PRELIMINARY CRITERIA FOR INITIAL SITE EVALUATION

The following outlines the preliminary criteria which will be utilized to perform initial (desk, non-field) evaluations of hazardous waste sites. This initial screening is the first step in the overall process to identify and prioritize problem sites. Based on the results of the screening, a decision will be made on whether a preliminary site inspection is appropriate.

The initial evaluation criteria is divided into two parts. The first considers the source and nature of the reported complaint or problem. Reports and other supporting evidence (e.g. USGS maps, hydrology and topography data, etc) are evaluated in the second part. An accumulation of five (5) points in either part of the criteria would indicate that a preliminary site visit is warranted. Where appropriate, such visits will be undertaken by the Emergency Response & Inspection Branch.

Use the following tables to determine if a preliminary site visit is warranted. Simply circle applicable criteria and total points.

Sirco Alloy

BEECHER
TAGGERT
DOWP

11/21/79

362532

I. PRELIMINARY CRITERIA FOR REPORTED COMPLAINTS

A. SOURCE OF COMPLAINT	#Pts
EPA State	5
Related Agency	4
Local Environmental/Health	4
Local Official	3
Professional	3
Local Citizen	2
General Complaint	1
SUBTOTAL	5

B. NATURE OF COMPLAINT	#Pts
1) Groundwater Contamination	
- Public well -	3
- Private well -	2
- Usable aquifer -	1
SUBTOTAL =	1
2) Surface Water Contamination	
- Water supply -	3
- Tributary to water supply -	2
- Recreational use -	1
Highly diluted 200,000/sec/ft	
SUBTOTAL =	2
3) Atmospheric Transport Contamination	
- Fire or explosion -	3
- Toxic volatilization -	2
- Contact -	1
SUBTOTAL =	

GRAND TOTAL #Pts = 8

GENERAL COMMENTS

Airco Alloys

II. PRELIMINARY CRITERIA FOR SUPPORTING EVIDENCE

A. GROUNDWATER CONTAMINATION	Pts.	B. SURFACE WATER CONTAMINATION	Pts	C. ATMOSPHERIC CONTAMINATION	Pts
Groundwater Discolored/Odoriferous	4	Hazardous Wastes in Runoff	4	Evidence of Fires or Explosions	4
Leachate Migration	3	Leachate Outcropping	3	Improperly Stored Flammable or Reactive Wastes	3
Unstablized Wastes	2	Leachate or Runoff Migration	3	Improperly Stored Toxic Wastes	3
Improperly Secured Site	2	Biological Stress Evident		Health Problem Evident	3
Leachate Outcropping	2	Improperly Secured Site	2	Odor Emissions	2
No Monitoring System	1	Unstabilized Wastes	2	Public Accessibility	1
		No Runoff Containment System	2		
SUBTOTAL	3	SUBTOTAL		SUBTOTAL	

GRAND TOTAL Pts. - 3

ADDITIONAL COMMENTS. The site is classified class "B". Detailed chemical analysis and/or a hydrological survey is needed, if warranted by the site's potential for health and/or environmental impact.

Updated information - 11/21/79 from John Beecher, DEC Buffalo, NY.

This site was used by vanadium corp. of america until 1964 for slag and construction type rubble. Since 1964, airco alloys has used the site for ferro-metallic slags and bag collector dusts. Baghouse dusts should pose no problems as they are submitted to a temperature of 3000°.

10/31/79

AIRCO ALLOYS
3801 Highland Avenue
Niagara Falls

Airco Alloys was founded and incorporated in 1913 in Delaware. Operations in Niagara County began in 1919 under the name Pittsburgh Metallurgical Company. The name was changed in 1962 to Airco Alloys. Airco Alloys is a subsidiary of the Airco Corporation which, in turn, became a subsidiary of BOC International in 1978.

Airco Alloys manufactures ferroalloys and stainless steel pigs in forms such as ferrosilicon, ferromanganese, silvery pig and ferrochrome silicon. The Pittsburgh Metrallurgical Company also manufactured ferroalloys at the Niagara Falls plant. These processes generate a slag which must be disposed of.

Since 1964, Airco Alloys has used a land disposal site located on Witmer Road in Niagara Falls for the disposal of two forms of slag, ferrochrome silicon and ferromanganese, two types of dust in a slurry form, ferrosilicon and ferrochrome silicon, and calcium hydroxide.

Before 1964, the Witmer Road site was used for the disposal of similar materials by the Vanadium Corporation of America.

Before 1970, some slags from Airco Alloys were hauled off plant property by Friona Brothers, Inc., and used for land fill and road beds. Since 1970, Hasley Trucking has purchased some of the slag from Airco Alloys and hauled it away for use in reclamation projects.

