

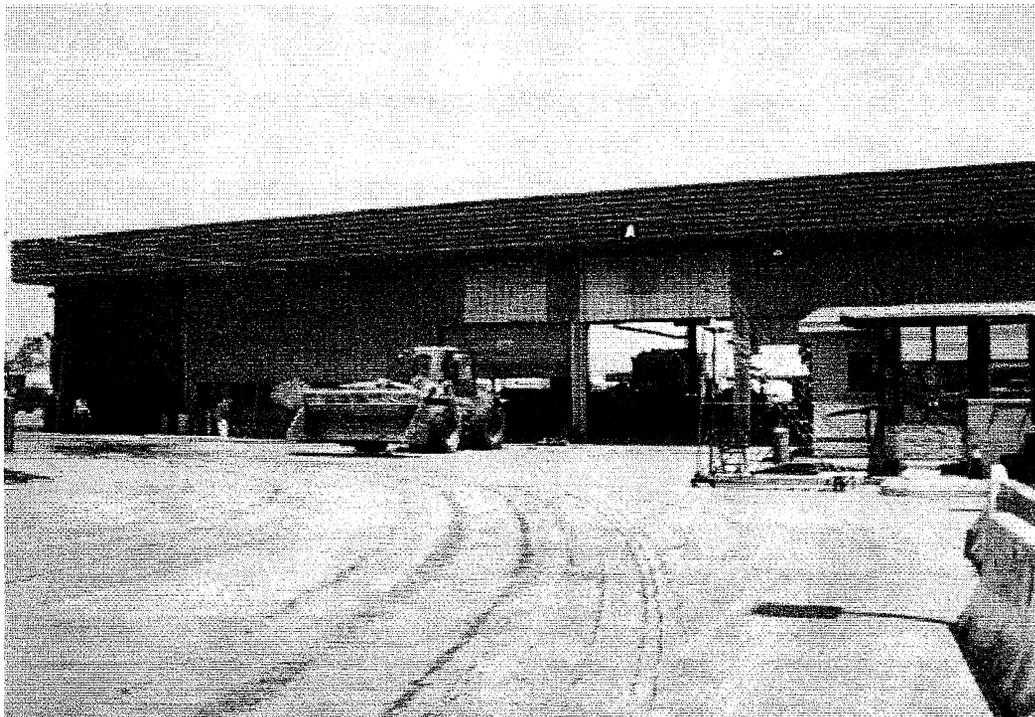
## APPENDIX E



PHOTO PAGE 1



Rainbow Disposal Company showing administrative office



The south side of vehicle repair shop with attached truck wash on left side

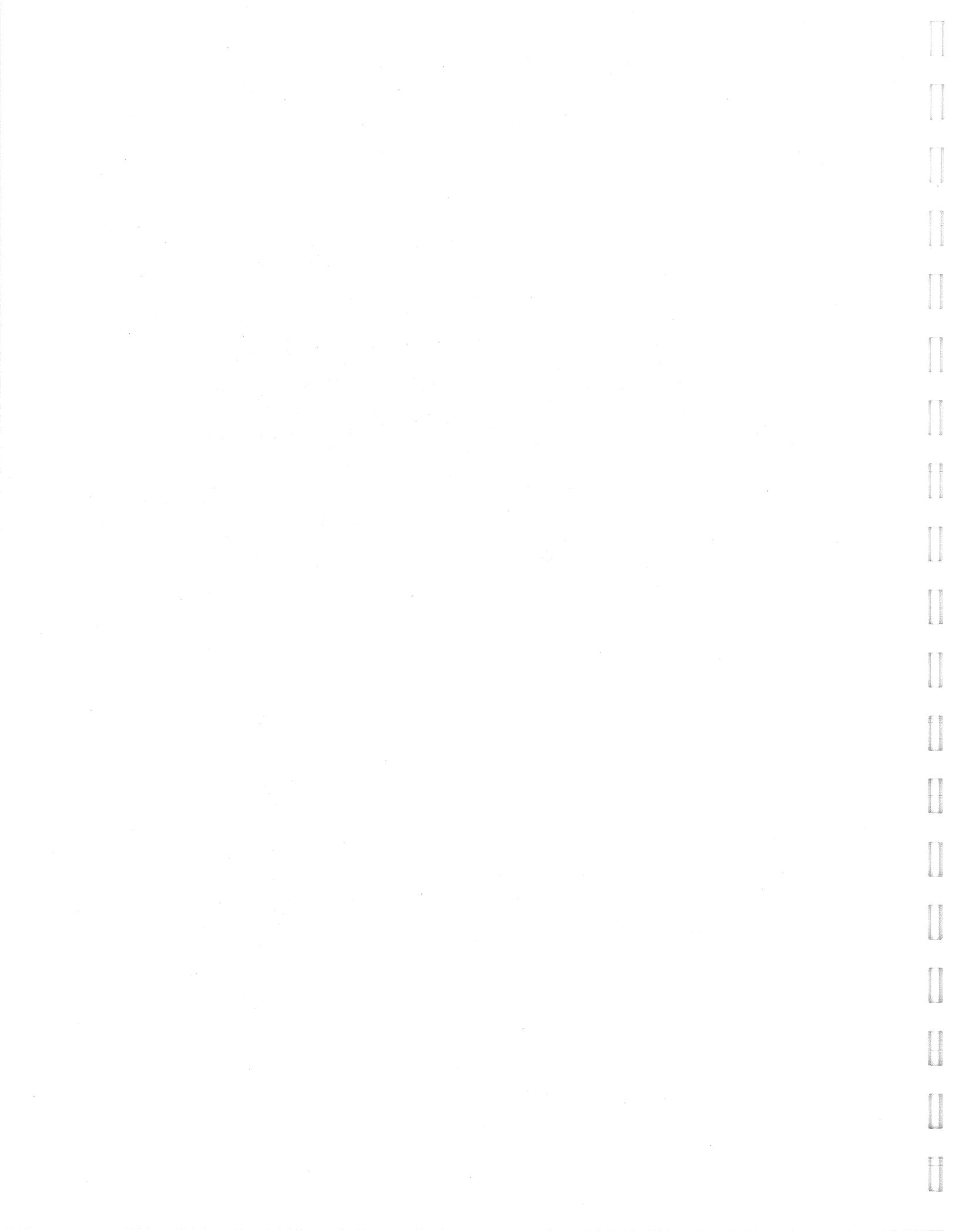
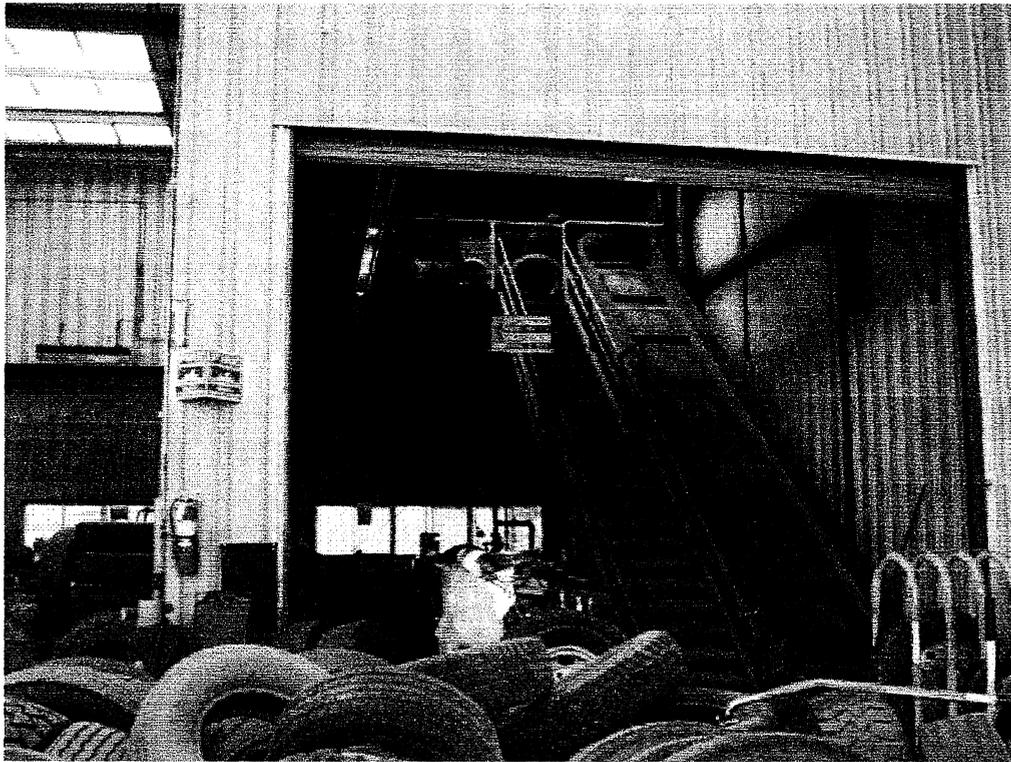


