ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PRELIMINARY SITE ASSESSMENT

VALENITE
DEWITT (T)

SITE NO. 734023
ONONDAGA (C)

Prepared for:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York

Thomas C. Jorling, Commissioner

DIVISION OF HAZARDOUS WASTE REMEDIATION

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MAY 1991

1153

PRELIMINARY SITE ASSESSMENT

TASK 1: DATA RECORDS SEARCH AND ASSESSMENT

VALENITE

SITE NO. 734023

DeWITT (T)/ONONDAGA (C)

MAY 1991

Performed Under

NYSDEC CONTRACT NO. D002340

NYSDEC WORK ASSIGNMENT NO. D002340-3

By

URS CONSULTANTS, INC.



For

DIVISION OF HAZARDOUS WASTE REMEDIATION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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1. EXECUTIVE SUMMARY

The Valenite site, Site No. 734023, is located at 315 Wavel Street, in the Town of DeWitt (Figures 1 and 2). The area where the site is located is a suburb of the City of Syracuse and is mostly an industrial area. From 1961 to 1981, Valenite rented the facility for the manufacture of carbide cutting tools.

A former employee has alleged that, over the twenty years that Valenite was in operation, more than 10,000 - 20,000 lbs. of heavy metal contaminated dust was discharged to the atmosphere from the ventilation system in the building. For seven years, the company also allegedly dumped 25 - 40 gallons a month of used machine oil from vacuum pumps onto the ground beside the building and into a drainage ditch at the rear of the site. Previous sampling conducted at this site found cobalt and many semivolatile organic compounds in the soil at elevated levels.

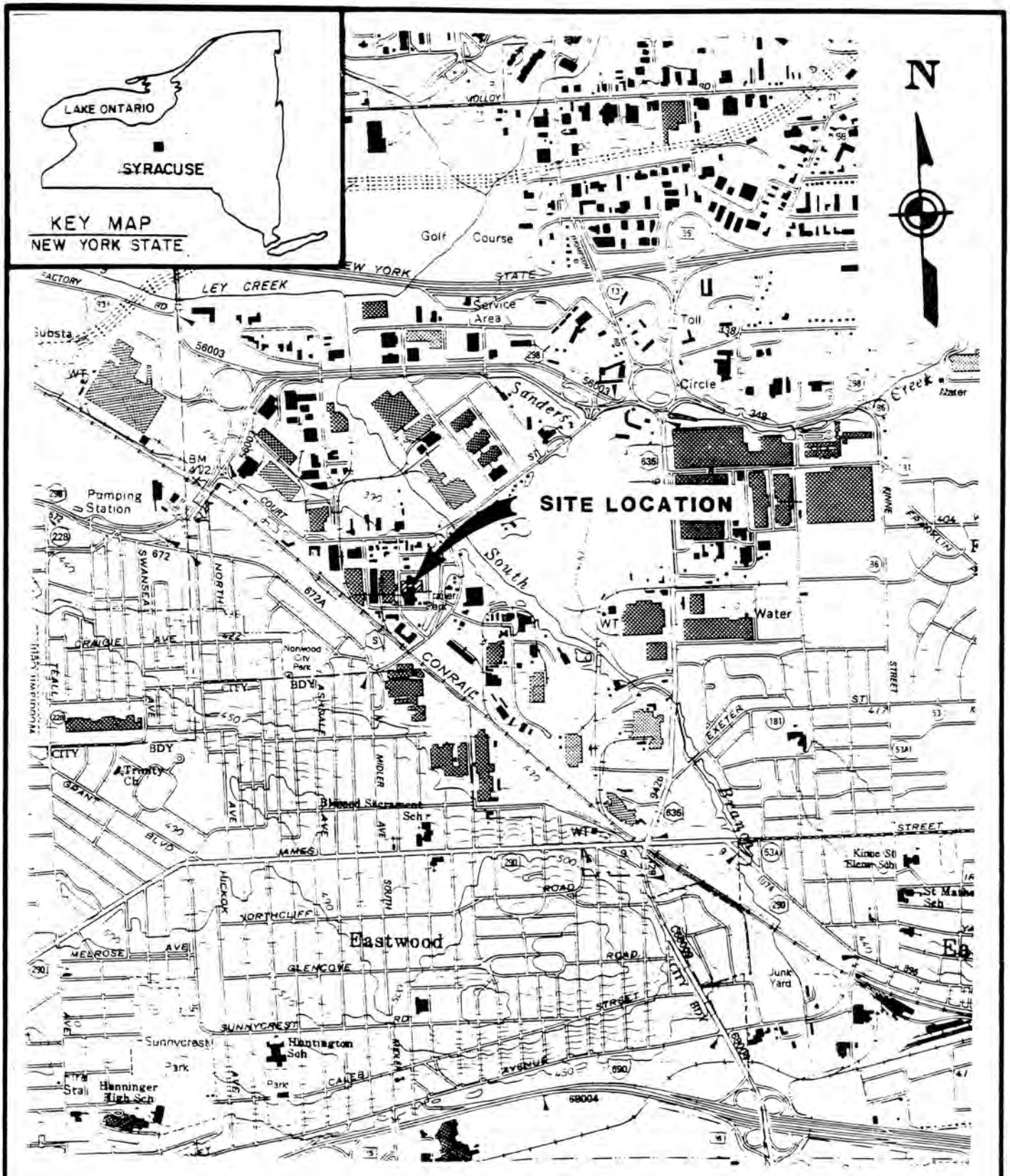
The most significant threat from this site was determined to be by direct contact with surficial soil. This is due to the high toxicity of the contaminants present at the site, as well as the dense population in the area. (A trailer park is located across the street from the rear of the Valenite site). The threat to groundwater was not found to be significant. No residents in the vicinity of the site are known to be using groundwater.

A site inspection was conducted on November 13, 1990 by Donald McCall (URS Consultants, Inc.) and Robert Kreuzer (URS Consultants, Inc.). The NYSDEC representative, Charles Branagh, was unable to attend due to illness. During the site visit, Mr. Michael E. Garey, present owner and operator of the site was interviewed. Mr. Garey operates the Garey Machine Corp. at this site. A tour of the site was made and photographs were taken (Figure 3). Due to the alleged method of waste disposal, no contamination was visible during the inspection.

Insufficient data exists to delist or reclassify the site. Additional sampling needs to be conducted to determine the extent of the contaminated soil. Based on the sampling data, the operations of the Valenite company, and other information gathered for this investigation, it is assumed that the site could pose a significant health threat to nearby residents.

The current Hazard Ranking System scoring is as follows:

$S_M = 12.03$ ($S_{GW} = 19.05$, $S_{SW} = 8.39$, $S_A = 0$)
$S_{FE} = 0$
$S_{DC} = 37.50$

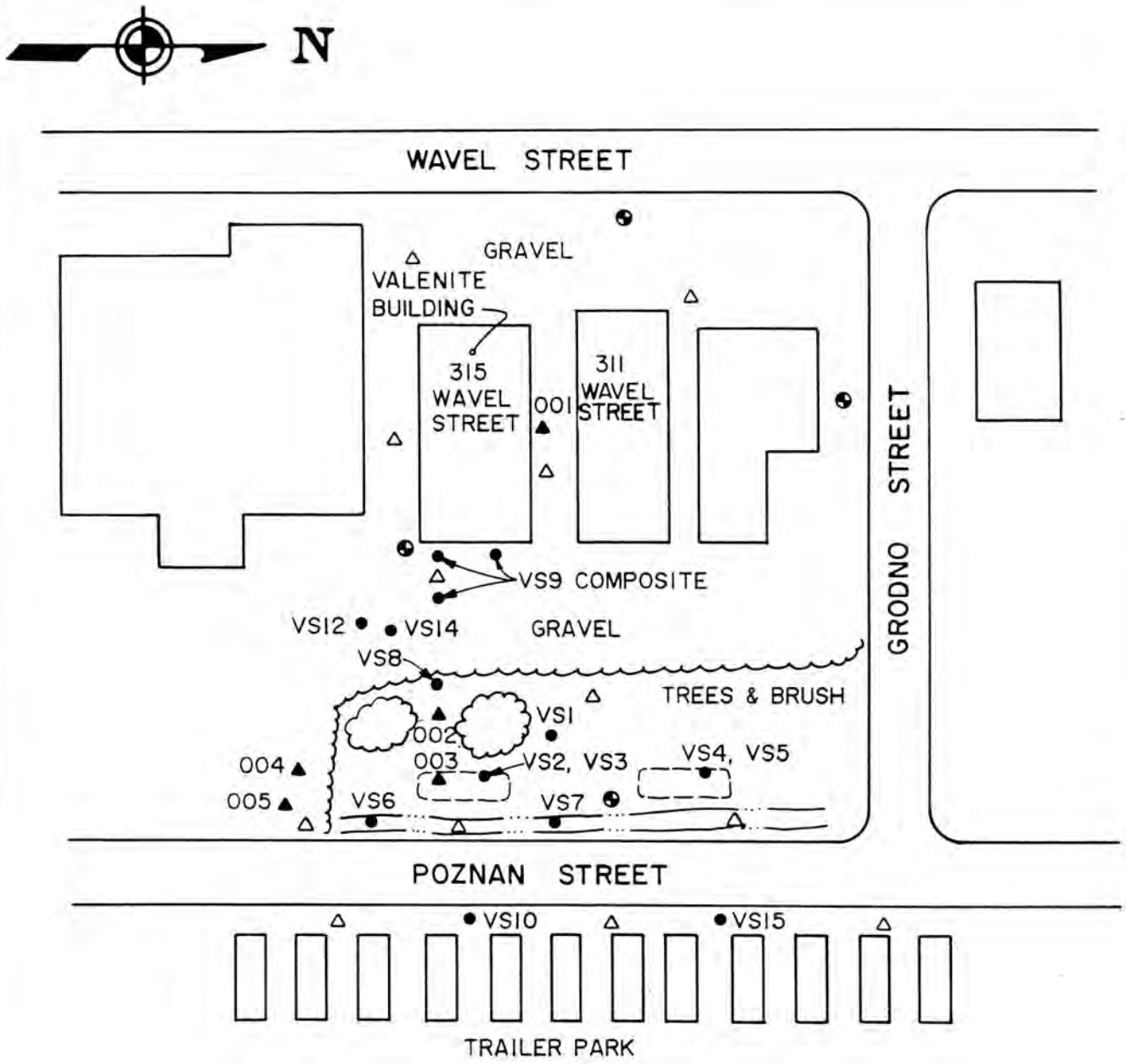


URS CONSULTANTS, INC.

VALENITE
SITE LOCATION MAP

FIGURE 1

A-3553



LEGEND

- ▲ NYSDEC SOIL SAMPLES, OCT. 1985
- ● EPA REGION II FIELD INVESTIGATION TEAM, JUNE 1984
- ◒ PROPOSED MONITORING WELL
- △ PROPOSED SOIL SAMPLE LOCATIONS
- ⊂⊃ GARDEN
- ═ DRAINAGE DITCH

NOT TO SCALE

URS CONSULTANTS, INC.	VALENITE SITE SKETCH	FIGURE 2

A-3578



From the rear of the building at 315 Wavel Street, facing east towards the trailer court on Poznan Street. Local residents maintain vegetable gardens in the brushy area.



Facing west towards the rear of the building. The area in the foreground is used for car and truck parking and is covered with gravel.

FIGURE 3-SITE PHOTOGRAPHS

Valenite

47-15-25 (11/90)—9d

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION

Original—BHSC
Copy—REGION
Copy—DEE
Copy—DOH
Copy—PREPARER

ADDITIONS/CHANGES TO REGISTRY OF INACTIVE HAZARDOUS WASTE DISPOSAL SITES

1. SITE NAME	2. SITE NO.	3. TOWN	4. COUNTY
Valenite	734023	DeWitt	Onondaga

5. REGION	6. CLASSIFICATION	7. ACTIVITY
7	Current 2A /Proposed ____	☐ Add ☐ Reclassify ☐ Delist ☐ Modify ____

8a. DESCRIBE LOCATION OF SITE (Attach U.S.G.S. Topographic Map showing site location)

From the NYS Thruway, take Exit 35 South to the Carrier Circle. Take the second exit from the circle and then turn left onto Court Street. Proceed down Court Street, approx. 1 mile and turn left onto Wavel Street. The site is located at 315 Wavel Street.

b. Quadrangle Syracuse East c. Site Latitude 43° 04' 47" Longitude 76° 06' 16" d. Tax Map Number 031-04-08.2

9a BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)

The site was operated from 1961 to 1981 by Valenite to manufacture carbide cutting tools. The site consists of a small lot and a manufacturing building. The surrounding area is largely industrial , though some residences are located immediately adjacent to the site.

b. Area 0.5 acres c. EPA ID Number NYD980780365 d. PA/SI ☐ Yes ☐ No

e. Completed: ☐ Phase I ☐ Phase II ☒ PSA ☒ Sampling (Limited)

10. BRIEFLY LIST THE TYPE AND QUANTITY OF THE HAZARDOUS WASTE AND THE DATES THAT IT WAS DISPOSED OF AT THIS SITE

A former employee alleges that 10,000-20,000 lbs of heavy metal contaminated dust was discharged from the ventilation system over a 20 year period. More than 3,000 gallons of waste oil was also dumped on the ground over a 7 year period.

11a. SUMMARIZED SAMPLING DATA ATTACHED

☐ Air ☐ Groundwater ☐ Surface Water ☒ Soil ☐ Waste ☐ EP Tox ☐ TCLP

b. List contravened parameters and values

No standards for soil are available. 1984 sampling found cobalt as high as 336 ppm (background for the eastern U.S. is reported to be 3-70 ppm) (Ref. 11)

12 SITE IMPACT DATA

a. Nearest surface water Distance 1200 ft. Direction East, Ley Creek Classification D

b. Nearest groundwater Depth 0.5-1 ft. Flow Direction Assumed East ☐ Sole Source ☐ Primary ☐ Principal

c. Nearest water supply Distance unknown ft. Direction ____ Active ☐ Yes ☐ No

d. Nearest building Distance 30-40 ft. Direction East and West Use Industrial Buildings

e. Crops or livestock on site? ☐ Yes ☒ No

f. Exposed hazardous waste? ☒ Yes ☐ No

g. Controlled site access? ☐ Yes ☒ No

h. Documented fish or wildlife mortality? ☐ Yes ☒ No

i. Impact on special status fish or wildlife resource? ☐ Yes ☒ No

j. Within a State Economic Development Zone? ☐ Yes ☐ No unknown

k. For Class 2a: Code ____ Health Model Score ____

l. For Class 2, Priority Category ____

m. HRS Score Sm= 12.03Sfe=0, Sdc=37.50

n. Significant Threat ☒ Yes 1e ☐ No ☐ Unknown

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
Michael E. Garey	315 Wavel St., Syracuse, NY	(315) 463-0210

16 PREPARER

Donald A. McCall, Chemical Engineer, URS Consultants, Inc.
Name, Title and Organization

1/10/91
Date

Donald A. McCall
Signature

17 APPROVED

Name, Title and Organization

Date

Signature

2. PURPOSE

Task 1, Data Records Search and Assessment, of the Preliminary Site Assessment (PSA) was conducted at Valenite, Site No. 734023, in the Town of DeWitt, Onondaga County, New York by URS Consultants under contract to the New York State Department of Environmental Conservation (NYSDEC) Superfund Standby Contract (Contract No. D002340, Work Assignment No. D002340-3).

The Valenite site (Figure 1) is a suspected inactive hazardous waste site recognized by NYSDEC. This site is currently classified as Class 2a because there is insufficient information to document hazardous waste disposal and/or assess the significance of potential risks to public health or the environment. The purpose of a PSA is to provide the information for NYSDEC to reclassify the site according to the following classifications:

Class 2- Hazardous waste sites presenting a significant threat to the public health or the environment.

Class 3- Hazardous waste sites not presenting a significant threat to the public health or the environment

Delist-Sites where hazardous waste disposal can not be documented.

3. SCOPE OF WORK

The Preliminary Site Assessment, Task I, investigation at the Valenite site comprised several interrelated tasks described in the following sections:

File Reviews

An extensive data search was conducted, utilizing both site-specific and regional sources. This information was compiled from existing data as well as new sources. These include:

- Visit to the NYSDEC Region 7 office (Charles Branagh) to conduct a file search, November 13, 1990. (315) 426-7531
- Phone Conversation with the Onondaga County Health Department (Lisa Letteny) regarding file information, December 13, 1990. (315) 469-6955
- Phone conversation with the New York State Department of Health (Henrietta Hamel) regarding file information, December 14, 1990. (315) 426-7612
- Visit to the NYSDEC office in Albany to conduct a file search June 14, 1990. (518) 457-3157

Site Inspection

A site inspection and interview was conducted on November 13, 1990, between 1:00 and 3:00 PM, in order to assess the surface characteristics of the site and vicinity, observe evidence, if any, of hazardous substances or wastes present, photograph the site, conduct preliminary air monitoring using a PID (HNu) and a radiation meter, and confirm

information obtained from the initial data search. A USEPA Site Inspection Report (EPA Form 2070-13) and the NYSDEC "Additions/Changes to the Registry of Inactive Hazardous Waste Disposal Sites" were completed following the site inspection.

The site inspection was conducted with the following personnel:

NAME	TITLE	AFFILIATION
Robert Kreuzer	Geologist	URS Consultants, Inc.
Donald McCall	Chemical Engineer	URS Consultants, Inc.

Mr. Michael E. Garey, the current site owner, gave URS permission to inspect the site. Before the site inspection was conducted Mr. Garey was interviewed for approximately 1 1/2 hours, during which time he provided information regarding the former Valenite company. Mr. Garey also showed URS personnel the operation of the Garey Machine Corp. which is located inside of the former Valenite building. Mr. Garey then gave URS permission to inspect the site.

During the 1/2 hour site inspection, the site was monitored with an HNu and with a radiation meter. No readings were recorded above background levels on either instrument. The site is approximately 1/2 acre in size and is flat. No visible evidence of any dumping or of hazardous waste could be seen. The majority of the site is covered with gravel and is used for parking. A small corner of the back of the site is covered with brush and some trees. There is also a drainage ditch at the back of the site.

4. SITE ASSESSMENT

4.1 Site History

The Valenite site (#734023) is a manufacturing facility at 315 Wavel Street in the Town of DeWitt. The Valenite Metals company rented this property from 1961 to 1981 for the manufacture of carbide cutting tools. Valenite used the adjacent property at 311 Wavel as a warehouse. Both properties were owned by Jacob Hafner. Former employees of Valenite have alleged that the company released metal contaminated dust into the air, in addition to dumping used machine oil onto the ground. Dust released from operations inside the plant would reportedly settle on everything around the building. At the end of the work day, the cars parked around the building would be covered with black "soot". Blowers and a bag dust collection system were used to collect dust from the machine operations. However, the bags in the collector were often ripped or were otherwise inefficient. In addition, there was a secondary system that would sometimes discharge dust directly through stacks in the roof. A transformer explosion and fire was also reported as occurring at the site sometime in the 1970s. Many of these transformers were replaced during the 1970s due to the explosion (Ref. 1,2,3). Additional information on materials used at Valenite, including Material Safety Data Sheet information, is included in Ref. 3.

Valenite ceased operations at this site in 1981. In 1982, the Garey Machine Corp. moved into the building (Ref. 4). According to the interview with Mr. Garey, the Valenite building was extremely dirty inside when he first moved in. Mr. Garey also said that the ventilation system appeared to be a closed loop system that did not even discharge to the outside. Mr. Garey acquired ownership of the site in 1988 (Ref. 5).

Several previous investigations have been conducted at this site. In June of 1984, a Potential Hazardous Waste Site Preliminary Assessment

was performed by NUS Corporation. The USEPA Technical Assistance Team conducted a Preliminary Site Assessment, including soil sampling for cobalt, in September of 1984. In October, 1985, the NYSDEC conducted their own Preliminary Assessment of the site. Five soil samples were collected as part of this investigation (Figure 2).