Estimated amounts of materials disposed of at Witmer Road site:

Since 1964 by Airco Alloys

Ferrochrome Silicon Slag*	21,000 tons
Ferromanganese slag*	6,000 tons
Ferrosilicon dust**	16,000 tons
Ferrochrome silicon dust***	39,200 tons
	82,200 "

1920 to 1964 by Vanadium Corporation of America

Slag*	594,000 tons
Refuse (brick, wood, ash	88,000 tons
Total	764,200 tons

* Assumes that 70% of slag is reclaimed.
** Dust from loghouse collectors at ferrochrome silicon and stainless steel pig furnaces built in 1976.
*** Baghouse dust from ferrosilicon furnace built in August 1971.

ATTACHMENT IV

Table 4 - 6

DOWN GRADIENT MONITORING DATA

PARAMETER	SAMPLE DATE 3/07/79 #1	3/07/79 #2	3/07/79 #5	4/11/79 #1	4/11/79 #2	4/11/79 #5	5/14/79 #1	5/14/79 #2	5/14/79 #5
Color (Pt-Co Units)	40	-	15	40	50	10	20	30	5
pH (Standard Units)	7.30	-	7.30	7.30	7.95	7.55	7.65	7.8	7.40
Conductivity (U mhos)	1200	-	1200	1350	470	1050	1000	500	7.40
COD (mg/l)	10	-	8	10	13	4	18	22	24
TOC (mg/l)	2	-	<2	2	17	<2	5	9	<2
Chlorinated Hydrocarbons (ug/l)*	<1	-	<1	<1	<1	<1	<1	<1	<1
Barium (mg/l)	0.10	<0.05	<0.05	0.01	0.05	0.05	0.15	0.10	0.05
Cadmium (mg/l)	0.01	0.10	0.005	0.01	<0.005	<0.005	0.01	<0.005	0.008
Cobalt (mg/l)	<0.02	0.05	<0.02	0.03	0.04	0.02	<0.02	<0.02	<0.02
Copper (mg/l)	0.01	<0.01	<0.01	0.02	0.01	<0.01	0.03	<0.01	<0.01
Chromium (mg/l)	<0.01	0.02	0.01	<0.01	<0.01	0.01	0.01	0.01	<0.01
Iron (mg/l)	1.23	0.64	4.1	1.00	1.40	5.9	1.10	0.40	6.0
Lead (mg/l)	0.08	0.06	0.03	0.08	0.10	<0.03	0.05	0.03	0.04
Mercury (mg/l)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000
Manganese (mg/l)	0.95	12.0	2.5	1.10	1.1	1.4	0.80	0.35	1.35
Nickel (mg/l)	0.05	0.15	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05
Silicon (mg/l)	9.8	8.8	7.8	9.0	6.4	7.0	4.9	2.6	4.6
Vanadium (mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (mg/l)	0.82	0.15	0.37	0.99	0.18	0.15	0.75	0.06	0.30

*Calculated as ug/l chlorine - Lindane Standard

ATTACHMENT 1 S.K.W. alloy

Table 4 - 2

STREAM SAMPLE POINTS

PARAMETER	SAMPLE DATE 3/07/79		4/11/79		5/14/79	
	#6	#7	#6	#7	#6	#7
Color (Pt-Co Units)	25	30	35	55	20	50
pH (Standard Units)	11.75	11.70	12.05	11.80	11.55	11.60
Conductivity (U mhos)	4100	3500	4100	2800	4000	3950
COD (mg/l)	14	19	6	10	41	22
TOC (mg/l)	8	10	7	8	2	12
Chlorinated Hydrocarbons (ug/l)*	<1	<1	<1	<1	<1	<1
Barium (mg/l)	0.15	0.05	0.10	0.10	0.10	0.20
Cadmium (mg/l)	<0.005	<0.005	<0.005	<0.005	0.005	<0.005
Cobalt (mg/l)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Copper (mg/l)	0.01	0.01	0.01	0.03	0.03	0.03
Chromium (mg/l)	0.25	0.48	0.23	0.59	0.30	0.95
Iron (mg/l)	0.07	0.06	0.06	0.18	0.04	0.02
Lead (mg/l)	<0.03	<0.03	<0.03	0.05	<0.03	<0.02
Mercury (mg/l)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (mg/l)	0.3	0.01	0.01	0.03	0.01	0.01
Nickel (mg/l)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silicon (mg/l)	2.9	3.3	1.5	5.0	1.6	2.5
Vanadium (mg/l)	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Zinc (mg/l)	0.02	0.01	<0.005	0.01	0.01	0.01

*Calculated as ug/l chlorine - Lindane Standard

NOTE: Sample Point #6 - Entering Site
Sample Point #7 - Leaving Site

ATTACHMENT

TABLE 4-3

QUALITY STANDARDS FOR CLASS GA GROUNDWATER

SUBSTANCE	MAXIMUM ALLOWABLE CONCENTRATION
Barium	1.0 mg/l
Cadmium	0.01 mg/l
Chromium (hexavalent)	0.05 mg/l
Copper	1.0 mg/l
Iron	0.3 mg/l Fe
Lead	0.025 mg/l
Manganese	0.3 mg/l
Zinc	5.0 mg/l
pH Range	6.5 - 8.5

NOTES: 1.) Combined concentration of iron or manganese shall not exceed 0.5 mg/l.

