

SITE DESCRIPTION/EXECUTIVE SUMMARY

Site Name and Location

Clark Twp. Dump
State Ave., $\frac{1}{2}$ mile west of
Blind Line Road
Cedarville, MI 49719

County: Mackinac
Michigan Code Number: 49-42N-01W-25BC
DNR District: Marquette
EPA ID Number: MID981188576

SAS Score/Screen No.: 07

The Clark Township Dump located one mile northwest of Cedarville, near the shore of Mackinac Bay, has been in operation since at least 1966. This facility was licensed yearly from 1966 to 1974 under Michigan Public Act 87 as a modified open dump. During this period, regular inspections conducted by the Michigan Department of Public Health (MDPH) indicated, in general, a satisfactory record of compliance. License stipulations required this operation to utilize trench type disposal methods with regular compaction and covering of refuse. The burning of refuse onsite was strictly prohibited.

In December of 1974, the Michigan Department of Natural Resources (MDNR) requested Clark Township officials to close their solid waste disposal facility by the end of the year due to non-compliance. Regular episodes of refuse burning were often reported along with infrequent and inadequate waste coverage. Clark Township requested an operating extension until an alternative disposal site could be identified and developed, agreeing to terminate operations at the existing site by July of 1976. Despite repeated requests for closure, the Clark Township Dump continued operation after the indicated deadline. In early 1977, concern over the disposal of polluted lake bottom sediments at the dump, as well as frequent burning and lack of cover, resulted in stepped-up efforts by MDNR for closure. In 1979, after numerous ineffective attempts to secure a voluntary shut down of this operation, the matter was referred to the MDNR Environmental Enforcement Division. Although Clark Township officials have repeatedly outlined schedules for the ultimate closure of their unlicensed disposal facility, they have yet to institute an alternative method of solid waste management.

In the late 1970's, contaminated private water supplies were identified near the Villages of Hessel and Cedarville. Investigation revealed groundwater contaminated with coliform bacteria, sulfides, and sulfide bacteria suggesting a polluted surface water source. Area bedrock consists of highly fractured limestone and dolomite just below grade with frequent outcroppings. Of the three known aquifers existing in the Cedarville area, the top two have been found to be contaminated. Suspected sources include leachate from the Clark Township dump and possibly runoff from a nearby marsh area and septic field effluents.

Follow-Up Recommendation for EPA

Unlicensed waste disposal at the Clark Township Dump has persisted to date despite extensive closure efforts by State officials. Cease and

desist orders, issued through the State Attorney General's Office have been ineffective in halting this illegal operation. Although township officials continue to consider alternative waste disposal sites and methods, no action has been taken to discontinue use of the present dump site. The hydrogeologic setting of this disposal facility is unacceptable. The fractured bedrock comprising the underlying saturated zone is extremely conducive to contaminant migration. The known groundwater contamination in this vicinity strongly suggests leachate from the waste site may have already impacted area aquifers. This situation requires a hydrogeological investigation to ascertain the source(s) of contamination and quantify its extent. A leachate monitoring system should be developed to avert any potential groundwater contamination problems this dump may pose. This site receives a high priority for EPA site inspection.

Date of Previous Summary:
Previous Author:

Current Date: 9/18/86
Author: S.Harrington/
D.Roycraft

Site Assessment Unit
Groundwater Quality Division
Michigan Dept. of Natural Resources



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER
26 | MID981188576

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Clark Twp Dump
02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER State Ave., 1/2 mile W. of Blind Line Rd.

03 CITY Cedarville
04 STATE | 05 ZIP CODE | 06 COUNTY | 07 COUNTY CODE | 08 CONG DIST
26 | 49719 | Mackinac | 97 | 11

09 COORDINATES LATITUDE LONGITUDE
46° 00' 28" | -84° 22' 53" | Hessel Quad. 7.5 min

10 DIRECTIONS TO SITE (Starting from nearest public road) Follow I-75 (U.S.2) north from the Mackinac Bridge to the junction with M-134 (about 10 miles). Take M-134 east, past Hessel, toward Cedarville (about 8 miles). Site is 1/2 mile west of the intersection of Blind Line Rd. and State Avenue Rd.

III. RESPONSIBLE PARTIES

01 OWNER (if known) Clark Township
02 STREET (Business, mailing, residential) P.O. Box 367

03 CITY Cedarville
04 STATE | 05 ZIP CODE | 06 TELEPHONE NUMBER
MI | 49719 | 906/484-2672

07 OPERATOR (if known and different from owner) Same
02 STREET (Business, mailing, residential)

08 CITY
10 STATE | 11 ZIP CODE | 12 TELEPHONE NUMBER
()

13 TYPE OF OWNERSHIP (Check one)
 A. PRIVATE B. FEDERAL C. STATE D. COUNTY E. MUNICIPAL
 F. OTHER: (Specify)

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
 A. RCRA 3001 DATE RECEIVED: MONTH DAY YEAR
 B. UNCONTROLLED WASTE SITE (RCRA 102 G) DATE RECEIVED: MONTH DAY YEAR
 C. NCE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION 1966 - 1986
 YES DATE MONTH DAY YEAR
 NO
BY (Check all that apply)
 A. EPA B. EPA CONTRACTOR C. STATE D. OTHER CONTRACTOR
 E. LOCAL HEALTH OFFICIAL F. OTHER: (Specify)
CONTRACTOR NAME(S):