4.2 Site Topography

The Valenite site is a small manufacturing facility that is approximately 1/2 acre in size. Over 1/4 of the site is covered by the manufacturing building. Most of the remainder of the site is covered with gravel and used for parking. The site is relatively flat with a few shallow depressions. (These low spots were noted to collect rainwater). East of the site, behind the manufacturing building, is a small area that is covered with trees and brush. A small drainage ditch is located in this area. A trailer court is located on Poznan Street directly behind the facility. Some of the trailer court residents maintain vegetable gardens on the rear of the Valenite site.

The vicinity of the facility, to the north and east, is mostly occupied by industrial companies with the exception of the trailer court located immediately east of the site. South and west of the site are mostly residential areas within the City of Syracuse.

4.3 Site Hydrology

Surface Water Hydrology

As shown in Figure 1, the South Branch of Ley Creek, a class D stream, is located 1200 feet to the northeast of the Valenite site (Ref. 6). The terrain in this area is flat with the slope between the site and the creek being only 1-2%. The threat to the creek from the site is minimal due to the location of the drainage ditch at the back of the site.

The ditch should intercept any contaminants migrating directly from the site through surficial soil erosion or surface water runoff. It is unknown where the drainage ditch discharges. Ley Creek eventually flows into Onondaga Lake, more than 4 stream miles to the west of the site. NYSDEC Freshwater Wetlands SYE-29 is located 1250 feet to the east of the Valenite site. This NYSDEC regulated wetland is more than 60 acres in size (Ref. 7).

Groundwater Hydrology

The geology of this area is characterized by soils formed in the lacustrine or aeolian deposits of silt, very fine sand, and moderate amounts of clay in former glacial lake plains (Ref. 8). The bedrock in this area is typically located at a depth of greater than ten feet and is the Syracuse Formation consisting of layers of dolostone shale, salt, and gypsum (Ref. 9, 22). The overlying soil at the Valenite site is classified as Urban, however, the area at the back of the site, and in the vicinity of the trailer court, is classified as the Minoa Series. Minoa soils are somewhat poorly drained and moderately coarse textured. The surface layer of this soil is fine sandy loam, while the subsurface consists of layers of fine sand, very fine sand, and silt (Ref. 8). Groundwater is not normally used because the water quality from the Syracuse formation is usually poor, due to the presence of salt and gypsum. No potable wells are believed to be located in the vicinity of the site.

It is assumed that the groundwater in the shallow layers of the overburden at the site flows east towards the South Branch of the Ley Creek. The groundwater in the deeper overburden and in the bedrock is assumed to flow west towards Onondaga Lake. The seasonal high water table in the area of the site is assumed to be 1/2 to 1 foot below ground surface (Ref. 8).

4.4 Contamination Assessment

Soil Contamination

Sampling of the soil at the site and the surrounding area has been conducted on at least two previous occasions. In September of 1984, Roy F. Weston, Inc., of the USEPA Technical Assistance Team collected 13 soil samples and 2 analytical blanks from the site and vicinity (Ref. 10). Because it was the most toxic material Valenite used, these samples were analyzed for cobalt, the results of which are summarized in Table 1. The highest level of cobalt detected was 336 ppm in the drainage ditch sediment behind the Valenite building. The background range for cobalt in the United States is reported to be <0.3 - 70 ppm (Ref. 11).

In October 1985, the NYSDEC conducted a Preliminary Assessment of the Valenite site. Three soil samples were analyzed for volatile organics, semivolatile organics, pesticides, and PCBs (Ref. 12). Many semivolatile organic compounds, primarily Polynuclear Aromatic Hydrocarbons, were detected in samples 001 and 002 (Table 2). The contaminant concentrations detected in sample 001, from the north side of the building, correlate well with those from 002, apparently taken from a drainage swale in the area of trees and brush. Sample 003, from the garden, showed almost no contamination. Samples 004 and 005, taken for the NYS Health Department, were apparently either lost or never analyzed (Ref. 13).

Groundwater Contamination

No sampling of the groundwater in the vicinity of the site has been conducted. Most residents in the area are believed to have a municipal supply available. However, based on 1980 Census data, it was estimated that 120 people may still be using groundwater. The location of these residents is not identified (Ref. 14). Contamination from cobalt and

TABLE 1
Summary of Cobalt Analytical Data
Valenite

Sample No.	Location	Cobalt (mg/kg)
VS1	Brush covered area	98
VS2	West garden (shallow)	10
VS3	West garden (12″ deep)	14
VS4	East garden (shallow)	5
VS5	East garden (12″ deep)	7
VS6	Drainage ditch sediment	170
VS7	Drainage ditch sediment	336
VS8	Mound of black earthy material	128
VS9	Composite of gravel area	174
VS10	Trailer park side of Poznan St.	14
VS11	Analytical blank	ND
VS12	Water in puddle on gravel	0.072
VS13	Analytical blank	ND
VS14	Water puddle sediment	73
VS15	Trailer park side of Poznan St.	12

Samples taken by Roy F. Weston, Inc., September 1984.

TABLE 2
Summary of Analytical Data
Valenite

Parameter	001 North of Building	002 Drainage Swale	003 Garden
Naphthalene	530 J	310 J	
2-Methylnaphthalene	160 J		
Acenaphthene	2,000	1,500	
Dibenzofuran	950	540 J	
Fluorene	1,300	770 J	
Phenanthrene	14,000	9,000	
Anthracene	2,200	1,500	
Fluoranthene	18,000	11,000	64 J
Pyrene	9,200	7,100	
Benzo(a)Anthracene	5,500	4,600	
bis(2-ethylhexyl)Phthalate	280 J	480 J	
Chrysene	5,000	4,600	
Di-n-octyl Phthalate	80 J		
Benzo(b)Fluoranthene	7,100 *	6,500 *	
Benzo(k)Fluoranthene	7,100 *	6,500 *	
Benzo(a)Pyrene	3,800	3,800	
Indeno(1,2,3-cd)Pyrene	2,900	2,900	
Dibenz(a,h)Anthracene	780 J	830 J	
Benzo(g,h,i)Perylene	2,600	2,500	

NOTE: Only detected results are reported. All results reported in μg/kg.

J - Indicates the result is less than the sample quantitation limit but greater than zero.
* - Coelute of Benzo(b)Fluoranthene and Benzo(k)Fluoranthene.

Samples were analyzed by ERCO / a division of ENSECO, October 1985.

other metals is unlikely since metals tend to be relatively immobile within soil. However, due to allegations that quantities of waste oil were dumped at the site (Ref. 1), and the shallow depth of groundwater, contamination of the groundwater is a possibility.

Surface Water Contamination

No sampling of surface water in the vicinity of this site has been conducted. Due to the nature of the contamination, and the topography of the surrounding area, contamination of either Ley Creek or Onondaga Lake is unlikely.

Air Contamination

Excluding the monitoring conducted during the site inspection, no air sampling in the vicinity of the site has been conducted. Although air contamination would have been a possibility at the time the Valenite facility was in operation, any air contamination at this time would be unlikely.

5. ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

5.1 Hazardous Waste Deposition

There is no documentation of the disposal of hazardous waste at the Valenite site. However, a former employee of the Valenite corporation estimates that 10,000 - 20,000 lbs. of cobalt contaminated dust was discharged to the air over the 20 year period of operation by Valenite (Ref. 2). In addition, from 1970 to 1977, 25 to 40 gallons per month of used oil from the vacuum pumps were dumped to the north of the building and in the drainage ditch located between Valenite and the trailer park (Ref. 1). Analytical data from previous investigations indicate the presence of cobalt and many semivolatile contaminants within on-site soil.

5.2 Significant Threat Determination

The most significant potential threat is considered to be by direct contact with metal contaminated soil. The extent to which the contaminated dust from Valenite may have spread to the surrounding area is unknown. The prevailing winds blow towards the east, in the direction of the trailer court (Ref. 20). The proximity of the trailer court to the site, and the possibility that the soil in the area of the trailer court has been contaminated is the major concern. Previous samples showed that cobalt levels in the soils of the trailer court were low in comparison to those in other areas (Table 2). Cobalt is easily taken up by plants and could lead to contamination of plants and the food chain. Residents of the trailer court have vegetable gardens on the back of the Valenite site. The other concern is that some of the semivolatile organic compounds that were detected are known carcinogens. The potential for health impacts from groundwater, surface water, and air exposure are considered to be insignificant.

5.3 Recommendations

Based upon the available information, there is insufficient data to support the reclassification of the site. The sampling data collected indicates that there is a potential threat to the surrounding population. Further work is recommended to more adequately define the presence and extent of the risk at this site.

RECOMMENDATIONS:

- A more extensive soil analysis as shown in Figure 2 should be conducted for the complete TCL list of organics, metals, and cyanide, in addition to cobalt. Sampling should be extended to areas beyond the Valenite property. Actual sampling locations will be determined in the field. This would help to assess any threat to the surrounding population and workers. Four soil borings at the proposed monitoring well locations should be taken in addition to a minimum of nine surface samples (as field conditions warrant), to help determine the depth and extent of contaminated soil.

- A minimum of four monitoring wells should be installed to determine the direction of groundwater flow in the overburden layer. Water quality in the area of the site should be determined and analyzed for TCL parameters. Potential receptors should be identified. Because all contaminants detected at the site are relatively immobile, only the shallow aquifer will be sampled. Deep wells will be installed later if contamination is found to be present in the shallow aquifer.

- A geophysical study should be conducted prior to drilling to locate metal objects or any other underground obstructions which could interfere with the drilling equipment.

APPENDIX A

References

APPENDIX A

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Dave W
can you please
keep this
copy - lets go over
it again before it goes
out

Charles
please verify district
please copy for me
w/copy for me

thanks
VLK

File
Valenite In Place Testing

(1)

125 Ruhamah Ave.
Syracuse, N.Y. 13205
March 8, 1985

William Krichbaum, Director
Dept. of Environmental Conservation
7481 Henry Clay Blvd.
Liverpool, N.Y. 13088

Dear Mr. Krichbaum,

As a followup of our phone conversation of 3/8/85, I am sending you this letter and a medical paper on cobalt poisoning. There was considerable discharge of dust from the Valenite Metals plant over a twenty year period (1961-1982) (311-315 Wavel St., E. Syracuse, N.Y.).

I also know that from 1970 through 1977 waste oil was dumped along side the plant and in the drainage ditch between the plant and the trailer park directly behind it. (25 to 40 gallons of oil a month were dumped)

There was also a transformer explosion and fire sometime in

the 1970's and we fear that P.C.B.'s may have been in these canisters that blew up as a result. Many of these "cans" were replaced through the 1970's due to this happening.

Since cobalt is hazardous through ingestion and there are gardens at the trailer park, we were concerned about how much cobalt was in the ground around the plant.

We have many documented cases of hard metals disease and all workers report signs, symptoms and complaints compatible with cobalt toxicity.

Please forward me a copy of the E. P. A. test results for cobalt and also please do more testing at this site for other contaminants and health hazards as per our conversation.

Sincerely,
Frank Johnson
ex Valenite Worker

requirements of diabetic patients alter with changes in physiological stress without simultaneous alteration in insulin antibody levels. This does not of course prove that insulin antibodies do not influence the insulin requirements from patient to patient. The studies reported here, showing that the majority of beef-insulin-treated diabetic patients can be maintained on a smaller dose of pork insulin, which can be predetermined by preferential insulin antibody-binding studies, indicate that antibodies to insulin account for a fixed aliquot of the daily insulin requirement.

The immediate clinical problem raised by this study is the necessity to exercise caution in changing diabetic patients from a pure beef-insulin preparation to a pure pork-insulin preparation. The theoretical possibility of deliberately inducing bovine-insulin antibodies and subsequently altering to porcine insulin in view of the failure of porcine insulin to produce a primary antibody response under these circumstances (Devlin and Stephenson, 1966) must be considered.

SUMMARY

The majority of a beef-insulin-treated diabetic population preferentially bind beef, pork, and human insulins in the order beef>pork>human. The theoretical implications of this observation are briefly discussed.

This work was supported by the Medical Research Council of Ireland and the Wellcome Trust. We wish to thank Professor D. K. O'Donovan for helpful criticism, and Dr. M. I. Drury, Mater Hospital, for referring some of the patients studied.

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Medical Memoranda

Case of Cobalt Poisoning

Brit. med. J., 1967, 1, 544–545

The main therapeutic use of cobalt in large doses has been in the treatment of refractory anaemias, particularly associated with renal failure. While it is sometimes effective in raising the haemoglobin level, there have been several reports of toxicity (Gardner, 1953; Kriss *et al.*, 1955). The following case is reported because of the unusually widespread nature of the toxic effects of cobalt.

CASE REPORT

A 35-year-old spinster first began to feel unwell in January 1965, complaining of nausea, vomiting, and breathlessness on exertion. In June she was investigated at another hospital, and found to have a haemoglobin level of 9.3 g./100 ml. and a blood urea of 196 mg./100 ml. A diagnosis of chronic nephritis was made. The only history relevant to the genitourinary system was that of cystitis at the age of 18. She was treated with a 20-g. protein diet and calcium lactate. For the anaemia she was given cobalt chloride 25 mg. q.d.s.

She was fairly well until November, when she started complaining of paraesthesiae in her limbs, numbness and occasional cramps in her legs, and unsteadiness on walking. At the same time she developed a slowly progressive swelling of the neck and an increasing difficulty in hearing. She also had frequency of micturition and nocturia, occasional dizzy spells, and bouts of nausea and vomiting, and by January 1966 she had lost 2 stone (12.7 kg.) in weight.

On admission to hospital in January 1966 the cobalt chloride was discontinued after six months' treatment, when she had had a total dose of approximately 18 g. Clinical examination showed a diffuse goitre without signs of hypothyroidism, bilateral nerve deafness, absent ankle jerks, tender calves, and a loss of vibration sense in the legs. The urine contained a little albumin, and a positive Clinitest showed the presence of glucose.

Investigations.—Haemoglobin 14.6 g./100 ml.; blood urea 90 mg./100 ml.; serum calcium 8.3 mg./100 ml.; serum proteins—total 6.9 g./100 ml., albumin 2.9 g./100 ml.; serum cholesterol 242 mg./100 ml.

The glucose-tolerance test was normal, the fasting level being 76 mg./100 ml., with a maximum rise of 160 mg./100 ml. after half an hour. Radioactive iodine uptake carried out three weeks after stopping the cobalt was 77% in 24 hours. On repeating the uptake, 33% of radioactive iodine was discharged after giving 400 mg. of potassium perchlorate, indicating that there was a considerable amount of inorganic iodine in the gland. The urine was examined by chromatography and several amino-acids were identified, showing that these were increased generally. Audiometry demonstrated a general decrease of sound perception in all frequencies and caloric tests were also found to be abnormal. A diagnosis of chronic renal failure complicated by cobalt chloride poisoning was made.

During her stay in hospital the symptoms gradually improved, the goitre regressed in size, and she was walking better. Her dietary protein was increased to 40 g. daily and she was maintained on a high fluid intake.

The glycosuria persisted for a week after admission and then ceased. She was discharged from hospital in February, by which time her walking had greatly improved. In April the goitre had almost gone and she had no difficulty in hearing or walking. At that time the haemoglobin was 13.3 g./100 ml.; blood urea 90 mg./100 ml.; and chromatography of the urine showed no amino-acid, though the albuminuria persisted, and there was no discharge of radioactive iodine after administration of potassium perchlorate.

DISCUSSION

Cobalt chloride was first used therapeutically about 15 years ago as a haemopoietic in the anaemia of renal failure and other refractory anaemias. Though cobalt is often effective in raising the haemoglobin, its mode of action is not known, but it may act by causing direct anoxia of the bone-marrow cells by enzyme inhibition (Weissbecker, 1950).

Gardner (1953) and Kriss *et al.* (1955) reported certain side-effects after administration of cobalt even for short periods. These effects included nausea, vomiting, damage to the eighth cranial nerve nuclei, thyroid hyperplasia and myxoedema, and congestive heart failure (Goodman and Gillman, 1965).

The case described above showed some of these toxic effects. The central nervous system was severely affected ; the vestibular and cochlear parts of the eighth nerve were damaged, as was shown by the abnormal caloric tests and audiometric curves. Paraesthesiae in the limbs, absent tendon jerks, and calf tenderness indicated that the patient also had a peripheral neuritis. The difficulty which she experienced in walking was probably due to a combination of vestibular damage and the peripheral neuritis.

In the series published by Kriss *et al.* (1955) cobalt chloride was given to children with sickle-cell anaemia, and it was found that cobalt depressed the uptake of iodine by the thyroid gland and caused thyroid hyperplasia. In the above case the iodine uptake was greatly increased. This test, however, was carried out three weeks after withdrawal of cobalt chloride, during the rebound recovery phase after thyroid suppression. The exact lesion in the thyroid has not been elicited. However, Kriss *et al.* cite evidence that cobalt chloride inhibits the tyrosine iodinase system, which catalyses the iodinization of tyrosine to form monoiodotyrosine. This view is strengthened by the fact that in the case reported here potassium perchlorate caused an immediate discharge of radioactive iodine from the gland, indicating that much of the iodine was still in the inorganic form.

Holly (1955) stated that cobalt is excreted primarily by the kidney, and he showed that rats receiving high doses of intraperitoneal cobalt developed renal tubular necrosis, though no glomerular damage was noted. There appear to be no previous reports of renal toxicity in man. The above patient had evidence of tubular damage, as was shown by the temporary glycosuria and the amino-aciduria. The chromatographic pattern of the amino-acids was very similar to that produced by other heavy metals—for example, copper in Kinnier Wilson's disease. There is no specific pattern of amino-aciduria caused by the different metals, and the basic lesion is again probably due to enzyme inhibition, perhaps the phosphorylation mechanism which is important in the active reabsorption of amino-acids. It was proved, by the disappearance of the tubular lesion three months after stopping the drug, that this damage was not due to the underlying kidney disease but to the cobalt administered.

In the above case it appears that the effect of cobalt on the body is of a temporary nature. Indeed it was gratifying to find that the effects on the thyroid gland, central nervous system, and renal tubules were completely reversible after the drug was stopped. The underlying condition of her renal failure, however, did not improve. The reason that this patient suffered so severely from the toxic effects of cobalt may be the combination of prolonged time of administration of the drug and the poor underlying renal clearance.

From this case and from previous reports it appears that cobalt chloride is very effective in raising the level of haemoglobin in refractory anaemias, especially that of renal failure. This asset of the drug, however, seems to be outweighed by the widespread side-effects which it can produce. Therefore, therapeutically, cobalt chloride seems to have no place in modern medicine.

I wish to thank Dr. J. R. Nassim for permission to publish details of this case.

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Prevention of Regurgitation During Induction of Anaesthesia with a Cuffed Oesophageal Catheter

Brit. med. J., 1967, **1**, 545–546

The importance of preventing regurgitation of stomach contents during induction of anaesthesia, particularly in operative obstetrics and emergency general surgery, is appreciated by anaesthetists. Endotracheal intubation with a cuffed tube is still the safest method for protecting the pulmonary system from the hazards of aspiration.

Sellick[1] summarized four approaches to the problem of cuffed endotracheal intubation in emergency surgery, when an empty stomach is but a wishful thought. These techniques are as follows: (1) Intubation under local anaesthesia if intubation is expected to be difficult ; Sellick suggested preliminary tracheostomy if severe maxillo-facial injuries are present. (2) Postural drainage of the pharynx in the lateral or Trendelenburg position during inhalation induction, where gravity and good suction assist in getting rid of any regurgitated contents in the pharynx, until the cuffed endotracheal tube has been passed. (3) Postural retention of gastric contents by inducing anaesthesia in the sitting position or 30 degrees head-up posture. Such technique requires rapid induction with barbiturate and muscle relaxant to achieve passage of the endotracheal tube without much delay. (4) Temporary oesophageal occlusion by means of cricoid pressure during the induction–intubation period.[2] Control of active vomiting by cricoid pressure is contraindicated, since obstruction to forcible vomiting might damage the oesophagus.

