

US EPA ARCHIVE DOCUMENT

STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION X
ID# 0032

Federal Aviation Administration Lake Minchumina Flight Service Station

Lake Minchumina, AK
(CMI order signed on August 25, 1992)

Facility/Unit Type: Federal Facility flight service station
Contaminants: Dioxin, Chloro-phenoxy herbicides, Dichlorodiphenoltrichloroethane (DDT),
1,1-Trichloro-2,2-Dis(p-chlorophenyl) (DDD),
Dichlorodiphenoldichloroethylene (DDE)
Media: Soil
Remedy: Excavation, off-site disposal, on-site storage

FACILITY DESCRIPTION

The Federal Aviation Administration's (FAA) Lake Minchumina Flight Service Station is located 150 miles southwest of Fairbanks, Alaska, and covers approximately 750 acres along the northwest shore of Lake Minchumina. From 1942-1969, pesticides were used. Petroleum products were used for heating and vehicle and airplane fuel. Solvents were used for machine maintenance. In 1985, two 55 gallon drums of mixed herbicides rusted through in the Former Drum Storage Area (FDSA), releasing the entire contents. Stained soil and stressed vegetation spots were observed at various locations on site. Grid sampling and surface soil excavations later confirmed spill areas were confined to near surface soils. In 1988 and 1990, additional drums of material generated during investigation and removal activities were placed in the storage building. These drums included potentially dioxin-contaminated soils and pesticides.

Lake Minchumina supports aquatic organisms and is an area where residents boat, fish, trap, and gather wood. The community of Lake Minchumina is adjacent to the site and has a population of up 35 people.

EXPOSURE PATHWAYS

Contaminants were found no lower than 10 feet below ground surface (bgs) at the FDSA. At the site of the herbicide spill, contamination had migrated to a maximum depth of 6 feet bgs, with herbicides at low concentrations of less than 330 ug/kg across two-thirds of the FDSA with high levels only at the spill site. Extensive areas of the Flight Service Station had residual DDT-T contamination which resulted from insect control. Herbicide contamination was also found in several other areas of the facility. Nearest potential receptors include nearby residents in the community of Lake Minchumina and aquatic organisms.

SELECTED REMEDY

In 1990, soil excavation was conducted at the FDSA and at other locations where high levels of contaminants had been detected to remove contaminated soil and ensure concentrations of hazardous constituents did not exceed clean-up levels. The contaminated soil was containerized and shipped off-site for final disposal. Drums containing dioxin and two small drums of investigations "derived" wastes remained on-site.

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminant	Maximum Concentration (mg/kg)	Action Level (mg/kg)	Cleanup Goal* (mg/kg)	Point of Compliance
soil	16 cubic yards	Chloro-phenoxy herbicides	100	2000	2000	N/A
		Total DDT, DDD, DDE	150	10	10	
		Dieldrin	7	0.08	0.08	
		PCBs	4	10	10	
		Endrin	4	40	40	

* Based on Risk Assessment in RFI

FAA proposes to excavate soils to cleanup goals in hot spots identified in confirmation sampling conducted during 1990. Drums containing dioxin contaminated soil and herbicides remain on-site until arrangements can be made to ship them off-site to a permitted storage facility. Once drums are removed, the liner of the storage area will be steam cleaned; samples from steam cleaning and from the storage area will be analyzed for contaminants until none are detected. The liner will be disposed of as hazardous waste. All other equipment will be decontaminated.

The approximate costs for the remedy are provided below:

Labor/Travel etc.	225,000-325,000
Excavation & Removal	70,000-100,000
Transport of Waste	375,000-450,000
Storage of Waste (offsite for one year)	625,000-650,000

INNOVATIVE TECHNOLOGIES CONSIDERED

None.

PUBLIC PARTICIPATION

EPA issued a public notice and gave the public an opportunity to comment following the posting of the notice for forty-five (45) days. No comments were submitted and no public meeting was held.

NEXT STEPS

Drums containing dioxin-contaminated soil and herbicides will be stored on-site in the FDSA they can be shipped off-site for storage and ultimate disposal. After all wastes have been removed, the facility will complete closure under RCRA.

KEY WORDS

soil; pesticides, dioxin; excavation; off-site disposal, on-site storage

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