PHOTO PAGE 2



Interior of vehicle repair shop



The tire recycling area of vehicle repair shop

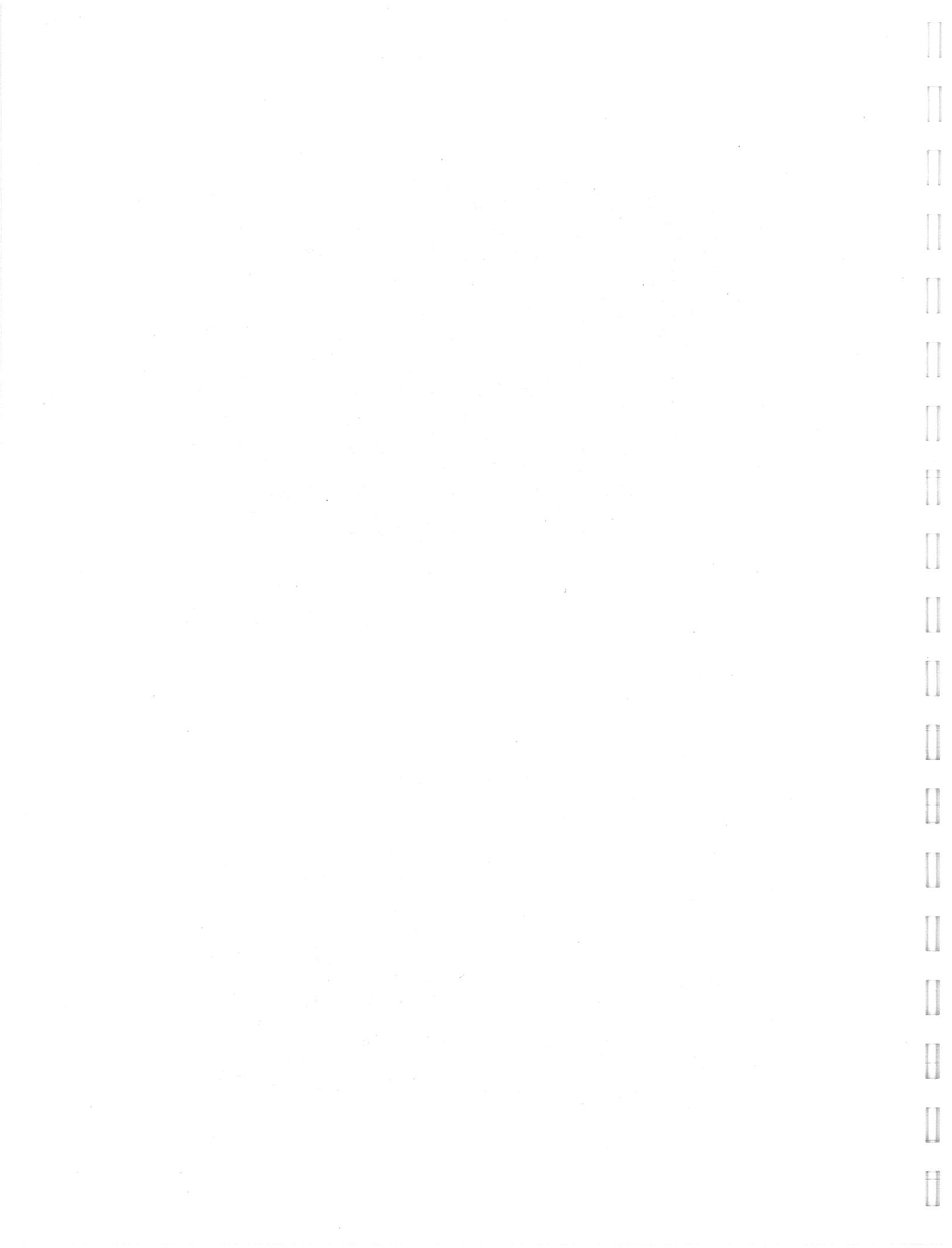
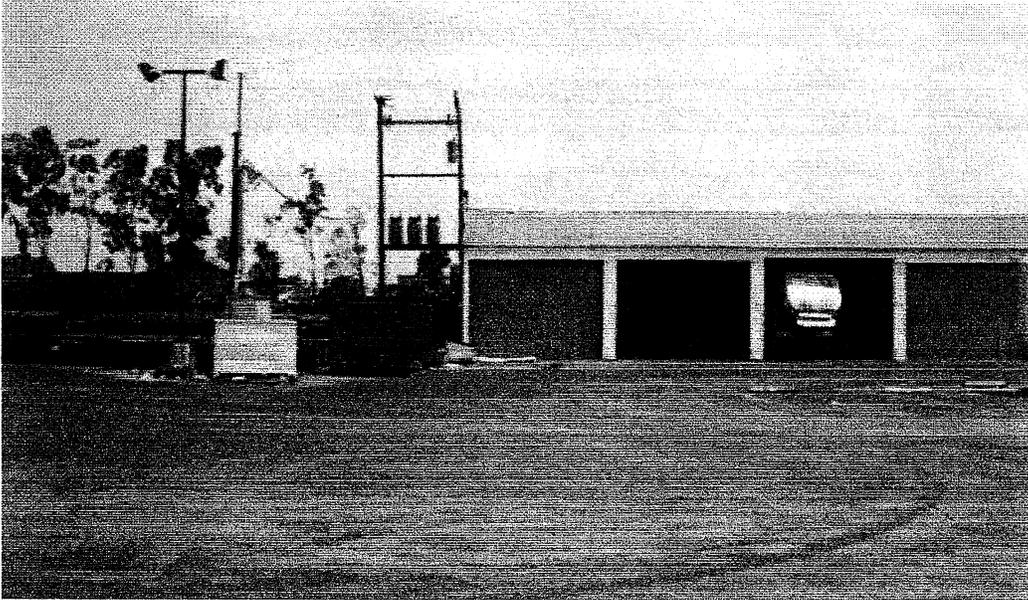
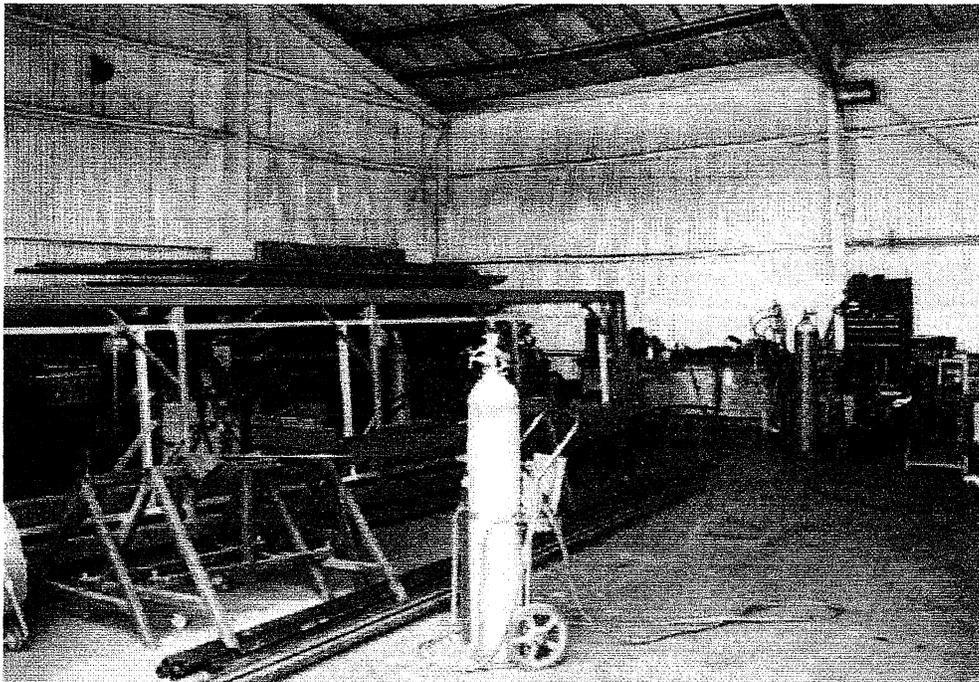


PHOTO PAGE 3



Welding shop located at the north perimeter of the site



West side of the interior of the welding shop

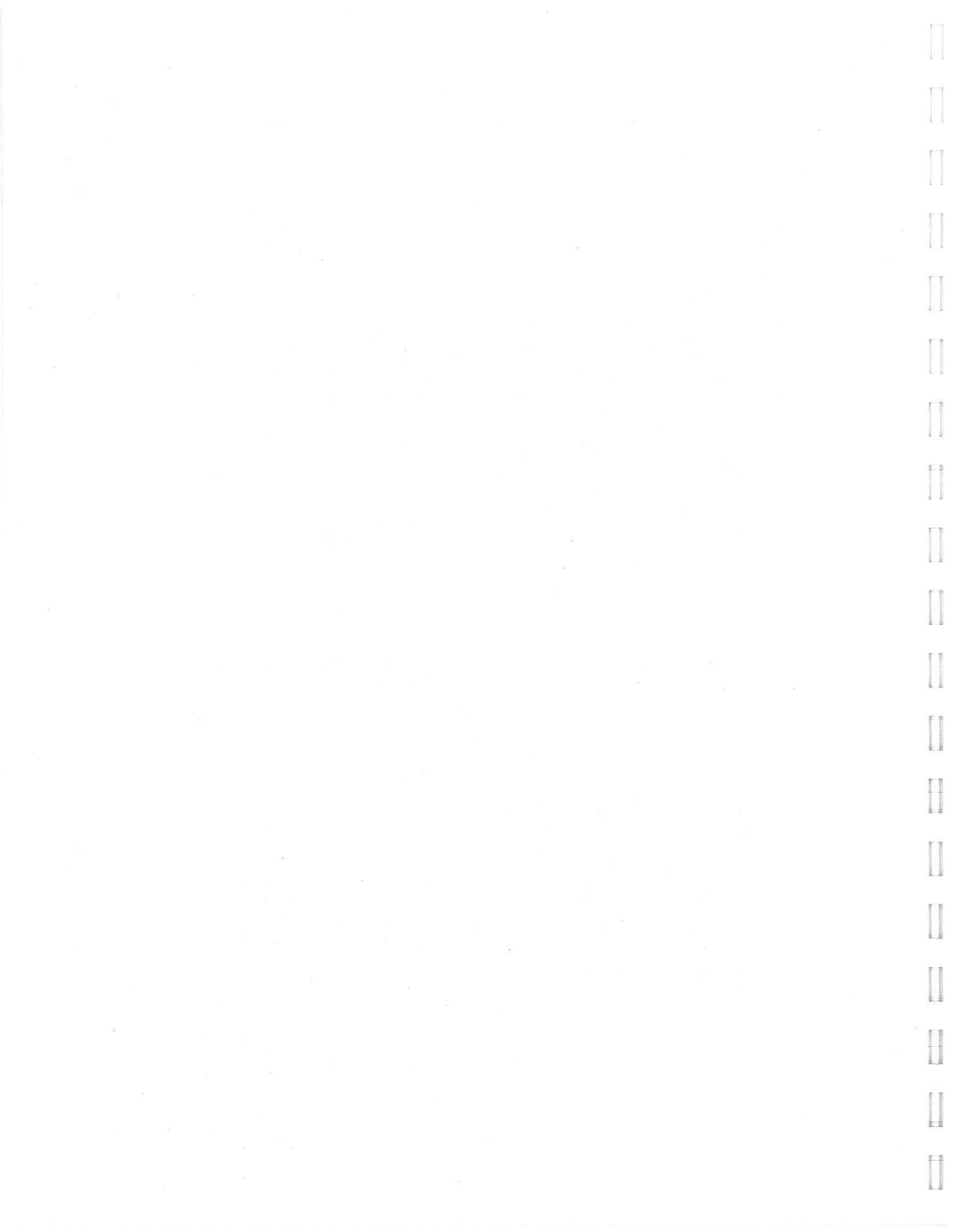
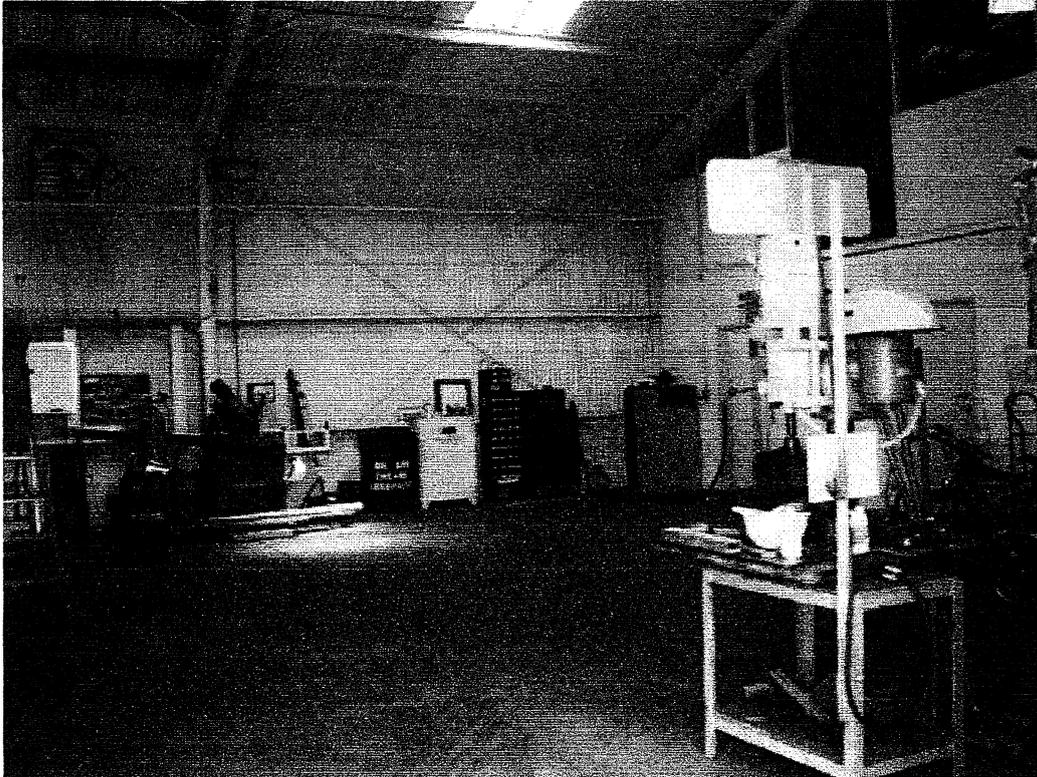
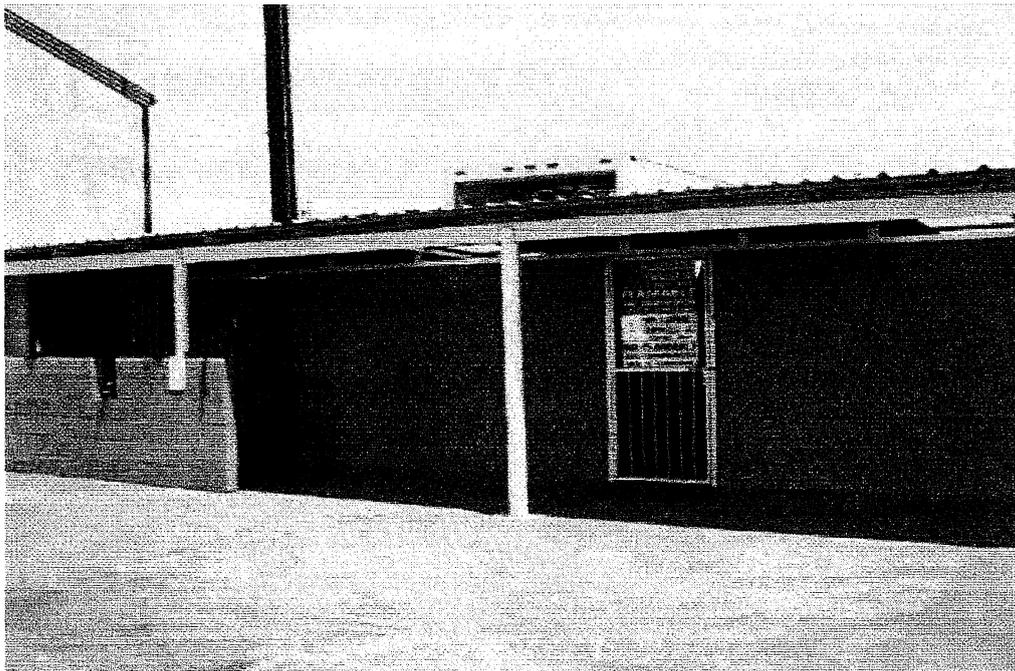