A further method, based on oesophageal occlusion by a balloon catheter to control regurgitation of gastrointestinal contents during the critical induction–intubation period, is described below. This method also prevents inflation of the stomach (a potent cause of regurgitation) during the positive-pressure ventilation preceding intubation with the aid of muscle relaxant. The wide-bore catheter acts as a safety-valve against any build-up of high pressure in the oesophagus behind the balloon, should active vomiting occur.

METHOD

Foley's haemostatic catheter is used—the type which acts as a self-retaining urethral catheter after prostatic operation. This has a strong balloon of 30–100 ml. capacity. The catheter, in variable sizes, has two terminal bores. A No. 26 F.G.S. is suitable for an adult patient. Analgesia of the mouth and pharynx facilitates insertion of the catheter into the oesophagus in the conscious patient without difficulty. In most cases this is not needed. The catheter is passed down the oesophagus as

VIth International Pneumoconiosis Conference, Bochum
September 20 – 23, 1983

Syracuse Valenite workers 64

PULMONARY AND EXTRAPULMONARY EFFECTS OF EXPOSURE TO HARD METALS IN THE CEMENTED TUNGSTEN INDUSTRY. Alf Fischbein, Yehuda Lerman, Ronald Ross, Steve Horowitz, Martin Goldman, Yasunosuke Suzuki, Burton Cohen, David Mendelson, J. George Bekesi and Irving J. Selikoff, Mount Sinai School of Medicine, New York, N.Y., USA

Interstitial pulmonary fibrosis and asthma have been reported in hard metal workers exposed to other metals such as titanium and tantalum, tungsten and cobalt. Although cobalt has been associated with cardiomyopathy after undue ingestion, cardiac effects among workers in the hard metal industry have been documented only in a limited number of reports of fatal cases. In an attempt to evaluate health effects of hard metal exposure at an early stage, we have examined a group of 14 male workers ranging in age from 23-51 (mean 38 years) and with a duration of exposure ranging from 3-21 years (mean 10 years). All had discontinued exposure 8 months prior to the study. A wide spectrum of clinical and laboratory tests were performed including detailed past medical and occupational histories, smoking habits, review of symptoms and physical examination. Laboratory tests included CAT-scan of the chest, nuclear cardiological studies, immunodiagnostic tests including T- and B-cell function, endocrinological tests as well as clinical biochemistry tests. Four of the examined workers had radiographic evidence of interstitial pulmonary disease and in 2 cases histopathological confirmation of interstitial fibrosis was obtained.

There was a high prevalence of cardiovascular symptoms (11/4); 6 workers had abnormal electrocardiograms; 3 showed a subnormal increase in ejection fraction upon exercise while two had abnormal right ventricular function. Of interest was the observation of "calcified" mediastinal and hilar lymph nodes in 9 of 12 examined individuals. All but one subject were PPD negative. The immunological findings included a low number of T lymphocytes. Despite the small number of workers examined

(over)

B. Griffin
RD

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(1)

125 Rubanah Ave.
Syracuse, N.Y. 13205
November 7, 1983

Robert Flacke, Commissioner
Dept. of Environmental Conservation
50 Wolfe Road
Albany, N.Y. 12233

Dear Commissioner,

Enclosed is a copy of letters sent to Commissioner of Health David Axelrod concerning our situation.

Some of these issues may concern your office.

How much damage could 10,000 to 20,000 pounds of these miped dusts do to the over all health of residents in the area of this plant over the 20 years Valentite was in business there?

This is the amount of dust blown out of the shop through the exhaust system we believe occured over a

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COMMISSIONER
ENVIRONMENTAL
CONSERVATION

(2)

twenty year period 1961 through 1982.

How much of these metals would cause a health hazard in drinking water?

You can see this is a very real, serious problem not just confined to workers or ex-workers.

Please help us find out the truth.

Yours truly,
Frank Johnson
Chairman
Hard Metals Disease
Committee
315 4698737

(2)

HARD METALS DISEASE COMMITTEE
125 Ruhamah Avenue
Syracuse, New York 13205
Telephone: (315) 469-8737

David Axelrod, Commissioner of Health
Dept. of Health, Tower Bldg.
Empire State Plaza
Albany, N.Y. 12237

Dear Commissioner,

I represent many ex-workers exposed to mixed dusts of tungsten carbide, titanium carbide, tantalum carbide, niobium carbide and cobalt 3% to 24% of matrix. We worked in a tungsten carbide manufacturing plant here and have many injuries, illnesses and/or diseases from exposure to these dusts.

Could you send us some information on the effects these mixed dusts can have on workers' health. We are especially concerned with the effects on the heart, lungs, blood, kidneys, liver, immunity system and organs of the body.

Many lives may be at risk here and we need some help. Please help if you can.

Could you send us some of the Russian and German Studies on hard metals disease translated into English.

Very truly yours,

FJ:mm

FRANK JOHNSON
Chairman

New York Department of Environmental Conservation

Valenite 734023

Sample Number: RH-785-LC-S-001

(12)

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ERCO/A Division of ENSECO

Invoice No: 5680-113

Lab Sample ID No: 21358

QC Report No:

Sample Matrix: Soil

Contract No: C000728

Data Release Authorized By:

Date Sample Received: 10-5-85

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10-7-85

Date Analyzed: 10-7-85

Conc/Dil Factor: 3.8 pH: —

Percent Moisture: —

Percent Moisture (Decanted): —

	CAS Number		ug/l or ug/Kg (Circle One)
150	74-87-3	Chloromethane	38 u
160	74-83-9	Bromomethane	38 u
190	75-01-4	Vinyl Chloride	38 u
160	75-00-3	Chloroethane	38 u
440	75-09-2	Methylene Chloride	38 u
	67-64-1	Acetone	95 u
	75-15-0	Carbon Disulfide	38 u
290	75-35-4	1,1-Dichloroethene	38 u
130	75-34-3	1,1-Dichloroethane	38 u
200	156-60-5	Trans-1,2-Dichloroethene	38 u
230	67-66-3	Chloroform	38 u
100	107-06-2	1,2-Dichloroethane	38 u
	78-93-3	2-Butanone	38 u
110	71-55-6	1,1,1-Trichloroethane	38 u
60	56-23-5	Carbon Tetrachloride	38 u
	108-05-4	Vinyl Acetate	38 u
470	75-27-4	Bromodichloromethane	38 u

	CAS Number		ug/l or ug/Kg (Circle One)
150	79-34-5	1,1,2,2-Tetrachloroethane	38 u
320	78-87-5	1,2-Dichloropropane	38 u
330	10061-02-6	Trans-1,3-Dichloropropene	38 u
870	79-01-6	Trichloroethene	38 u
510	124-48-1	Dibromochloromethane	38 u
140	79-00-5	1,1,2-Trichloroethane	38 u
40	71-43-2	Benzene	38 u
	10061-01-5	cis-1,3-Dichloropropene	38 u
190	110-75-8	2-Chloroethylvinylether	38 u
470	75-25-2	Bromoform	38 u
	591-78-6	2-Hexanone	38 u
	108-10-1	4-Methyl-2-Pentanone	38 u
850	127-18-4	Tetrachloroethene	38 u
860	108-88-3	Toluene	38 u
70	108-90-7	Chlorobenzene	38 u
390	100-41-4	Ethylbenzene	38 u
	100-42-5	Styrene	38 u
		Total Xylenes	38 u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration / dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read "U - Compound was analyzed for but not detected. The number is the minimum obtainable detection limit for the sample."

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J).

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

(12)

New York Department of
Environmental Conservation

Sample Number
RH-785-005-001

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10-4-85
Date Analyzed: 10-17-85
Conc/Dil Factor: 2

	CAS Number		ug/l or ug/Kg (Circle One)
18	62-75-9	N-Nitrosodimethylamine	810 u
5A	108-95-2	Phenol	810 u
	62-53-3	Aniline	810 u
	111-44-4	bis(-2-Chloroethyl)Ether	810 u
4A	95-57-8	2-Chlorophenol	810 u
2B	541-73-1	1,3-Dichlorobenzene	810 u
3B	106-46-7	1,4-Dichlorobenzene	810 u
	100-51-6	Benzyl Alcohol	810 u
5B	95-50-1	1,2-Dichlorobenzene	810 u
	95-48-7	2-Methylphenol	810 u
1B	39638 32-9	bis(2-chloroisopropyl)Ether	810 u
	106-44-5	4-Methylphenol	810 u
3B	621-64-7	N-Nitroso-Di-n-Propylamine	810 u
2B	67-72-1	Hexachloroethane	810 u
5B	98-95-3	Nitrobenzene	810 u
4B	78-59-1	Isophorone	810 u
7A	88-75-5	2-Nitrophenol	810 u
4A	105-67-9	2,4-Dimethylphenol	810 u
	65-85-0	Benzoic Acid	810 u
2B	111-91-1	bis(2-Chloroethoxy)Methane	810 u
1A	120-83-2	2,4-Dichlorophenol	810 u
2B	120-82-1	1,2,4-Trichlorobenzene	810 u
1B	91-20-3	Naphthalene	530 J
	106-47-8	4-Chloroaniline	810 u
5B	87-68-3	Hexachlorobutadiene	810 u
1A	59-50-7	4-Chloro-3-Methylphenol	810 u
	91-57-6	2-Methylnaphthalene	160 J
5B	77-47-4	Hexachlorocyclopentadiene	810 u
1A	88-06-2	2,4,6-Trichlorophenol	810 u
	95-95-4	2,4,5-Trichlorophenol	810 u
2B	91-58-7	2-Chloronaphthalene	810 u
	88-74-4	2-Nitroaniline	810 u
1B	131-11-3	Dimethyl Phthalate	810 u
3B	208-96-8	Acenaphthylene	810 u
	99-09-2	3-Nitroaniline	810 u

	CAS Number		ug/l or ug/Kg (Circle One)
1B	83-32-9	Acenaphthene	2000
9A	51-28-5	2,4-Dinitrophenol	810 u
6A	100-02-7	4-Nitrophenol	810 u
	132-64-9	Dibenzofuran	950
3B	121-14-2	2,4-Dinitrotoluene	810 u
3B	606-20-2	2,6-Dinitrotoluene	810 u
7B	84-66-2	Diethylphthalate	810 u
4B	7005-72-3	4-Chlorophenyl-phenylether	810 u
9A	86-73-7	Fluorene	1300
	100-01-6	4-Nitroaniline	810 u
6A	534-52-1	4,6-Dinitro-2-Methylphenol	810 u
2B	86-30-6	N-Nitrosodiphenylamine (1)	810 u
1B	101-55-3	4-Bromophenyl-phenylether	810 u
7B	118-74-1	Hexachlorobenzene	810 u
4A	87-86-5	Pentachlorophenol	810 u
1B	85-01-8	Phenanthrene	14,000
5B	120-12-7	Anthracene	2200
2B	84-74-2	Di-n-Butylphthalate	80 u
5B	206-44-0	Fluoranthene	18,000
5B	92-87-5	Benzidine	810 u
5B	129-00-0	Pyrene	9200
2B	85-68-7	Butylbenzylphthalate	810 u
3B	91-94-1	3,3'-Dichlorobenzidine	810 u
2B	56-55-3	Benzo(a)Anthracene	5500
4B	117-81-7	bis(2-Ethylhexyl)Phthalate	280 J
2B	218-01-9	Chrysene	5000
4B	117-84-0	Di-n-Octyl Phthalate	80 J
2B	205-99-2	Benzo(b)Fluoranthene	7100 } Coe
2B	207-08-9	Benzo(k)Fluoranthene	7100
2B	50-32-8	Benzo(a)Pyrene	3800
3B	193-39-5	Indeno(1,2,3-cd)Pyrene	2900
1B	53-70-3	Dibenzo(a,h)Anthracene	780 J
3B	191-24-2	Benzo(g,h,i)Perylene	2600

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency. CLP Sample Management Office
O Box 818. Alexandria. Virginia 22313 703/557-2490

Sample Number
RH-785-005-001

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10-4-85

Date Analyzed: 10-11-85 ; 10-14-85

Conc/Dil Factor: D.L=100 ; PH=7 ; moisture = 5%

	CAS Number		ug/l or ug/Kg (Circle One)
101P	319-84-6	Alpha-BHC	100 u
103P	319-85-7	Beta-BHC	100 u
104P	319-86-8	Delta-BHC	100 u
102P	58-89-9	Gamma-BHC (Lindane)	100 u
100P	76-44-8	Heptachlor	100 u
89P	309-00-2	Aldrin	100 u
101P	1024-57-3	Heptachlor Epoxide	100 u
	959-98-8	Endosulfan I	100 u
90P	60-57-1	Dieldrin	100 u
93P	72-55-9	4,4'-DDE	100 u
95P	72-20-8	Endrin	100 u
	33213-65-9	Endosulfan II	100 u
94P	72-54-8	4,4'-DDD	100 u
99P	7421-93-4	Endrin Aldehyde	100 u
97P	1031-07-8	Endosulfan Sulfate	100 u
92P	50-29-3	4,4'-DDT	100 u
	72-43-5	Methoxychlor	200 u
	53494-70-5	Endrin Ketone	100 u
91P	57-74-9	Chlordane	200 u
113P	8001-35-2	Toxaphene	200 u
117P	12674-11-2	Aroclor-1016	200 u
108P	11104-28-2	Aroclor-1221	200 u
109P	11141-16-5	Aroclor-1232	200 u
106P	53469-21-9	Aroclor-1242	200 u
110P	12672-29-6	Aroclor-1248	200 u
107P	11097-69-1	Aroclor-1254	200 u
111P	11096-82-5	Aroclor-1260	200 u

V_t = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s NA or W_s 25.1 V_t 1000 V_t 2.7 ; 2.7

New York Department of
Environmental Conservation

Sample Number
RH-785-005-001

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		Unknown	BNA	345	3000
2.	123-42-2	2-Pentanone, 4-hydroxy-4-methyl *a	BNA	381	48,000
3.	486-25-9	9H-Fluorenone	BNA	1230	510
4.	132-65-0	Dibenzothiophene	BNA	1240	670
5.	86-74-8	9H-Carbazole	BNA	1300	1200
6.		Methylphenanthrene isomer	BNA	1338	960
7.		Methylphenanthrene isomer	BNA	1342	1030
8.		Methylphenanthrene isomer	BNA	1349	360
9.	203-64-5	4H-Cyclopenta[def]phenanthrene	BNA	1354	2400
10.	57-10-3	Hexadecanoic acid	BNA	1372	560
11.	84-65-1	9,H-Anthracenedione	BNA	1391	2000
12.		S-containing aromatic $C_{14}H_8S$ isomer	BNA	1470	400
13.		Methylpyrene isomer	BNA	1539	2100
14.		Methylpyrene isomer	BNA	1549	1100
15.		Methylpyrene isomer	BNA	1553	540
16.		Methylpyrene isomer	BNA	1567	610
17.		Terphenyl isomer	BNA	1608	620
18.		An aromatic hydrocarbon $C_{18}H_{14}$ isomer	BNA	1621	1100
19.		S-containing aromatic, $C_{16}H_{10}S$ isomer	BNA	1636	1100
20.		An aromatic hydrocarbon $C_{18}H_{14}$ isomer	BNA	1654	860
21.		An aromatic hydrocarbon, $C_{18}H_{12}$ isomer	BNA	1692	1400
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

*a Possibly an aldol condensation product

York Department of
Environmental Conservation

Sample Number
SA - 785-005-0.2

(12)

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ERCO/A Division of ENSECO
Lab Sample ID No: 21384
Sample Matrix: Soil
Data Release Authorized By: AFA

Invoice No: 5680-113
QC Report No:
Contract No: C000728
Date Sample Received: 10-3-85

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10-7-85
Date Analyzed: 10-7-85
Conc/Dil Factor: 1.6 pH —
Percent Moisture: —
Percent Moisture (Decanted): —

	CAS Number		ug/l or ug/Kg (Circle One)
U	74-87-3	Chloromethane	16 U
U	74-83-9	Bromomethane	16 U
U	75-01-4	Vinyl Chloride	16 U
U	75-00-3	Chloroethane	16 U
10	75-09-2	Methylene Chloride	16 U
	67-64-1	Acetone	40 U
	75-15-0	Carbon Disulfide	16 U
U	75-35-4	1, 1-Dichloroethene	16 U
3	75-34-3	1, 1-Dichloroethane	16 U
U	156-60-5	Trans-1, 2-Dichloroethene	16 U
3U	67-66-3	Chloroform	16 U
0	107-06-2	1, 2-Dichloroethane	16 U
	78-93-3	2-Butanone	16 U
1U	71-55-6	1, 1, 1-Trichloroethane	16 U
U	56-23-5	Carbon Tetrachloride	16 U
	108-05-4	Vinyl Acetate	16 U
18U	75-27-4	Bromodichloromethane	16 U

	CAS Number		ug/l or ug/Kg (Circle One)
15U	79-34-5	1, 1, 2, 2-Tetrachloroethane	16 U
32U	78-87-5	1, 2-Dichloropropane	16 U
33U	10061-02-6	Trans-1, 3-Dichloropropene	16 U
87U	79-01-6	Trichloroethene	16 U
51U	124-48-1	Dibromochloromethane	16 U
14U	79-00-5	1, 1, 2-Trichloroethane	16 U
4U	71-43-2	Benzene	16 U
	10061-01-5	cis-1, 3-Dichloropropene	16 U
19U	110-75-8	2-Chloroethylvinylether	16 U
47U	75-25-2	Bromoform	16 U
	591-78-6	2-Hexanone	16 U
	108-10-1	4-Methyl-2-Pentanone	16 U
85U	127-18-4	Tetrachloroethene	16 U
60U	108-88-3	Toluene	16 U
7U	108-90-7	Chlorobenzene	16 U
35U	100-41-4	Ethylbenzene	16 U
	100-42-5	Styrene	16 U
		Total Xylenes	16 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J).

