EA Engineering, P.C.

EA Northeast
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932001

12 May 2000

Mr. Gary McDannell
U.S. Army Corps of Engineers–Buffalo District
1776 Niagara Street
Buffalo, New York 14207

RE: AIRCO, Inc. Witmer Road Landfill (Corps Project No. 2000-01556)
EA Project No. 12040.33

Dear Mr. McDannell:

EA Engineering P.C., and its Affiliate EA Engineering, Science, and Technology, as consultants to BOC Gases, are developing final design plans for closure of the AIRCO, Inc. Witmer Road Landfill. This property is approximately 25 acres located off Witmer Road in Niagara Falls, New York, at the intersection of the Lewiston and Niagara U.S. Geological Survey topographic quadrangles. Specific site location information and construction design information were provided in our 3 April 2000 letter which has been filed as Corps Project No. 2000-01556. Following conclusion of the public comment period, a Consent Order will be signed with the New York State Department of Environmental Conservation (NYSDEC); we anticipate this to occur on or about 19 May 2000. As you requested, your office has been included on the mailing list to receive a copy of the Consent Order when it is completed. This closure action will impact approximately 1 acre of wetland: 0.5 acres of existing perimeter drainage swale with wetland characteristics and 0.5 acres of scrub/shrub and *Phragmites*-dominated emergent wetland. This letter serves as the Pre-Construction Notification to conduct this action under Nationwide Permit 38–Cleanup of Toxic and Hazardous Waste.

During the week of 1 May 2000, EA completed a wetlands delineation at the site, consistent with the Corps' 1987 methodology. Completed Routine Wetland Determination Data Forms are provided in Attachment 1. Attachment 2 indicates the location of the wetland/upland boundary in green. The onsite wetlands consist primarily of a linear drainage swale along the southeast, south, and southwest perimeter of the landfill. Additional offsite wetlands abut the property line along the southeast corner and south perimeter of the BOC Gases property. This area consists primarily of scrub/shrub grading into *Phragmites*- and cattail-dominated emergent wetlands with flow to the south and east. For the most part, the boundary between wetland and upland is sharply defined, following the limit of the waste fill material deposited at the site. The County Soil Maps indicate that much of this area is Made Land or Cut and Fill associated with construction of the Niagara Power Project. Attachment 3 provides a series of photographs showing the extent and characteristics of the wetlands at the site.

Our client and NYSDEC desire to accelerate the closure process; construction of a new access road via the adjacent Niagara Mohawk Power Corporation (NMPC) property will begin immediately following approval from NMPC. We anticipate that regrading of the waste material will be initiated in late May or early June 2000. This work will entail removal of the existing drainage swale (1,685 linear ft and 5-10 ft wide) along the southeast, south, and southwest perimeter of the landfill. This swale collects seepage and runoff from the landfill and from portions of the adjacent NMPC property and transports this flow offsite to an emergent *Phragmites*- and cattail-dominated wetland to the south and southeast of the landfill. In the process of regrading the site, a new swale will be constructed on the property around the entire perimeter of the landfill.

In addition, through an easement agreement with NMPC, a portion of waste material on their property will be pulled back within BOC Gases' property. A second drainage swale will be constructed on the NMPC property to the east and south of the property fence line. NYSDEC has requested that this second swale be extended along the full length of the south property line and merge with the onsite swale near the existing access gate at the southwest corner of the property. This request was made to prevent potentially contaminated runoff from the NMPC property from entering the AIRCO, Inc. landfill following this closure action or from entering portions of the wetland not previously exposed to this runoff. In this area, the new swale will displace a 15- to 20-ft wide strip of scrub/shrub and *Phragmites*-dominated wetland along the existing fence line. The location and cross-sections of this offsite swale are shown on Sheets 7, 8, and 13 of 13 of the design drawings (enclosed separately).