PHOTO PAGE 4



East side of the interior of the welding shop



Storage Shed used for gas cylinders attached to east side of welding shop

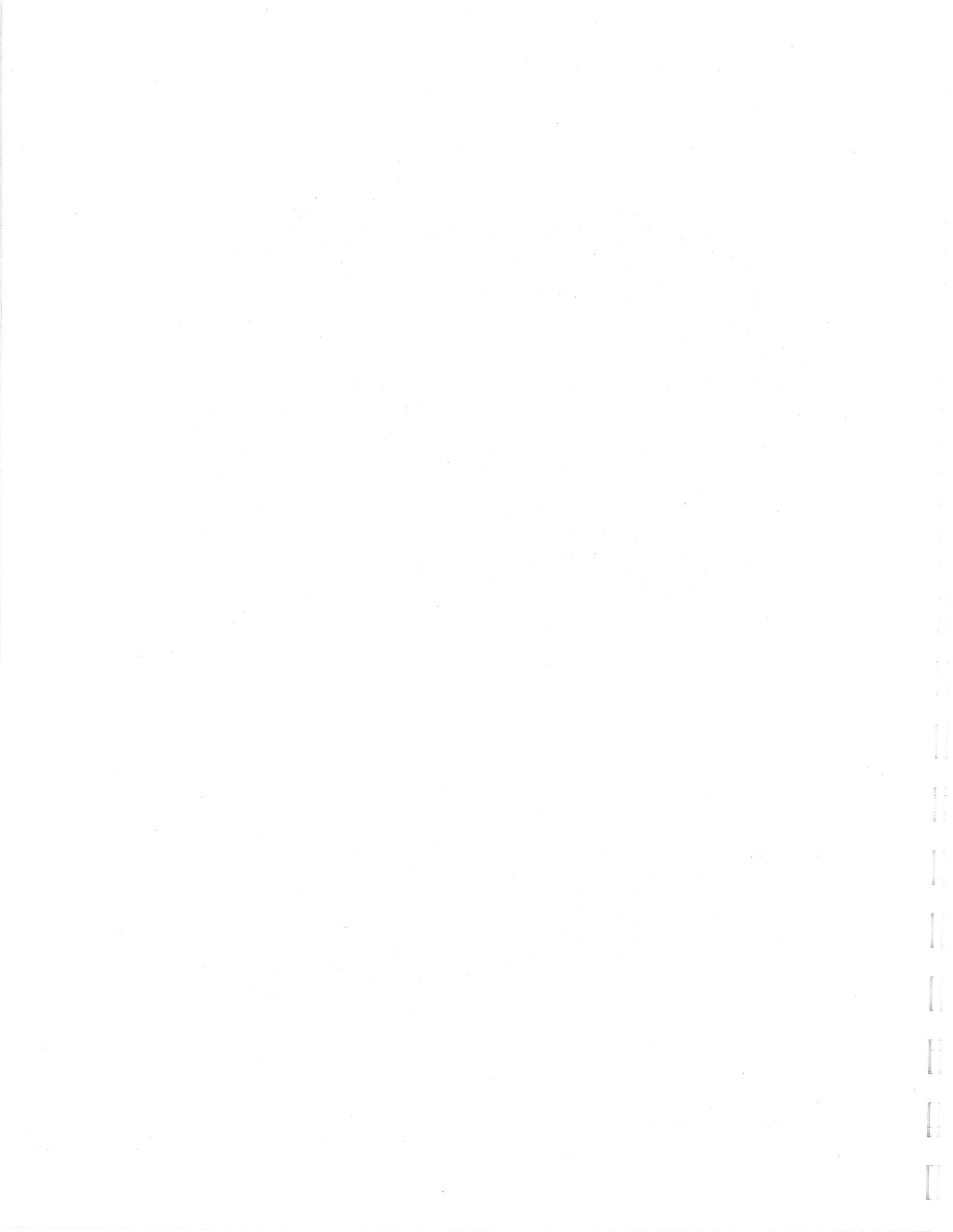


PHOTO PAGE 5



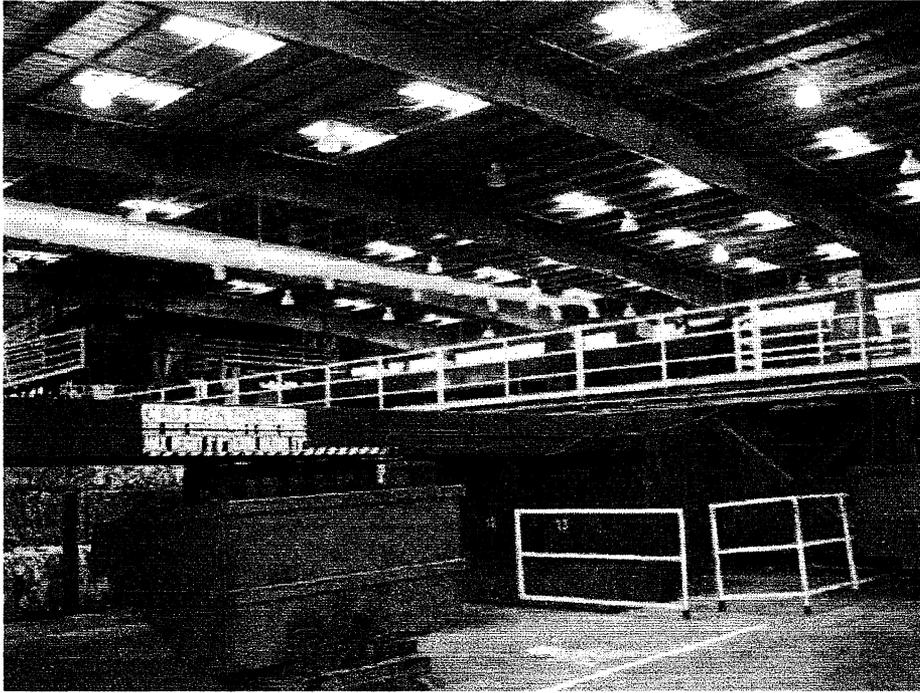
Northeast corner of MRF



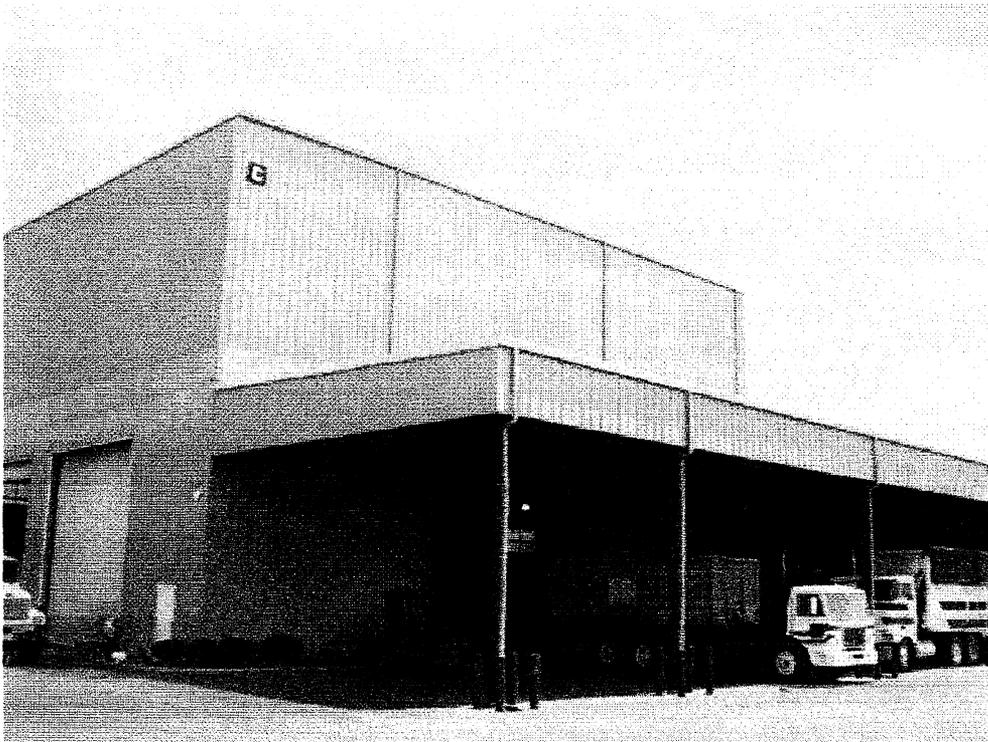
Southeast corner of MRF



PHOTO PAGE 6



Interior of MRF



Southwest corner of MRF



PHOTO PAGE 7



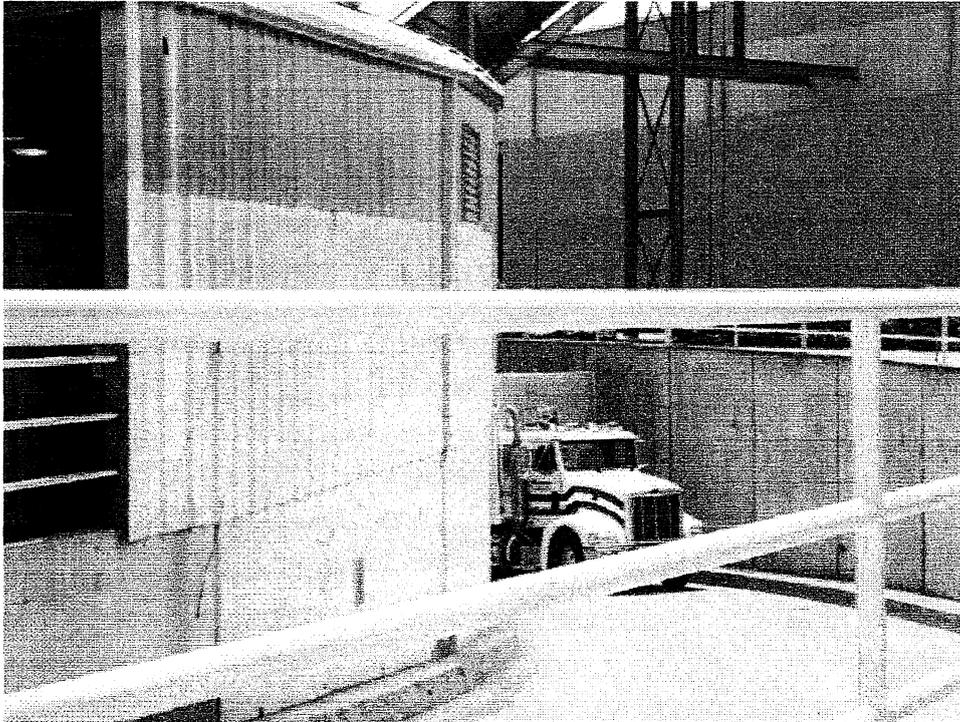
Bales of recyclable material in MRF



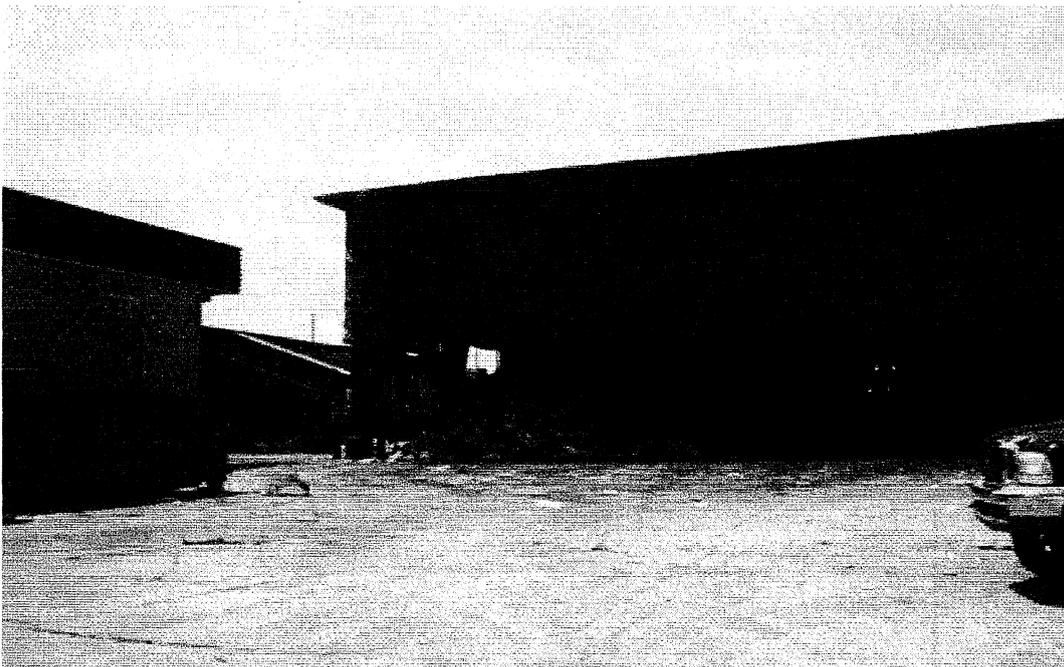
Conveyor Belts Connecting the MRF (right) to the Transfer Building (left)