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

New York Department of
Environmental Conservation

Sample Number
RH-785-005-002

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 11-12-85
Date Analyzed: 11-16-85
Conc/Dil Factor: 1

	CAS Number		ug/l or ug/Kg (Circle One)
	62-75-9	N-Nitrosodimethylamine	790u
	108-95-2	Phenol	790u
	62-53-3	Aniline	790u
	111-44-4	bis(-2-Chloroethyl)Ether	790u
	95-57-8	2-Chlorophenol	790u
	541-73-1	1,3-Dichlorobenzene	790u
	106-46-7	1,4-Dichlorobenzene	790u
	100-51-6	Benzyl Alcohol	790u
	95-50-1	1,2-Dichlorobenzene	790u
	95-48-7	2-Methylphenol	790u
	39638 32-9	bis(2-chloroisopropyl)Ether	790u
	106-44-5	4-Methylphenol	790u
	621-64-7	N-Nitroso-Di-n-Propylamine	790u
	67-72-1	Hexachloroethane	790u
	98-95-3	Nitrobenzene	790u
	78-59-1	Isophorone	790u
	88-75-5	2-Nitrophenol	790u
	105-67-9	2,4-Dimethylphenol	790u
	65-85-0	Benzoic Acid	790u
	111-91-1	bis(-2-Chloroethoxy)Methane	790u
	120-83-2	2,4-Dichlorophenol	790u
	120-82-1	1,2,4-Trichlorobenzene	790u
	91-20-3	Naphthalene	310j
	106-47-8	4-Chloroaniline	790u
	87-68-3	Hexachlorobutadiene	790u
	59-50-7	4-Chloro-3-Methylphenol	790u
	91-57-6	2-Methylnaphthalene	790u
	77-47-4	Hexachlorocyclopentadiene	790u
	88-06-2	2,4,6-Trichlorophenol	790u
	95-95-4	2,4,5-Trichlorophenol	790u
	91-58-7	2-Chloronaphthalene	790u
	88-74-4	2-Nitroaniline	790u
	131-11-3	Dimethyl Phthalate	790u
	208-96-8	Acenaphthylene	790u
	99-09-2	3-Nitroaniline	790u

	CAS Number		ug/l or ug/Kg (Circle One)
	83-32-9	Acenaphthene	1500
	51-28-5	2,4-Dinitrophenol	790u
	100-02-7	4-Nitrophenol	790u
	132-64-9	Dibenzofuran	540j
	121-14-2	2,4-Dinitrotoluene	790u
	606-20-2	2,6-Dinitrotoluene	790u
	84-66-2	Diethylphthalate	790u
	7005-72-3	4-Chlorophenyl-phenylether	790u
	86-73-7	Fluorene	770j
	100-01-6	4-Nitroaniline	790u
	534-52-1	4,6-Dinitro-2-Methylphenol	790u
	86-30-6	N-Nitrosodiphenylamine (1)	790u
	101-55-3	4-Bromophenyl-phenylether	790u
	118-74-1	Hexachlorobenzene	790u
	87-86-5	Pentachlorophenol	790u
	85-01-8	Phenanthrene	9000
	120-12-7	Anthracene	1500
	84-74-2	Di-n-Butylphthalate	790u
	206-44-0	Fluoranthene	11,000
	92-87-5	Benzidine	790u
	129-00-0	Pyrene	7100
	85-68-7	Butylbenzylphthalate	790u
	91-94-1	3,3'-Dichlorobenzidine	790u
	56-55-3	Benzo(a)Anthracene	4600
	117-81-7	bis(2-Ethylhexyl)Phthalate	480j
	218-01-9	Chrysene	4600
	117-84-0	Di-n-Octyl Phthalate	790u
	205-99-2	Benzo(b)Fluoranthene	6500 } coelut
	207-08-9	Benzo(k)Fluoranthene	6500
	50-32-8	Benzo(a)Pyrene	3800
	193-39-5	Indeno(1,2,3-cd)Pyrene	2900
	53-70-3	Dibenz(a,h)Anthracene	830j
	191-24-2	Benzo(g,h,i)Perylene	2500

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency. CLP Sample Management Office.
P.O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
RH-785-005-002

(12)

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10-4-85

Date Analyzed: 10-11-85 ; 10-14-85

Conc/Dil Factor: dil=20 ; PH=7 ; moisture = 16%

	CAS Number		ug/l or (ug/Kg) (Circle One)
101P	319-84-6	Alpha-BHC	20 U
103P	319-85-7	Beta-BHC	20 U
104P	319-86-8	Delta-BHC	20 U
102P	58-89-9	Gamma-BHC (Lindane)	20 U
100P	76-44-8	Heptachlor	20 U
89P	309-00-2	Aldrin	20 U
101P	1024-57-3	Heptachlor Epoxide	20 U
	959-98-8	Endosulfan I	20 U
90P	60-57-1	Dieldrin	20 U
93P	72-55-9	4,4'-DDE	20 U
95P	72-20-8	Endrin	20 U
	33213-65-9	Endosulfan II	20 U
94P	72-54-8	4,4'-DDD	20 U
99P	7421-93-4	Endrin Aldehyde	20 U
97P	1031-07-8	Endosulfan Sulfate	20 U
92P	50-29-3	4,4'-DDT	20 U
	72-43-5	Methoxychlor	40 U
	53494-70-5	Endrin Ketone	20 U
91P	57-74-9	Chlordane	40 U
113P	8001-35-2	Toxaphene	40 U
112P	12674-11-2	Aroclor-1016	40 U
105P	11104-28-2	Aroclor-1221	40 U
109P	11141-16-5	Aroclor-1232	40 U
106P	53469-21-9	Aroclor-1242	40 U
110P	12672-29-6	Aroclor-1248	40 U
107P	11097-69-1	Aroclor-1254	40 U
111P	11096-82-5	Aroclor-1260	40 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s NA or W_s 17.6 V_t 1000 V_i 2.7; 2.7

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New York Department of
Environmental Conservation

Sample Number
RH-785-005-002

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	123-42-2	2-Pentanone, 4- hydroxyl- 4-methyl	ABN	366	≤900
2.	486-25-9	Fluorenone	ABN	1222	370
3.	132-65-0	Dibenzothiophene	ABN	1232	400
4.	86-74-8	Carbazole	ABN	1291	1000
5.		Methylphenanthrene isomer	ABN	1330	630
6.		Methylphenanthrene isomer	ABN	1334	650
7.	203-64-5	Cyclopenta(def)phenanthrene	ABN	1346	1800
8.	84-65-1	Anthracenedione	ABN	1381	1400
9.		Methylpyrene isomer	ABN	1530	1500
10.		Methylpyrene isomer	ABN	1540	740
11.		UnKnown, PAH $C_{17}H_{14}$ isomer	ABN	1550	660
12.	82-05-3	Benz[de]anthracene-7-one	ABN	1611	730
13.		Benzonaphthethiophene	ABN	1626	720
14.		UnKnown, PAH $C_{18}H_{12}$ isomer	ABN	1632	1300
15.		UnKnown, PAH, mol wt 230	ABN	1644	710
16.		UnKnown, PAH, $C_{18}H_{12}$ isomer	ABN	1682	960
17.		UnKnown, PAH, mol wt 232	ABN	1699	510
18.		Methylchrysene isomer	ABN	1730	760
19.		UnKnown, PAH, mol wt 240	ABN	1748	840
20.		UnKnown, PAH, $C_{20}H_{12}$ isomer	ABN	1853	1300
21.		UnKnown, PAH, $C_{20}H_{12}$ isomer	ABN	1884	3300
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Environmental Protection Agency. CLP Sample Management Office.
P. O Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
RH-785-005-003

(12)

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10-4-85

Date Analyzed: 10-11-85 ; 10-14 85

Conc/Dil Factor: dil=20 ; PH=7 ; moisture = 15%

	CAS Number		ug/l or (ug/Kg) (Circle One)
102P	319-84-6	Alpha-BHC	20 u
103P	319-85-7	Beta-BHC	20 u
104P	319-86-8	Delta-BHC	20 u
105P	58-89-9	Gamma-BHC (Lindane)	20 u
100P	76-44-8	Heptachlor	20 u
89P	309-00-2	Aldrin	20 u
101P	1024-57-3	Heptachlor Epoxide	20 u
	959-98-8	Endosulfan I	20 u
90P	60-57-1	Dieldrin	20 u
93P	72-55-9	4,4'-DDE	20 u
95P	72-20-8	Endrin	20 u
	33213-65-9	Endosulfan II	20 u
94P	72-54-8	4,4'-DDD	20 u
99P	7421-93-4	Endrin Aldehyde	20 u
97P	1031-07-8	Endosulfan Sulfate	20 u
92P	50-29-3	4,4'-DDT	20 u
	72-43-5	Methoxychlor	40 u
	53494-70-5	Endrin Ketone	20 u
91P	57-74-9	Chlordane	40 u
113P	8001-35-2	Toxaphene	40 u
112P	12674-11-2	Aroclor-1016	40 u
108P	11104-28-2	Aroclor-1221	40 u
109P	11141-16-5	Aroclor-1232	40 u
106P	53469-21-9	Aroclor-1242	40 u
110P	12672-29-6	Aroclor-1248	40 u
107P	11097-69-1	Aroclor-1254	40 u
111P	11096-82-5	Aroclor-1260	40 u

V_t = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s NA or W_s 21.0 V_t 500 V_i 2.5; 2.7

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New York Department of
Environmental Conservation

Sample Number
RH-785-005-003

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 10-4-85
Date Analyzed: 10-16-85
Conc/Dil Factor: 1

	CAS Number		ug/l or (ug/Kg) (Circle One)
18	62-75-9	N-Nitrosodimethylamine	540u
5A	108-95-2	Phenol	540 u
	62-53-3	Aniline	540 u
2B	111-44-4	bis(-2-Chloroethyl)Ether	540 u
4A	95-57-8	2-Chlorophenol	540 u
3B	541-73-1	1, 3-Dichlorobenzene	540 u
8	106-46-7	1, 4-Dichlorobenzene	540 u
	100-51-6	Benzyl Alcohol	540 u
5B	95-50-1	1, 2-Dichlorobenzene	540 u
	95-48-7	2-Methylphenol	540 u
2B	39638 32-9	bis(2-chloroisopropyl)Ether	540 u
	106-44-5	4-Methylphenol	540 u
3B	621-64-7	N-Nitroso-Di-n-Propylamine	540 u
2B	67-72-1	Hexachloroethane	540 u
2B	98-95-3	Nitrobenzene	540 u
4B	78-59-1	Isophorone	540 u
2A	88-75-5	2-Nitrophenol	540 u
4A	105-67-9	2, 4-Dimethylphenol	540 u
	65-85-0	Benzoic Acid	540 u
2B	111-91-1	bis(-2-Chloroethoxy)Methane	540 u
1A	120-83-2	2, 4-Dichlorophenol	540 u
2B	120-82-1	1, 2, 4-Trichlorobenzene	540 u
2B	91-20-3	Naphthalene	540 u
	106-47-8	4-Chloroaniline	540 u
2B	87-68-3	Hexachlorobutadiene	540 u
3A	59-50-7	4-Chloro-3-Methylphenol	540 u
	91-57-6	2-Methylnaphthalene	540 u
2B	77-47-4	Hexachlorocyclopentadiene	540 u
1A	88-06-2	2, 4, 6-Trichlorophenol	540 u
	95-95-4	2, 4, 5-Trichlorophenol	540 u
2B	91-58-7	2-Chloronaphthalene	540 u
	88-74-4	2-Nitroaniline	540 u
2B	131-11-3	Dimethyl Phthalate	540 u
2B	208-96-8	Acenaphthylene	540 u
	99-09-2	3-Nitroaniline	540 u

	CAS Number		ug/l or (ug/Kg) (Circle One)
1B	83-32-9	Acenaphthene	540u
9A	51-28-5	2, 4-Dinitrophenol	540 u
8A	100-02-7	4-Nitrophenol	540 u
	132-64-9	Dibenzofuran	540 u
3B	121-14-2	2, 4-Dinitrotoluene	540 u
3B	606-20-2	2 6-Dinitrotoluene	540 u
3B	84-66-2	Diethylphthalate	540 u
4B	7005-72-3	4-Chlorophenyl-phenylether	540 u
3B	86-73-7	Fluorene	540 u
	100-01-6	4-Nitroaniline	540 u
6A	534-52-1	4, 6-Dinitro-2-Methylphenol	540 u
2B	86-30-6	N-Nitrosodiphenylamine (1)	540 u
4B	101-55-3	4-Bromophenyl-phenylether	540 u
2B	118-74-1	Hexachlorobenzene	540 u
4A	87-86-5	Pentachlorophenol	540 u
1B	85-01-8	Phenanthrene	540 u
2B	120-12-7	Anthracene	540 u
4B	84-74-2	Di-n-Butylphthalate	540 u
2B	206-44-0	Fluoranthene	64 J
3B	92-87-5	Benzidine	540 u
2B	129-00-0	Pyrene	540 u
2B	85-68-7	Butylbenzylphthalate	540 u
3B	91-94-1	3, 3'-Dichlorobenzidine	540 u
2B	56-55-3	Benzo(a)Anthracene	540 u
4B	117-81-7	bis(2-Ethylhexyl)Phthalate	540 u
2B	218-01-9	Chrysene	540 u
4B	117-84-0	Di-n-Octyl Phthalate	540 u
2B	205-99-2	Benzo(b)Fluoranthene	540 u
2B	207-08-9	Benzo(k)Fluoranthene	540 u
2B	50-32-8	Benzo(a)Pyrene	540 u
3B	193-39-5	Indeno(1, 2, 3-cd)Pyrene	540 u
2B	53-70-3	Dibenz(a, h)Anthracene	540 u
2B	191-24-2	Benzo(g, h, i)Perylene	540 u

(1)-Cannot be separated from diphenylamine

New York Department of Environmental Conservation

Sample Number: RH-785-005-003

(12)

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ERCO/A Division of ENSECO — Invoice No: 5680-113

Lab Sample ID No: 21390 — QC Report No:

Sample Matrix: soil — Contract No: C000728

Data Release Authorized By: NA — Date Sample Received: 10-3-85

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 10-7-85

Date Analyzed: 10-7-85

Conc/Dil Factor: 1.6 — pH: —

Percent Moisture: —

Percent Moisture (Decanted): —

	CAS Number		ug/l or ug/Kg (Circle One)
45U	74-87-3	Chloromethane	16 U
46U	74-83-9	Bromomethane	16 U
88U	75-01-4	Vinyl Chloride	16 U
16U	75-00-3	Chloroethane	16 U
44U	75-09-2	Methylene Chloride	16 U
	67-64-1	Acetone	40 U
	75-15-0	Carbon Disulfide	16 U
99U	75-35-4	1, 1-Dichloroethene	16 U
13U	75-34-3	1, 1-Dichloroethane	16 U
20U	156-60-5	Trans-1, 2-Dichloroethene	16 U
23U	67-66-3	Chloroform	16 U
10U	107-06-2	1, 2-Dichloroethane	16 U
	78-93-3	2-Butanone	16 U
11U	71-55-6	1, 1, 1-Trichloroethane	16 U
6U	56-23-5	Carbon Tetrachloride	16 U
	108-05-4	Vinyl Acetate	16 U
48U	75-27-4	Bromodichloromethane	16 U

	CAS Number		ug/l or ug/Kg (Circle One)
15U	79-34-5	1, 1, 2, 2-Tetrachloroethane	16 U
32U	78-87-5	1, 2-Dichloropropane	16 U
33U	10061-02-6	Trans-1, 3-Dichloropropene	16 U
87U	79-01-6	Trichloroethene	16 U
51U	124-48-1	Dibromochloromethane	16 U
14U	79-00-5	1, 1, 2-Trichloroethane	16 U
4U	71-43-2	Benzene	16 U
	10061-01-5	cis-1, 3-Dichloropropene	16 U
19U	110-75-8	2-Chloroethylvinylether	16 U
47U	75-25-2	Bromoform	16 U
	591-78-6	2-Hexanone	16 U
	108 10-1	4-Methyl-2-Pentanone	16 U
85U	127-18-4	Tetrachloroethene	16 U
86U	108-88-3	Toluene	16 U
7U	108-90-7	Chlorobenzene	16 U
39U	100-41-4	Ethylbenzene	16 U
	100-42-5	Styrene	16 U
		Total Xylenes	16 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration / dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum obtainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J).

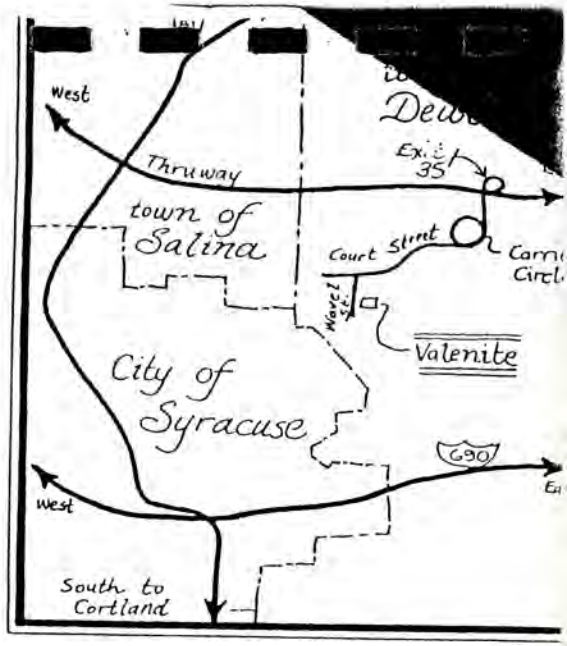
C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

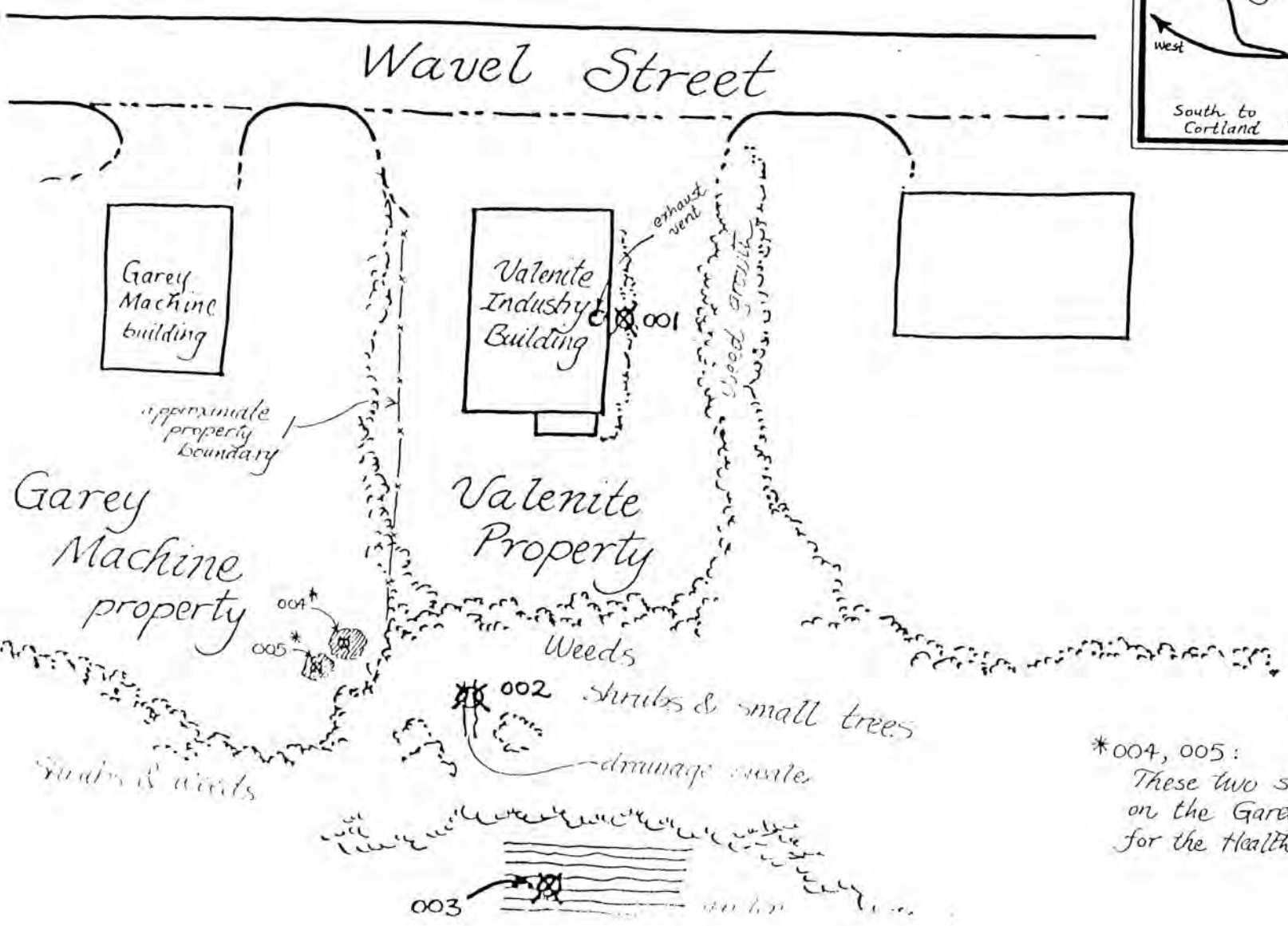
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

VALENITE 734023

SAMPLE LOCATION MAP
DEWITT (t); ONONDAGA CO.
FIVE SOIL SAMPLES TAKEN
001, 002, 003, 004*, & 005*





*004, 005:
These two samples were taken on the Garey machine property for the Health department.