The owner of the property, BOC Gases, who is implementing this closure under the Consent Order, can be reached as follows:

Mr. Mike Resh
BOC Gases
100 Mountain Avenue
Murray Hill, New Jersey 07974
(908) 771-1452

The NYSDEC Manager for this project is:

Mr. Michael Hinton, P.E.
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203
(716) 851-7220

It is tentatively planned that construction will begin at the site the week of 22 May 2000, and an EA engineer overseeing construction will be present throughout the closure operations. If you wish to visit the site, arrangements can be made at that time. If you have any questions or require additional information, please do not hesitate to contact either Paul Muessig or Chip McLeod at (914) 565-8100.

Sincerely yours,

EA ENGINEERING, P.C.

David S. Santoro, P.E., L.S.
President

EA ENGINEERING, SCIENCE,
AND TECHNOLOGY

Paul H. Muessig
Senior Environmental Scientist

DSS/caw
Attachments

cc: M. Resh, BOC Gases (w/o enclosure)
M. Hinton, NYSDEC (w/o enclosure)
C. McLeod, EA (w/o enclosure)

Attachment 1

Routine Wetland Determination
Data Forms

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Witmer Road landfill
Applicant/Owner: BCC Corp.
Investigator: Paul Nuessing
Date: 5/3/00
County: Niagara
State: NY

Do Normal Circumstances exist on the site? Yes (No)
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID:
Transect ID: WM-1
Plot ID: 1

location inside gated access road from Stollberg.

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Phragmites	herb	FACW
2. Typha latifolia	herb	OBL
3. gray dogwood	shrub	FAC-
4. silky dogwood	shrub	FACW
5. red fescue	herb	FACU
6. raspberry ??	herb	?
7. bull thistle	herb	FACU
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 50%

Remarks: new growth just beginning

HYDROLOGY

✓ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ✓ Aerial Photographs
- ___ Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: < 8 (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ✓ Inundated
- ___ Saturated in Upper 12 Inches
- ✓ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ✓ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 Inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: aerial photos show fairly clear delineation of wetland vegetation. Looks like waste material was originally placed in portion of much larger wetland.

SOILS

Map Unit Name (Series and Phase): Me (Made Land), Cu (Cut + Fill) Drainage Class: _____

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): _____

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-6		2.5Y 2.5/1	7.5YR 5/8	< 2%	
>6		stone rubble			

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ✓ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ✓ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: could not penetrate stone fill below 6" depth. Upland area - barren waste + fill material.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks: graded drainage swale and berm along footfill covered and seeded south boundary of landfill. Contiguous with less disturbed emergent / scrub shrub wetland beyond fenceline

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Witmer Road Landfill
Applicant/Owner: BOC Gases
Investigator: Paul Muessig

Date: 5/3/00
County: Niagara
State: NY

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID:
Transect ID: WM-2
Plot ID: 1

approx. halfway along south boundary

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. P. hragmites	eg herb	FACW
2. silky dogwood	shrub	FACW
3. gray dogwood	shrub	FAC-
4. Canada goldenrod	herb	FACU
5. rusty goldenrod	herb	FACW
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 60%

Remarks: new seasonal growth just beginning

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
✓ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: ≤ 6 (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:
Primary Indicators:
✓ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
✓ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
✓ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Ne (Nodelland) Cu (Cut and Fill)

Drainage Class: _____

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): _____

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4		2.5GY 2.5/1			
4-9		2.5GY 3/1	2.5YR 6/8 2.5YR 4/6	<10% <2%	soft mottles throughout oxidized root lining
>9		10Y 4/1	10YR 6/4	~15%	soft mottles

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- X Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- X Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: Horizons not clearly developed in fill/disturbed soil cover.