PHOTO PAGE 8



A truck coming up the ramp from the pit of the Transfer Building



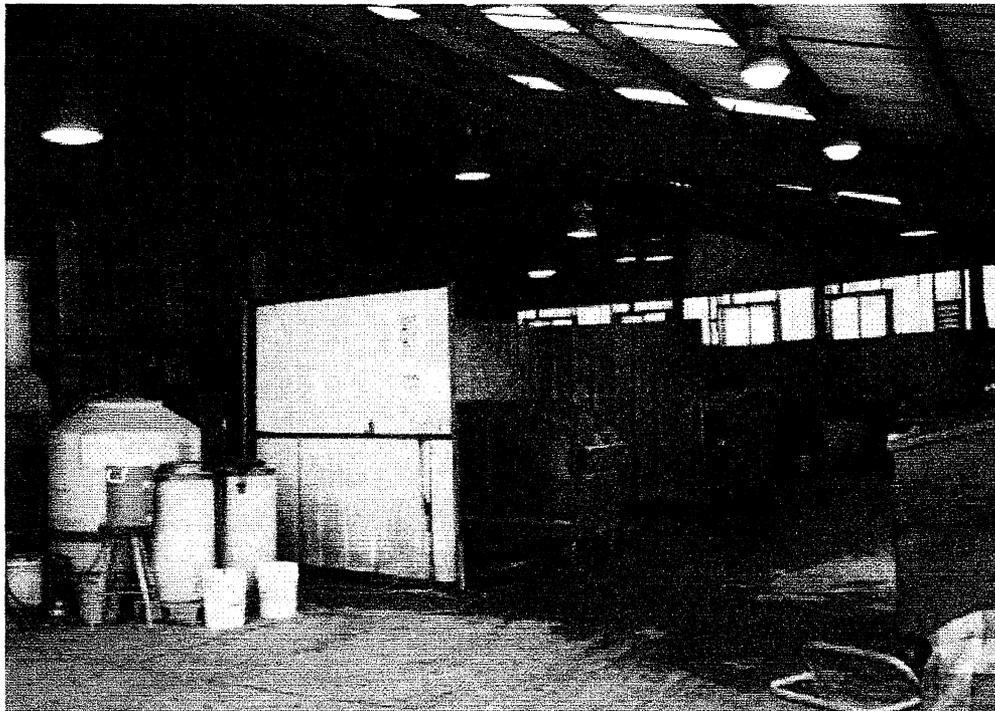
The upper level of the Transfer Building



PHOTO PAGE 9



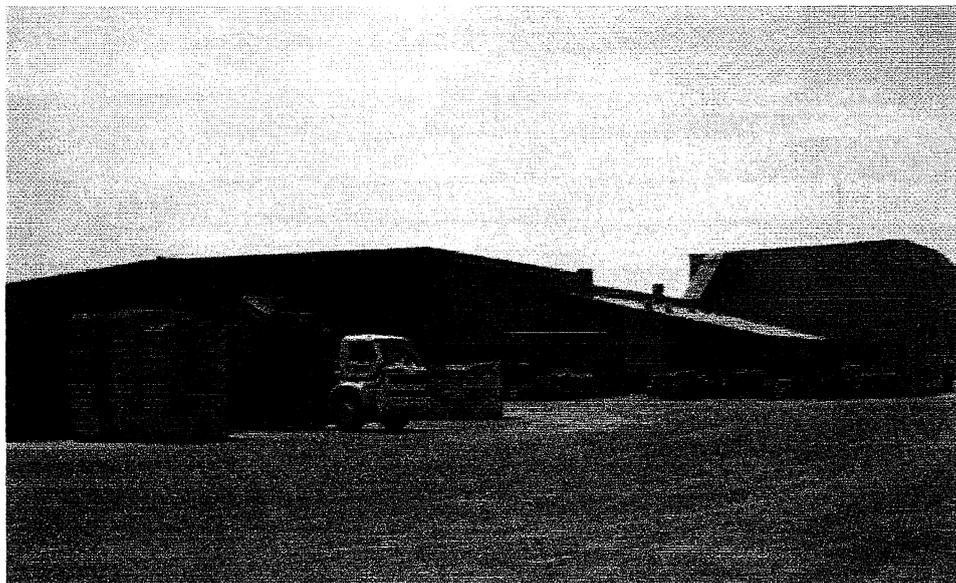
View of the east side of the Transfer Building



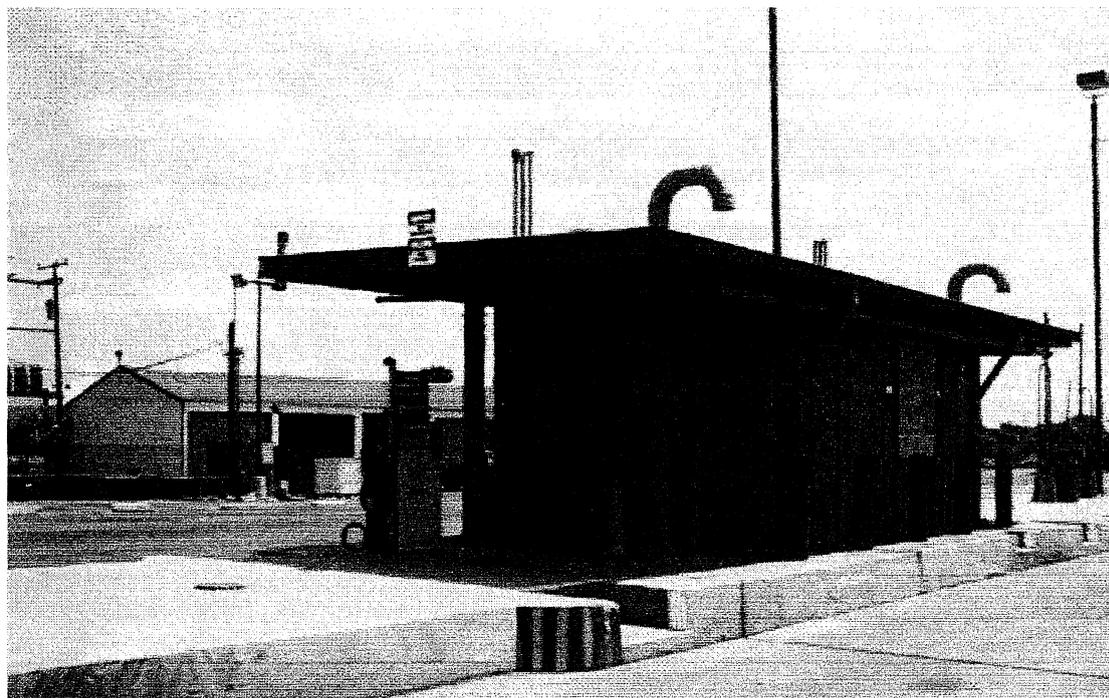
Bin maintenance area with wash down enclosure in center



PHOTO PAGE 10



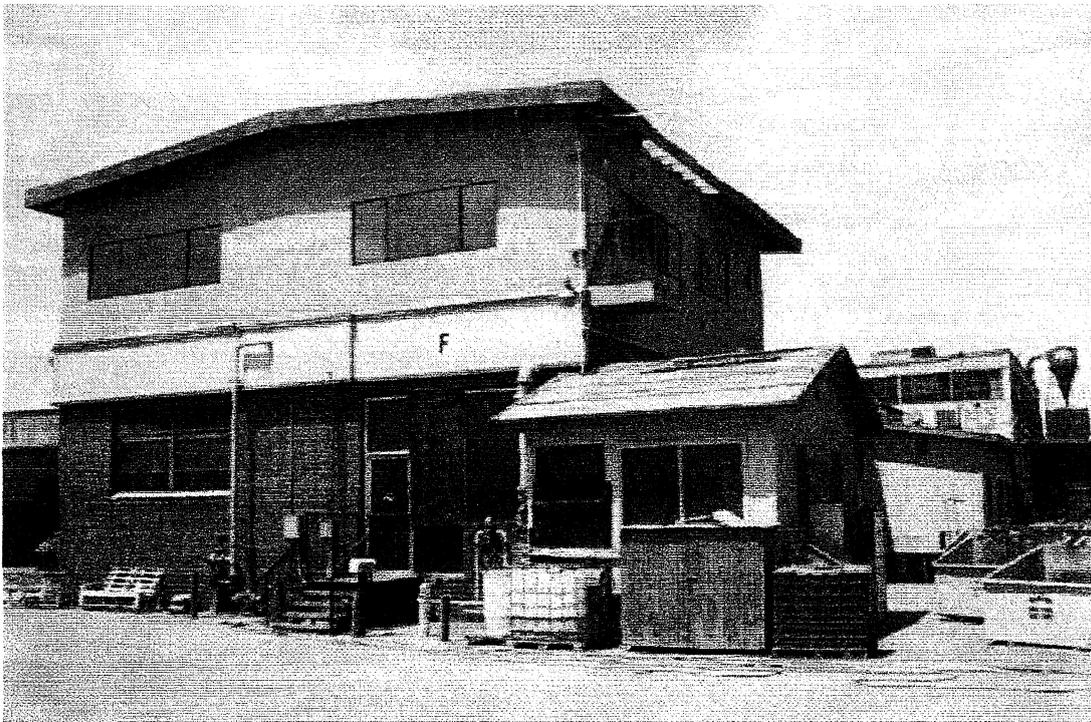
View of the Transfer Building (left) with the attached bin maintenance area behind which is the MRF (right)



