US EPA ARCHIVE DOCUMENT

STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION III
ID# not given

Dixon Wearever Inc.

Deer Lake, PA
(Signed September 30, 1992)

Facility/Unit Type:	**Manufacturer**
Contaminants:	**Arsenic; Tetrachloroethylene (PCE); 1,1-Dichloroethane (1,1-DCA); 1,1-Dichloroethene (1,1-DCE); 1,2-Dichlorethylene (1,2-DCE); Trichloroethylene (TCE)**
Media:	**Ground water, soil**
Remedy:	**Pumping and treating ground water with air stripping, removal of contaminated soil**

FACILITY DESCRIPTION

On August 29, 1988, EPA and Dixon Wearever Incorporated (Dixon) entered into a Consent Order pursuant to Section 3008(h) of RCRA. The agreement required Dixon to complete an on-site and off-site investigation to determine the nature and extent of contamination and to conduct a CMS to evaluate cleanup alternatives.

The facility is located in Schuylkill County, PA. Dixon purchased the facility in 1984. Operations at the facility have centered around the manufacture and assembly of writing instruments, such as pencils, ball point and fountain pens, and felt-tip markers. Two evaporation lagoons at the site were used to treat and store ink and metal sludge.

Beneath the facility there are three zones of permeability that generally flow to the east: a shallow unconfined zone extending approximately 100 feet below the ground surface; a lower-permeability intermediate zone extends from approximately 100 to 150 feet below the ground surface; and a third deeper zone extends from 150 to 400 feet below the ground surface and yields water which is used as an on-site drinking water and production water supply source.

Areas of concern included two evaporation lagoons used to treat and store ink and metal sludge, a wastewater effluent lagoon, a gravity sand oil trap, a drum storage area, three on-site disposal areas used to dispose of burned and unused pen parts, and an inactive 20,000 gallon underground fuel oil storage tank.

Dixon completed the RFI and the CMS in 1992. In addition, Dixon has already completed extensive stabilization activities pursuant to a closure plan approved by the Pennsylvania Department of Environmental Resources (PADER), which included closing two concrete-lined evaporation lagoons by removing the sludge, backfilling and capping the area. Contaminated ground water from the lagoon area has been withdrawn from a single production well, treated with air stripping, then stored for on-site use. Dixon also removed the underground storage tank, contaminated soil in the area of the tank, and contaminated soil in the area of the three disposal sites. The excavated oil-contaminated soil is being stored on-site pending corrective action. Other excavated soils were removed to an off-site disposal facility.

EXPOSURE PATHWAYS

Ground water is the primary impacted medium at the facility with ingestion being the main exposure pathway evaluated. The ground-water contamination is found primarily within the facility property boundaries due to the existing recovery system. Atmospheric dispersion modeling was performed to assess potential risk from VOC emissions from the air stripper.

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminant	Maximum Concentration	Action Level	Cleanup Goal	Point of Compliance ***
ground water	not given	1,1-DCA	4.39 ppm	810 ppb	810 ppb*	On-site wells 1,2,3,5,8,9,10, and production well
		1,1-DCE	3.16 ppm	7 ppb	7 ppb**	
		PCE	not given	5 ppb	5 ppb**	
		TCE	24.30 ppm	5 ppb	5 ppb**	
		1,1,1-TCA	57.30 ppm	200 ppb	200 ppb**	
		1,2-DCE	10 ppb	70 ppb	70 ppb**	
soil	not given	Arsenic	37.0 ppm	1.6 ppm	not given	

* Cleanup goal is based on the 10-6 cancer risk level.
** Cleanup goal is a Maximum Contaminant Level that is federally enforceable under the Safe Drinking Water Act.
*** Off-site compliance will be determined during the implementation of the corrective measure.

SELECTED REMEDY

The selected Corrective Measure for the contaminated ground water at the Deer Lake facility is continuation of the ongoing ground-water recovery system utilizing air stripping. In addition to the one ground-water recovery well currently used, an additional pumping well will be placed near the downgradient property boundary to provide a "flushing" effect in the aquifer. The treated ground water will be transferred into a storage tank for on-site use and excess water will be discharged into the storm system. The treated water will be discharged to a public sewer system after an NPDES permit is obtained. The capital and present value O&M costs for the remediation are $3,000 and $9,700, respectively.

INNOVATIVE TECHNOLOGIES CONSIDERED

None

PUBLIC PARTICIPATION

The public comment period on EPA's proposed remedy extended from August 17, 1992 to September 16, 1992. A public meeting was held on August 10, 1992. The meeting was attended by approximately twenty (20) people including representatives from EPA, Dixon, Deer Lake Borough Council, and concerned citizens. The comments addressed residential well testing, ground-water flow, and the contaminants found in the ground water. Other comments from citizens dealt the possibility of the contaminated groundwater spreading to nearby residential wells and specifics of the chosen remedy and its implementation schedule. Dixon submitted a number of comments that challenged EPA's decision to require an additional ground-water pumping well, indicating the additional well was not necessary and would cause more harm than good. The proposed remedy was not changed due to any of the comments.

NEXT STEPS

Oil-contaminated soil from the vicinity of the removed underground tank is being stored on-site pending corrective action.

KEY WORDS
ground water, soil; ingestion; VOCs, arsenic; air stripping, off-site disposal, excavation

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