PREDECISIONAL DRAFT

ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT FIVE-YEAR PLAN
ACTIVITY DATA SHEET

Operations Office: OR
Installation: PORTS
Facility/Waste Area Grouping: SOLID
Program B&R Code: CD-10-71-86-4
39-CD-10-71-U
Activity Title: PB/PCB Control Improvements (Gaskets)

ID Number: OR-0602-02/05-30
Category: CA
Priority: 3

Funding Summary:

Budget Authority ($000's)

	FY 1989* Approp.	FY 1990* Amended Presid. Budget	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
Operating:	400	50	0	0	0	0	0
Capital:	0	0	0	0	0	0	0
Plant:							
GPP	0	0	0	0	0	0	0
Line-Item	0	0	10,000	20,000	3,600	0	0
TOTAL	400	50	10,000	20,000	3,600	0	0
RD&D (non-add)							
Operating:	0	0	0	0	0	0	0
Capital:	0	0	0	0	0	0	0
Plant:	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

*FY 1989 and FY 1990 funds are for CDR and feasibility study (engineering/operating) support work only.

KEY WORDS: TSCA, PCB, Gaskets, Oil, Leaks

NARRATIVE: This project is to bring the ventilation duct systems at Portsmouth into compliance with PCB usage regulations (40 CFR 761.20(a)) promulgated under the Toxic Substances Control Act (TSCA) and 40 CFR 761.20. Currently, the ventilation ducts are constructed with flanged joints containing wool felt gaskets. These gaskets have been found to contain chromium compounds, asbestos, PCB's, and radionuclides. This use of PCB's is not authorized under the current PCB regulations and, barring regulatory relief, must be terminated. In addition, some of the ventilation ducts (the Process Building Motor Exhaust Ducts) contain entrained lubricating oil which is leaching through the duct gaskets, mobilizing the PCB's, and dripping onto the operating floors of the process buildings. These "drips" must be cleaned up according to the PCB Spill Cleanup Policy, which is consumptive of plant resources and administratively burdensome.

1991

This activity is proceeding with [illegible] alternatives in parallel. The preferred alternative i install an oil control system under all duct flanges with a potential to leak and collect the oil for appropriate disposal. To permit this alternative which violates TSCA regulations, DO pursuing a rulemaking with EPA to authorize the continued use of PCB's in ventilation gaskets. Oil collection troughs would be installed under all motor exhaust ducts and manifolde collection points to control oil drips. All gasket materials will be removed and disp approoriately at plant decommissioning and decontamination. This alternative has lower health environmental risks and much lower costs (~$34 million), but requires the active concurrence of EPA. The other alternative consists of the removal of the gaskets and decontamination of ductwork. This alternative would comply with the existing regulations, but would involve hi health and safety risks (due to the asbestos in the gaskets and construction safety issues) environmental risks (due to the fact that no existing or planned waste handling facility authorized to accept the gasket materials) and is prohibitively expensive under the exis funding restrictions on the uranium enrichment program (several hundred million dollars). possibility of troughing only the motor exhaust ducts to further reduce costs is b investigated.

[illegible] have been initiated with U.S. EPA and are expected to continue until an agreement (includin compliance schedule) is reached or until EPA initiates enforcement action based on the exist regulations. Any delay or deferment of this activity can be expected to trigger an enforcem action by EPA based on the existing regulations.

Current ASE: CD-10-01
39-CD-10-01

Costs/Milestones: Cost estimates are based on the Cost and Schedule Document for the Concept Design Report (90% Draft). Proposed project schedules are:

	START	END
Engineering	Oct 90	Jan 93
Construction	Oct 91	Feb 93

Alternative 2 - Replacement

Engineering	Oct 90	Nov 94
Construction	Oct 91	Apr 95

Alternatives: Alternatives are troughing and total replacement. Encapsulation of the gaskets h been suggested, but would offer no advantages over troughing and would be more difficult implement. The best alternative seems to be containment via troughing vs. replacement. A ri assessment supports containment due to the potentially adverse safety and health impacts construction workers who would be performing the gasket replacement. Funding for gask replacement is $6.840 million in FY 1991, $204.01 million in FY 1992, $2.39 million in FY 199 $2.51 million in FY 1994 and $2.51 million in FY 1995. (Total Estimated Cost $219 million)

TO: C. A. Mentges, Manager
Production Division
DEPT: 801
LOCATION: X-100, MS 1110A

DATE: 10/27/8
FROM DEPT: 378
CODE NO: GAT-378-
REFERENCE:

SUBJECT: VENTILATION[illegible]T SEAM SEEPAGE

Summary

The seepage of liquid containing high levels of polychlorinated bi (PCBs) from ventilation duct seams onto the operating floors of th process buildings has been observed. The accumulation of this liq considered by the US-EPA to be a PCB spill; therefore, liquids from t leaks must be cleaned up and disposed of as PCB wastes. The Medical, and Environment organization requests that the Production Division inst cleaning and inspection program based on the guidelines given in this A written response outlining your tentative plans for the program sho submitted to the Environmental Control Department by November 5, 198 final plan should be established by November 26, 1982.