A4 - F2

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: WITMER RD LANDFILL
Applicant/Owner:
Investigator: Jane Muessig

Date: 5/3/00
County: Niagara
State: NY

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID:
Transect ID: WM-2
Plot ID: 2

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. mowed grass		
2. graded landfill		
3. cover		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____ (in.)
Depth to Free Water in Pit: 24 (in.)
Depth to Saturated Soil: 12 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Me / Cu

Drainage Class: _____

Field Observations
Confirm Mapped Type? Yes No

Taxonomy (Subgroup): _____

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10		2.5YR 4/3			
>10		7.5YR 3/3	7.5YR 6/6	<10%	

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? Yes (No)

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Witmer Rd Landfill - NMP property
Applicant/Owner: BOC Gases
Investigator: Paul Muessig

Date: 5/3/00
County: Niagara
State: NY

Do Normal Circumstances exist on the site? Yes (No)
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID:
Transect ID: WM-3
Plot ID: 1

near SE corner of BOC Gases' property

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. gray dogwood	shrub	FAC-
2. silky dogwood	shrub	FACW
3. raspberry	herb	
4. bull thistle	herb	FACU
5. reed canary grass	herb	FACW+
6. swamp buttercup	herb	OBL
7. Canada goldenrod	herb	FACU
8. sphagnum	herb	
9. grape	vine	
10. box elder	tree	FAC+
11. pear	tree	NI
12. hawthorn ?	tree	?
13. phragmites	ag herb	FACW
14. swamp cabbage	herb	OBL
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 6 of 9 67%

Remarks: clear boundary between waste material and wetland veg.

HYDROLOGY

- ✓ Recorded Data (Describe in Remarks):
  - ___ Stream, Lake, or Tide Gauge
  - ✓ Aerial Photographs
  - ___ Other
- ___ No Recorded Data Available

Field Observations:

- Depth of Surface Water: < 2 (in.)
- Depth to Free Water in Pit: ___ (in.)
- Depth to Saturated Soil: ___ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ✓ Inundated
- ___ Saturated in Upper 12 Inches
- ✓ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ✓ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ✓ Oxidized Root Channels in Upper 12 Inches
- ✓ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Me / Cu

Drainage Class: _____

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): _____

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10		2.5YR 3/1	2.5YR 4/8	<2%	
7/0		2.5YR 4/1	2.5Y 6/6	<2%	

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- X Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- X Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: A4, F4

WETLAND DETERMINATION

		(Circle)
Hydrophytic Vegetation Present?	(Yes) No	
Wetland Hydrology Present?	(Yes) No	
Hydric Soils Present?	(Yes) No	
Is this Sampling Point Within a Wetland?	(Yes) No	

Remarks:

Attachment 2

Location Map of Wetland/Upland Boundary

AIR REDUCTION COMPANY, INC. (AIRCO)

N

N 1138750

N 1138500

N 1138250

N 1138000

E 1030000

E 1030250

E 1030500

E 1030750

E 1031000

B-1 B-2 B-3 B-4 B-5 B-6 B-9 B-10 B-11 B-13 B-15 B-16 B-17 B-19

TP-01 TP-02 TP-03 TP-04 TP-05 TP-06 TP-07 TP-08 TP-10 TP-26 TP-27 TP-28

WELL1 WELL1A WELL2 WELL2A

GROUND OBSCURED

WETLAND

DENSE BRUSH

DENSE BRUSH GROUND OBSCURED

UPLAND

EXISTING ACCESS ROAD

100 FT

100 FT

500 FT

LEGEND:

3 → PHOTO TAKEN LOCATION AND DIRECTION

WETLAND/UPLAND BOUNDARY

NOTES:

EXISTING CONDITIONS SURVEY PERFORMED BY WENDEL, LOCKPORT, NY IN DECEMBER 1999.

60 30 0 60 120

GRAPHIC SCALE IN FEET

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

WITMER ROAD LANDFILL
NIAGARA FALLS, NEW YORK

ATTACHMENT 2
LOCATION OF DELINEATED WETLAND BOUNDARY AND PHOTO LOG LOCATIONS FOR WITMER ROAD LANDFILL

DESIGNED BY	DRAWN BY	DATE	PROJECT NO.
PHM	BT	5-11-2000	12040.33
CHECKED BY	PROJECT MGR.	SCALE	FIGURE
PHM	CEM	AS SHOWN	–

Attachment 3

Photographs Showing the Extent and Characteristics of the Wetlands

Photo 1. View south where drainage from *Phragmites*-dominated emergent wetland on NMPC property crosses east fence line into swale on AIRCO property.