12

File: Sampling reports .17

New York State Department of Environmental Conservation 734023

(12)

MEMORANDUM

TO: Robert A. Olazagasti
FROM: Thomas M. Koch TMKoch 10/24/85
SUBJECT: Sampling and Investigation Trip to Region 7
DATE: OCT 24 1985

On October 1, 2 and 3, I assisted the Region 7 staff in the investigation and sampling of four sites in the Region. The four sites visited were:

1. Valenite - Dewitt (T), Onondaga County
2. Syracuse Die Casting - Syracuse (C), Onondaga County
3. Agway Mill Site - Groton (V), Tompkins County
4. C&J Disposal Site - Eaton (T), Madison County

The first site, Valenite in Dewitt is a small abandoned plant that used to manufacture industrial tools. During the time the plant was in operation, metal dust was blown out through exhaust vents on the roof of the building and settled in the vicinity. Prior sampling done on location showed high levels of heavy metals in the soil from the dust. The heavy metals contamination had been detected in the soil of a small vegetable garden nearly 300 feet from the building. A more detailed summary of the problem at Valenite is described in the Preliminary Assessment done by NUS. A total of three sets of soil samples were taken on site. Please refer to map No. 1 for approximate locations as to where the samples were taken. The samples are to be analyzed for priority pollutants, cobalt and tungsten. During the time we were sampling and investigating Valenite, two representatives from the Health Department stopped by to oversee our progress with the sampling. One of the representatives, Ronald Heerkens of the Syracuse Regional Office requested that we take two additional soil samples on the adjacent property of the Garey Machine Company. The samples were taken from two small "sludge" piles near the property boundary. They are to be analyzed for PCB's and acid extractables and the results will be used by the Health Department in their enforcement program.

The second site visited was the Syracuse Die Casting facility on Teall Avenue in Syracuse. The contaminated area at this location is a gravel driveway of approximately 2000 square feet. When Syracuse Die Casting was in operation, the owner used to pour PCB contaminated oil on this driveway in an attempt to keep the dust down. Over time, the levels of PCB's built up considerably. In fact, when we first arrived on site, I immediately noticed the pungent stench of PCB carrier gas in the air in spite of the fact that it was raining at the time. Because the odor was so prominent, I did not even bother to monitor the air with the HNU meter. Instead, we immediately put the respirators on to do our sampling. A total of nine samples were taken for PCB analysis in a grid pattern on the driveway. Please refer to map No. 2 for sampling locations. More information pertinent to this site is contained in the Preliminary Assessment.

APPENDIX B

Site Inspection Report
USEPA Form 2070-13



Site Inspection Report

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Valenite	315 Wavel Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Syracuse	NY	13206	Onondaga		

09 COORDINATES LATITUDE 43° 04' 47.2" LONGITUDE 76° 06' 16.0"

10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
11 / 13 / 90 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1961 (BEGINNING YEAR) 1981 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR URS Consultants (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Robert Kreuzer	Geologist	URS Consultants	(716) 883-5525
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Donald McCall	Chemical Engineer	URS Consultants	(716) 883-5525
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Michael E. Garey	President of Garey Machine	315 Wavel Street Syracuse, NY 13206	(315) 463-0210
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1:00	Cloudy, 28-30°F, Trace of snow

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Donald McCall	URS Consultants, Inc.	(716) 883-5525

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Donald McCall	URS		(716) 883-5525	11 / 27 / 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☒ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 10 (dust)
Gallons 3400(oil)
CUBIC YARDS
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	3400	Gallon	Used oil from vacuum pumps
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	10	ton	Dust containing cobalt and
ACD	ACIDS			other metals
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
10C	Cobalt		Ventilation discharge	unknown	
OLW	Acenaphthene	83-32-9	Dumped on Ground		
OLW	Dibenzofuran				
OLW	Fluorene	86-73-7			
OLW	Phenanthrene	85-01-8			
OLW	Anthracene	120-12-7			
OLW	Fluoranthene	206-44-0			
OLW	Pyrene	129-00-0			
OLW	Benzo (a)Anthracene	56-55-3			
OLW	Chyrsene	218-01-9			
OLW	Benzo (b) Fluoranthene	205-99-2			
OLW	Benzo(k) Fluoranthene	207-08-9			
OLW	Benzo (a) Pyrene	50-32-8			
OLW	Indeno (1,2,3-cd) Pyrene	193-39-5			
OLW	Dibenz (a,h) Anthracene	53-70-3			
OLW	Benzo (g,h,i) Perylene	191-24-2			

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)

NYSDEC Albany File Search, 6/14/90

Ref. I,2

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: D980780365

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 120
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Although almost all of DeWitt is believed to have a public water supply available, there is a possibility that some residents might still be using wells.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: unknown
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The south branch of Ley Creek, 1200 feet east of the site, could potentially be contaminated. The population that would be affected is unknown.

01 ☒ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: unknown
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

If dust or other particulates are still present on the ground surface, they could be picked up by the wind.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

At the present, no fire or explosive conditions exist.

01 ☒ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 2600
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Estimate of people living in a 1 mile radius of the site. Cobalt contamination has also been found in gardens at the back of the site.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 0.5-1 (Acres)
02 ☒ OBSERVED (DATE: 1984,1985) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Sampling data has indicated contamination of soil by cobalt and many semivolatile organic compounds.

01 ☒ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 120
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Estimate of the population in a 3-mile radius of the site possibly using groundwater. All municipal drinking water in the surrounding area is obtained from Lakes Ontario, Otisco, and Skaneateles.

01 ☒ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: 200
02 ☒ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

200 people worked at the plant over a 20 year period. Many have been diagnosed having heavy metal disease. The company has been closed since 1981.

01 ☒ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 23,200
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Estimate of the population in a 3 mile radius of the site. A trailer park is located across the street at the rear of the site.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980780365

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A potential for plant uptake of heavy metals exists at the rear of the site.

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

Metals uptake by plants could lead to ingestion by fauna.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Several gardens were located at the rear of the site for the residents of the trailer park across the street.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills Runoff Standing liquids Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown — 04 NARRATIVE DESCRIPTION

Dust was discharged out the ventilation system onto the surrounding area. Waste oil was poured onto the ground and into the drainage ditch.

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The extent of the heavy metal dust contamination is unknown.

It is possible that contamination has spread to offsite locations.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

It is possible that runoff from the site could contaminate a sewer or storm drain.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The site is unfenced and readily accessible. Illegal dumping is not considered to be a problem.

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

Many of the contaminants found on site can cause serious health problems over a period of time

III. TOTAL POPULATION POTENTIALLY AFFECTED: 2600 (population in a 1-mile radius)

IV. COMMENTS

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

NYSDEC Albany file search, 6/14/90
URS Site visit 11/13/90

Ref. 1,2,14,15,16,17,18

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER (Specify) all waste was discharged or dumped on the ground		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

1

06 AREA OF SITE

0.5 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

All of the dust and waste oils were discharged or dumped onto the ground. There is no containment onsite.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

The site is not fenced and is easily accessible

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

URS Site Visit 11/13/90

Ref. 1,2

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☑	B. ☐
NON-COMMUNITY	C. ☐	D. ☒

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☒
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. 17+ (mi)
B. unknown (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUNDWATER Estimated 120 people in a 3-mile radius

03 DISTANCE TO NEAREST DRINKING WATER WELL unknown (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
0.5-1 (ft)	assumed east	0.5-1 (ft)	unknown (gpd)	☐ YES ☑ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

Unknown, no well construction details or well logs were found during the file search.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS: unknown	☐ YES ☐ NO	COMMENTS: unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one) Assumed to be used for recreation

☑ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Ley Creek South Branch	potentially ☑	0.23 (mi)
Onondaga Lake	☐	(mi)
	remote potential ☑	4 + (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 2600 NO OF PERSONS	B. 10,300 NO OF PERSONS	C. 23,200 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION 30-40 ft. (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 4200

04 DISTANCE TO NEAREST OFF-SITE BUILDING 30-40 ft. (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Areas to the north and east are mostly industrial with the exception of a trailer court located immediately east of the site. Areas to the south and west are urban residential.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: D980780365

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
10+ (ft)	unknown (ft)	5.1-7.3	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
12 (in)	2.5 (in)	0-1 %	East	0-2 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. NA (mi) OTHER: B. 0.24 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

NA (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 0 (mi)	B. 0.025 (mi)	C. 1-2 (mi)	D. 1-2 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site and surrounding areas are relatively flat and even. Areas to the north and east are industrial while the south and west are urban residential.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

URS Site Visit, 11/13/90 Ref. 8, 19, 14

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	5 15	ERCO/A Division of ENSECO Roy F. Weston, Inc.	1985 1984
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNu	No readings above background levels, 11/13/90
Radiation Meter	No readings above background levels, 11/13/90

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF URS Consultants, Inc.
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS
URS Consultants, Inc., 570 Delaware Avenue, Buffalo, New York

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Photographs of significant features were taken and a site location map was developed.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

NYSDEC Albany File Search 6/14/90
URS Site Visit, 11/13/90.
Ref. 10,12

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Michael E. Garey	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
315 Wavel Street	
05 CITY	06 STATE / 07 ZIP CODE
Syracuse	NY / 13206

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER
Heidi Schauer Michael, Thomas & Peter Hafner	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
Jacob Hafner	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Fay Road	
05 CITY	06 STATE / 07 ZIP CODE
N. Syracuse	NY / 13212

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

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

NYSDEC Albany File Search, 6/14/90.
Ref. 5

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Garey Machine Corp.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
315 Wavel Street	

05 CITY	06 STATE	07 ZIP CODE
Syracuse	NY	13206

08 YEARS OF OPERATION	09 NAME OF OWNER
1982-Present	Michael E. Garey

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
Valenite Metals	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
315 Wavel Street	

05 CITY	06 STATE	07 ZIP CODE
Syracuse	NY	13206

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1961-1981	Jacob Hafner

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
Valeron Corp.	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE
Madison Heights	MI	

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Albany File Search, 6/14/90
Ref. 3,10

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Valenite Metals	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
315 Wavel Street	

05 CITY	06 STATE	07 ZIP CODE
Syracuse	NY	13206

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

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

NYSDEC Albany File Search, 6/14/90

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980780365

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION None reported

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION None reported

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980780365

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION None reported

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None reported

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

None reported

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Albany File Search, 6/14/90

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980780365

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Albany File Search, 6/14/90

APPENDIX C

Interview Documentation Forms

McCall's Copy (3)

URS

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
570 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1207
(716) 883-5525
FAX: (716) 883-0754

ATLANTA
BOSTON
BUFFALO
CLEVELAND
COLUMBUS
DENVER
NEW YORK
PARAMUS, NJ
NEW ORLEANS
SAN FRANCISCO
SAN MATEO
SEATTLE
VIRGINIA BEACH
WASHINGTON, D.C.

December 19, 1990

RECEIVED
URS CONSULTANTS

DEC 26 1990

JOB # 36231 (5015-113)

Mr. Frank G. Johnson
125 Ruhamah Avenue
Syracuse, New York 13205

RE: VALENITE

Dear Mr. Johnson:

As mentioned during our telephone conversation on November 18, 1990, URS Consultants, Inc. is currently conducting a Preliminary Site Assessment of the Valenite site in the Town of Dewitt, Onondaga County, New York.

We are performing this investigation under contract to the New York State Department of Environmental Conservation (NYSDEC) pursuant to the requirements of the New York State Environmental Conservation Law, Section 27-1309.

This is to confirm our conversation wherein you provided the following information:

- Mr. Johnson was a machinist and furnace operator for Valenite for 11 years.
- Two hundred people worked at Valenite over 20 years, the most at one time being 65.
- Dust from the operations used to settle on everything around the building. At the end of the work day, the cars would be covered with black "soot".
- Blowers were used to collect dust from the machine operations. There was a bag dust collection system but bags were sometimes ripped or had other problems. The blowers and ventilation for the building were not adequate.
- There were also six secondary systems that were sometimes used to discharge the dust directly through stacks in the roof. These systems were removed at the time Valenite left.
- The waste oil disposed of was heavy duty 50 weight oil used in the vacuum pumps. This oil would probably contain some of the combustion products from the furnaces. As the furnaces turned the powdered carbide into hard metal, the carbide and oxides would burn off. Approximately 40 gallons per month of this oil was dumped to the left of the building and in the drainage ditch. This occurred from 1970 to ~~1971~~ the mid 1970's.
- Combustion products from blower - carbide fires were swept out of the back door, or

put in the dumpster.

o There was a transformer explosion and fire in the late 1970's. or 1980, maybe PCB's were involved.

We would appreciate it if you would review this information, note any necessary corrections, and return a signed and dated copy to indicate your concurrence. Your prompt attention to this would be greatly appreciated, as the information is necessary to complete our evaluation of the site. Please use the enclosed envelope.

Sincerely,

URS CONSULTANTS, INC.

Donald A. McCall

Donald A. McCall
Project Engineer

DAM/ys

12-19-90.FJ
35231.00 (File: 5015 - 113)

I agree with the information as it is presented, with corrections

Frank G. Johnson — Dec. 26, 1990

Frank G. Johnson — Date

(enclosures)

P.S. I also expressed my concerns over the Trailer Park located behind Valenite and that there were many gardens planted there. Dust from the roads may contain these toxic metals also.

Material Information on Products + materials used at Valenite Metals Co.

From an April 1980 product catalog

Valenite, a world-wide leader in cutting tools and carbide products, now brings you a quality line of mining and construction tools.

Years of experience has taught Valenite how to produce tough, wear and abrasion resistant carbide grades. Now Valenite is using this experience to produce quality wear resistant mining and construction tools.

What's more, Valenite is dedicated to fast delivery and complete service for all its products. Valenite mining tools can be there when and where you need them!



Since the inception of Valeron, all divisions have been guided by a set of basic principles which express the responsible character of our organization. We shall continue to strive for constant improvement and never compromise our principles of service to our customers.

Our goal is to provide our customer with the best possible combination of modern tooling, proper planning, engineering and service to enhance their competitive capability.

Safety First

Although the cemented tungsten carbide used in mining tools is extremely hard, it has limited ductility. It may chip or fragment in use. Always use safety glasses, protective clothing and machine guards when working with cemented carbide to prevent burns or other injury to body or eyes from flying particles. Extra care should be observed when tungsten carbide tools are subjected to impact loads (such as hammering) or released from compression, since the danger of shattering is increased under these conditions.

Tool Resharpening

When brazed carbide tools are resharpened, the usual [illegible] (including applicable OSHA regulations) for grinding [illegible] but in addition, the dusts and coolant mists formed [illegible] tion must be removed and collected since a few individuals [illegible] pulmonary problems from inhaling even small amounts [illegible] stances. OSHA regulations should be consulted to determine [illegible] exposure to tungsten, cobalt, or other materials contained [illegible] or coolant.

(3)

GTE VALERON CORPORATION

750 STEPHENSON HWY. • P.O. BOX 3950 • TROY, MI 48007-3950 / PHONE (313) 589-1000 (USA) / CABLE: VALOR / TELEX: 211679 / 211642

ALENITE
CARBIDE TOOLS
DIGITAL TECHNIQUES
ALCAST
ALFORM
ALCRAFT
ALDIAMANT INTERNATIONAL
ALENITE MINING PRODUCTS
VISUAL ARTS

September 20, 1985

CERTIFIED MAIL
Return Receipt Requested

Mr. Frank Johnson
125 Ruhamah Avenue
Syracuse, NY 13205

Dear Mr. Johnson:

This is in response to your letter dated September 5, 1985 which we received September 9, 1985. You have requested certain information relating to your employment at the company's Syracuse, New York plant which closed in April, 1982.

1. Medical Records - A copy of all your medical records and notes were sent to you on September 20, 1983. We believe we sent the best copies available; however, if you feel that any of the copies were not readable, please identify the document and we will provide you with another copy.

2. Exposure Records - Our records show that only one exposure study of the work environment was conducted between 1970 and September 15, 1981, while you worked at the Syracuse plant. The records of your exposure are enclosed.

3. Chemical substances and harmful physical agents - Enclosed is a list of chemical substances that, to the best of our knowledge, were used from time to time in your workplace.

4. Material Safety Data Sheets - Our suppliers did not provide us with Material Safety Data Sheets during the time of your employment with Valeron. Furthermore, many of the suppliers used at that time ceased doing business with Valeron after the plant closed in 1982. We have, however, enclosed current suppliers' material safety data sheets we have received to date to the extent that we can determine that the same or similar substances may have been used when you were employed.

We believe this completes the information we are required to supply.

Very truly yours,

GTE VALERON CORPORATION

David Karapetian
Director of Human Resources

DK/mlg

SYRACUSE, NEW YORK

(1) Tungsten Carbide Grade Powders

Powders include predominately tungsten carbide with smaller amounts of one or more of the following substances:

Cobalt
Titanium Carbide
Tantalum Carbide
Niobium Carbide

(2) Tungsten Carbide Products

Products include the same substances as the Grade Powders listed above.

(3) Other substances used in manufacturing operations

Graphite powder, trays and forms (Union Carbide)
Coolant (Tech N39) (Ral Rich Tool Supply)
Sand blast grit (#50 Lionblast grain)
Grinding wheels (Form and green grit)
Dressing wheels and sticks
Paraffin
Heptane (Allied Chemical)
Acetone 33165 (Ashland Chemical)
Ethylene Glycol 515 (Ashland Chemical)
Ethanol proprietary 190 (Ashland Chemical)
Miscellaneous oils, including Mobil DTE Heavy Oil

(4) Other substances

Welding gasses and supplies
WD40
Carco powdered hand cleaner (W. D. Carpenter Co.)
Micro-Brush hand cleaner
Lava Soap
Crest Soap
Penesolve (Pentone Corp.)
Floor finish and concentrate (Parish)
Permasol
Lubriplate grease
SSS Industrial Cleanser & drain opener
Miscellaneous paints
Miscellaneous soaps and detergents

Material Safety Data Sheet

Genium Publishing Corporation
1145 Catalyn Street
Schenectady, NY 12303-1836 USA
(518) 377-8855

GENIUM PUBLISHING CORP.

No. 177
TUNGSTEN CARBIDE
(Cemented with Cobalt Binder)

Issued: February 1986

SECTION 1. MATERIAL IDENTIFICATION

19

MATERIAL NAME: TUNGSTEN CARBIDE (Cemented with Cobalt Binder)
DESCRIPTION: Dark-gray-to-black metal.
OTHER DESIGNATIONS: CAS #12070-12-1

MANUFACTURERS:
General Electric Co., Carboloy System Department, 11177 E 8 Mill Road, Detroit, MI 48089; Telephone: (313) 497-5000
Krupp Widia, 444 Lake Cook Road, Deerfield, IL 60015; Telephone: (312) 948-1330
Sandvik Inc., 1702 Nevins Road, Fairlawn, NJ 07410; Telephone: (201) 794-5000
See Genium MSDS #123.

HMIS
H: 2
F: 0
R: 0
PPE: *
* See Sect. 8

Not Found

R 0
I 3
S 0
K 0

SECTION 2. INGREDIENTS AND HAZARDS

	%	HAZARD DATA	
		OSHA PEL*	ACGIH TLV**
Tungsten Carbide (Limits for Tungsten Dust); CAS #12070-12-1	50-97		5 mg/m^3
Cobalt; CAS #7440-48-4	3-20	0.1 mg/m^3	0.1 mg/m^3
Tantalum Carbide (Limits for Tantalum Dust); CAS #12070-06-3	0-15	5 mg/m^3	5 mg/m^3
Chromium Carbide (Limits for Chromium [+3]); CAS #12012-35-0	0-1	1 mg/m^3	0.5 mg/m^3
Chromium (+3); CAS #7440-47-3	0-1	1 mg/m^3	0.5 mg/m^3

* OSHA PEL = Permissible Exposure Limit
** ACGIH TLV = American Conference of Governmental Industrial Hygienists Threshold Limit Values.
Processing and finishing of cemented Tungsten Carbide (grinding, buffing, welding, casting, or other high-temperature exposures) can generate hazardous respirable particles and may generate metal dust/fumes or metal oxides.

