regional Administrator for the Region in which the generator or commercial storer is located whenever the following occurs:

(1) The generator or commercial storer transferred the PCBs or PCB Items to the disposer of PCB waste on a date within 9 months from the date of removal from service for disposal of the affected PCBs or PCB Items, as indicated on the manifest or continuation sheet; and

(2) The generator or commercial storer either has not received within 13 months from the date of removal from service for disposal a Certificate of Disposal confirming the disposal of the affected PCBs or PCB Items, or the generator or commercial storer receives a Certificate of Disposal confirming disposal of the affected PCBs or PCB Items on a date more than 1 year after the date of removal from service.

(e) The One-year Exception Report shall include:

(1) A legible copy of any manifest or other written communication relevant to the transfer and disposal of the affected PCBs or PCB Items.

(2) A cover letter signed by the submitter or an authorized representative explaining:

(i) The date(s) when the PCBs or PCB Items were removed from service for disposal.

(ii) The date(s) when the PCBs or PCB Items were received by the submitter of the report, if applicable.

(iii) The date(s) when the affected PCBs or PCB Items were transferred to a designated disposal facility.

(iv) The identity of the transporters, commercial storers, or disposers known to be involved with the transaction.

(v) The reason, if known, for the delay in bringing about the disposal of the affected PCBs or PCB Items within 1 year from the date of removal from service for disposal.

[54 FR 52752, Dec. 21, 1989, as amended at 58 FR 28205, June 27, 1993; 58 FR 34205, June 23, 1993]

§761.218 Certificate of disposal.

(a) For each shipment of manifested PCB waste that the owner or operator of a disposal facility accepts by signing the manifest, the owner or operator of the disposal facility shall prepare a Certificate of Disposal for the PCBs and PCB Items disposed of at the facility, which shall include:

(1) The identity of the disposal facility, by name, address, and EPA identification number.

(2) The identity of the PCB waste affected by the Certificate of Disposal including reference to the manifest number for the shipment.

(3) A statement certifying the fact of disposal of the identified PCB waste, including the date(s) of disposal, and identifying the disposal process used.

(4) A certification as defined in §761.3.

(b) The Certificate of Disposal shall be sent to the generator identified on the manifest which accompanied the shipment of PCB waste within 30 days of the date that disposal of the PCB waste identified on the manifest was completed.

(c) The disposal facility shall keep a copy of each Certificate of Disposal among the records that it retains under §761.180(b).

(d)(1) Generators of PCB waste shall keep a copy of each Certificate of Disposal that they receive from disposers of PCB waste among the records they retain under §761.180(a).

(2) Commercial storers of PCB waste shall keep a copy of each Certificate of Disposal that they receive from disposers of PCB waste among the records they retain under §761.180(b).

PART 762—FULLY HALOGENATED CHLOROFUOROALKANES

Subpart A—General Provisions

Sec.

762.1 Scope.

762.3 Definitions.

Subpart B—(Reserved)

Subpart C—Prohibitions, Exemptions, and Certification Requirements

762.45 Manufacturing.

762.50 Processing.

Sec.

762.55 Distribution in commerce.

762.58 Essential use exemptions.

762.60 Special exemptions.

Subpart D—Records and Reports

762.60 General reporting requirements.

762.65 Manufacturers of fully halogenated chlorofluoroalkanes for aerosol propellant uses.

762.70 Processors of fully halogenated chlorofluoroalkanes for aerosol propellant uses.

AUTHORITY: 15 U.S.C. 2605, 2607, and 2611.

SOURCE: 45 FR 43721, June 30, 1980, unless otherwise noted.

Subpart A—General Provisions

§762.1 Scope.

This part prohibits the manufacture, processing, and distribution in commerce of fully halogenated chlorofluoroalkanes for those aerosol propellant uses which are subject to the Toxic Substances Control Act (TSCA), requires submission of annual reports, and lists the exemptions to the prohibitions.

§762.3 Definitions.

For the purposes of this part:

(a) The term *aerosol propellant* means a liquefied or compressed gas in a container where the purpose of the liquefied or compressed gas is to expel from the container liquid or solid material different from the aerosol propellant.

(b) The term *person* includes any natural person, corporation, firm, company, joint venture, partnership, sole proprietorship, association, or any other business entity, any State or political subdivision thereof, any municipality, any interstate body and any department, agency, or instrumentality of the Federal Government.

(c) The term *nonconsumer article* means any article subject to TSCA which is not a "consumer product" within the meaning of the Consumer Product Safety Act (CPSA), 15 U.S.C. 2052.

(d) The terms *Administrator*, *chemical substance*, *commerce*, *distribute in commerce*, *manufacture*, *process*, *processor*, *State*, and *United States* have the same meanings as in 15 U.S.C. 2602.

MCHB-DC-EHM

SUBJECT: Hazardous Waste Management Consultation No. 37-26-1296-96, Apr-Dec 1995

APPENDIX C

SAMPLING PLAN/SITE SAFETY AND HEALTH PLAN

SAMPLING PLAN
HAZARDOUS WASTE MANAGEMENT CONSULTATION #37-10565-95
PCB TESTING
79TH ARCOM
NEW JERSEY

1. **AUTHORITY.** Scoping Report and Work Plan, US Army Corps of Engineers, CENAB-PL-EM, 31 August 1994, subject: ECAAR Follow-Up Actions for the 79TH ARCOM.

2. **REFERENCES.**

a. Toxic Substances Control Act, Title 40 of the Code of Federal Regulations, Part 761: Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and use Prohibitions.

b. Public Law 99-499, Emergency Planning and Community Right-to Know Act of 1986.

c. Executive Order 12856, Federal Compliance with Right-to Know Laws and Pollution Prevention Requirements, 3 August 1993.

d. SW-846, U.S. Environmental Protection Agency-Office of Solid Waste and Emergency Response, Test Methods for Evaluating Solid Waste - Laboratory Manual, Physical/Chemical Methods, 3rd Ed., January 1990.

e. Army Regulation 200-1, Environmental Protection and Enhancement, 1990.

f. NRECA Research Project 82-7, PCB Equipment, Operations & Management Reference Manual, March 1983.

3. **PURPOSE.** The purpose of this study is to determine the Polychlorinated Biphenyl concentration in the 79TH Army Reserve Command Centers' electrical transformers.

4. **BACKGROUND.**

a. The 79th Army Reserve Command (ARCOM) has 3 Reserve Centers throughout New Jersey that have electrical transformers owned by the Federal government that may contain Polychlorinated Biphenyls (PCBs)

b. Polychlorinated Biphenyls (PCBs) were the primary dielectric fluid used in transformers for several years. It is a nonflammable, dense, viscous liquid ideal for cooling the electrical coils in high current equipment. However, safety and

environmental issues have surfaced, generating the need for PCB regulations. PCBs have been scientifically proven to bioaccumulate. The compound is stored in the fatty tissues of organisms that ingest PCBs and is taken up by other organisms that prey upon them. This can result in large concentrations of PCBs within higher carnivorous organisms. PCBs are also carcinogens that attack the liver. Thus, through the regulating of PCBs, the chances of the compound adversely affecting the environment are decreased.

c. The PCB regulations most pertinent to this survey are those involving transformers discovered to contain greater than 500 parts per million (ppm) PCB. These transformers, according Title 40 CFR 761, need to be: retrofitted with additional electrical protection, registered with the local fire department and periodically inspected for integrity; reclassified and labeled as PCB Contaminated or Non PCB; or removed. These options vary with the type of transformer, the location, and the installation (how the transformer is connected). Consult Title 40 CFR 761 for complete details. In most cases, action must be taken within 18 months of the notification of a PCB transformer.

d. Complying with Title 40 CFR 761 without removing the PCB transformer leaves potential for a spill should the transformer begin to leak. Cleaning up PCB spills is expensive, especially when dirt removal is involved. Eliminating the potential for an expensive spill is proactive and in the spirit of the Pollution Prevention portion of Executive Order 12856.