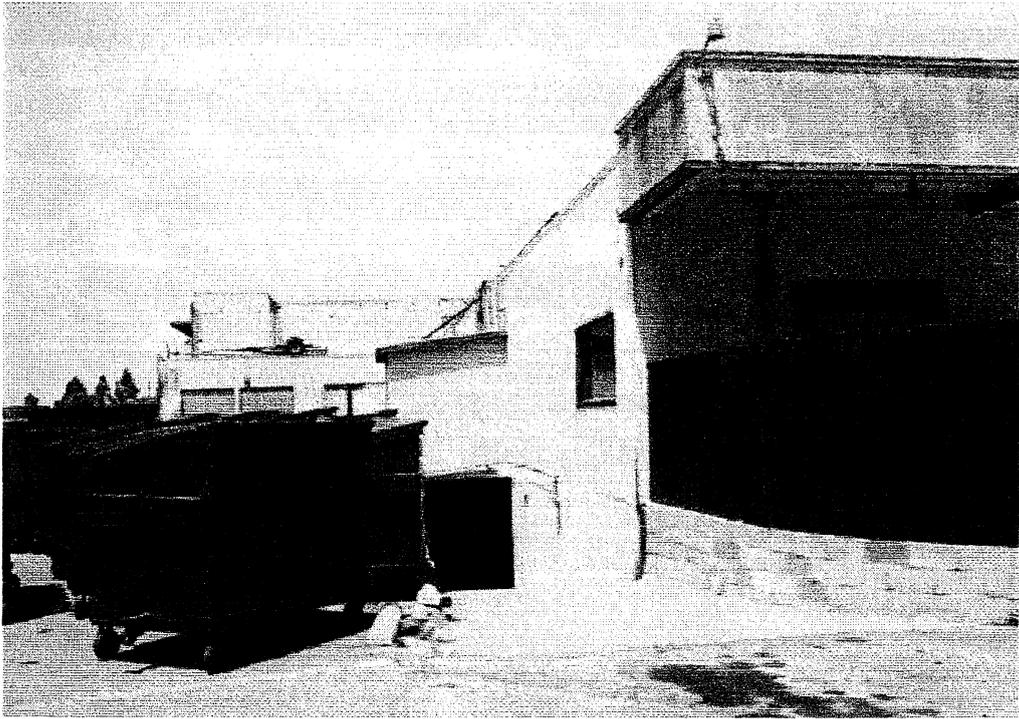
Looking northeast at the fuel dispensing island



PHOTO PAGE 11



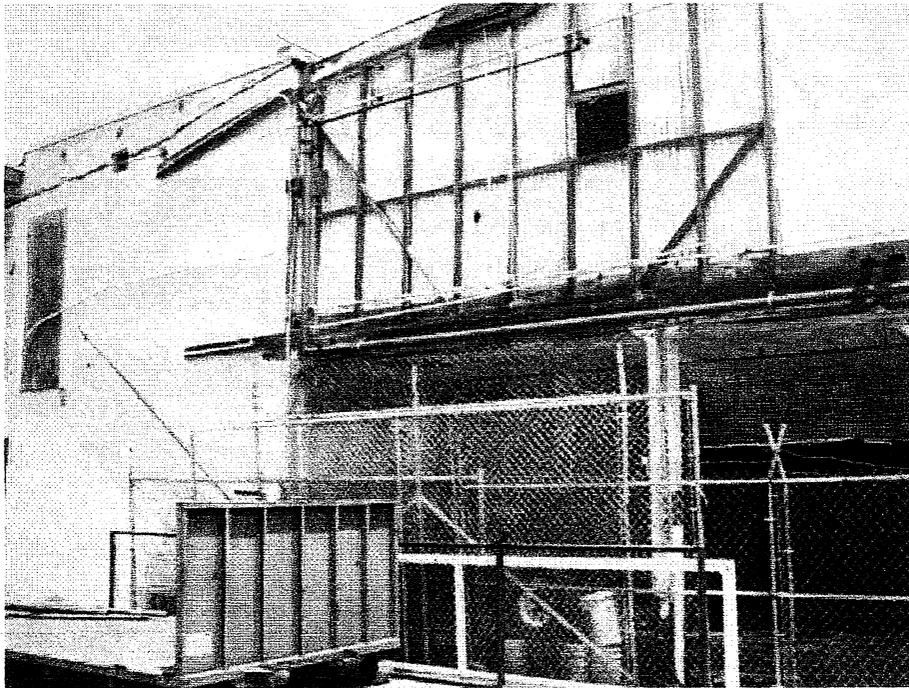
Vacant building in southwest corner of site



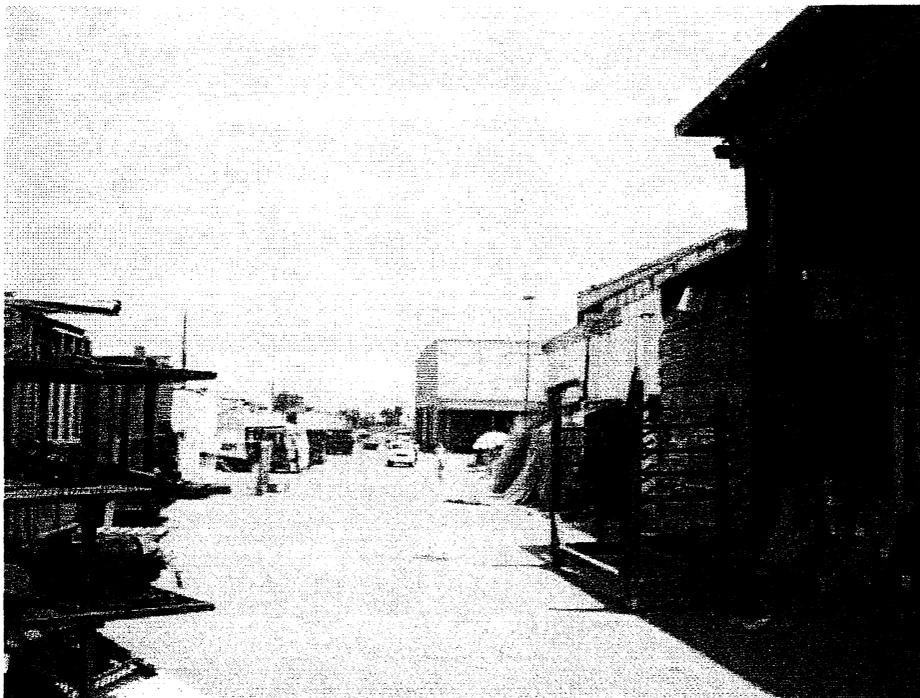
The southeast corner of the vacant building



PHOTO PAGE 12



The south side of the vacant building



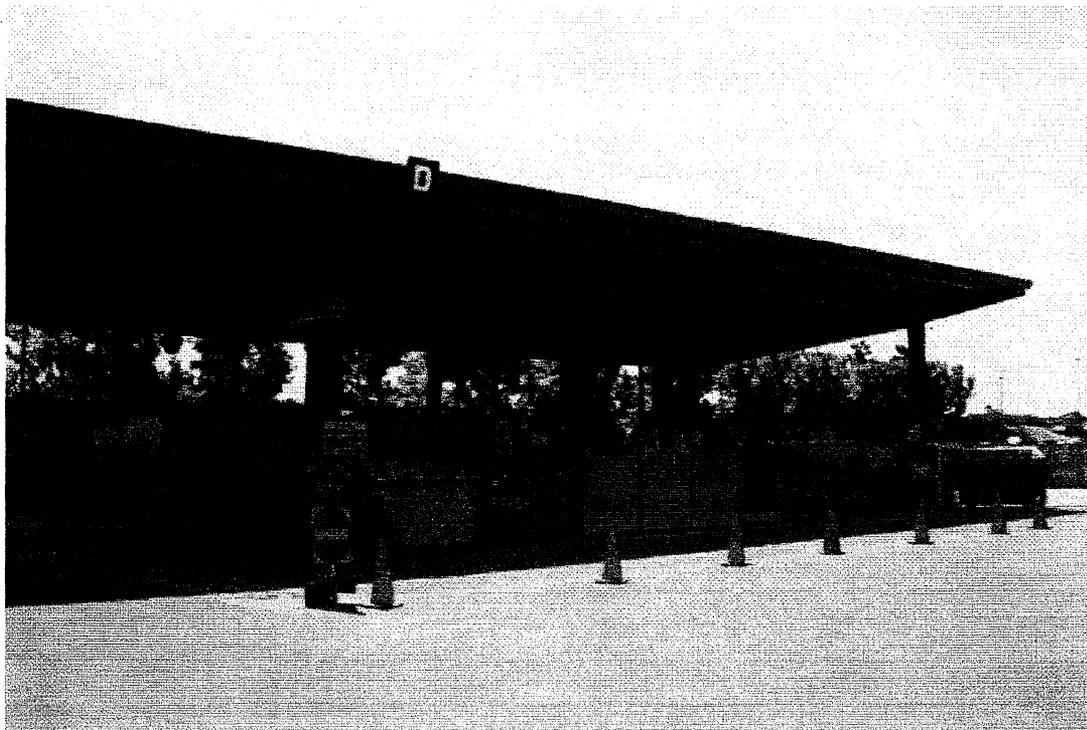
The west side of the vacant building with storage trailers on the left



PHOTO PAGE 13



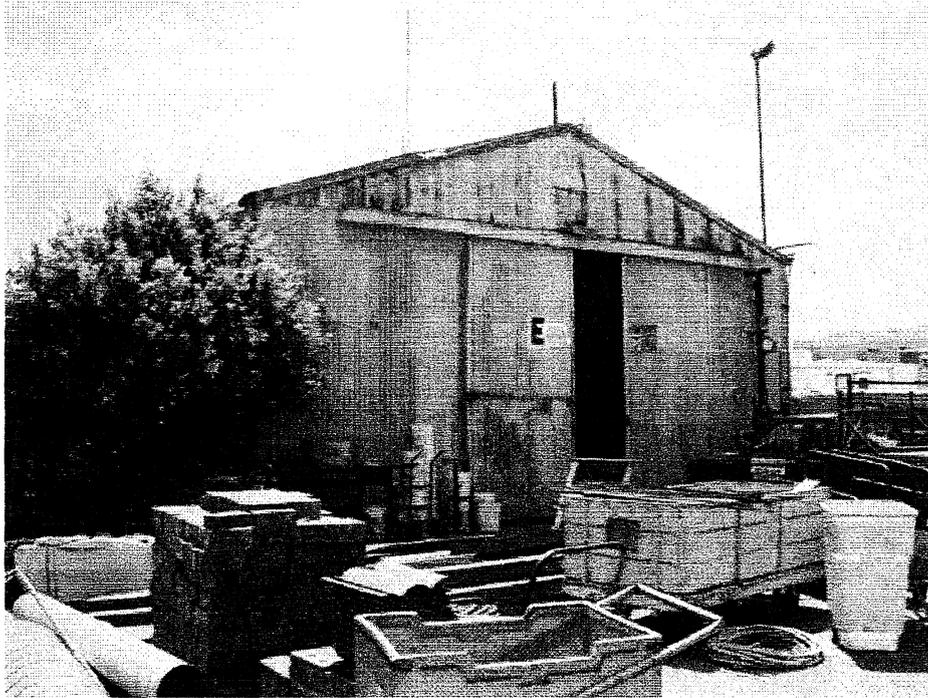
Green waste transfer area



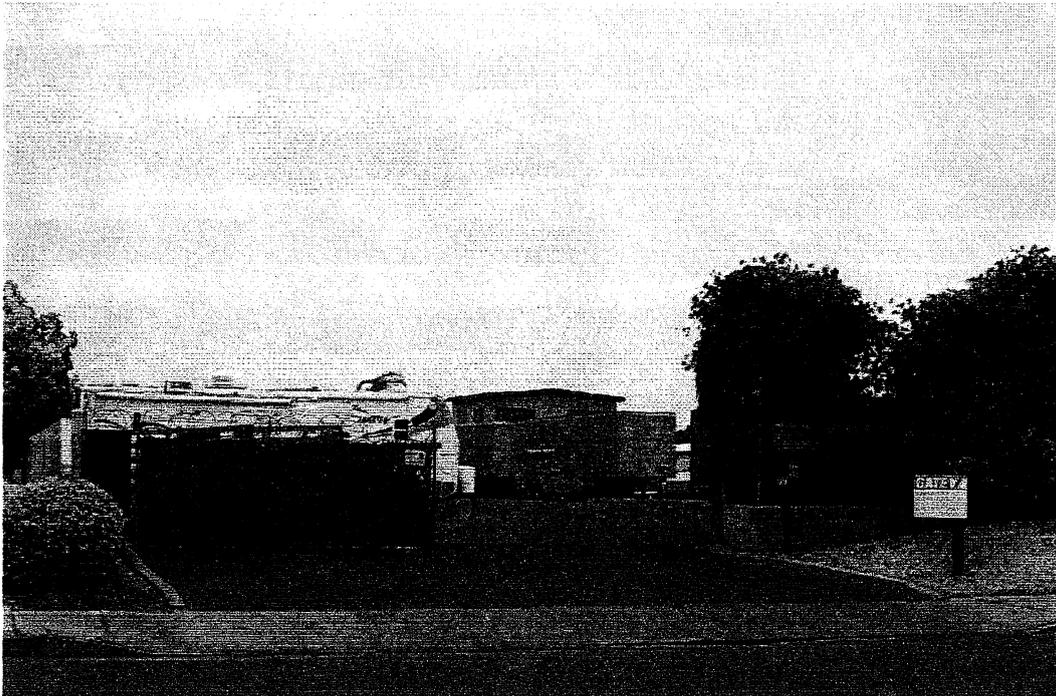
The household hazardous waste collection area