SECTION 3. PHYSICAL DATA

Boiling Point, 1 atm ... 10,832°F (6000°C)
Vapor Pressure, (mm Hg) ... NA
Water Solubility (25°C) ... Insoluble
Vapor Density (Air = 1) ... NA
Specific Gravity (H_2O = 1) ... 15.63

Melting Point ... 5198°F (2870°C ± 50°C)
Percent Volatile by Volume ... 0
Molecular Weight ... 195.86
Evaporation Rate .. NA

Appearance and odor: Dark-gray-to-black metal. No odor.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER
Not Applicable	Not Applicable	Not Applicable	–	–

EXTINGUISHING MEDIA: Use special mixtures of dry powders (Type D extinguishers), dry sand, dry dolomite, or dry graphite powder. Dust will form explosive mixtures with air. Bulk dust in a damp or wet state may generate heat and hydrogen gas. Handle like a metal fire. Finely divided powdered tungsten carbide poses a fire and explosion hazard when exposed to high temperatures or ignition sources. Tungsten carbide will generate toxic fumes when heated (see sect. 6).
Fire fighters should use self-contained breathing apparatus. When fighting fires involving tungsten carbide and tungsten carbide w/cobalt use special procedures (see sect. 8 for respiratory protection). For a powder fire confined to a small area, use a respirator approved for toxic dusts and fumes. For a large fire, fire fighters should use self-contained breathing apparatus.
Hard-cemented tungsten carbide product is not a fire hazard. Dust generated in grinding operations may ignite if allowed to accumulate and subjected to an ignition source.

SECTION 5. REACTIVITY DATA

Tungsten carbide is stable. Hazardous polymerization cannot occur.
Contact of tungsten carbide dust with strong oxidizers may cause fire or explosions. Its reaction with hydrogen peroxide can be explosive. It reacts violently with aluminum powder, rubidium acetylide, and potassium azide. Tungsten carbide burns with incandescence if heated to a dull redness in either nitrous oxide or nitrogen dioxide.
Avoid contact with strong acids. Bulk tungsten carbide dust should be kept in dry, well-ventilated storage to prevent reaction with water and generation of hydrogen gas.

Hazardous decomposition products are tungsten carbide and cobalt metallic oxides.

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SECTION 6. HEALTH HAZARD INFORMATION TLV

Tungsten carbide is highly insoluble in body fluids. It is considered to be relatively inert when ingested or inhaled. Other components, such as cobalt, can cause respiratory disease if inhaled in sufficient quantities. Grinding or other material-removing processes of a cemented tungsten product will produce a dust composed of potentially hazardous ingredients that can be inhaled or swallowed or can come into contact with the skin and eyes. Coolant mists from wet grinding may contain potentially hazardous dusts/fumes. Dust can cause irritation of the eyes, nose, and throat. Target organs are the upper and lower respiratory tract (especially the lungs), skin, and mucous membranes of the eyes, nose, and throat. Cobalt exposure is a potential cause of blood, heart, and other nonrespiratory organ problems. (See Reference: Canadian Medical Association Journal, 10/7/67, Vol. 97. British Heart Journal, 1972, Vol. 34.) Both transient and permanent pulmonary effects have been described. Obstructive airways symptoms with cough and asthmatic breathing can occur in sensitized individuals after 6 to 18 months' exposure and is relieved completely if exposure ceases. A more intense allergic interstitial pneumonitis occurs in some sensitized individuals and may be accompanied by chest X-ray changes, but this is a reversible condition if exposure ceases. Interstitial fibrosis, the third type of pulmonary response, may be seen after years of exposure and is characterized by pulmonary fibrosis and restrictive pulmonary disease. Both sensitization and pulmonary fibrosis are permanent. (References: Journal of the Society of Occupational Medicine 33:181, 1983; American Review of Respiratory Disease 130:130, 1984.)

FIRST AID: EYE CONTACT: If irritation occurs, flush with copious amounts of water to remove metal particles. If irritation persists, seek medical attention.* SKIN CONTACT: If irritation or rash appears, isolate victim from exposure, then wash the affected area with soap and water. If irritation persists, seek medical attention.* INHALATION: If symptoms of coughing, wheezing, or shortness of breath occur, isolate victim from exposure and seek medical attention. INGESTION: If substantial quantities are swallowed, dilute with large amounts of water and seek medical attention. Cobalt dust can cause skin irritation or an allergic skin rash because of cobalt sensitization.

This product is not considered a carcinogen by the NTP, IARC, or OSHA.

SECTION 7. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of large dust spills. Ventilate area. Avoid dust generation in cleanup; vacuuming (use appropriate filter to prevent airborne dust levels that exceed the PEL or the TLV), wet mop, or wet cleanup. If airborne levels of dust exceed the PEL/TLV, use an appropriate NIOSH/OSHA-approved respirator (see sect. 8, below).

DISPOSAL: Dispose of salvageable waste in an approved landfill in accordance with applicable Federal, state, and local regulations. May be sold as scrap for reclaim.

Consider use of EPA #D001 for disposal purposes based on ignitability (dust products only). Clean up dust spills with spark-proof tools and explosive-proof vacuuming equipment.

SECTION 8. SPECIAL PROTECTION INFORMATION

Prevent eye contact with metal particles by wearing safety glasses with side shields or goggles, especially when grinding, machining, or polishing cemented tungsten carbide product. Protective gloves or clothing are needed when working with hot or molten cemented tungsten carbide metal. Protective gloves or barrier creams are recommended when conact with dust or mist unavoidable. Wash thoroughly before applying barrier creams.

Use an appropriate NIOSH/OSHA-approved respirator if concentrations of airborne dust exceed the established PEL or TLV. All appropriate requirements set forth in 29 CFR 1910.134 should be met. Use local (explosion-proof) and general exhaust ventilation when respirable airborne dust levels exceed the PEL or TLV. If such equipment is not available or is inadequate to limit exposures below the applicable PEL or TLV, use respirators as specified above.

Prohibit the use of contact lenses in airborne-dust-generating areas. They pose a special hazard; soft lenses may absorb and all lenses concentrate irritants. Eyewash stations and washing facilities should be made readily accessible in dust-generating areas. Preplacement and periodic medical exams for personnel are suggested, with emphasis on the respiratory system whenever inhalation of harmful levels of dust is possible.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Solid cemented tungsten carbide does not need special storage; however, store dust/powder in dry, well-ventilated areas in closed containers away from strong oxidizers, other incompatible liquid chemicals, and sources of ignition.

Follow approved cleaning techniques for cemented carbide dust to control levels of airborne particles.

Use equipment to prevent accumulation of dust (local exhaust, vacuuming) and follow sound cleaning and ventilation techniques to keep airborne particles at a minimum. Avoid repeated or prolonged breathing of metal dust. Minimize skin contact. Keep dust off clothing. Do not use compressed air to remove dust from clothes. Wash clothes separately. Wash hands and face before eating, drinking, or smoking after handling this material. Control equipment should always be grounded, explosion proof, and nonsparking when handling metal dusts. Establish emergency planning procedures for fire and spills. Not designated as a hazardous substance by the EPA (40 CFR 116).

DOT Classification: NA UN #: NA

Data Source(s) Code: 1-12, 26, 31, 37, 41, 59, 61, 62, 82, 84. OW

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Approvals	
Indust. Hygiene/Safety	6/86
Medical Review	July 86

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MATERIAL SAFETY DATA SHEET

GENIUM PUBLISHING CORPORATION
1145 CATALYN STREET
SCHENECTADY, NY 12303-1836 USA
(518) 377-8855

GENIUM PUBLISHING CORP.

NO 123

TUNGSTEN CARBIDE POWDER

DATE October 1983

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: TUNGSTEN CARBIDE POWDER
OTHER DESIGNATIONS: WC, CAS #012 070 121
MANUFACTURER: Available from several suppliers, including:
General Electric Company
Carboloy Systems Department
11177 E 8 Mill Road
Detroit, MI 48089

SECTION II. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Tungsten Carbide	>99	8-hr TWA 5mg/m^3* (As W for insoluble tungsten cmpds.)

*ACGIH (1983) TLV

SECTION III. PHYSICAL DATA

Boiling point, 1 atm, deg C -- 6000 Specific gravity, 18C ------ 15.6
Solubility in water, 25C ---- Insoluble Melting point, deg C ------- 2780

Appearance & Odor: Gray to black powder. Odorless.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp	Flammability Limits in Air	Lower	Upper

Extinguishing media: Type D fire extinguisher - dry powder. Handle like a metal fire (Detailed fire fighting information should be obtained from supplier).
When finely powdered tungsten carbide is exposed to high temperatures or ignition sources, it is expected to be a fire and explosion hazard. Particle size and dispersion in air determine reactivity.
Firefighters should wear self-contained breathing apparatus.

SECTION V. REACTIVITY DATA

This is a stable material in closed containers at room temperature under normal storage and handling conditions. It does not polymerize.
Readily attacked by a nitric acid-hydrofluoric acid mixture.
Soluble in aqua regia. Can burn with fluorine at room temperature or with chlorine at 400C. Will oxidize upon heating with air. Burns with incandescence with nitrogen dioxide or nitrous oxide.

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NO. 123

SECTION VI. HEALTH HAZARD INFORMATION

TLV 5 mg/m^3

Tungsten carbide is highly insoluble in body fluids. Experimental studies of WC dust on animal lungs showed it to be relatively inert. The toxic effects are due not so much to WC itself as to other components, cobalt, for example, which is used with WC in cemented carbides.

FIRST AID:

Eye Contact: Flush thoroughly with running water for 15 min. including under eyelids.
Skin Contact: Remove contaminated clothing. Wash affected area with soap and water.
Inhalation: Remove to fresh air.
Ingestion: Induce vomiting.

Seek medical assistance for further treatment, observation and support.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of spills. Remove sources of heat or ignition.
Provide adequate ventilation. Clean-up personnel need protective equipment to avoid inhalation of dust. Small spills can be removed by vacuuming or wet sweeping, keeping airborne dust at a minimum. Recover material when possible.
DISPOSAL: Unsalvageable waste may be buried in an approved secure landfill.
Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide general and local exhaust ventilation in the workplace to keep airborne particulate at a minimum. Approved respirators should be available for nonroutine or emergency use.
Avoid eye contact by use of chemical safety goggles where dusty conditions occur.
Wear protective clothing appropriate for the work situation to minimize skin contact.
Eyewash stations and washing facilities should be readily accessible near areas of use.
Grinding operations with cemented tungsten carbide tools (usually 3-15% Co) and regrinding of tools can expose workers to higher toxicity cobalt, as well as WC. (See MSDS #82 and AIHA Journal, Dec 1975, pp879-885).

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed containers in a cool, dry, well-ventilated area away from sources of heat and ignition. Protect containers from physical damage. Use good housekeeping practices to prevent accumulation of dust from WC use, and follow sound cleaning and ventilation techniques that will keep airborne particulate at a minimum.
Avoid repeated or prolonged breathing of dust. Minimize skin contact. Keep dust off clothing. Wash hands and face before eating, drinking or smoking after handling this material.

DATA SOURCE(S) CODE: 2,6,7,9,13,14,25,44

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APPROVALS: MIS/CRD J. M. Nielsen

INDUST. HYGIENE SAFETY 10-25-83

MEDICAL REVIEW 14 November 1983

EXHIBIT 32

(3)

SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV. All appropriate requirements set forth in 29 CFR 1910.134 should be met.

Ventilation: Use local exhaust ventilation which is adequate to limit personal exposure to airborne dust to levels which do not exceed the PEL or TLV. If such equipment is not available use respirators as specified above.

Protective Gloves: Protective Gloves or Barrier cream are recommended when contact with dust or mist is likely. Prior to applying the Barrier cream or use of protective gloves, wash thoroughly.

Eye Protection: Safety glasses with side shields or goggles are recommended.

Other Protective Equipment: N/A

SPECIAL PRECAUTIONS

Precautions to be Taken In Handling and Storage: Maintain good housekeeping procedures to prevent dust accumulation during grinding. Avoid dust inhalation and direct skin contact with dust.

Other Precautions: Clean up using methods which avoid dust generation such as vacuum (with appropriate filter to prevent airborne dust levels which exceed the PEL or TLV), wet dust mop or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

Wash hands thoroughly after handling, before eating or smoking. Wash exposed skin at the end of work shift. Do not shake clothing, rags or other items to remove dust. Dust should be removed by washing or vacuuming (with appropriate filters) the clothing, rags or other items.

Periodic medical examinations are recommended for individuals regularly exposed to dust or mist.

In case of questions please call
GTE Valeron Corporation
Safety Director
(313) 589-1000

Issue Date: Nov. 25, 1985

Supersedes: N/A

Although GTE has attempted to provide current and accurate information herein, GTE makes no representations regarding the accuracy or completness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person.

MATERIAL SAFETY DATA SHEET

GTE Valeron Corporation
P.O. Box 3950
Troy, MI 48007-3950
Telephone No. (313) 589-1000

A

CHEMICAL NAME: **Cemented Carbide Product with Cobalt binder.**

TRADE NAME & SYNONYMS: All Valenite Carbide Grades except VC-67, VC-68, VC-83, VC-099 and VC-320

CHEMICAL FAMILY: Refractory Metal Carbide

MOLECULAR WEIGHT: N/A

PHYSICAL DATA

Appearance and Odor:	Dark Gray Metal/No Odor	**Specific Gravity (H_2O=1):**	11.0 to 15.5
Boiling Point:	N/A	**Percent Volatile by Volume:**	0
Vapor Pressure (mm Hg):	N/A	**Evaporation rate:**	N/A
Vapor Density (Air=1):	N/A	**How Best Monitored:**	Air sampli
Solubility In Water:	Insoluble		

HAZARDOUS INGREDIENTS

Material	Percent by Weight	OSHA PEL	ACGIH TLV
Tungsten Carbide (limits for Tungsten dust)	41-97%*	—	5 mg/m³
Cobalt	3-30%*	0.1 mg/m³	0.1 mg/m³
Tantalum Carbide (limits for Tantalum dust)	0.0-52%*	5 mg/m³	5 mg/m³
Chromium Carbide (limits for Chromium (+3) dust)	0.0-5.1%*	1 mg/m³	0.5 mg/m³
Chromium (+3)	0.0-4.5%*	1 mg/m³	0.5 mg/m³

* Depends on grade specifications

HEALTH HAZARD DATA

Routes of Exposure:
Grinding cemented carbide product will produce dust of potentially hazardous ingredients which can be inhaled, swallowed or come in contact with skin or eyes.

Effects of Overexposure:

Inhalation — Dust from grinding can cause irritation of the nose and throat. It also has the potential for causing transient or permanent respiratory disease, including occupational asthma and interstitial fibrosis, in a small percentage of exposed individuals. It is reported that cobalt dust is the most probable cause of such respiratory diseases. Symptoms include productive cough, wheezing, shortness of breath, chest tightness and weight loss. Interstitial fibrosis (lung scarring) can lead to permanent disability or death. Certain pulmonary conditions may be aggravated by exposure.

Skin Contact — Can cause irritation or an allergic skin rash due to cobalt sensitization. Certain skin conditions, such as dry skin, may be aggravated by exposure.

Eye Contact — Can cause irritation.

Ingestion — Reports outside the industry suggest that ingestion of significant amounts of cobalt has the potential for causing blood, heart and other organ problems.

Emergency and First Aid Procedures: Applicable for dusts or mists

Inhalation — If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.), remove from exposure and seek medical attention.

Skin Contact — If irritation or rash occurs thoroughly wash affected area with soap and water and isolate from exposure. If irritation or rash persists, seek medical attention.

Eye Contact — If irritation occurs, flush with copious amounts of water. If irritation persists, seek medical attention.

Ingestion — If substantial quantities are swallowed, dilute with a large amount of water, induce vomiting and seek medical attention.

Carcinogenic Assessment (NTP Annual Report, IARC Monographs, other):
None of the components of this material have been identified as known or suspected carcinogens by NTP, IARC or OSHA.

FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A
Test Method Used: —
Flammable Limits: N/A
LEL: — **UEL:** —

Hard Cemented Carbide Product is not a fire hazard. Dusts generated in grinding operations may ignite if allowed to accumulate and subjected to an ignition source.

Extinguishing Media: For powder fires, smother with dry sand, dry dolomite, ABC type fire extinguisher, or flood with water.

Special Fire Fighting Procedures: For a powder fire confined to a small area, use a respirator approved for toxic dusts and fumes. For a large fire, fire fighters should use self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Dusts may present a fire or explosion hazard under rare favoring conditions of particle size, dispersion and strong ignition source. However, this is not expected to be a problem under normal handling conditions.

REACTIVITY DATA

Stability:
Unstable
Stable X

Conditions to Avoid: N/A

Incompatibility: Contact of dust with strong oxidizers may cause fire or explosions.

Materials to Avoid: Strong acids

Hazardous Decomposition Products: None

Hazardous Polymerization:
May Occur
Will Not Occur X

Conditions to Avoid: N/A

SPILL OR LEAK PROCEDURES

Steps to be Taken In Case Material Is Released or Spilled: Ventilate area of spill. Clean up using methods which avoid dust generation such as vacuum (with appropriate filter to prevent airborne dust levels which exceed the PEL or TLV), wet dust mop or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

Waste Disposal Method: Dispose of in accordance with appropriate government regulations. May be sold as scrap for reclaim.

THE VALERON CORPORATION

20800 COOLIDGE HIGHWAY • OAK PARK, MICHIGAN 48237 / PHONE (313) 548-7000 (USA) / CABLE: VALOR

VALENITE
MODCO TOOLS
VALCOMATIC
VALCAST
DIGITAL TECHNIQUES
VALCRAFT

Reply to: 311 Wavel Street
Box 10, Eastwood Station
Syracuse, NY 13205
Phone: (315) 463-8638

(3)

Dec. 11, 1979

Attn Greg Humphries

This letter just comfirms our earlier conversation of Oct ; 79 about the health hazard caused by the dust condition in Syr. Mfg. I feel that if we were ever inspected by O.S.H.A. for air quality they would either shut us down or limit us to the use of the 1960 state approved system which would eliminate about 40% of our manufacturing capacity.

As you stated in the conversation, that the company was taking action to correct this problem by designing & building a new plant. I am sure the problem will be solved at that time. However Iwill not feel safe about an inspection until then.

I would also like to mention at this time Carl Mac Petrie is aware of the dust condition in syracuse mfg.

Your Truly

John F. Coughlin Sr.

John F. Coughlin

CC: Frank Roach

John F. Coughlin - Syracuse Valenite Metals Co. plant manager

Greg Humphries - Division Manager of Valeron's Valenite Division (Coughlin's boss)

Frank Roach - Vice President of Valeron's Valenite Metals Division

Carl Mac Petrie - Valeron Corp. Safety Director

McCall (4)

URS

URS CONSULTANTS, INC.
570 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1207
716 883-5525
FAX: 716 883-0754

December 18, 1990

Michael E. Garey, President
Garey Machine Corp.
315 Wavel Street
Syracuse, New York 13206

RE: VALENITE

Dear Mr. Garey:

As mentioned during our visit to your office on November 13, 1990, URS Consultants, Inc. is currently conducting a Preliminary Site Assessment of the Valenite site in the Town of Dewitt, Onondaga County, New York.

We are performing this investigation under contract to the New York State Department of Environmental Conservation (NYSDEC) pursuant to the requirements of the New York State Environmental Conservation Law, Section 27-1309.