5. GENERAL. The PCB sampling of Pedricktown (Sievers Sandberg) USARC, Kilmer USARC, and Cavens Point USARC, will be performed during the period of 11-15 December, 1995. This sampling will address the PCB status of the electrical transformers. The sampling approach for this project is presented below.

6. SITE DESCRIPTIONS. These sites are Army and Combined Forces Reserve Centers in New Jersey. Directions are provided in the Appendix.

7. WORK PLAN.

a. Data Quality Objectives. The purpose of this study is to determine the Polychlorinated Biphenyl concentration in the 79TH Army Reserve Command Centers' electrical transformers. One sample will be drawn from each transformer located on each listed Reserve Center. Each sample will require unique sampling equipment to prevent any cross contamination.

b. Sample Locations. A total of 80 discrete oil samples will be collected during this study. This includes 47 at Pedricktown USARC, 9 at Kilmer USARC, and 24 at Cavens Point USARC.,

c. Analytical Parameters and Methodologies. Bulk oil samples will be

analyzed for PCB's. The analyses will be accomplished using the USEPA method 8080 established in SW-846 (reference 2d). The detection limit for PCB's in oil is approximately 1 ppm.

d. Sampling Methods. All oils will be collected with glass pipettes or plastic tubing, whichever is best designed for the particular transformer configuration. All samples will be transferred to clean and labeled glass jars or test tubes.

e. Sample Handling and Analysis.

(1) Field Procedures. Project personnel will place all samples in containers at the site. Labels will be affixed with installation name, project number, project officer, date sampled, sample identification, and analysis required marked with an indelible pen. Samples will be immediately placed into an absorbent and padded container. The Project Officer will record appropriate field observations in a permanently bound field notebook.

(2) Shipment. All samples will be hand carried by the Project Officer to the USACHPPM Analytical Laboratory.

(3) Decontamination Procedure. Dedicated or disposable equipment will be used when possible to prevent the need for decontamination. All unique equipment will be contained in plastic and labeled with installation name, date sampled, and sample identification. The plastic bags will then be placed in an absorbent padded container and hand carried to the CHPPM Soils Laboratory for storage until the amount of PCBs are determined for proper disposal. Project personnel are responsible for ensuring that no oil is released into the environment.

(4) Quality Control (QC)/ Quality Assurance. All laboratory analyses will be performed in accordance with EPA QC/QA standards identified in method 8080.

f. Data Evaluation. Any PCB contaminants detected will be assumed to be indicative of the concentrations of particular oil used in the transformers. Should the PCB concentration in the oil fall between 50 ppm and 500 ppm, the transformer will be classed as a PCB contaminated transformer. Should the PCB concentration in the oil exceed 500 ppm, the transformer will be classed as a PCB transformer according to Title 40, Part 761 (reference 2a).

8. **SITE SAFETY PROCEDURES.** A site safety and health plan is required for all environmental sampling projects and will be provided under a separate cover. The plan summarizes the potential hazards and outlines precautions and safety procedures to be followed during sample collection.

9. **SCHEDULE.** The proposed sampling will occur between 11-15 December,

SITE SAFETY AND HEALTH PLAN
HAZARDOUS WASTE MANAGEMENT CONSULTATION #37-26-1296-95
79TH ARCOM
NEW JERSEY

1. REFERENCES.

a. Toxic Substances Control Act, Title 40 of the Code of Federal Regulations, Part 761: Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and use Prohibitions.

b. U.S. Army Environmental Hygiene Agency, Waste Disposal Engineering Division, Site Safety and Health Program, undated.

c. U.S. Department of Health and Human Services, Public Health Service, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985.

2. AUTHORITY. Scoping Report and Work Plan, US Army Corps of Engineers, CENAB-PL-EM, 31 August 1994, subject: ECAAR Follow-Up Actions for the 79TH ARCOM.

3. ORGANIZATION AND RESPONSIBILITIES.

a. 2LT Lisa Strutz
Project Officer
USACHPPM

b. 2LT Rich Daniels
Assistant Project Officer and Site Safety Officer
USACHPPM

c. SGT Menslage
Line Man
287TH Engineer Detachment

d. SSG Greg Simmons
Line Man
287TH Engineer Detachment

4. WORK PLAN.

A. Purpose. The purpose of this study is to determine the Polychlorinated Biphenyl concentration in the 79TH Army Reserve Command Centers' electrical transformers.

B. Background.

1. The 79th Army Reserve Command (ARCOM) has 3 Reserve Centers in the New Jersey area that have electrical transformers owned by the Federal government that may contain Polychlorinated Biphenyls (PCBs).

2. Polychlorinated Biphenyls (PCBs) were the primary dielectric fluid used in transformers for many years. It is a nonflammable, dense, viscous liquid ideal for cooling the electrical coils in high current equipment. However, safety and environmental issues have surfaced, generating the need for PCB regulations. PCBs have been scientifically proven to bioaccumulate. The compound is stored in the fatty tissues of organisms that ingest PCBs and is taken up by other organisms that prey upon them. This can result in large concentrations of PCBs within higher carnivorous organisms. PCBs are also potential carcinogens that attack the liver. Thus, through the regulating of PCBs, the chances of the compound adversely affecting the environment are decreased.

3. The PCB regulations most pertinent to this survey are those involving transformers discovered to contain greater than 500 parts per million (ppm) PCB. These transformers, according Title 40 CFR 761, need to be: retrofitted with additional electrical protection, registered with the local fire department and periodically inspected for integrity; reclassified and labeled as PCB Contaminated or Non PCB; or removed. These options vary with the type of transformer, the location, and the installation (how the transformer is connected). Consult Title 40 CFR 761 for complete details. In most cases, action must be taken within 18 months of the notification of a PCB transformer.

C. Anticipated Activities. The activities which are to be conducted as a part of this study involve the collection of oil samples from the inside of electrical transformers that are pad and pole mounted. Oil samples will be collected with glass pipettes or plastic tubing, whichever is best designed for the particular transformer configuration. All samples will be transferred to clean and labeled glass jars or test tubes.

D. Personnel. One USACHPPM personnel will be serving in an oversight capacity during these sampling efforts.

E. Training. The USACHPPM personnel has attended the mandatory 40-hour course addressing health and safety training for hazardous waste operations. Requisite annual updates have also been attended. The 287TH personnel have been trained in high voltage electrical power lines and have the associated skill identifier of U4 for that training.

5. NOTIFICATION. A pre-entry briefing will be held by a USACHPPM personnel

prior to the initiation of this sampling effort. This briefing will consist of the familiarization of project personnel with the sample locations and methodologies, site safety procedures, and emergency response procedures. The following individuals acknowledge that they have been notified of the contents of this site safety and health plan, understand its requirements, and agree to comply with the contents of the plan:

| <u>Name</u> | <u>Signature</u> | <u>Date</u> |
|------------------|------------------------------------|-------------|
| 2LT Rich Daniels | <i>Richard Daniels</i> | 11 DEC 95 |
| SGT Menslage | <i>John [unclear] For Menslage</i> | |
| SSG Greg Simmons | <i>Gregory P Simmons</i> | 11 DEC 95 |

6. SITE SPECIFIC SAFETY PLAN.

A. Hazard Analysis.

(1) Weather. The samples will be taken in mid December. Personnel should prepare for moderate to cold temperatures and bring appropriate clothing. The adverse effects of severe cold (weather below 10° F.) should not be a problem because of the moderate climate around the New Jersey area at that time. The mean temperature is expected to be around 40° F. The USACHPPM project officer will be trained in the prevention of cold injuries, and will authorize additional break times in the event of severe cold. Warm beverages, drinking water and a warm break area will be available at each site to limit the exposure to cold weather. If there is rain, freezing rain, severe wind, or a lightening storm, discontinue sampling, replace transformer cover, and seek shelter. Under no circumstances are any personnel to be on or near electric supply conduits during any storm. Wait until all evidence of the storm has passed and check grounding lines prior to continuing with the sampling.