PHOTO PAGE 14



Old warehouse building used for storage



The southeast corner of the site which is leased by Budget



PHOTO PAGE 15



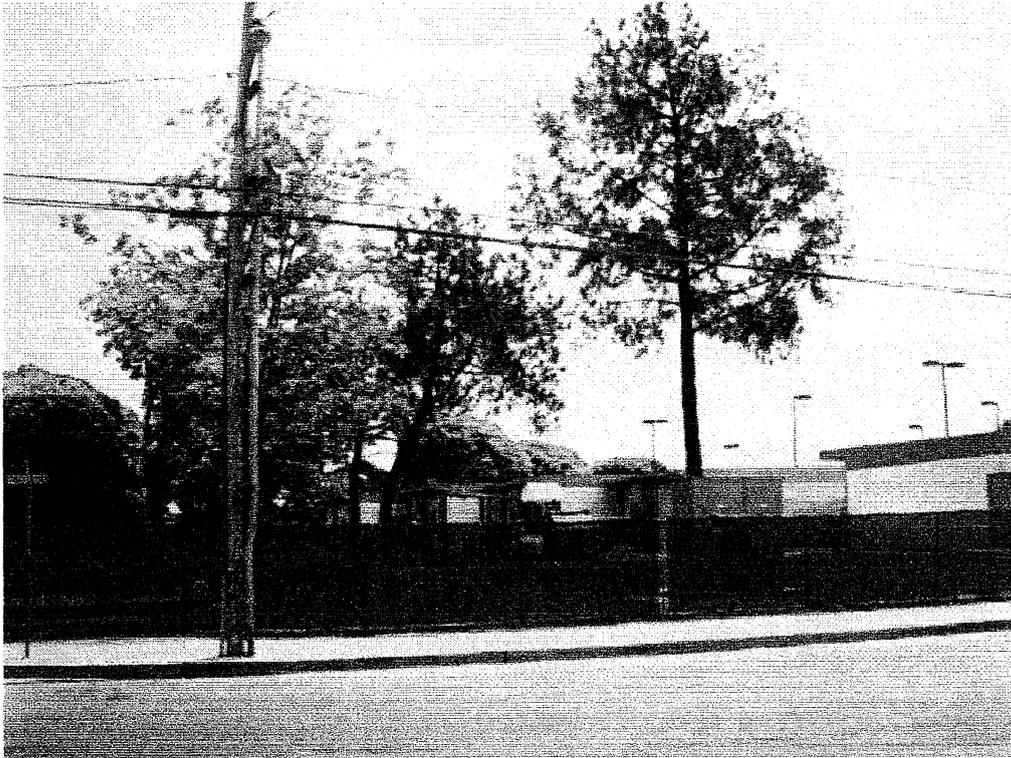
Looking south down Nichols Street. Facility Entrances are on the right



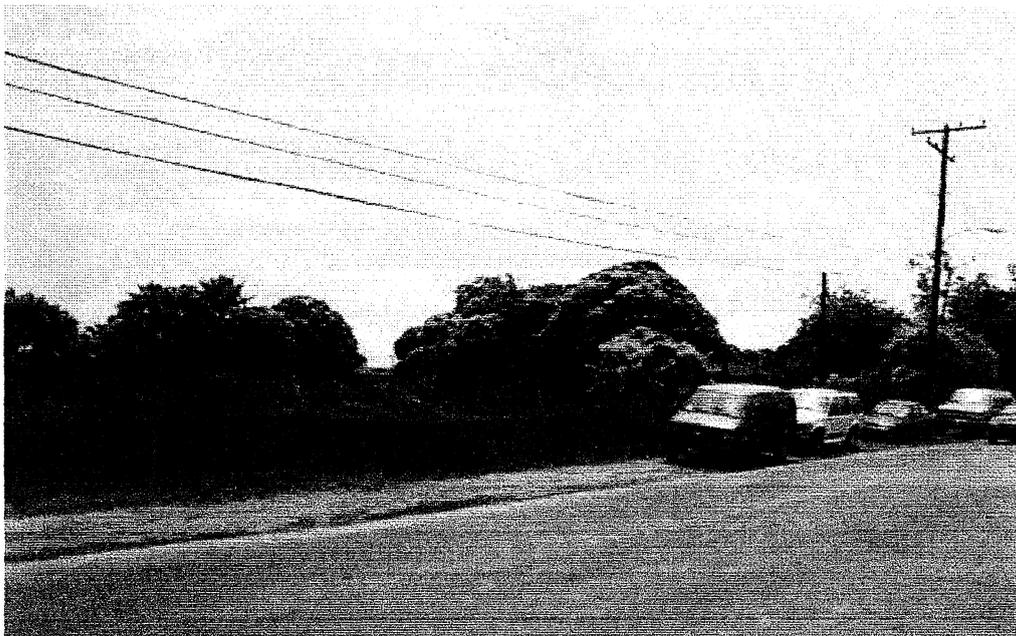
Oak View Elementary School



PHOTO PAGE 16



Oak View Elementary School



Undeveloped land located across Nichols Street to the northeast of the site



PHOTO PAGE 17



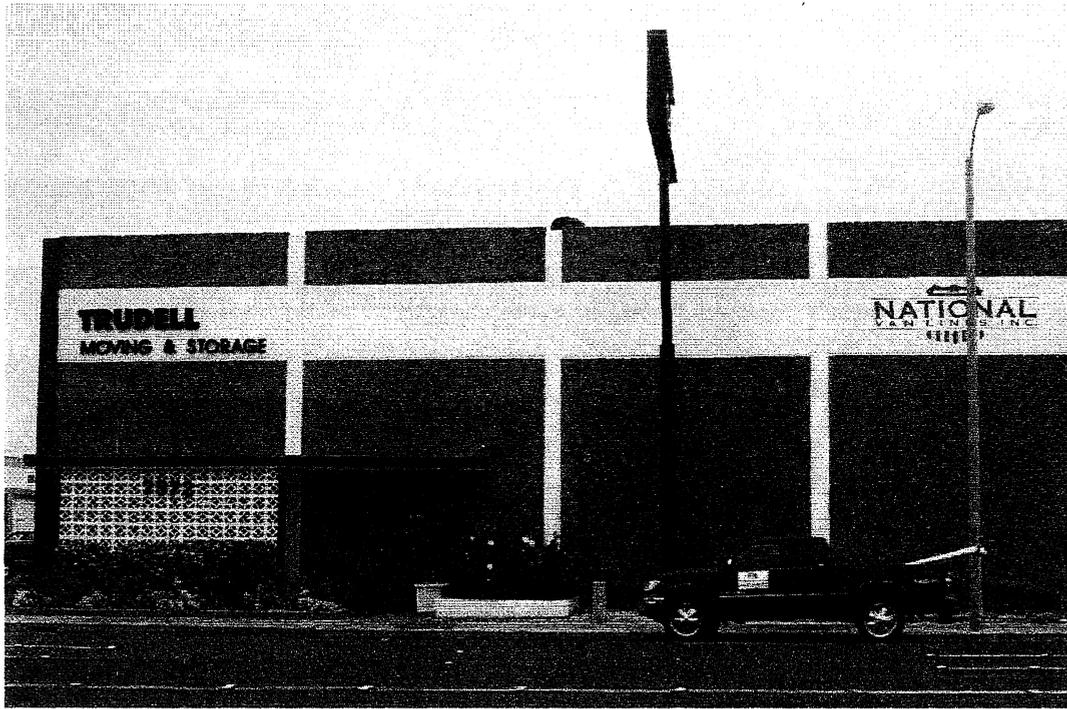
Vacant house northeast of the site across Nichols Street



Trudell Moving & storage as viewed from the site perimeter looking north



PHOTO PAGE 18



Trudell Moving & Storage as viewed from Warner Avenue



Trudell Moving & Storage (left) and Discount Tire Center and various auto repair facilities (right) as viewed from site perimeter