This is to confirm our conversation wherein you provided the following information:

- In 1982, Garey Machine Corp. moved into the former Valenite manufacturing building at 315 Wavel Street.
- Valenite was a metal manufacturing specialty job shop. Mr. Garey works in a related field and was a former customer of Valenite.
- When Garey Machine moved into the Valenite building the ventilation system appeared to be a closed system that did not discharge to the outside. There is a ventilation fan in the south wall of the building. However, the metal dust created by the manufacturing processes was too heavy to be picked up by a ventilation fan. The building was also very dirty when they first moved in.
- Mr. Garey never saw any visual evidence of dumping or of cobalt contamination. Some dust may have occasionally been swept out the back door. Anything produced during manufacturing, including floor sweepings, was valuable enough to be saved and recycled.

URS

AN INTERNATIONAL PROFESSIONAL SERVICES COMPANY

We would appreciate it if you would review this information, note any necessary corrections, and return a signed and dated copy to indicate your concurrence. Your prompt attention to this would be greatly appreciated, as the information is necessary to complete our evaluation of the site. Please use the enclosed envelope.

Sincerely,

URS CONSULTANTS, INC.

Donald A. McCall

Donald A. McCall
Project Engineer

DAM/ys

12-18-90.MG
35231.00 (File: 5015 - 113)

I agree with the information as it is presented.

_____ _____

Michael E. Garey Date

5

URS

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.00.11300 JOB NAME NYSDEC Standby - Valenite

MEMO OF TELECON

DATE 12-14-90 TELEPHONE (315) 446-0973

PERSON CALLING D. McCall PERSON CALLED BOARD OF ASSESSORS

REPRESENTING URS - Buffalo REPRESENTING TOWN OF DEWITT

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED: TO FIND OUT WHO OWNED THE PROPERTY.

TEXT OF TELECON

SINCE 1988 – MICHAEL GAREY

PRIOR TO 1988 – MICHAEL HAFNER
THOMAS HAFNER
PETER HAFNER
HEIDI SCHAUER
} FAMILY TRUST OWNS MOST OF THE LAND IN THE AREA.

RECORDS GO BACK TO APPROXIMATELY 1963

cc:

RECEIVED
URS CONSULTANTS
DEC 26 1990
JOB #

URS

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATIO

(7)

URS CONSULTANTS, INC.
570 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1207
(716) 883-5525
FAX: (716) 883-0754

ATLANTA
BOSTON
BUFFALO
CLEVELAND
COLUMBUS
DENVER
NEW YORK
PARAMUS, NJ
NEW ORLEANS
SAN FRANCISCO
SAN MATEO
SEATTLE
VIRGINIA BEACH
WASHINGTON, D.C.

December 17, 1990

Mr. Coburn
New York State Department of
Environmental Conservation - Wetlands
615 Erie Boulevard - West
Syracuse, New York 13204

RE: PRELIMINARY SITE ASSESSMENTS, REGION 7

Dear Mr. Coburn:

URS Consultants, Inc. is currently conducting Preliminary Site Assessments of three (3) sites in Region 7.

We are performing these investigations under contract to the New York State Department of Environmental Conservation pursuant to the requirements of the New York State Environmental Conservation Law, Section 27-1309.

As part of the assessment, we need to determine whether or not there are any wetlands within a 1-mile vicinity of the site. The sites for which we are doing assessments are listed below:

Valenite -	#734023
State Fair Landfill -	#734033
Niagara Mohawk Fire Training School -	#738030

Copies of the USGS topo maps showing the locations of the sites have been included.

We would appreciate it if you would send us copies of the wetlands maps for the locations of these three sites. Your prompt attention to our request would be appreciated, as this information is necessary to complete our evaluation of the site. If you have any questions, please feel free to call.

Sincerely,

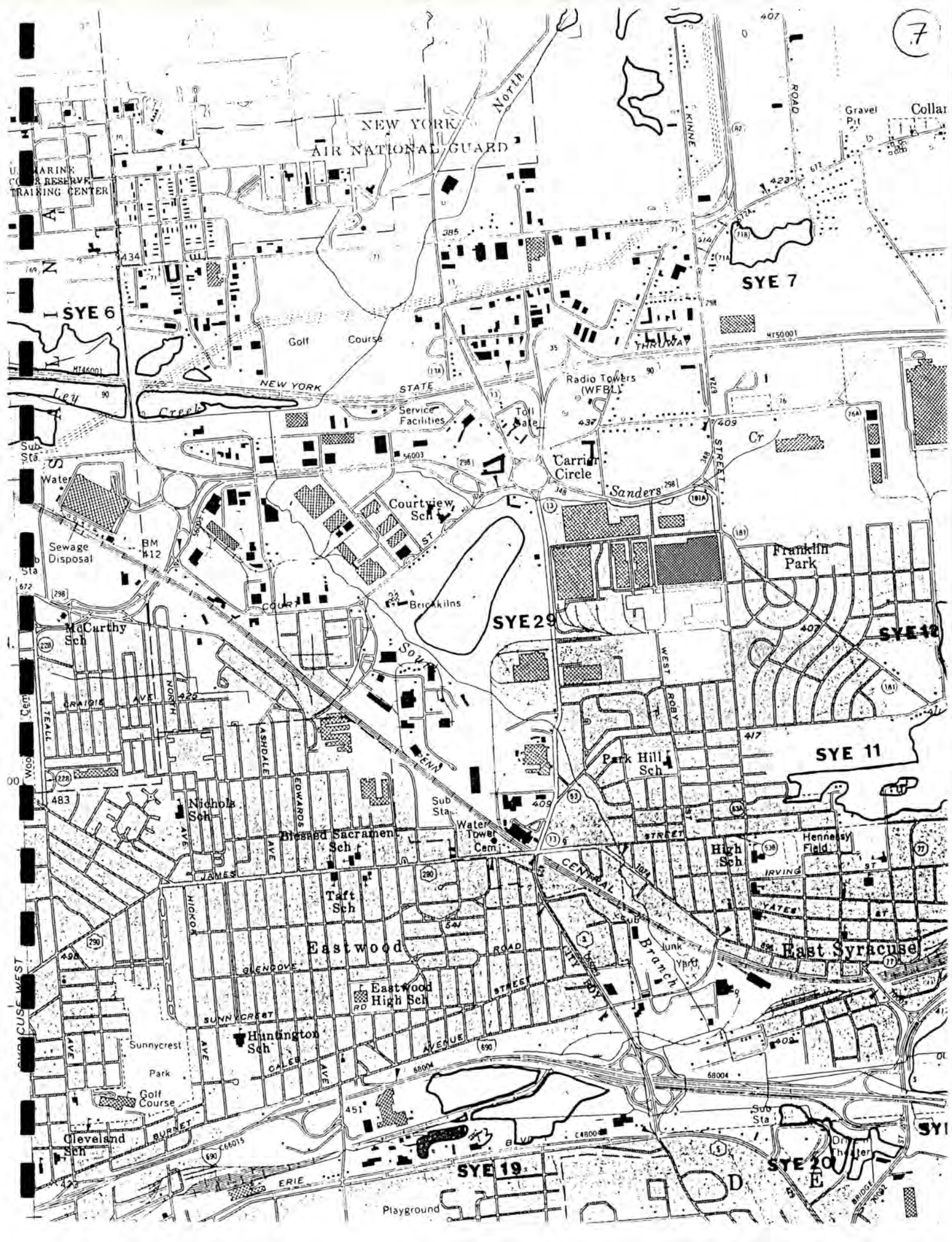
URS CONSULTANTS, INC.

Donald A. McCall

Donald A. McCall
Project Engineer

DAM/ys
Enc.

12-17-90.MC
35231.00 (5010)


7
NEW YORK AIR NATIONAL GUARD
U.S. MARINE CORPS RESERVE TRAINING CENTER
North
Gravel Pit
Collar
SYE 7
SYE 6
Golf Course
NEW YORK STATE
Radio Towers (WFBL)
Service Facilities
Toll Gate
Carrier Circle
Sanders
Courtview Sch
Sewage Disposal
BM 412
Brickkilns
SYE29
Franklin Park
McCarthy Sch
Park Hill Sch
SYE 11
Nichols Sch
Blessed Sacrament Sch
Water Tower
Cem
High Sch
Hennessy Field
Taft Sch
Eastwood
East Syracuse
Junk Yard
Eastwood High Sch
Huntington Sch
Sunnycrest Park
Golf Course
Cleveland Sch
SYE 19
SYE 20
Playground
ERIE
CENTRAL
Branch
ROAD
STREET
AVENUE

(13)

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.00.11300 JOB NAME NYSDEC Standby - Valenite

MEMO OF TELECON

DATE 12-14-90 TELEPHONE (315) 426-7612

PERSON CALLING D. McCall PERSON CALLED HENRI HAMEL

REPRESENTING URS - Buffalo REPRESENTING NYS. HEALTH DEPARTMENT

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED: TO FIND OUT WHAT INFORMATION THEY HAVE ON THE VALENITE SITE.

TEXT OF TELECON

SHE SAID THAT THEY HAVE VERY LITTLE INFORMATION ON THIS SITE OTHER THAN A FEW LETTERS TO THE DEC, AND THE SAMPLING DATA FROM TOM KOCH AT THE DEC. SAMPLES 004, AND 005 THAT WERE TAKEN FOR THE HEALTH DEPARTMENT WERE APPARENTLY LOST OR NEVER ANALYZED. SHE HAS ASKED THE DEC TO TAKE MORE SAMPLES. THEY HAVE NO ADDITIONAL INFORMATION OTHER THAN WHAT WE HAVE.

WE CAN ALSO CALL HER OFFICE REGARDING THE STATE FAIR LANDFILL AND THE NIAMO FIRE TRAINING SCHOOL.

cc:

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.00.11300 JOB NAME NYSDEC Standby - Valenite

MEMO OF TELECON

DATE 1-3-91 TELEPHONE (315) 446 - 3734

PERSON CALLING D. McCall PERSON CALLED JACK BRIGHT

REPRESENTING URS - Buffalo REPRESENTING WATER SUPT. - TOWN OF DEWITT

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED:

INFO. ON THE WATER SUPPLY FOR THE TOWN OF DEWITT

TEXT OF TELECON

THE TOWN OF DEWITT GETS ITS WATER FROM SEVERAL DIFFERENT SOURCES. IN THE NORTH IT COMES PRIMARILY FROM THE ONONDAGA COUNTY WATER AUTHORITY. OCWA GETS ITS WATER FROM LAKES ONTARIO AND OTISCO. THE MAJORITY OF DEWITT IS ON THE WATER SYSTEM. THE PEOPLE WITH WELLS ARE PRIMARILY IN THE SOUTH AROUND JAMESVILLE AND LYNDON. THERE ARE PEOPLE IN AREAS SERVICED WITH WATER THAT MAY STILL BE USING WELLS.

CC:

(16)

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.00.11300 JOB NAME NYSDEC Standby - Valenite

MEMO OF TELECON

DATE 12-19-90 TELEPHONE (315) 448-8230

PERSON CALLING D. McCall PERSON CALLED PHIL JOHNSTON

REPRESENTING URS - Buffalo REPRESENTING WATER SYSTEMS ANALYST FOR CITY OF SYRACUSE

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED:

INFO. ON THE WATER SYSTEM IN THE AREA.

TEXT OF TELECON

THE PRIMARY SOURCE OF WATER FOR SYRACUSE IS SKANEATELES LAKE BUT A SMALL PORTION ALSO COMES FROM LAKE ONTARIO VIA THE METROPOLITAN WATER BOARD (SELLS EXCLUSIVELY TO MUNICIPALITIES, RESPONSIBLE ONLY FOR TREATMENT AND TRANSMISSION).

EVERY STREET IN SYRACUSE IS SERVICED BY THE WATER SYSTEM. AS FAR AS HE KNOWS, NOBODY WOULD HAVE A WELL SYSTEM.

THE CITY OF SYRACUSE ALSO SERVICES A COUPLE OF INDUSTRIAL CLIENTS AND THE TOWN OF DEWITT, ALTHOUGH DEWITT IS SWITCHING TO THE ONONDAGA COUNTY WATER AUTHORITY.

CC:

(17)

URS

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.00.11300 JOB NAME NYSDEC Standby - Valenite

MEMO OF TELECON

DATE 12-19-90 TELEPHONE (315) 451-0950

PERSON CALLING D. McCall PERSON CALLED DAN PARKS

REPRESENTING URS - Buffalo REPRESENTING ASST. WATER SUPERINTENDENT TOWN OF SALINA

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED:

INFO. ON THE SALINA WATER SYSTEM.

TEXT OF TELECON

THE TOWN OF SALINA GETS ITS WATER MOSTLY FROM OTISCO LAKE VIA THE ONONDAGA COUNTY WATER AUTHORITY AND THE MUNICIPAL WATER BOARD.

AS FAR AS HE KNOWS, EVERYBODY IN THE TOWN OF SALINA IS ON THE WATER SYSTEM.

CC:

(18)

URS

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.00.11300 JOB NAME NYSDEC Standby - Valenite

MEMO OF TELECON

DATE 12-19-90 TELEPHONE (315) 455-7061

PERSON CALLING D. McCall PERSON CALLED

REPRESENTING URS - Buffalo REPRESENTING ONONDAGA CNTY WATER AUTH.

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED: INFO. ON THE WATER SYSTEM FOR THE AREA.

TEXT OF TELECON

THE ONONDAGA COUNTY WATER AUTHORITY GETS ITS WATER FROM LAKE ONTARIO MOSTLY, BUT SOME OF THE WEST AND A LITTLE BIT OF NORTH SYRACUSE GET THEIR WATER FROM LAKE OTISCO.

THE AUTHORITY ONLY WHOLESALES WATER TO THE TOWNS OF DEWITT, SALINA, AND CLAY

THE CITY OF SYRACUSE HAS THEIR OWN SOURCE. (LAKE SKANEATELES)

CC:

APPENDIX D

Hazard Ranking System

FACILITY NAME: Valenite

LOCATION: 315 Wavel Street, DeWitt, Onondaga County, NY

EPA REGION: II; NYSDEC Region 7

PERSON(S) IN CHARGE OF THE FACILITY: Michael E. Garey

315 Wavel Street

Syracuse, NY 13206

NAME OF REVIEWER: URS Consultants, Inc. DATE: 1/10/91

GENERAL DESCRIPTION OF THE FACILTY:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action;etc.)

The Valenite site is a manufacturing facility located in the Town of DeWitt, a suburb of Syracuse. From 1961 to 1981, the Valenite company rented this property to manufacture carbide cutting tools. A former employee of the company alleges that 10,000 - 20,000 lbs of dust were discharged from the building over a 20 year period. This dust was primarily tungsten carbide with smaller amounts of cobalt, titanium carbide, tantalum carbide, and niobium carbide. Additionally, more than 3,000 gallons of used oil from vacuum pumps was allegedly dumped on the site and in a drainage ditch at the rear of the site, over a seven year period. The limited sampling that has been conducted at the site has indicated the presence of cobalt in the soil, as well as many semivolatile organic compounds. The major concern at this site is that dust from the operations may have fallen onto the ground of the trailer court located adjacent to the site. The site is presently owned & occupied by the Garey Machine Corp.

SCORES: Sm= 12.03 (Sgw = 19.05 Ssw = 8.39 Sa = 0)

Sfe = 0

Sdc = 37.50

HRS COVER SHEET

GROUND WATER ROUTE WORK SHEET

RATING FACTOR	ASSIGNED VALUE (CIRCLE ONE)	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEASE	0 45 [0]	1	0	45	3.1
IF OBSERVED RELEASE IS GIVEN A SCORE OF 45, PROCEED TO LINE 4 IF OBSERVED RELEASE IS GIVEN A SCORE OF 0, PROCEED TO LINE 2					
2 ROUTE CHARACTERISTICS					3.2
DEPTH TO AQUIFER OF CONCERN	0 1 2 3 [3]	2	6	6	
NET PRECIPITATION	0 1 2 3 [2]	1	2	3	
PERMEABILITY OF THE UNSATURATED ZONE	0 1 2 3 [2]	1	2	3	
PHYSICAL STATE	0 1 2 3 [3]	1	3	3	
TOTAL ROUTE CHARACTERISTICS SCORE			13	15	
3 CONTAINMENT	0 1 2 3 [3]	1	3	3	3.3
4 WASTE CHARACTERISTICS					
TOXICITY/PERSISTANCE	0 3 6 9 [18]	1	18	18	3.4
HAZARDOUS WASTE QUANTITY	12 15 18 0 1 2 3 [2] 4 5 6 7 8	1	2	8	
TOTAL WASTE CHARACTERISTICS SCORE			20	26	
5 TARGETS					
GROUND WATER USE	0 1 2 3 [2]	3	6	9	
DISTANCE TO NEAREST WELL /POPULATION SERVED	0 4 6 8 10 12 16 18 20 [8] 24 30 32 35 40	1	8	40	
TOTAL TARGETS SCORE			14	49	
6 IF LINE 1 IS 45, MULTIPLY 1 X 4 X 5 IF LINE 1 IS 0, MULTIPLY 2 X 3 X 4 X 5			0 10920	57,330	
7 DIVIDE LINE 6 BY 57,330 AND MULTIPLY BY 100			Sgw = 19.05		

GROUND WATER ROUTE WORK SHEET

SURFACE WATER ROUTE WORK SHEET					
RATING FACTOR	ASSIGNED VALUE (CIRCLE ONE)	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEASE	0 45 [0]	1	0	45	4.1
IF OBSERVED RELEASE IS GIVEN A SCORE OF 45, PROCEED TO LINE 4 IF OBSERVED RELEASE IS GIVEN A SCORE OF 0, PROCEED TO LINE 2					
2 ROUTE CHARACTERISTICS					4.2
FACILITIES SLOPE AND INTERVENING TERRAIN	0 1 2 3 [0]	1	0	3	
1-yr 24 HOUR RAINFALL	0 1 2 3 [2]	1	2	3	
DISTANCE TO NEAREST SURFACE WATER	0 1 2 3 [2]	2	4	6	
PHYSICAL STATE	0 1 2 3 [3]	1	3	3	
TOTAL ROUTE CHARACTERISTICS SCORE			9	15	
3 CONTAINMENT	0 1 2 3 [3]	1	3	3	4.3
4 WASTE CHARACTERISTICS					
TOXICITY/PERSISTANCE	0 3 6 9 12 15 [18]	1	18	18	4.4
HAZARDOUS WASTE QUANTITY	1 2 3 4 5 6 7 8 [2]	1	2	8	
TOTAL WASTE CHARACTERISTICS SCORE			20	26	
5 TARGETS					4.5
SURFACE WATER USE	0 1 2 3 [2]	3	6	9	
DISTANCE TO A SENSITIVE ENVIRONMENT	0 1 2 3 [2]	2	4	6	
POPULATION SERVED/DIST TO WATER INTAKE DOWNSTREAM	0 4 6 8 10 12 16 18 20 24 30 32 35 40 [0]	1	0		
TOTAL TARGETS SCORE			10	55	
6 IF LINE 1 IS 45, MULTIPLY 1 X 4 X 5 IF LINE 1 IS 0, MULTIPLY 2 X 3 X 4 X 5			0 5400	64,350	
7 DIVIDE LINE 6 BY 64,350 AND MULTIPLY BY 100 Ssw =			8.39		

SURFACE WATER ROUTE WORK SHEET

AIR ROUTE WORK SHEET

RATING FACTOR	ASSIGNED VALUE (CIRCLE ONE)		MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEASE	0 45	0	1	0	45	5.1

DATE AND LOCATION:

SAMPLING PROTOCOL:

IF LINE 1 IS 0, THE Sa =0. ENTER ON LINE 5
IF LINE 1 IS 45, THEN PROCEED TO; LINE 2.