TABLE 4-4

MONITORING WELL CONSTRUCTION DATA

Piezometer Number	Date Installed	Depth to Bottom of Casing	Top of Casing Elevation	Ground Elevation	Size and Type of Casing	Installed By
1	12/25/78	11.1 ft.	604.11	601.5	2 in. PVC	
2	12/27/78	14.0 ft.	607.18	604.3	2 in. PVC	EARTH
3	12/28/78	14.0 ft.	608.49	607.7	2 in. Steel	DIMENSIONS
4	12/29/78	15.0 ft.	611.75	609.9	2 in. PVC	INC.
5	12/29/78	24.2 ft.	601.48	599.1	2 in. Steel	

ATTACHMENT III

Table 4 - 5

BACKROUND MONITORING WELL DATA

PARAMETER	3/07/79		4/11/79		5/14/79	
	#3	#4	#3	#4	#3	#4
Color (Pt-Co Units)	-	10	40	40	135	15
pH (Standard Units)	-	7.45	10.30	7.55	9.15	7.35
Conductivity (U mhos)	-	1050	950	1150	600	1150
COD (mg/l)	-	28	69	4	53	25
TOC (mg/l)	-	102	24	6	15	5
Chlorinated Hydrocarbons (ug/l)*	-	<1	<1	<1	<1	<1
Barium (mg/l)	0.25	0.20	0.05	0.15	<0.05	0.05
Cadmium (mg/l)	<0.005	0.03	<0.005	0.010	0.005	0.010
Cobalt (mg/l)	<0.02	0.05	0.04	0.04	<0.02	<0.02
Copper (mg/l)	<0.01	<0.01	0.03	0.01	0.03	0.03
Chromium (mg/l)	0.02	0.02	0.03	0.01	0.03	0.02
Iron (mg/l)	0.47	0.62	4.20	0.41	9.0	0.85
Lead (mg/l)	<0.03	0.08	0.07	0.05	0.08	0.08
Mercury (mg/l)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (mg/l)	2.0	5.5	1.2	3.8	0.75	1.25
Nickel (mg/l)	0.10	0.10	<0.05	<0.05	0.05	<0.05
Silicon (mg/l)	23.0	11.0	12.4	11.5	4.8	4.6
Vanadium (mg/l)	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Zinc (mg/l)	0.12	0.83	0.44	0.38	0.28	0.33

*Calculated as ug/l chlorine - Lindane Standard

Summary

Airco Alloys
3801 Highland Avenue
Niagara Falls, (Niagara County) NY

The EPA learned of the site through the work of the Interagency Task Force study and through their draft report, dated March 1979.

The type size and characteristics of the site are not given. The present owner or operator is Airco Alloys.

Since 1964, Airco Alloys has used a land disposal site located on Witmer Road in Niagara Falls for the disposal of two forms of slag, ferrochrome silicon and ferromanganese, two types of dust in a slurry form, ferrosilicon and ferrochrome silicon, and Calcium hydroxide.

From 1920 – 1964 the Witmer Road site was used for the disposal of similar materials by the Vanadium Corporation of America.

No information is given on drinking water wells, underlying acquifer, homes or nearby bodies of surface water.

The site is classified as class "B". Detailed chemical analysis and/or a hydrogeological survey is needed, if warranted by the site's potential

for health and/or environmental impact.

updated information

UPDATE —

AIRCO ALLOYS - (NOW SKW) NIAGARA FALLS NY

ATTACHMENT - I

It is presently owned by SKW Industries. The western half belongs to SKW, the Eastern half belong to Airco.

A good percentage of the site is used for disposal of fines from their air cleaning equipment, ferro-silicon, and ferrochrome silicon, the primary products or materials used. They are a combination of iron, silicon, chromium and magnesium.

S.K.W. recently received a permit from the dept (D.E.C.) for operation of a semi secure landfill.

History

When the Niagara power project undertook the project, the SKW obtained some of the Easternmost property for the construction of their conduits and for high tension transmission lines.

This area has been used for the disposal of slag from their operation.

In preparing the engineering report they began monitoring surface water entering the property.

updated information

Update -
Airco ALLOYS - (NOW SKW) Niagara Falls, NY

ATTACHMENT - I

at this time there is no division between SKW and Airco Alloys.

The surface water quality indicated high levels of total chromium and other parameters, that are presently being analyzed for, for surface water entering the property.

The levels of the surface water standards that pass through the property did not change substantially. They have installed a series of monitoring wells both on Airco retained property and SKW property.