(2) Electrical Energy. The principal hazard is the potential for electrocution. The bucket truck (for pole mounted transformers) and personnel will be properly grounded before deenergizing each transformer. Deenergizing will occur immediately prior to handling the transformers. Minimize electrical handling as much as possible. The ground personnel will be cognizant of the line man and will communicate using voice and/or hand and arm signals before the bucket is slowly moved. Electrical connections will be reestablished after all work is completed at the site. A list of area power companies' telephone numbers will be provided.

(3) Abandoned Poles. Several of the pole mounted transformers have been abandoned in place for several years. The mounting for these transformers may not be secure enough to safely sample the transformers. The linesmen will closely examine each transformer mount prior to sampling for integrity.

Transformers will not be sampled unless they can be firmly secured to the poles or safely removed to ground level.

(4) Noise. Noise hazard should not be a factor.

(5) Height. Height presents the potential for falling. The pole mounted transformers may be located 20 feet above the ground level and some are located on and near slopes. The truck will be securely positioned near the pole, immobilized, and grounded. The line man will carefully enter the bucket with the needed equipment and sampling materials a safety harness will be used while riding in the bucket. The bucket will be moved slowly and in a controlled manner, in accordance with company provided instructions. Items will not be thrown into or from the bucket. Personnel will not ride in the bucket when the truck is moving.

(5) Traffic and Obstacles. All traffic signs and rules will be obeyed when traveling from site to site. Extra caution will be taken if winter driving conditions exist. Travel will be delayed if severe weather forces road closure or unsafe driving conditions. An awareness of obstacles such as trees and buildings will be maintained when positioning the truck. The bucket will be fully lowered and secured prior to any movement of the truck from the sampling site.

(6) Contaminants. The chemical hazard will be potential exposure to the dielectric fluid Polychlorinated Biphenyl (PCB), possibly contained in the transformers. PCB exposure could occur orally or dermally. Appropriate personnel protective equipment and general safety practices will minimize this hazard.

B. Personal Protective Equipment. All personnel involved in sampling will wear modified level D protective equipment to include: BDU's or street clothes with white coveralls, and latex gloves. The gloves will be changed between samples to preclude cross-contamination.

C. General Safety Rules and Equipment.

(1) Personnel working on site will read the site sampling and safety plan and receive a safety briefing by USACHPPM personnel.

(2) There will be no eating, drinking, or smoking in the work area.

(3) An adequately stocked first aid kit will be available on site throughout the operations.

(4) The location of the nearest medical facility and corresponding phone number will be established through the facility manager at each site prior to commencing operations.

(5) Individuals will wash exposed skin surfaces after working on site.

(6) Emergency communication will be accomplished by means of a cellular phone or Center phone.

D. Emergency Procedures. All sampling activities will be coordinated with Center facility personnel upon arrival at each site. Requisite emergency procedures and telephone numbers will be provided to the study team at that time. Should work related injuries, illness, etc., occur, the local medical facility will provide the necessary medical support, as warranted.

E. Decontamination Procedures.

(1) Decontamination will be performed to protect workers from chemical exposure and to limit the spread of contamination within and outside the sample sites. Equipment decontamination consists mainly of containing any spilled oil in absorbent pads or kitty litter. All wash and rinse water will be collected and analyzed for disposal.

(2) Personnel decontamination will consist of removing gloves and white coveralls and placing them into the appropriate plastic bag for disposal. Any oil spilled should be absorbed with an absorbent pad. No personnel will leave the work area in vehicles while wearing protective clothing.

PREPARED BY: *Lisa S. Strutz* 10 Aug 95
2LT Lisa S. Strutz
Project Officer
Pollution Prevention Team
DATE

REVIEWED BY: *Thomas R. Runyon* 10 Aug 95
Thomas R. Runyon
Team Leader
Special Studies/Technology Team
DATE

CONCURRENCE BY: *Thomas R. Runyon* 10 Aug 95
JJ John J. Resta, P.E.
Program Manager
Hazardous and Medical Waste Management
USACHPPM
DATE

Creighton P. Jacobson DATE
Safety and Occupational Health Manager
USACHPPM

immobilized, and grounded. The line man will carefully enter the bucket with the needed equipment and sampling materials. The bucket will be moved slowly and in a controlled manner, in accordance with company provided instructions. Items will not be thrown into or from the bucket. Personnel will not ride in the bucket when the truck is moving.

(5) **Traffic and Obstacles.** All traffic signs and rules will be obeyed when traveling from site to site. An awareness of obstacles such as trees and buildings will be maintained when positioning the truck. The bucket will be fully lowered and secured prior to any movement of the truck from the sampling site.

(6) **Contaminants.** The chemical hazard will be potential exposure to the dielectric fluid Polychlorinated Biphenyl (PCB), possibly contained in the transformers. PCB exposure could occur orally or dermally. Appropriate personnel protective equipment and general safety practices will minimize this hazard.

B. Personal Protective Equipment. All personnel involved in sampling will wear modified level D protective equipment to include: BDU's or street clothes with white coveralls, and latex gloves. The gloves will be changed between samples to preclude cross-contamination.

C. General Safety Rules and Equipment.

(1) Personnel working on site will read the site sampling and safety plan and receive a safety briefing by USACHPPM personnel.

(2) There will be no eating, drinking, or smoking in the work area.

(3) An adequately stocked first aid kit will be available on site throughout the operations.

(4) The location of the nearest medical facility and corresponding phone number will be established through the facility manager at each site prior to commencing operations.

(5) Individuals will wash exposed skin surfaces after working on site.

(6) Emergency communication will be accomplished by means of a cellular phone or Center phone.

D. Emergency Procedures. All sampling activities will be coordinated with Center facility personnel upon arrival at each site. Requisite emergency procedures and telephone numbers will be provided to the study team at that time. Should

MCHB-DC-EHM

SUBJECT: Hazardous Waste Management Consultation No. 37-26-1296-96, Apr-Dec 1995

APPENDIX D

DETERMINATION OF TRANSFORMERS SERVICING THE 79th ARCOM

**Determination of Electrical Transformers
79th ARCOM Reserve Centers in New Jersey**

Reserve Centers with Utility Owned Transformers

| Reserve Center | Servicing Utility |
|---------------------------------|---------------------------------|
| Monmouth USFRC, Red Bank, NJ | Jersey Central Power and Light |
| Hamilton USARC, Lodi NJ | Jersey Central Power and Light |
| Brittin USARC, Camden NJ | Public Service Electric and Gas |
| Somervell USARC, MT. Freedom NJ | Jersey Central Power and Light |
| Stock USARC, Northfield NJ | Atlantic Electric Company |
| Stryker USARC, Trenton NJ | Public Service Electric and Gas |
| Weigel USARC, Edison NJ | Public Service Electric and Gas |