Photo 2. View south where drainage from *Phragmites*-dominated emergent wetland on NMPC property crosses east fence line into swale on AIRCO property.

Photo 3. View north where drainage from *Phragmites*-dominated emergent wetland on NMPC property crosses east fence line into swale on AIRCO property.

Photo 4. View southeast toward wetland on NMPC property along east side of AIRCO property.

Photo 5. View north toward *Phragmites*-dominated emergent wetland on NMPC property near east side of AIRCO property.

Photo 6. View northeast toward *Phragmites*-dominated emergent wetland on NMPC property from previous closure on AIRCO property.

Photo 7. Transition from waste material to wetland on NMPC property near southeast corner of AIRCO property looking east.

Photo 8. Transition from waste material to wetland on NMPC property near southeast corner of AIRCO property looking south.

Photo 9. Transition from waste material to scrub/shrub wetland on NMPC property near southeast corner of AIRCO property looking southeast.

Photo 10. Access road dividing waste and scrub/shrub wetland on NMPC property along east side of AIRCO property looking to the northeast.

Photo 11. Access road through scrub/shrub wetland on NMPC property near southeast corner of AIRCO property looking southeast.

Photo 12. Access road through scrub/shrub wetland on NMPC property near southeast corner of AIRCO property looking to the northwest.

Photo 13. View to east of drainage swale and offsite scrub/shrub wetland boundary with waste material.

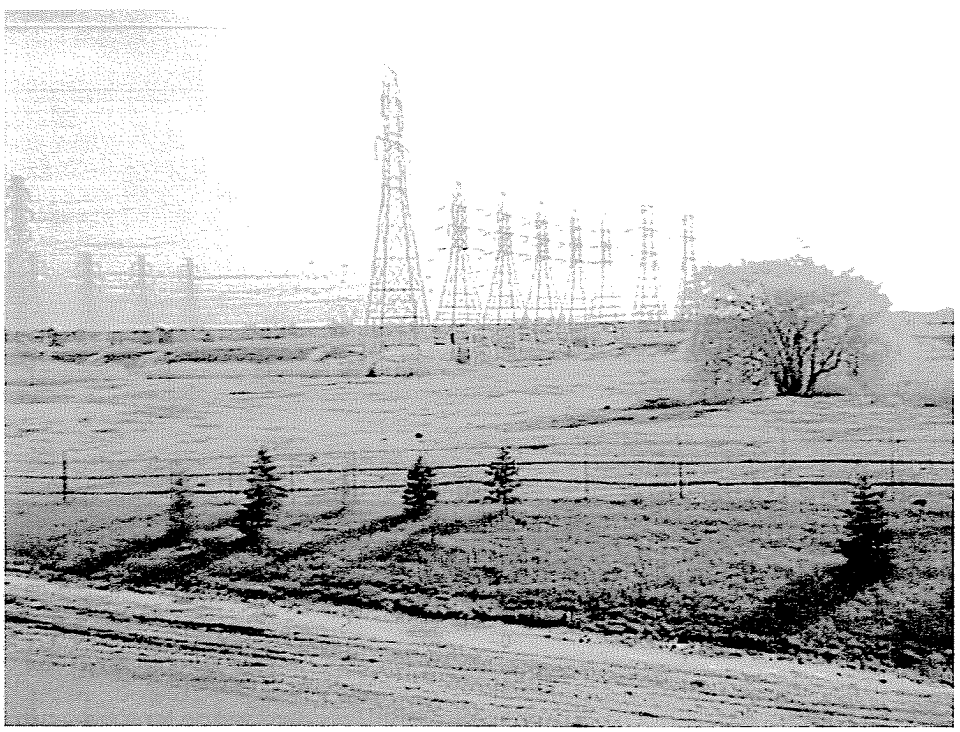

Photo 14. View of drainage swale along east side of AIRCO property.

