STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION X
ID# 6831

Morrison-Knudsen Company, Inc., Boise Industrial Complex

Boise, ID
(Signed July 24, 1991)

Facility/Unit Type:	**Manufacture and overhaul locomotives, mass transit cars, and other heavy equipment**
Contaminants:	**VOCs**
Media:	**Ground water**
Remedy:	**Pump and treat ground water; perform long term monitoring**

FACILITY DESCRIPTION

In January 1991, the Idaho Department of Health and Welfare issued a post-closure permit to Morrison-Knudsen Company, Inc., Boise Industrial Complex (MK BIC) pursuant to RCRA and the Idaho Hazardous Waste Management Act. Corrective action conditions under the permit require ground-water remediation for releases from two drainfields and a landfill at the facility, and long term monitoring of ground water in two perched aquifers.

Locomotives, mass transit cars, and other heavy equipment are overhauled at the site, which is located about 2 miles east of the Boise Municipal Airport. From the early 1970s until September 1984, MK BIC used various solvents to clean equipment. These solvents were routinely allowed to drain into two drainfields on site. A landfill was also used for the disposal of sludge and items contaminated with the solvents.

These activities have resulted in the contamination of the upper perched aquifer (zone A) located about 90 feet below ground surface. A lower perched zone (zone B) is located at 160 feet below ground surface, while the regional ground water table (zone C) is located about 235 feet below ground surface. Contamination has been detected in the zone B aquifer at levels below regulatory concern. The zone C aquifer has not been impacted by the site. Due to the denial of off-site access, the extent of off-site contamination in the zone A aquifer was not determined prior to issuance of the permit.

After permit issuance, off-site contamination of the zone A aquifer was confirmed; the level and extent of contamination has not, however, been confirmed. The facility is located approximately 800 feet from the nearest residential areaq.

EXPOSURE PATHWAYS

Ground water is the primary contaminant migration pathway at the site. The risk of exposure is minimal, however, as ground water in the zone A aquifer is not drinking water quality and is therefore not used as a drinking water source.

SELECTED REMEDY

MK BIC has installed a pump and treat system for the zone A aquifer. Extracted ground water is treated in a carbon adsorption unit and discharged to the municipal water treatment facility. Reduction of recharge from the MK BIC sewage disposal system and from runoff ponded along the north side of the site is planned. Long term monitoring for zone A and zone B will also be performed. The total capital and O&M costs for remediation are estimated to be $1.5 million (1991).

INNOVATIVE TECHNOLOGIES CONSIDERED

In situ bioremediation was considered, but rejected because the low permeability and porosity and high nitrate levels would limit the effectiveness

CONTAMINATION DETECTED AND CLEANUP GOALS**

Media	Estimated Volume	Contaminant	Maximum Concentration (µg/l)	Action Level	Cleanup Goal (µg/l)	Point of Compliance
ground water	not given	1,1,1 trichloroethane	5400	not given	200	not given
		1,1,2 trichloroethane	10		5	
		1,1 dichloroethane	610		5	
		1,2 dichloroethane	24		5	
		1,1 dichloroethylene	620		7	
		tetrachloroethylene	280		5	
		trichloroethylene	120		5	
		1,1,2,2 tetrachloroethane	8		5	
		chloroethane	<3		10	
		vinyl chloride	<1		2	

of the microorganisms available for breakdown of 1,1,1 trichloroethane and because of the technology limitations associated with performing enhanced bioremediation at depths greater than 50 feet.

PUBLIC PARTICIPATION

The public comment period began on October 2, 1990, and ended November 16, 1990. Two written comments were received, which resulted in minor changes to the proposed permit. There were no requests for a public meeting.

NEXT STEPS

Limited access for installation of off-site wells has been obtained since issuance of the permit. Access to additional off-site well locations is being pursued to support characterization and remediation efforts.

KEY WORDS

ground water; ingestion; VOCs, TCE; carbon adsorption, on-site treatment, monitoring

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