Reserve Centers as tenant activities at federal facilities

| Reserve Center | Responsible Party for Transformer |
|---|--|
| 2nd BDE Motor Pool, FT Dix, NJ | FT Dix Environmental Management Office |
| ECS#27, FT Dix, NJ | FT Dix Environmental Management Office |
| Kelly USARC, FT Dix, NJ | FT Dix Environmental Management Office |
| Regional Training Site Intelligence, FT Dix, NJ | FT Dix Environmental Management Office |
| NCO Academy, FT Dix, NJ | FT Dix Environmental Management Office |
| BPC Kilmer, FT Dix, NJ | FT Dix Environmental Management Office |

Transformers Owned by the 79th ARCOM.

| Reserve Center | Description of Transformers |
|------------------------|---|
| Sievers-Sandburg USARC | A total of 47 transformers are located on site. Five transformers at the old NIKE site are PCB-containing or PCB-contaminated. An additional 2 transformers are PCB-contaminated. |
| Kilmer USARC | A total of nine transformers are owned by the Reserve Center. All transformers were determined to be Non-PCB. |
| Cavens Point USARC | A total of 21 transformers are owned by the Reserve Center. Four transformers were determined to be PCB-contaminated. |

A. Non-Federally-Owned-Transformers. This refers to the condition of the Reserve Center as: 1) having a transformer or more owned by the local utility, or 2) a tennant activity at a federal facility.

1. The 79th ARCOM Centers with local utility owned-transformers.

Brittin USARC, Camden NJ
Hamilton USARC, Lodi NJ
Monmouth USFRC, Red Bank, NJ
Somervell USARC, MT. Freedom NJ
Stock USARC, Northfield NJ
Stryker USARC, Trenton NJ
Weigel USARC, Edison NJ

2. The 79th ARCOM Centers as tennant activities at federal facilities.

2nd BDE Motor Pool, FT Dix, NJ
ECS#27, FT Dix, NJ
BPC Kilmer, FT Dix, NJ
Kelly USARC, FT Dix, NJ
NCO Academy, FT Dix, NJ
Regional Training Site Intelligence, FT Dix, NJ

B. Transformers Owned by the 79th ARCOM.

Sievers-Sandburg USARC
Kilmer USARC
Cavens Point USARC

C. Locations of Utility Owned Transformers

1. ATLANTIC ELECTRIC COMPANY TRANSFORMERS

Northfield, NJ: Stock USARC

2. JERSEY CENTRAL POWER AND LIGHT TRANSFORMERS

MT. Freedom, NJ: Somervell USARC
Lodi, NJ: Hamilton USARC
Red bank, NJ: Monmouth USFRC

3. PUBLIC SERVICE ELECTRIC AND GAS

Camden, NJ: Brittin USARC
Trenton, NJ: Stryker USARC
Edison NJ: Weigel USARC

MCHB-DC-EHM

SUBJECT: Hazardous Waste Management Consultation No. 37-26-1296-96, Apr-Dec 1995

APPENDIX E

LABORATORY ANALYSIS

Table 1
Laboratory Analysis SGT J. Kilmer USARC

| Sample number | Sample Location | Date Sampled | Lab Analysis PCB Contamination | Label Required | Inspection Required (1) |
|---------------|--------------------------------------|--------------|--------------------------------|----------------|-------------------------|
| PA47K | Pad transformer, Building 1066 | 14-DEC-95 | <5.0 MG/KG (BDL) | Non-PCB | no |
| PA48K | Pad transformer, Building 1065 | 14-DEC-95 | <5.0 MG/KG (BDL) | Non-PCB | no |
| PA49K | Pad transformer, Building 1432 (2) | 14-DEC-95 | <5.0 MG/KG (BDL) | Non-PCB | no |
| PA50K | Pad transformer, Building 1432 (2) | 14-DEC-95 | 11 MG/KG | Non-PCB | no |
| PA51K | Pad transformer, Building 1432 (2) | 14-DEC-95 | 11 MG/KG | Non PCB | no |
| PA52K | Pole Transformer by Truman Drive (3) | 14-DEC-95 | <5.0 MG/KG (BDL) | Non-PCB | no |
| PA53K | Pole Transformer by Truman Drive (3) | 14-DEC-95 | <5.0 MG/KG (BDL) | Non-PCB | no |
| PA54K | Pole Transformer by Truman Drive (3) | 14-DEC-95 | <5.0 MG/KG (BDL) | Non-PCB | no |

(MG/KG) Milligrams per Kilogram of dielectric fluid

(BDL) Below instrument Detection Limits for chemical analyzed

(1) Quarterly Inspection required for transformers over 500 MG/KG for PCBs

(2) Located behind Old Motor Pool

(3) Located along Truman Drive close to Catholic Charities Day Care

Table 2
Laboratory Analysis Sievers-Sandburg USARC

| Sample number | Sample Location | Date Sampled | PCB Contamination | Label Required | Inspection Required? |
|---------------|--|--------------|-------------------|------------------|----------------------|
| PT1P | Pole Transformer by PX | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT2P | Pole Transformer by PX | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT3P | Pole Transformer by PX | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT4P | Pole Transformer by Building 351 | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT5P | Pole Transformer by Building 351 | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT6P | Pole Transformer by Building 351 | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT7P | Pole Transformer by Building 371 | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT8P | Pole Transformer by Building 371 | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT9P | Pole Transformer by Building 371 | 11-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT10P | Pole Transformer by Building 380 | 11-DEC-95 | <7.2 PPM | Non-PCB | no |
| PT11P | Pole Transformer by Building 380 | 11-DEC-95 | <7.6 PPM | Non-PCB | no |
| PT12P | Pole Transformer by Building 380 | 11-DEC-95 | <7.1 PPM | Non-PCB | no |
| PT13P | Pole Transformer by Building 380 (1) | 11-DEC-95 | <9.2 PPM | Non-PCB | no |
| PT14P | Abandoned Transformer by Water Treatment | 11-DEC-95 | <7.2 PPM | Non-PCB | no |
| PT15P | Pole Transformer by Building 474 | 11-DEC-95 | 86 PPM | PCB-Contaminated | no |
| PT16P | Pole Transformer by Building 464 | 11-DEC-95 | <5 PPM | Non-PCB | no |
| PT17P | Pole Transformer by Building 464 | 11-DEC-95 | <5 PPM | Non-PCB | no |
| PT18P | Pole Transformer by Building 464 | 11-DEC-95 | <5 PPM | Non-PCB | no |

Table 2
Laboratory Analysis Sievers-Sandburg USARC

| Sample number | Sample Location | Date Sampled | PCB Contamination | Label Required | Inspection Required? |
|---------------|---|--------------|-------------------|------------------|----------------------|
| PT19P | Pole Transformer by Building 464 (2) | 12-DEC-95 | <6.3 PPM | Non-PCB | no |
| PT20P | Pole Transformer by Building 404 | 12-DEC-95 | 120 PPM | PCB-Contaminated | no |
| PT21P | Pole Transformer by Building 404 | 12-DEC-95 | <11.3 PPM | Non-PCB | no |
| PT22P | Pad Transformer in Missile Master Building | 12-DEC-95 | >430000 PPM | PCB-Containing | yes |
| PT23P | Pad Transformer in Missile Master Building | 12-DEC-95 | 161 PPM | PCB-Contaminated | no |
| PT24P | Pad Transformer in Missile Master Building | 12-DEC-95 | 530 PPM | PCB-Containing | yes |
| PT25P | Pad Transformer in Missile Master Building | 12-DEC-95 | 1450 PPM | PCB-Containing | yes |
| PT26P | Oil Switch in Missile Master Building | 12-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT27P | Pole Transformer corner Depot & Central | 12-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT28P | Pole Transformer along Central Dr (Bldg404) | 12-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT29P | Pole Transformer along Central Dr (Bldg404) | 12-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT30P | Pole Transformer along Central Dr (Bldg404) | 12-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT31P | Pole Transformer along Central Dr (Bldg404) | 12-DEC-95 | 39 PPM | Non-PCB | no |
| PT32P | Pole Transformer corner Central & Artillary | 12-DEC-95 | 22 PPM | Non-PCB | no |
| PT33P | Pole Transformer in Field | 12-DEC-95 | 150 PPM | PCB-Contaminated | no |
| PT34P | Pole Transformer by Building | 13-DEC-95 | 27 PPM | Non-PCB | no |
| PT35P | Pole Transformer by Building 173 | 13-DEC-95 | <8.7 PPM | Non-PCB | no |
| PT36P | Pole Transformer by Building 173 | 13-DEC-95 | <8.4 PPM | Non-PCB | no |