Photo 15. View of drainage swale and offsite scrub/shrub wetland at southeast corner of AIRCO property.

Photo 16. View of drainage swale and offsite scrub/shrub wetland at southeast corner of AIRCO property.

Photo 17. View from NMPC to AIRCO property at southeast corner.

Photo 18. Swale entering AIRCO property on east side from NMPC property.

Photo 19. View to southwest of wetlands on south side of AIRCO property; shows transition from scrub/shrub to *Phragmites*-dominated emergent wetland.

Photo 20. View to southeast of wetlands on south side of AIRCO property from top of previous closure.

Photo 21. View west along drainage swale at south fence line on AIRCO property.

Photo 22. View east at seep along drainage swale at south fence line on AIRCO property.

Photo 23. View west along drainage swale at south fence line on AIRCO property.

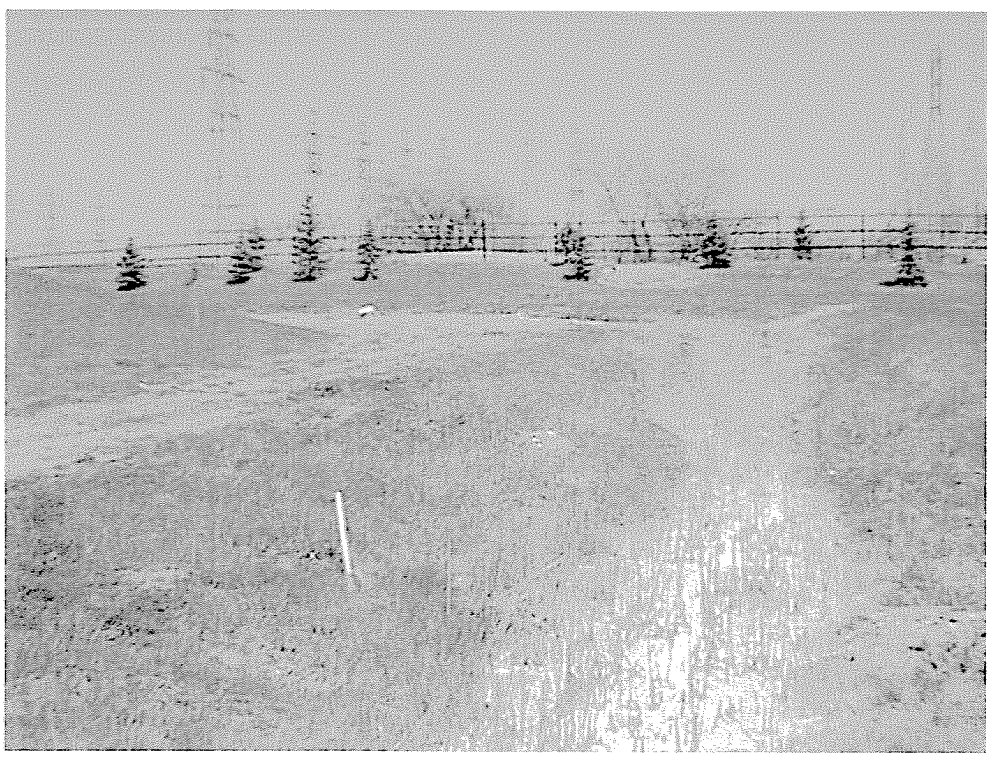

Photo 24. View east along drainage swale at south fence line on AIRCO property.

Photo 25. View northwest along drainage swale at southwest fence line on AIRCO property.

Photo 26. View south along drainage swale at southwest fence line on AIRCO property.

Photo 27. View east along drainage swale at southwest fence line on AIRCO property.

Photo 28. View west along drainage swale at southwest fence line on AIRCO property.

Photo 29. View west along swale at southwest side of AIRCO property.

Photo 30. View south along swale at southwest side of AIRCO property.