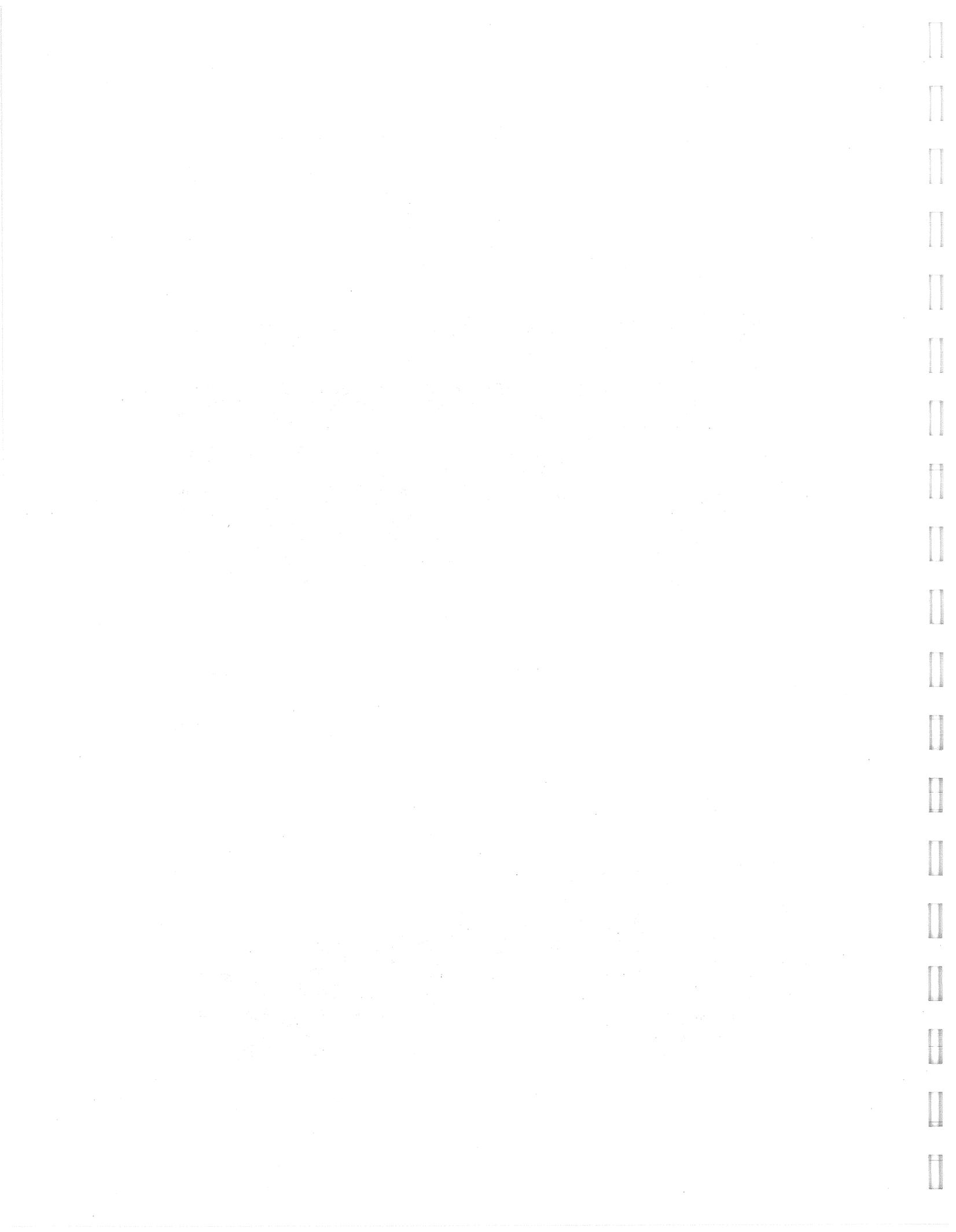


PHOTO PAGE 19



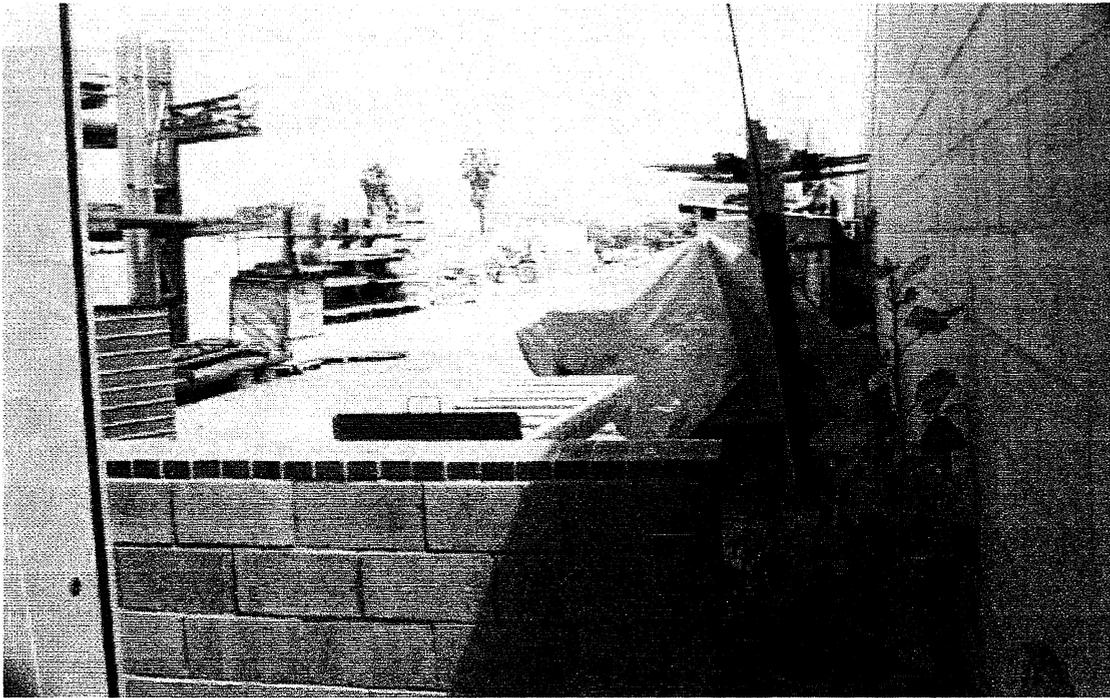
Discount Tire Center and various auto repair facilities viewed from Warner Avenue



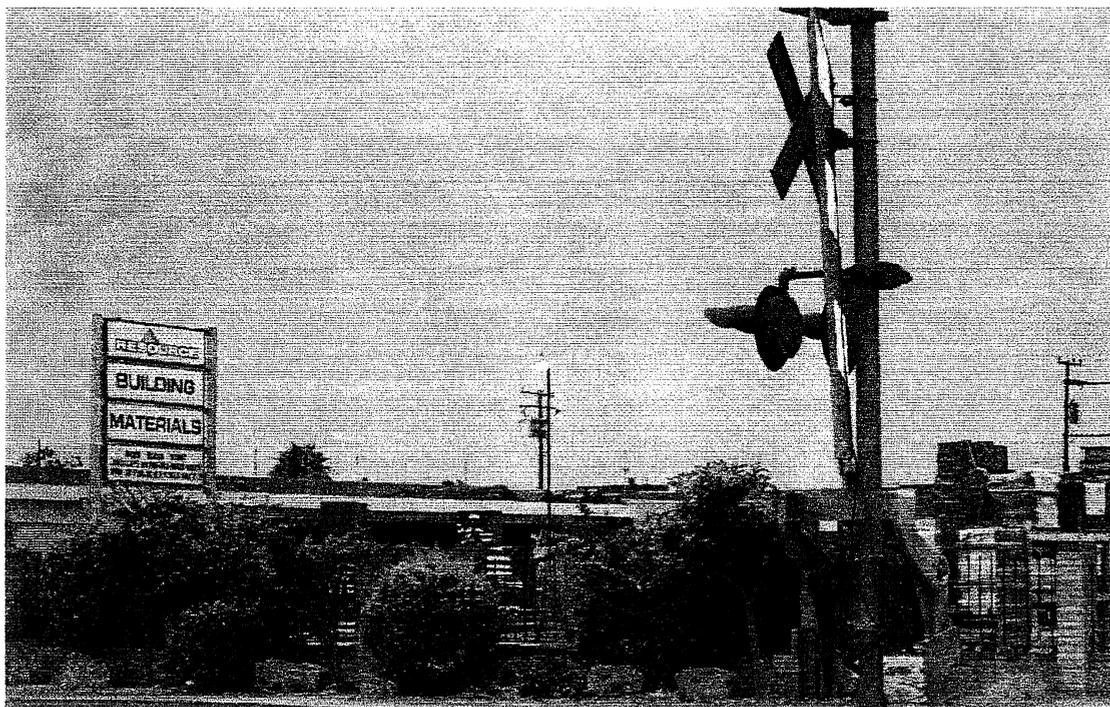
Warner Auto Center as viewed from Warner Avenue (Trudell is to the left)



PHOTO PAGE 20



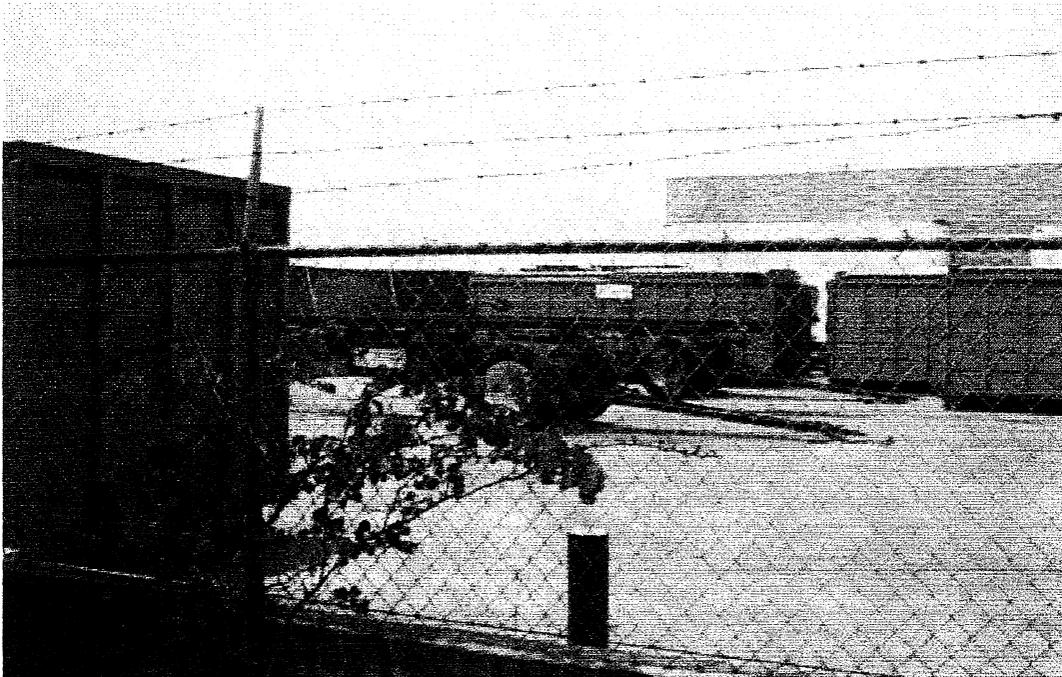
Resource Building Materials located northwest as viewed from the site



Resource Building Materials viewed from Warner Avenue



PHOTO PAGE 21



The east side of S & R Services (formerly US Rentals)



S & R Services (formerly US Rentals) as viewed from Warner Avenue



PHOTO PAGE 22



Looking south along the railroad tracks from the southwest corner of the site



Looking north along the railroad tracks from the west side of the site



PHOTO PAGE 23



Looking southwest of the site across railroad tracks



Looking west of the site across the railroad tracks



**PHOTO PAGE 24**



The Bent Manufacturing facility located south of the site



Bent Manufacturing as viewed from the southwest corner of the site



## APPENDIX F



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SANTA ANA REGION3737 MAIN STREET, SUITE 500  
RIVERSIDE, CA 92501-3339  
PHONE: (909) 782-4130  
FAX: (909) 781-6288

October 15, 1996

Mr. Richard Timm  
Rainbow Disposal Company, Inc.  
P.O. Box 1026  
Huntington Beach, CA 92647SUBJECT: NO FURTHER ACTION  
RAINBOW DISPOSAL  
17121 NICHOLS STREET  
HUNTINGTON BEACH, ORANGE COUNTY  
UST NO. 083000371

Dear Mr. Timm:

We have reviewed the August 16, 1996, "Quarterly Groundwater Monitoring/Fifth Sampling Event" report submitted by your consultant, John L. Hunter.

As required by this office, Rainbow Disposal has conducted soil and groundwater remediation (free product recovery, soil excavation, and in-situ "Steam Enhanced Recovery Process" [SERP]), and completed five (5) quarters of post-remedial monitoring.

According to the groundwater results, it appears that diesel contamination has decreased from free product and dissolved phase contamination levels of 980,000 ppb to a maximum dissolved level of 25,000 ppb (August 1996 results). In addition, all benzene, toluene, ethylbenzene, and xylenes (BTEX) results were below maximum contaminant levels (MCLs) or non-detectable (ND).

In August 1993, the SERP system appeared to reach BAT. According to EPA's sampling study conducted at this site, as discussed in the July 1995, "Innovative Technology Evaluation Report", significant total petroleum hydrocarbon (TPH) soil contamination levels still remain in "pockets" beneath the site.

These levels were discussed during a meeting held on July 7, 1994, between Rainbow Disposal, Rainbow's consultant, John L. Hunter, Peter Peuron of the Orange County Health Care Agency, and Kenneth Williams and Nancy Olson-Martin of this office. According to the results, BTEX contamination levels were all ND or were slightly above detection levels set for these compounds. Since only TPH contamination remained, this office concurred (by a letter dated July 25, 1996), that no further soil and groundwater remediation was required for this site, and that a post-remedial monitoring program would be required for a minimum of one year.

Mr. Timm

-2-

October 15, 1996

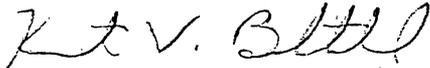
Based on our review of the post-remedial groundwater monitoring results (please refer to the attached "*Site Closure Summary*" for details), we believe that the low level groundwater contamination present beneath the site is "low risk". Based upon the available information, including current land use, and with the provisions that the information provided to this agency was accurate and representative of site conditions, no further action is required for this site.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721(e).

Once the monitoring wells have been properly abandoned at this site, please submit documentation (i.e., copies of permits, discussion of the abandonment activities, etc.) to this office.

If you have any questions, please call Nancy Olson-Martin or Kenneth R. Williams at (909) 782-4497 or 4496, respectively.