Table 2
Laboratory Analysis Sievers-Sandburg USARC

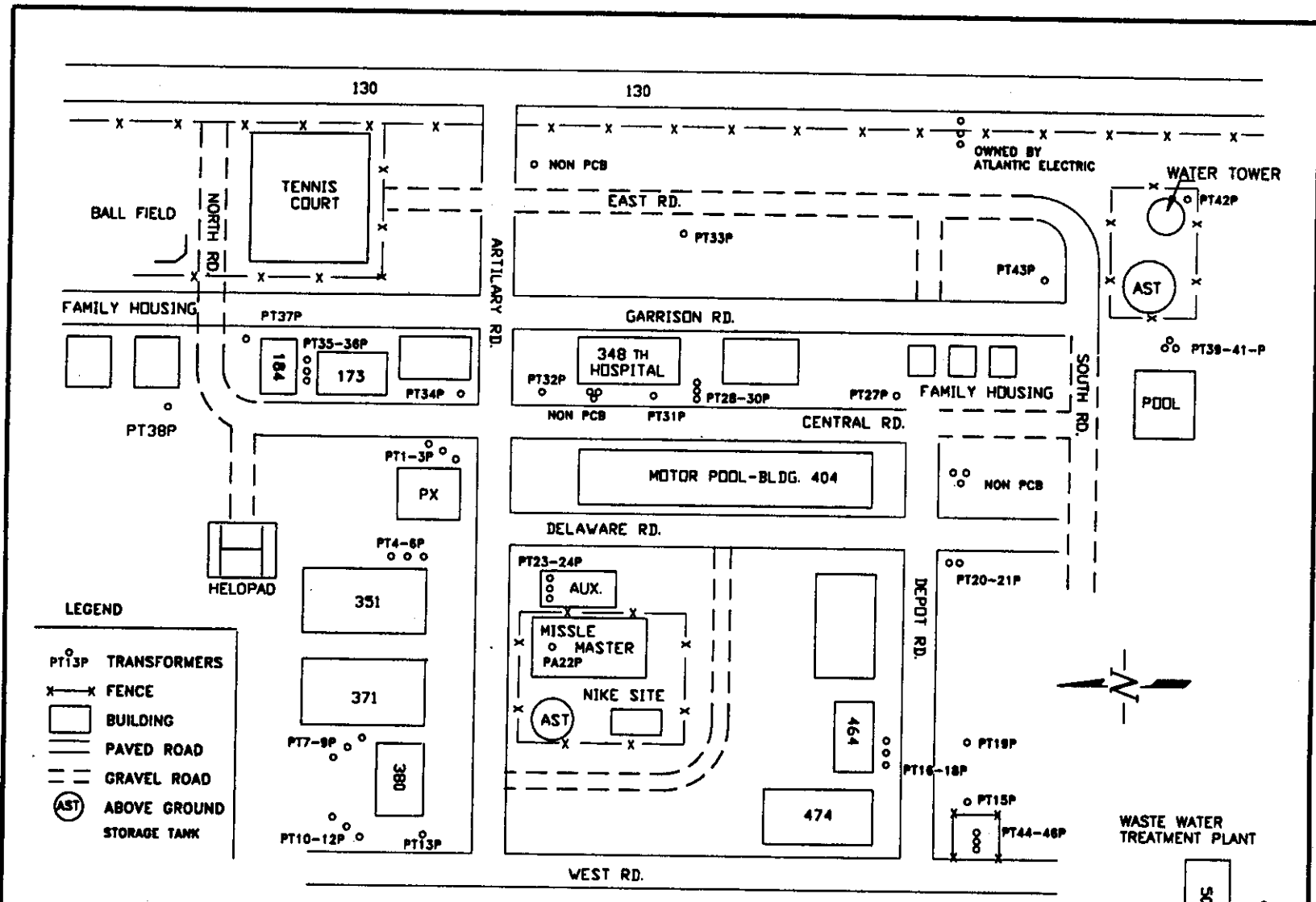
| Sample number | Sample Location | Date Sampled | PCB Contamination | Label Required | Inspection Required? |
|---------------|---|--------------|-------------------|----------------|----------------------|
| PT37P | Pole Transformer by Building 184 | 13-DEC-95 | <8 PPM | Non-PCB | no |
| PT38P | Pole Transformer in Field by Housing Area | 13-DEC-95 | <7.4 PPM | Non-PCB | no |
| PT39P | Pole Transformer by Swimming Pool | 13-DEC-95 | <7.3 PPM | Non-PCB | no |
| PT40P | Pole Transformer by Swimming Pool | 13-DEC-95 | <9.5PPM | Non-PCB | no |
| PT41P | Pole Transformer by Swimming Pool | 13-DEC-95 | <12.3 PPM | Non-PCB | no |
| PT42P | Pole Transformer by Water Tower | 13-DEC-95 | 24 PPM | Non-PCB | no |
| PT43P | Pole Transformer by South Avenue | 13-DEC-95 | <11.6 PPM | Non-PCB | no |
| PT44P | Pad Transformer corner of Depot & West | 13-DEC-95 | <14.6 PPM | Non-PCB | no |
| PT45P | Pole Transformer corner Depot & West | 13-DEC-95 | 24 PPM | Non-PCB | no |
| PT46P | Pole Transformer corner Depot & West | 13-DEC-95 | <14.2 PPM | Non-PCB | no |


Table 3
Laboratory Analysis Cavens Point USARC

| Sample number | Sample Location | Date Sampled | PCB Contamination | Label Required | Inspection Required? |
|---------------|---|--------------|-------------------|------------------|----------------------|
| PT54C | Pole Transformer in Field | 14-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT55C | Pole Transformer in Field | 14-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT56C | Pole Transformer in Field | 14-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT57C | Pole Transformer by Cavens Point RD (1) | 15-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT58C | Pole Transformer by Bulbwing 198 | 15-DEC-95 | 40 PPM | PCB-Contaminated | no |
| PT59C | Pole Transformer by Cavens Point RD (1) | 15-DEC-95 | <7.8 PPM | Non-PCB | no |
| PT60C | Pole Transformer by Bulbwing 198 | 15-DEC-95 | 42 PPM | PCB-Contaminated | no |
| PT61C | Pole Transformer by Bulbwing 198 | 15-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT62C | Pole Transformer by Bulbwing 204 | 15-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT63C | Pole Transformer by Bulbwing 204 | 15-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT64C | Pole Transformer by Bulbwing 204 | 15-DEC-95 | <5 PPM (BDL) | Non-PCB | no |
| PT65C | Pole Transformer in Parking Area | 15-DEC-95 | <9.8 PPM (BDL) | Non-PCB | no |
| PT66C | Pole Transformer in Parking Area | 15-DEC-95 | <9.5 PPM | Non-PCB | no |
| PT67C | Pole Transformer in Parking Area | 15-DEC-95 | <9.3 PPM | Non-PCB | no |
| PT68C | Pole Transformer by Building 204 | 15-DEC-95 | 42 PPM | PCB-Contaminated | no |
| PT69C | Pole Transformer by Building 204 | 15-DEC-95 | 19 PPM | Non-PCB | no |
| PT70C | Pole Transformer by Building 204 | 15-DEC-95 | 41 PPM | PCB-Contaminated | no |
| PT71C | Pad Transformer by Building 198 | 15-DEC-95 | <10.5 PPM (BDL) | Non-PCB | no |