Discussion

The MSZ organization has investigated and confirmed the occurrence o liquid leaks from certain ventilation duct seams in the X-333, X-330 X-326 Process Buildings. The sealant used for the ventilation duct exp joints has been found to contain high levels of PCBs; consequently, a expansion joint material degrades, PCB liquid drips onto the operating Several general observations about this seepage problem are listed below:

- PCB concentrations up to 290,000 ppm have been found in the ventilation duct seam seepage. All liquid associated with the seepage should be treated as a PCB waste (i.e., 50 ppm or greater PCBs). The seepage condition does not appear to be a significant health hazard, however, it is a PCB waste management concern.

- Liquid from the seams is distinguishable from most lube oil leaks. Vent duct seepage is reddish-brown in color and much more viscous than lube oil. These leaks occur primarily in areas under the duct seams, and are of low volume when compared to lube oil leaks.

- It has been observed that the seam seepage occurs primarily at the exhaust ducts serving operating units. Also, it seems that seepage rate increases as the duct temperature increases.

- Vent duct seepage occurs primarily at the X-333 Process Building. However, seepage is also evident to a lesser extent at the X-330 and X-326 Process Buildings. The X-326 Process Building has two special conditions associated with it, first, many floor areas have liquids that are a mixture of lube oils and vent seam sealant oils, second, a network of collection channels has been installed under some of the seams at the south end of the building.

March 1983

GAT-OCAW SPECIAL NOTICE

SUBJECT: PCB CONTAMINATED OIL IN PROCESS BUILDINGS

PROBLEM: It has been determined that oil seeping from the exhaust duct vent seams in the process buildings contains POLYCHLORINATED BIPHENYLS (PCB's) above plant allowable limits. The immediate concern is to protect all persons who may come in contact with PCB-contaminated oil while working or passing through these areas of seepage.

(Polychlorinated biphenyls (PCB's)) can affect the body through inhalation, contact with the eyes, skin, or if swallowed. The PCB's can cause an acne-like rash and irritate the eye, nose, and throat. In cases of severe exposure, they may also injure the liver resulting in effects such as fatigue, dark urine, and yellow jaundice.

All GAT employees and visitors who may come in contact with this source or any other known sources of PCB-contaminated oil are required to use the proper protective equipment to avoid exposure (see Attachment I).

First aid measures to be taken in case of exposure should be:

a. If PCBs come in contact with eyes, flush with large amounts of water and report to the Medical Department immediately thereafter.

b. If clothing becomes saturated with PCBs, remove it and wash contaminated areas of skin as soon as possible.

c. If PCBs are accidentally ingested, report immediately to the hospital.

PCB-Contaminated waste generated during these activities should be disposed of in special PCB waste containers. These containers will be provided by building supervision. Tools and other reusable items should be cleaned with kerosene. The waste cleaning solutions should be disposed of as a PCB-contaminated waste.

Exhibit V

Obtain additional details on duties, as necessary.

5.1 What types of radioactive materials were present or processed, and in wh (solid, liquid, or gas)? Review the list below individually, as necessary.

Radionuclide	Response	Isotope(s) if known	Form
Tritium	__Y ✓N __DK	____	__S __L __G
Cobalt	✓Y __N __DK	60, 57	✓S ✓L ✓G
Strontium/Yttrium	✓Y __N __DK	90	✓S __L __G
Technetium	✓Y __N __DK	99	✓S ✓L ✓G
Iodine	✓Y __N __DK	125, 129, 131, 133	✓S ✓L ✓G
Cesium	✓Y __N __DK	137	✓S __L __G
Thallium	✓Y __N __DK	207	✓S __L __G
Lead	✓Y __N __DK	210	✓S __L __G
Polonium	✓Y __N __DK	210	✓S __L __G
Radon (progeny)	✓Y __N __DK	____	__S __L ✓G
Radium	✓Y __N __DK	223, 224, 226, 228	✓S __L __G
Actinium	✓Y __N __DK	227	✓S ✓L ✓G
Europium	✓Y __N __DK	152	✓S __L __G
Thorium (natural)	✓Y __N __DK	226, 228, 230, 232, 223, 224	✓S ✓L ✓G
Protactinium	✓Y __N __DK	232, 234, 234M, 231	✓S ✓L ✓G
Uranium (natural)	✓Y __N __DK	232, 234, 235, 236, 238	✓S ✓L ✓G
Uranium(enriched)	✓Y __N __DK	234, 235, 236, 238	✓S ✓L ✓G
Neptunium	✓Y __N __DK	237	✓S ✓L ✓G
Plutonium	✓Y __N __DK	238, 239, 240	✓S ✓L ✓G
Americium	✓Y __N __DK	241	✓S ✓L ✓G
Curium	✓Y __N __DK	244	✓S ✓L ✓G
Californium	✓Y __N __DK	252	✓S ✓L ✓G

Others

___(1)	____	__S	__L __G
___(2)	____	__S	__L __G
___(3)	____	__S	__L __G

5.2 What quantities of radioactive materials were present or processed (ounces, pounds, kilograms, drums) over what time periods? _____