2 WASTE CHARACTERISTICS 5.2

REACTIVITY AND INCOMPATIBILITY	0 1 2 3		1		3
TOXICITY	0 1 2 3		3	0	9
HAZARDOUS WASTE QUANTITY	3 4 5 6 7 8		1	0	8

TOTAL WASTE CHARACTERISTICS SCORE	0	20	

3 TARGETS 5.3

POPULATION WITHIN 4 MILE RADIUS	O 9 12 21 24 27		1	0	30
DISTANCE TO SENSITIVE ENVIRONMENT	0 1 2 3		2	0	6
LAND USE	0 1 2 3		1		3

TOTAL TARGETS SCORE	0	39	
4 MULTIPLY 1 X 2 X 3	0	35,100	

5 DIVIDE LINE 4 BY 35,100 AND MULTIPLY BY 100

Sa= 0.00

	S	S^2
GROUNDWATER ROUTE SCORE (Sgw)	19.05	362.81
SURFACE WATER ROUTE SCORE (Ssw)	8.39	70.42
AIR ROUTE SCORE (Sa)	0.00	0.00
$S^2gw + S^2sw + S^2a$		433.23
square root of($S^2gw + S^2sw + S^2a$)		20.81
square root of ($S^2gw + S^2sw + S^2a$)/1.73 = Sm		12.03

WORKSHEET FOR COMPUTING Sm

FIRE AND EXPLOSION WORK SHEET

Not Applicable for this site.

RATING FACTOR	ASSIGNED VALUE (CIRCLE ONE)	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 CONTAINMENT	1 3	1	0	3	7.1
2 WASTE CHARACTERISTICS					
DIRECT EVIDENCE	0 3	1		3	7.2
IGNITABILITY	0 1 2 3	1	0	3	
REACTIVITY	0 1 2 3	1	0	3	
INCOMPATIBILITY	0 1 2 3	1	0	3	
HAZARDOUS WASTE QUANTITY	1 2 3 4 5 6 7 8	1	0	3 8	
TOTAL WASTE CHARACTERISTICS SCORE			0	20	
3 TARGETS					7.3
DISTANCE TO NEAREST POPULATION	0 1 2 3 4 5	1			
DISTANCE TO NEAREST BUILDING	0 1 2 3	1			
DISTANCE TO A SENSITIVE ENVIRONMENT	0 1 2 3	1		6	
LAND USE	0 1 2 3	1			
POPULATION WITHIN 2 MILE RADIUS	0 1 2 3 4 5	1			
BUILDINGS WITHIN 2 MILE RADIUS	0 1 2 3 4 5	1			
TOTAL TARGETS SCORE			0	24	
4 MULTIPLY 1 X 2 3			0	1,440	
5 DIVIDE LINE 4 BY 1,440 AND MULTIPLY BY 100 Sfe =			0.00		

FIRE AND EXPLOSION WORK SHEET

DIRECT CONTACT WORK SHEET					
RATING FACTOR	ASSIGNED VALUE (CIRCLE ONE)	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEASE	0 45 [0]	1	0	45	8.1
IF LINE 1 IS 45, PROCEED TO LINE 4 IF LINE 1 IS 0, PROCEED TO LINE 2					
2 ACCESSIBILITY	0 1 2 3 [3]	1	3	3	8.2
3 CONTAINMENT	0 15 [15]	1	15	15	8.3
4 WASTE CHARACTERISTICS TOXICITY	0 1 2 3 [3]	5	15	15	8.4
5 TARGETS					8.5
POPULATION WITHIN 1 MILE RADIUS	0 1 2 3 4 5 [3]	4	12	20	
DISTANCE TO A CRITICAL HABITAT	0 1 2 3 [0]	4	0	12	
TOTAL TARGETS SCORE			12	32	
6 IF LINE 1 IS 45, MULTIPLY 1 X 4 X 5 IF LINE 1 IS 0, MULTIPLY 2 X 3 X 4 X 5			0 8100	21,600	
7 DIVIDE LINE 6 BY 21,600 AND MULTIPLY BY 100			Sdc =	37.50	

DIRECT CONTACT WORK SHEET

GROUNDWATER ROUTE

1 OBSERVED RELEASE

o CONTAMINANTS DETECTED (5 MAXIMUM):

NA, no sampling of groundwater has been done

o RATIONALE FOR ATTRIBUTING THE CONTAMINANTS TO THE FACILITY:

NA

SCORE 0

***

2. ROUTE CHARACTERISTICS

DEPTH TO AQUIFER OF CONCERN

o NAME/DESCRIPTION OF AQUIFER(S) OF CONCERN:

- Overburden layers of silt, very fine sand, and moderate amounts of clay.
- Syracuse formation bedrock consisting of layers of dolostone shale, salt, and gypsum (Ref. 8).

o DEPTH(S) FROM THE GROUND SURFACE TO THE HIGHEST SEASONAL LEVEL OF THE SATURATED ZONE [WATER TABLE(S)] OF THE AQUIFER OF CONCERN:

Estimated to be 1/2 to 1 foot (Ref. 8).

o DEPTH FROM THE GROUND SURFACE TO THE LOWEST POINT OF WASTE DISPOSAL/STORAGE:

All wastes were disposed of on the surface of the site. The depth to which they may have migrated is unknown.

SCORE 3

***

NET PRECIPITATION

- o MEAN ANNUAL OR SEASONAL PRECIPITATION(LIST MONTHS FOR SEASONAL):

  39 inches annually (Ref. 20).

- o MEAN ANNUAL OR SEASONAL EVAPORATION (LIST MONTHS FOR SEASONAL):

  27 inches Mean Annual Evaporation (Ref. 21)

- o NET PRECIPITATION (SUBTRACT THE ABOVE FIGURES):

  12 inches annually

SCORE 2

PERMEABILITY OF UNSATURATED ZONE

- o SOIL TYPE IN UNSATURATED ZONE:

  Minoa Series, Fine sandy loam (Ref. 8).

- o PERMEABILITY ASSOCIATED WITH SOIL TYPE:

  10^{-3} to 10^{-5} cm/s (Ref. 8).

SCORE 2

PHYSICAL STATE

- o PHYSICAL STATE OF SUBSTANCES AT TIME OF DISPOSAL (OR AT PRESENT TIME FOR GENERATED GASES):

  Dust and liquid

SCORE 3

***

3. CONTAINMENT

CONTAINMENT

o METHOD(S) OF WASTE OF LEACHATE CONTAINMENT EVALUATED:

There is no containment at this site. Wastes were dumped onto the ground, there is no liner.

o METHOD WITH THE HIGHEST SCORE:

No liner.

SCORE 3

***

4. WASTE CHARACTERISTICS

TOXICITY AND PERSISTENCE

o COMPOUND(S) EVALUATED:

Compounds	Toxicity	Persistence	Score
Cobalt	3	3	18
Benzo(a)pyrene	3	3	18
Benzo(b)fluoranthene	3	3	18
Benzo(a)anthracene	3	3	18
Indeno(1,2,3-cd)pyrene	3	3	18

o COMPOUND WITH THE HIGHEST SCORE:

All compounds scored 18.

SCORE 18

HAZARDOUS WASTE QUANTITY

o TOTAL QUANTITY OF HAZARDOUS SUBSTANCES AT THE FACILITY, EXCLUDING THOSE WITH A CONTAINMENT SCORE OF 0(GIVE A REASONABLE ESTIMATE EVEN IF QUANTITY IS ABOVE MAXIMUM):

27 ton

SCORE 2

o BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

20,000 lb. of dust = 10 ton
40 gal. oil/month for 7 years = 3,360 gal. = 17 ton (Ref. 1,2).

***

5. TARGETS

GROUNDWATER USE

o USE(S) OF AQUIFER(S) OF CONCERN WITHIN A 3-MILE RADIUS OF THE FACILITY:

Most residents in the area are believed to have a municipal supply available. However, based on 1980 Census data, it was estimated that 120 people may still be using groundwater. The location of these residents is not identified (Ref. 14, 15, 16, 17, 18).

SCORE 2

DISTANCE OF NEAREST WELL

o LOCATION OF NEAREST WELL DRAWING FROM AQUIFER OF CONCERN OR OCCUPIED BUILDING NOT SERVED BY A PUBLIC WATER SUPPLY:

Unknown (Ref. 14, 15, 16, 17, 18)

o DISTANCE TO ABOVE WELL OR BUILDING:

Assumed to be 2-3 miles (Ref. 14, 15, 16, 17, 18).

POPULATION SERVED BY GROUNDWATER WELL WITHIN A 3-MILE RADIUS

o IDENTIFIED WATER-SUPPLY WELL(S) DRAWING FROM AQUIFER(S) OF CONCERN WITHIN A 3-MILE RADIUS AND POPULATIONS SERVED BY EACH:

An estimated 120 people use the groundwater for drinking water (Ref. 14).

o COMPUTATION OF LAND AREA IRRIGATED BY SUPPLY WELL(S) DRAWING FROM AQUIFER(S) OF CONCERN WITHIN A 3-MILE RADIUS, AND CONVERSION TO POPULATION(1.5 PEOPLE PER ACRE):

None known

o TOTAL POPULATION SERVED BY GROUNDWATER WITHIN A 3-MILE RADIUS:

120

SCORE 8

SURFACE WATER ROUTE

1. OBSERVED RELEASE

o CONTAMINANTS DETECTED IN SURFACE WATER AT THE FACILITY OR DOWNHILL FROM IT (5 MAXIMUM):

NA, no sampling of surface water has been done

o RATIONALE FOR ATTRIBUTING THE CONTAMINANTS TO THE FACILITY:

NA

SCORE 0

***

2. ROUTE CHARACTERISTICS

FACILITY SLOPE AND INTERVENING TERRAIN

o AVERAGE SLOPE OF THE FACILITY IN PERCENT:

0-1% Based on URS Site Visit November 13, 1990

o NAME/DESCRIPTION OF THE NEAREST DOWNSLOPE SURFACE WATER:

Ley Creek, South Branch (Ref. 19)

o AVERAGE SLOPE OF TERRAIN BETWEEN FACILITY AND ABOVE-CITED SURFACE WATER IN PERCENT:

1-2% (Ref. 19)

o IS THE FACILITY LOCATED EITHER TOTALLY OR PARTIALLY IN SURFACE WATER?:

No (Ref. 19)

SCORE 0

o IS THE FACILITY COMPLETELY SURROUNDED BY AREAS OF HIGHER ELEVATION?

No (Ref. 19)

1-YEAR 24 HOUR RAINFALL IN INCHES

2.5" (Ref. 21)

SCORE 2

DISTANCE TO NEAREST DOWNSLOPE SURFACE WATER

1200' (Ref. 19)

SCORE 2

PHYSICAL STATE OF WASTE

Dust and liquid

SCORE 3

***

3. CONTAINMENT

CONTAINMENT

o METHOD(S) OF WASTE OR LEACHATE CONTAINMENT EVALUATED:

There is no containment at this site. Wastes were dumped onto the ground, no liner (Ref. 1,2,3).

o METHOD WITH THE HIGHEST SCORE:

No liner

SCORE 3

***

4. WASTE CHARACTERISTICS

TOXICITY AND PERSISTENCE

o COMPOUND(S) EVALUATED

Compounds	Toxicity	Persistence	Score
Cobalt	3	3	18
Benzo(a)pyrene	3	3	18
Benzo(b)fluoranthene	3	3	18
Benzo(a)anthracene	3	3	18
Indeno(1,2,3-cd)pyrene	3	3	18

o COMPOUND WITH THE HIGHEST SCORE:

All compounds scored 18

SCORE 18

HAZARDOUS WASTE QUANTITY

o TOTAL QUANTITY OF HAZARDOUS SUBSTANCES AT THE FACILITY EXCLUDING THOSE WITH A CONTAINMENT SCORE OF 0 (GIVE A REASONABLE ESTIMATE EVEN IF QUANTITY IS ABOVE MAXIMUM):

27 ton

SCORE 2

o BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

20,000 lb. of dust = 10 ton
40 gal. oil/month for 7 years = 3,360 gal = 17 ton (Ref. 1,2)

***

5. TARGETS

SURFACE WATER USE

o USE(S) OF SURFACE WATER WITHIN 3 MILES DOWNSTREAM OF THE HAZARDOUS SUBSTANCE:

The stream is assumed to be used on a limited basis for recreation.

Score 2

- IS THERE TIDAL INFLUENCE?

  There is no tidal influence on the site

DISTANCE TO A SENSITIVE ENVIRONMENT

- DISTANCE TO A 5-ACRE(MINIMUM) COASTAL WETLAND, IF 2 MILES OR LESS:

  NA

- DISTANCE TO A 5 ACRE (MINIMUM) FRESH-WATER WETLAND, IF 1 MILE OR LESS:

  Approximately 1250 feet to Wetland SYE-29 (Ref. 7)

- DISTANCE TO CRITICAL HABITAT OF AN ENDANGERED SPECIES OR NATIONAL WILDLIFE REFUGE, IF 1 MILE OR LESS:

  NA

SCORE 2

POPULATION SERVED BY SURFACE WATER

- LOCATION(S) OF WATER-SUPPLY INTAKE(S) WITHIN 3 MILES(FREE-FLOWING BODIES) OR 1 MILE (STATIC WATER BODIES) DOWNSTREAM OF THE HAZARDOUS SUBSTANCE AND POPULATION SERVED BY EACH INTAKE:

  There are no water intakes with 3 miles downstream

- COMPUTATION OF LAND AREA IRRIGATED BY ABOVE-CITED INTAKE(S) AND CONVERSION TO POPULATION (1.5 PEOPLE PER ACRE):

  None known

- TOTAL POPULATION SERVED

  0

- NAME/DESCRIPTION OF NEAREST ABOVE-CITED WATER BODIES:

  Ley Creek, South Branch

- DISTANCE TO ABOVE-CITED INTAKES, MEASURED IN STREAM MILES:

  NA

SCORE 0

***

AIR ROUTE

1. OBSERVED RELEASE

o CONTAMINANTS DETECTED:

NA, no observed release. Valenite is no longer in operation at this site.

o DATE AND LOCATION OF DETECTION OF CONTAMINANTS:

NA

o METHODS USED TO DETECT THE CONTAMINANTS:

NA

o RATIONALE FOR ATTRIBUTING THE CONTAMINANTS TO THE SITE:

NA

SCORE 0

***

2. WASTE CHARACTERISTICS

REACTIVITY AND INCOMPATIBILITY

o MOST REACTIVE COMPOUND

NA

o MOST INCOMPATIBLE PAIR OF COMPOUNDS

NA

SCORE 0

TOXICITY

o MOST TOXIC COMPOUND

NA

SCORE 0

HAZARDOUS WASTE QUANTITY

o TOTAL QUANTITY OF HAZARDOUS WASTE:

NA

SCORE 0

o BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

NA

***

3 TARGETS

POPULATION WITHIN 4-MILE RADIUS

o UNDERLINE RADIUS USED, GIVE POPULATION AND INDICATE HOW DETERMINED:

0 TO 4 MI 0 TO 1 MI 0 TO 0.5 MI 0 TO 0.25 MI

NA

SCORE 0

DISTANCE TO A SENSITIVE ENVIRONMENT

o DISTANCE TO 5 ACRE (MINIMUM) COASTAL WETLAND, IF 2 MILES OR LESS:

NA

- DISTANCE TO 5 ACRE (MINIMUM) FRESH WATER WETLAND, IF 1 MILE OR LESS:

  NA

- DISTANCE TO CRITICAL HABITAT OF AN ENDANGERED SPECIES, IF 1 MILE OR LESS:

  NA

SCORE 0

LAND USE

- DISTANCE TO COMMERCIAL/INDUSTRIAL AREA , IF 1 MILE OR LESS:

  NA

- DISTANCE TO NATIONAL OR STATE PARK, FOREST, OR WILDLIFE RESERVE, IF 2 MILES OR LESS:

  NA

- DISTANCE TO RESIDENTIAL AREA, IF 2 MILES OR LESS:

  NA

- DISTANCE TO AGRICULTURAL LAND IN PRODUCTION WITHIN THE LAST 5 YEARS, IF 1 MILE OR LESS:

  NA

- DISTANCE TO PRIME AGRICULTURAL LAND IN PRODUCTION WITHIN PAST YEARS, IF 2 MILES OR LESS:

  NA

- IS A HISTORICAL OR LANDMARK SITE(NATIONAL REGISTER OR HISTORIC PLACES AND NATIONAL NATURAL LANDMARKS) WITHIN VIEW OF THE SITE?

  NA

SCORE 0

***

FIRE AND EXPLOSION

1. CONTAINMENT

o HAZARDOUS SUBSTANCES PRESENT:

No observed potential for fire and explosion.

o TYPE OF CONTAINMENT, IF APPLICABLE:

NA

SCORE 0

***

2. WASTE CHARACTERISTICS

DIRECT EVIDENCE

o TYPE OF INSTRUMENT AND MEASUREMENTS:

NA

SCORE 0

IGNITABILITY

o COMPOUND USED

NA

SCORE 0

REACTIVITY

o MOST REACTIVE COMPOUND:

NA

SCORE 0

INCOMPATIBILITY

o MOST INCOMPATIBLE PAIR OF COMPOUNDS:

NA

SCORE 0

HAZARDOUS WASTE QUANTITY

- TOTAL QUANTITY OF HAZARDOUS SUBSTANCES AT THE FACILITY:

  NA

SCORE 0

- BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

  NA

3 TARGETS

DISTANCE TO NEAREST POPULATION

NA

SCORE 0

DISTANCE TO NEAREST BUILDING

NA

SCORE 0

DISTANCE TO SENSITIVE ENVIRONMENT

- DISTANCE TO WETLANDS

  NA

- DISTANCE TO CRITICAL HABITAT:

  NA

SCORE 0

LAND USE

- DISTANCE TO COMMERCIAL/INDUSTRIAL AREA

  NA

- DISTANCE TO NATIONAL OR STATE PARK, FOREST OF WILDLIFE RESERVE, IF 2 MILES OR LESS:

  NA

- DISTANCE TO RESIDENTIAL AREA, IF 2 MILES OR LESS:

  NA

- DISTANCE TO AGRICULTURAL LAND IN PRODUCTION WITHIN PAST 5 YEARS, IF 1 MILE OR LESS:

  NA

- DISTANCE TO PRIME AGRICULTURAL LAND IN PRODUCTION WITHIN PAST 5 YEARS, IF 2 MILES OR LESS:

  NA

- IF A HISTORIC OR LANDMARK SITE (NATIONAL REGISTER OF HISTORIC PLACES AND NATIONAL NATURAL LANDMARKS) WITHIN VIEW OF THE SITE?

  NA

SCORE 0

POPULATION WITHIN 2 MILE RADIUS

NA

SCORE 0

BUILDINGS WITHIN A 2 MILE RADIUS

NA

SCORE 0

***

DIRECT CONTACT

1. OBSERVED INCIDENT

o DATE, LOCATION AND PERTINENT DETAILS OF INCIDENT:

There are confirmed cases of hard metal disease and signs and symptoms of cobalt toxicity to previous employees of Valenite. References 1, 2, and 10 contain additional information regarding former employees of Valenite. No instances involving injury or illness to surrounding residents are known.

SCORE 0

***

2. ACCESSIBILITY

o DESCRIBE TYPE OF BARRIER(S):

There are no barriers around this facility

SCORE 3

***

3. CONTAINMENT

o TYPE OF CONTAINMENT, IF APPLICABLE:

The waste oil was poured directly onto the ground. The cobalt dust would also have settled directly on the ground surface.

SCORE 15

***

4. WASTE CHARACTERISTICS

TOXICITY

o COMPOUNDS EVALUATED

Compounds	Toxicity	Persistence	Score
Cobalt	3	3	18
Benzo(a)pyrene	3	3	18
Benzo(b)fluoranthene	3	3	18
Benzo(a)anthracene	3	3	18
Indeno(1,2,3-cd)pyrene	3	3	18

o COMPOUND WITH HIGHEST SCORE:

All compounds scored 3

SCORE 3

***

5 TARGETS

POPULATION WITHIN 1 MILE RADIUS

2600 (Estimate) (Ref. 14, 19)

SCORE 3

DISTANCE TO CRITICAL HABITAT (OF ENDANGERED SPECIES)

None Reported

SCORE 0

***