Table 3 (Continued)
Laboratory Analysis Cavens Point USARC

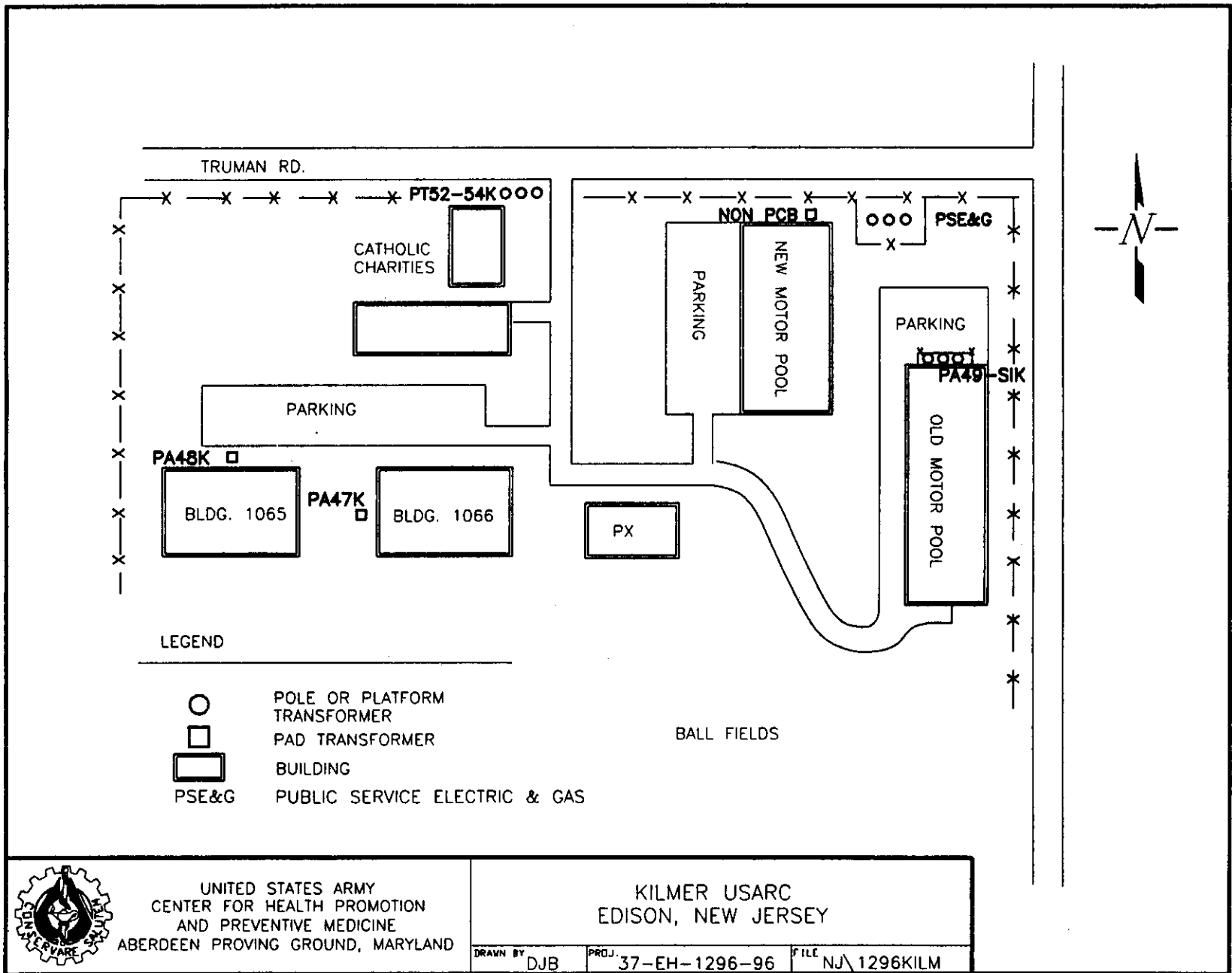
| Sample number | Sample Location | Date Sampled | PCB Contamination | Label Required | Inspection Required? |
|---------------|---------------------------------------|--------------|-------------------|----------------|----------------------|
| PT72C | Abandoned transformer in Parking Area | 15-DEC-95 | <10.2 PPM (BDL) | Non-PCB | no |
| PT73C | Abandoned transformer in Parking Area | 15-DEC-95 | <10 PPM (BDL) | Non-PCB | no |
| PT74C | Pad Transformer by Building 198 | 15-DEC-95 | <16.1 PPM (BDL) | Non-PCB | no |




 UNITED STATES ARMY
 CENTER FOR HEALTH PROMOTION
 AND PREVENTIVE MEDICINE
 ABERDEEN PROVING GROUND, MARYLAND

SIEVERS-SANDERS USARC
 PEDRICKTOWN, NEW JERSEY

DRAWN BY DJB PROJ 37-EH-1296-96 FILE NJ\1296SIEV



TRUMAN RD.