02 SITE STATUS (Check one)
 A. ACTIVE B. INACTIVE C. UNKNOWN
03 YEARS OF OPERATION
1966 or before - present
BEGINNING YEAR ENDING YEAR

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED leachate from solid waste disposal facility

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
environment: groundwater and surfacewater contamination
soil contamination
population: drinking water contamination

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Inventory and Part 3 - Description of Hazardous Constituents and Impacts)
 A. HIGH (Immediate response priority)
 B. MEDIUM (Response required)
 C. LOW (Subject of future possible action)
 D. NONE (No further action required, complete current data collection only)

VI. INFORMATION AVAILABLE FROM

01 CONTACT B. Schmeling/E. Olsen
02 OF (Agency/ Organization) MDNR Marquette District
03 TELEPHONE NUMBER 906/228-6561
04 PERSON RESPONSIBLE FOR ASSESSMENT S. Harrington/D. Roycraft
05 AGENCY MDNR
06 ORGANIZATION GQD
07 TELEPHONE NUMBER 1517/373-4800
08 DATE 9.18.86
MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER
26 | MD981188576

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 235

02 OBSERVED (DATE: late 1970s) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater in the Hessel-Cedarville area is known to be contaminated with coliform bacteria, sulfides, and sulfide bacteria. Although the exact source(s) are unconfirmed this dump site is strongly implicated. The hydrogeologic setting of the dump

01 B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 235

02 OBSERVED (DATE:) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

This dump is located within 1 mile of Mackinac Bay and within 1/2 mile of Pearson Creek which flows into Cedarville Bay. Although no specific surface water contamination has been reported, the nature of the groundwater contamination and a known migration route (fracture interconnectivity within the bedrock saturated zone) are suggestive of a surface water source.

01 D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 32

02 OBSERVED (DATE: 1974 ->) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

Refuse was frequently found burning upon site inspection and appears to have been a regular practice instead of compaction and covering of wastes. Burning was expressly forbidden by State regulation.

01 E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____

02 OBSERVED (DATE:) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

01 F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: unknown

02 OBSERVED (DATE: 1966 ->) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

This facility was required to be operated by trench-type method. Wastes were to be regularly compacted and covered. For the most part this dump evolved into a large open waste pile. After 20 yrs. of operation soil contamination is inevitable

01 G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 235

02 OBSERVED (DATE: late 1970s) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

Residents of the villages of Hessel and Cedarville experienced discoloration, odors and unpleasant taste from their private water supply wells. Some residents have drilled deeper supply wells or have their drinking water hauled in. See G.W. contamination above.

01 H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____

02 OBSERVED (DATE:) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

01 I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 235

02 OBSERVED (DATE: late 1970s) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

The area population has been impacted by contaminated drinking water drawn from private supply wells. The extent of those affected has not been delineated but many residents have undertaken alternative water supplies.



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
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26 MID981188576

II. HAZARDOUS CONDITIONS AND INCIDENTS (continued)

01 J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE: _____) POTENTIAL ALLEGED

01 K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (INCLUDE ABILITY OF SPECIES)

02 OBSERVED (DATE: _____) POTENTIAL ALLEGED

01 L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE: _____) POTENTIAL ALLEGED

01 M. UNSTABLE CONTAINMENT OF WASTES
(See narrative for storage tanks/making drums)

02 OBSERVED (DATE: 1974 →) POTENTIAL ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 235

04 NARRATIVE DESCRIPTION This dump was originally

licensed as a modified open dump to be operated in trench and fill fashion. For the most part this dump has evolved into a large open surface waste pile.

01 N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE: _____) POTENTIAL ALLEGED

This dump is a suspected source of the contaminated groundwater problem in the Hessel-Cedarville area. Although no conclusive evidence has been gathered to date, it is highly likely to be at least one source if not the major source.

01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

01 P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE: 1974 →) POTENTIAL ALLEGED

This dump has been out of compliance with State regulations and hence unlicensed since 1974. Despite extensive efforts by State enforcement offices this dump continues to operate illegally.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 235

IV. COMMENTS

This dump must have a properly maintained leachate monitoring system installed and operations on site must be halted. The full environmental impact of this dump must be ascertained.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, service agencies, reports)

- MDNR files, GQD Lansing / Marquette
- site # MID981192602, P.A. completed 3/86, Hessel-Cedarville
G.W. contamination

DATE August 31, 1983

HSAS SITE SCREENING

COUNTY Hackensack
Known site

SITE	EXISTING EXPOSURE (SCORE 4)	ENVIRONMENTAL CONTAMINATION GR, SM, OR A	POPULATION x 100 homes per Hackensack Co. ID	UNSATURATED ZONE	KNOWN HAZARD	CHEMICAL CONCERN (SCORE 4)	LIQUID WASTES	TOTAL	COMMENTS
Clark Township Dump	Wells drilled deeper to top lower aquifer	x - -	x 100 homes per Hackensack Co. ID	5C	-	Chlorides -	1	2	
									Aquifer vulnerability map