CATHOLIC CHARITIES

NON PCB

PSE&G

PARKING

NEW MOTOR POOL

PARKING

OLD MOTOR POOL

PARKING

PA48K

PA47K

BLDG. 1065

BLDG. 1066

PX

PA49-SIK

LEGEND

- POLE OR PLATFORM TRANSFORMER
- PAD TRANSFORMER
- ▭ BUILDING
- PSE&G PUBLIC SERVICE ELECTRIC & GAS

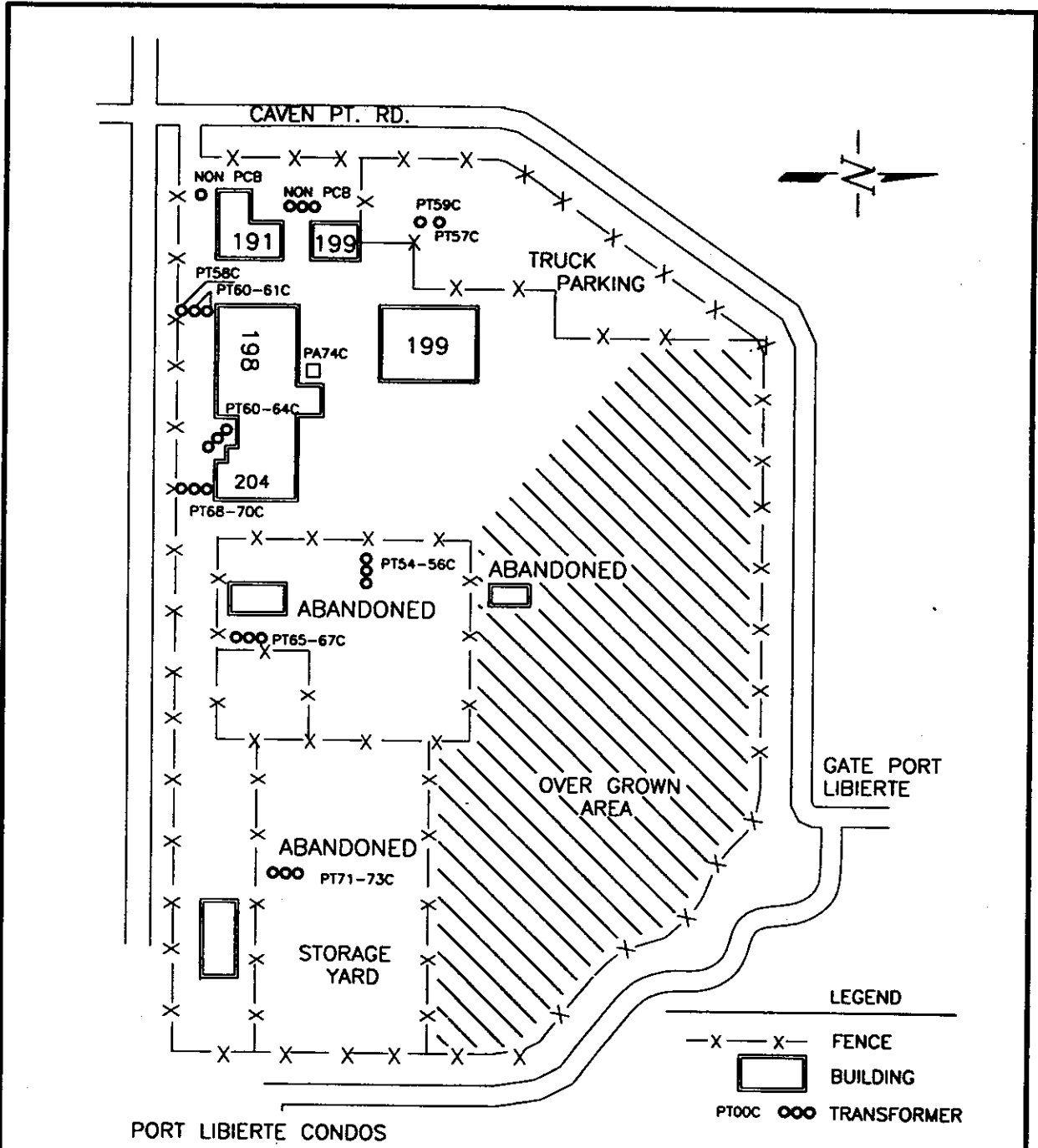
BALL FIELDS



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 AND PREVENTIVE MEDICINE
 ABERDEEN PROVING GROUND, MARYLAND

KILMER USARC
 EDISON, NEW JERSEY

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UNITED STATES ARMY
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 AND PREVENTIVE MEDICINE
 ABERDEEN PROVING GROUND, MARYLAND

CAVENS POINT USARC
 JERSEY CITY, NEW JERSEY

DRAWN BY DJB PROJ 37-EH-1296-96 FILE NJ\1296CAVE

U.S. Army Center for Health Promotion and Preventive Medicine
Directorate of Laboratory Sciences
Aberdeen Proving Grounds, MD 21010-5422

Analytical Results - Final Program Report
(LIMS Generated by rberkshi)

Note: This report shall not be reproduced except in full, without the written approval of the laboratory.

DLS Job.....: 5A4569
Proj. Officer.: RICHARD DANIELS
Timekeeping#...: 37-21-1296
Installation...: 79TH ARCOM

Reviewed and released by:

Signature..:


Ms. Rosemary Gaffney

Date

2/9/96

Title.....: Manager, CHPPM - Military Unique and Special Chemistry Program

The following labs performed analyses included in this report:

Lab Description

HLI Heritage Laboratories, Inc.

DLS Sample#.....: D8335
Field ID.....: PT1P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 09:50
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |

DLS Sample#.....: D8336
Field ID.....: PT2P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 10:05
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 27-DEC-95 | LMW |

DLS Sample#.....: D8337
Field ID.....: PT3P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 10:10
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#.....: D8338
Field ID.....: PT4P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 11:20
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8338
 Field ID.....: PT4P
 Sample Description...: Oil
 Date/Time Collected.: 11-Dec-95 11:20
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#.....: D8339
 Field ID.....: PT5P
 Sample Description...: Oil
 Date/Time Collected.: 11-Dec-95 11:25
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#.....: D8340
 Field ID.....: PT6P
 Sample Description...: Oil
 Date/Time Collected.: 11-Dec-95 11:30
 Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8340
Field ID.....: PT6P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 11:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#.....: D8341
Field ID.....: PT7P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 12:00
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#.....: D8342
Field ID.....: PT8P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 12:10
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8342
Field ID: PT8P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 12:10
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#: D8343
Field ID: PT9P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 12:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#: D8344
Field ID: PT10P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 14:05
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8344
Field ID: PT10P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 14:05
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 2.2 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 28-DEC-95 | LMW |

DLS Sample#: D8345
Field ID: PT11P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 14:10
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 2.6 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8346
Field ID: PT12P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 14:15
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8346
Field ID: PT12P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 14:15
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 2.1 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8347
Field ID: PT13P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 14:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 4.2 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8348
Field ID: PT14P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 15:00
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8348
Field ID.....: PT14P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 15:00
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 1.3 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | 1.9 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8349
Field ID.....: PT15P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 15:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 86 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8350
Field ID.....: PT16P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 16:00
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8350
Field ID: PT16P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 16:00
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8351
Field ID: PT17P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 16:10
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8352
Field ID: PT18P
Sample Description: Oil
Date/Time Collected: 11-Dec-95 16:15
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8352
Field ID.....: PT18P
Sample Description...: Oil
Date/Time Collected.: 11-Dec-95 16:15
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8353
Field ID.....: PT19P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 08:45
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 1.3 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8354
Field ID.....: PT20P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 09:15
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8354
Field ID.....: PT20P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 09:15
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <2.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <2.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <10.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <2.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | 120 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <2.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <2.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <2.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8355
Field ID.....: PT21P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 09:25
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 6.3 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8356
Field ID.....: PA22P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 10:00
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8356
Field ID.....: PA22P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 10:00
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 430000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <5000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <25000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <5000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <5000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <5000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <5000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <5000 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8357
Field ID.....: PA23P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 11:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 130 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <25.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | 31 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8358
Field ID.....: PA24P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 11:25
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8358
Field ID: PA24P
Sample Description: Oil
Date/Time Collected: 12-Dec-95 11:25
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 120 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <10 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <50 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <10 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <10 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <10 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <10 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | 410 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8359
Field ID: PA25P
Sample Description: Oil
Date/Time Collected: 12-Dec-95 11:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 150 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <20 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <100 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <20 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <20 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <20 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <20 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | 1300 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8360
Field ID: OS26P
Sample Description: Oil
Date/Time Collected: 12-Dec-95 11:50
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8360
Field ID.....: OS26P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 11:50
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8361
Field ID.....: PT27P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 13:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8362
Field ID.....: PT28P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 14:00
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8362
Field ID.....: PT28P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 14:00
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8363
Field ID.....: PT29P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 14:10
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#.....: D8364
Field ID.....: PT30P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 14:20
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8364
Field ID: PT30P
Sample Description: Oil
Date/Time Collected: 12-Dec-95 14:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | JLG |

DLS Sample#: D8365
Field ID: PT31P
Sample Description: Oil
Date/Time Collected: 12-Dec-95 14:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 39 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#: D8366
Field ID: PT32P
Sample Description: Oil
Date/Time Collected: 12-Dec-95 15:40
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8366
Field ID.....: PT32P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 15:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 22 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8367
Field ID.....: PT33P
Sample Description...: Oil
Date/Time Collected.: 12-Dec-95 16:15
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 150 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <25.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8368
Field ID.....: PT34P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 08:30
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8368
Field ID.....: PT34P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 08:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 27 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8369
Field ID.....: PT35P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 08:55
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 3.7 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8370
Field ID.....: PT36P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 09:05
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8370
 Field ID.....: PT36P
 Sample Description..: Oil
 Date/Time Collected.: 13-Dec-95 09:05
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 3.4 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8371
 Field ID.....: PT37P
 Sample Description..: Oil
 Date/Time Collected.: 13-Dec-95 09:25
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 3.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8372
 Field ID.....: PT38P
 Sample Description..: Oil
 Date/Time Collected.: 13-Dec-95 09:40
 Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8372
Field ID.....: PT38P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 09:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 2.4 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8373
Field ID.....: PT39P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 10:25
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 7.3 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#.....: D8374
Field ID.....: PT40P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 10:35
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8374
Field ID: PT40P
Sample Description: Oil
Date/Time Collected: 13-Dec-95 10:35
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 4.5 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 08-JAN-96 | TBP |

DLS Sample#: D8375
Field ID: PT41P
Sample Description: Oil
Date/Time Collected: 13-Dec-95 10:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 7.3 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#: D8376
Field ID: PT42P
Sample Description: Oil
Date/Time Collected: 13-Dec-95 11:10
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8376
 Field ID.....: PT42P
 Sample Description...: Oil
 Date/Time Collected.: 13-Dec-95 11:10
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | 24 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#.....: D8377
 Field ID.....: PT43P
 Sample Description...: Oil
 Date/Time Collected.: 13-Dec-95 11:35
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 6.6 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#.....: D8378
 Field ID.....: PA44P
 Sample Description...: Oil
 Date/Time Collected.: 13-Dec-95 12:10
 Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8378
Field ID: PA44P
Sample Description: Oil
Date/Time Collected: 13-Dec-95 12:10
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 9.6 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#: D8379
Field ID: PA45P
Sample Description: Oil
Date/Time Collected: 13-Dec-95 12:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 24 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#: D8380
Field ID: PA46P
Sample Description: Oil
Date/Time Collected: 13-Dec-95 12:30
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8380
Field ID.....: PA46P
Sample Description...: Oil
Date/Time Collected.: 13-Dec-95 12:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 9.2 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#.....: D8381
Field ID.....: PA47K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 09:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#.....: D8382
Field ID.....: PA48K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 09:40
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8382
Field ID.....: PA48K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 09:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#.....: D8383
Field ID.....: PA49K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 10:25
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 8.7 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#.....: D8384
Field ID.....: PA50K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 10:30
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8384
Field ID: PA50K
Sample Description: Oil
Date/Time Collected: 14-Dec-95 10:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 11 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 03-JAN-96 | TBP |

DLS Sample#: D8385
Field ID: PA51K
Sample Description: Oil
Date/Time Collected: 14-Dec-95 10:35
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 11 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#: D8386
Field ID: PA52K
Sample Description: Oil
Date/Time Collected: 14-Dec-95 11:15
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8386
Field ID.....: PA52K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 11:15
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#.....: D8387
Field ID.....: PT53K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 11:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#.....: D8388
Field ID.....: PT54K
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 11:30
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8388
Field ID: PT54K
Sample Description: Oil
Date/Time Collected: 14-Dec-95 11:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#: D8389
Field ID: PT54C
Sample Description: Oil
Date/Time Collected: 14-Dec-95 14:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#: D8390
Field ID: PT55C
Sample Description: Oil
Date/Time Collected: 14-Dec-95 14:50
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8390
Field ID.....: PT55C
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 14:50
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#.....: D8391
Field ID.....: PT56C
Sample Description...: Oil
Date/Time Collected.: 14-Dec-95 14:50
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#.....: D8392
Field ID.....: PT57C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 09:10
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8392
 Field ID.....: PT57C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 09:10
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#.....: D8393
 Field ID.....: PT58C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 12:50
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 40 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#.....: D8394
 Field ID.....: PT59C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 09:20
 Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8394
Field ID.....: PT59C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 09:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 2.8 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 29-DEC-95 | LMW |

DLS Sample#.....: D8395
Field ID.....: PT60C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 12:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 42 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8396
Field ID.....: PT61C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 09:40
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8396
Field ID.....: PT61C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 09:40
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8397
Field ID.....: PT62C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 10:45
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8398
Field ID.....: PT63C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 10:55
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8398
 Field ID.....: PT63C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 10:55
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8399
 Field ID.....: PT64C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 11:05
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8400
 Field ID.....: PT65C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 11:20
 Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8400
Field ID.....: PT65C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 11:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 4.8 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8401
Field ID.....: PT66P
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 11:30
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 4.5 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8402
Field ID.....: PT67C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 11:35
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8402
Field ID.....: PT67C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 11:35
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 4.3 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8403
Field ID.....: PT68C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 13:20
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 42 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8404
Field ID.....: PT69C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 13:35
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8404
Field ID.....: PT69C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 13:35
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 19 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | TBP |

DLS Sample#.....: D8405
Field ID.....: PT70C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 13:55
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 41 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |

DLS Sample#.....: D8406
Field ID.....: PT71C
Sample Description...: Oil
Date/Time Collected.: 15-Dec-95 14:00
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#: D8406
Field ID: PT71C
Sample Description: Oil
Date/Time Collected: 15-Dec-95 14:00
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 5.5 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |

DLS Sample#: D8407
Field ID: PT72C
Sample Description: Oil
Date/Time Collected: 15-Dec-95 14:05
Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 5.2 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |

DLS Sample#: D8408
Field ID: PT73C
Sample Description: Oil
Date/Time Collected: 15-Dec-95 14:10
Date Received in DLS: 18-Dec-95 11:21

DLS Sample#.....: D8408
 Field ID.....: PT73C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 14:10
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | 5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 53469-21-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |

DLS Sample#.....: D8409
 Field ID.....: PT74C
 Sample Description...: Oil
 Date/Time Collected.: 15-Dec-95 15:00
 Date Received in DLS: 18-Dec-95 11:21

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11097-69-1 | 1.1 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 53469-21-5 | 11 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |

DLS Sample#.....: D8440
 Field ID.....: 96MUS1-114
 Sample Description...: Oil
 Date/Time Collected.: 22-Dec-95 00:00
 Date Received in DLS: 22-Dec-95 09:23

DLS Sample#.....: D8440
 Field ID.....: 96MUS1-114
 Sample Description...: Oil
 Date/Time Collected.: 22-Dec-95 00:00
 Date Received in DLS: 22-Dec-95 09:23

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 53469-21-5 | 44 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |

DLS Sample#.....: D8441
 Field ID.....: 96MUS1-115
 Sample Description...: Oil
 Date/Time Collected.: 22-Dec-95 00:00
 Date Received in DLS: 22-Dec-95 09:23

| Test | Parameter | Result | Units | Method | Analyzed | Analyst |
|--------|------------|--------|-------|-------------|-----------|---------|
| HLI457 | 11096-82-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11097-69-1 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11104-28-2 | <5.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 11141-16-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12672-29-6 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 12674-11-2 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 37324-23-5 | <1.0 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |
| HLI457 | 53469-21-5 | 40 | MG/KG | SW846-8080A | 04-JAN-96 | BJW |

DLS Sample#.....: D8442
 Field ID.....: 96MUS1-116
 Sample Description...: Oil
 Date/Time Collected.: 22-Dec-95 00:00
 Date Received in DLS: 22-Dec-95 09:23