Sincerely,



for Gerard J. Thibeault  
Executive Officer

Enclosure: Case Closure Summary

cc: Orange County Health Care Agency - Peter Peuron (w/enclosure)  
John L. Hunter (w/enclosure)  
State Water Resources Control Board, UST Fund - Vickie Bouvia  
(w/enclosure)

NOM/rainbow.ltr

# CASE CLOSURE SUMMARY

## I. AGENCY INFORMATION

Date: 10/15/96

Agency Name: California Regional Water Quality Control Board, Santa Ana Region	Address: 3737 Main Street, Suite 500
City/state/zip: Riverside, CA 92501-3339	Phone: (909) 782-4497 or (909)-782-4130
Staff: Nancy Olson-Martin	Title: Sanitary Engineering Associate

## II. CASE INFORMATION

Site Name:	Rainbow Disposal			
Location:	17121 Nichols Street, Huntington Beach, Orange County			
RB Case #:	083000371			
Local Agency Case #:	N/A			
Responsible Parties:	Address:	Phone Number:		
Rainbow Disposal	17121 Nichols Street, Huntington Beach	(714) 847-3581		
Tank No. (*See Memo)	Size In Gallons	Contents	Closed In-Place Removed?	Date
1	15,000-gallon	Diesel	Removed	10/20/93
2	15,000-gallon	Diesel	Removed	10/20/93
3	6,000-gallon	Unleaded Gasoline	Removed	10/20/93
4	1,000-gallon	Motor Oil	Removed	10/20/93
5	1,000-gallon	Hydraulic Oil	Removed	10/20/93
6	550-gallon	Transmission Oil	Removed	10/20/93
7	1,000-gallon	Waste Oil	Removed	10/20/93
8	550-gallon	Waste Oil	Removed	10/20/93

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause & type of release: Pipeline - see memo (VII. Additional Comments section)	
Site characterization complete: YES [x ] NO [ ]	Date approved by oversight agency: Regional Board/OCHCA
Monitoring Wells installed: YES [X] NO [ ]	Proper screened interval: YES [x ] NO [ ]
Highest GW depth below ground surface: 25.28'	Lowest depth: 41.96'
Flow Direction: Westerly/Southwesterly	Nearest/affected SW name:
Most sensitive current GW use: MUN	Off-site beneficial use impacts: N/A
Groundwater Basin: Santa Ana Pressure	Reports(s) filed: California Regional Water Quality Control Board (Yes)
Report(s) on file? Yes	3737 Main Street, Suit 500, Riverside, CA 92501-3339

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
MATERIAL	AMOUNT	ACTION TREATMENT OR DISPOSAL W/DESTINATION	DATE
TANK	8 Tanks	Excavated and transported to TPS Technologies	10/20/93
PIPING	*See Memo	Repaired	1986
SOIL	(1) 200 cubic yards of contaminated soil excavated  (2) In-Situ Steam Enhanced Recovery Process (SERP)	TPS Technologies - thermal treatment and disposal.	(1) October/November 1993  (2) August 1991 - August 1993
GROUND-WATER	(1) FP: Automatic Recovery System/Bailing  (2) SERP	Recovered approximately 4,000 gallons of free product by bailing/automatic recovery system.  As of April 1993, 42,309 gallons of diesel (free product plus diesel vapor) recovered by SERP.	(1) 1987-1991.  (2) August 1991- August 1993.

CASE CLOSURE SUMMARY

Rainbow Disposal, 17121 Nichols Street, Huntington Beach

Page 3

October 15, 1996

UST # 083000371

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS - BEFORE & AFTER CLEANUP					
CONTAMINANT	SOIL (mg/kg)			WATER (µg/l)	
	Before (1993) (UST excav.)	(1986-1987) (piping trench)	After *(memo) (Maximum)	Before (Maximum Concentrations)	After (8/96) (Maximum Concentrations)
TPH-Diesel	190	39,100	31,800	Free Product/Dissolved Phase @ 980,000 ppb	25,000
TRPH (Diesel)	21,000	+NA	25,410	N/A	N/A
Benzene	0.060	2.6	0.31	6.9	0.99
Toluene	0.10	2.1	0.060	6.4	6.6
Ethylbenzene	ND	5.1	0.092	63.0	1.2
Xylenes	0.15	16.0	0.33	45.0	2.2
HVOCS (8010)	ND	Not Analyzed (NA)	NA	NA	N/A
+TRPH - N/A referred to as Oil and Grease (@ 6,940 ppm)					

#### IV. CLOSURE

Does completed corrective action protect beneficial uses per the regional board basin plan? YES  NO

Does the corrective action protect public health for current land use? YES  NO

##### SITE MANAGEMENT REQUIREMENTS

Should corrective action be reviewed if land use changes?

YES  NO

Monitoring or vapor wells decommissioned: YES  NO  N/A  Note: Remaining wells to be abandoned in the near future.

Number decommissioned: See below

Note: A total of former and/or existing monitoring wells at the site = 53  
A total of former and/or existing extraction wells at the site = 42  
A total of former and/or existing injections wells at the site = 42  
A total of former and/or existing temperature wells at the site = 38  
A total of former and/or existing product recovery wells at the site = 2

Note: Majority of these wells were abandoned in October and November 1993

List of enforcement actions taken: Cleanup and Abatement Order No. 87-96 issued on July 10, 1987.

List enforcement action rescinded: Cleanup and Abatement Order No. 87-96 to be rescinded.

#### VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is used as a municipal solid waste transfer/recycling facility. The site covers approximately 4.64 acres.

In 1984, an underground diesel fuel pipeline (used to supply fuel to the trucks) was punctured during digging operations. The leaking pipeline was not discovered for approximately twenty-two (22) months. In 1986, field tests and inspection revealed the presence of diesel contaminated soil. It was determined that approximately ~70,000 to 135,000 gallons of diesel fuel leaked into the surrounding soil and groundwater. The pipeline was repaired.

Approximately 4,000 gallons of free product was recovered by manual bailing and an automatic recovery system (auto-skimmer) was implemented on January 20, 1988. From August 1991 to August 1993, site remediation for both soil and groundwater included "In-Situ Steam Enhanced Recovery Process (SERP)" technology. Note: refer to EPA's July 1995, "Innovative Technology Evaluation Report" for further details regarding this remedial method. Approximately, 42,309 gallons of fuel (free product plus diesel vapor) was recovered by this system.

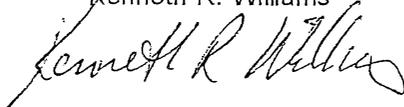
In addition, eight (8) tanks and associated piping were removed in 1983 under the direction of the Orange County Health Care Agency (OCHCA). The tanks were removed, and immediately crushed and destroyed at the transfer station on 10/20/93. Soil samples were collected and results revealed elevated levels of TRPH (T1-15' at 21,000 ppm) in the location of the former waste oil tank. At that time, approximately 200 cubic yards of contaminated soil was excavated and disposed of at the TPS facility in Adelanto. No further remediation was required by the OCHCA at that time.

VII. LOCAL AGENCY/RWQCB REPRESENTATIVE DATA

OCHCA NAME: Peter Peuron Title: Hazardous Waste Specialist

SIGNATURE: Note: Concurrent approval granted via telephone on 10/11/96 (conversation between Peter Peuron of the OCHCA and Nancy Olson-Martin of the RWQCB.

RWQCB NAME: Kenneth R. Williams Title: Senior Engineering Geologist

SIGNATURE:  DATE: 10-15-96



## 1.0 INTRODUCTION

As part of post-remedial monitoring, three groundwater monitoring wells were installed at the Rainbow Disposal Company site as required by the Regional Water Quality Control Board. The installation of the three wells included the collection of soil samples at five foot intervals and the subsequent analysis of three soil samples per well.

### 1.1 PROJECT BACKGROUND

In 1984, a diesel fuel pipeline at the Rainbow Disposal Company site in Huntington Beach, California, was punctured during digging operations at the site. The leaking pipe was not discovered for approximately 22 months, during which time an estimated 70,000 to 135,000 gallons of diesel fuel leaked into the surrounding soil and groundwater<sup>1</sup>.

After discovery of the contamination, several investigative studies were undertaken by various consulting firms (Converse Environmental, HydroFluent, Hughes Environmental).

A full-scale Steam Enhanced Recovery Process system was implemented at the site over a two year period beginning circa 1991. The remediation system was shut down in October 1993, and the injection, extraction, temperature and a majority of the groundwater monitoring wells were removed. During the remediation program, an estimated 4,000 gallons of free product, 700 gallons of diesel fuel in water and 15,400 gallons of diesel fuel in vapor phase had been recovered. Confirmation soil samples at the conclusion of the project (by SAIC) found that localized areas of elevated contamination were still present at the facility<sup>2</sup>.

In order to provide post-remediation monitoring, a total of seven groundwater monitoring wells were left in place at the site. Two of these wells were later found to be unusable due to damage from residual subsurface heat (estimated from previous work to be well in excess of 140°F). The Regional Water Quality Control Board required that three additional groundwater monitoring wells be installed and sampled on a quarterly, then semi-annual basis.

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<sup>1</sup> Information from Science Applications International Corporation draft report entitled "In Situ Steam Enhanced Recovery Process Innovative Technology Evaluation Report", dated February 1994.

<sup>2</sup> Ibid

## 1.2 SITE LOCATION

The subject site is located at 17121 Nichols Street in the City of Huntington Beach, California. The site is currently occupied by the Rainbow Disposal Company, a municipal solid waste transfer/recycling facility. This facility occupies approximately 5 acres.

The facility is bordered on the north, west and south by light industrial properties, and on the east by residential units (across Nichols Street). A Southern Pacific Railroad right-of-way runs along the western property boundary. The nearest major intersection is Beach Boulevard and Warner Avenue, to the northeast of the property.

## 1.3 REGIONAL GEOLOGY

The subject site is within the central Los Angeles Basin, in the City of Huntington Beach, Orange County, California. The site is located on the Huntington Beach Mesa, and is immediately northeast of the Newport-Inglewood Fault Zone. The Mesa is underlain by Pleistocene marine terrace deposits and Tertiary/Mesozoic sedimentary deposits to an approximate depth of 14,000 feet. The Mesa is bordered on the east by the Santa Ana Gap and on the west by the Bolsa Gap<sup>3</sup>.

The elevation of the site is approximately 25 to 30 feet above mean sea level<sup>4</sup>.

## 1.4 SITE STRATIGRAPHY AND HYDROGEOLOGY

Stratigraphy at the site consists generally of interbedded sand and clay layers of varying thickness and permeability. These layers have been identified in previous reports as "Sands" and "Aquitards", and have been assigned alphanumeric labels based on composition and depth (i.e. "A Sand, A Aquitard, B Sand, etc.).

The main stratigraphic area of concern consists of the B Sand and A Sand aquifers and the dividing B Aquitard. Higher stratigraphic units occur in the vadose zone at the site.

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<sup>3</sup> Information from HydroFluent, Inc. report entitled "Work Plan Clean-Up and Abatement Order 87096", dated January 23, 1989.

<sup>4</sup> USGS 7.5 minute Topographic Map, Newport Beach Quadrangle, 1961 Photorevised 1981

Groundwater at the site first occurs in the B Sand at an approximate depth of 35 feet below surface. This perched aquifer is underlain by the B Aquitard, which is between 2 and 15 feet in thickness, and appears to be a confining bead for the lower A Sand aquifer. The A Sand aquifer occurs approximately 40 to 55 feet below ground surface, and is approximately 15 to 20 feet in thickness. According to previous reports, the A Sand appears to be a confined (artesian) aquifer, with very little hydraulic continuity between the B Sand aquifer and the A Sand aquifer.

### 1.5 WORKPLAN SUMMARY

The proposed scope of work for this project consisted of:

The installation of three 4 inch steel groundwater monitoring wells to supplement five groundwater wells currently in place. The screened interval of the newly installed wells was planned to extend throughout the B Sand (to a depth of approximately 40 feet). See Figure 2 for well locations.

The collection of soil samples at five foot intervals from all of the well locations.

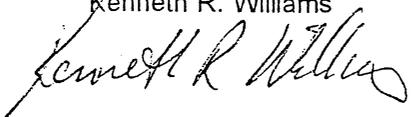
Laboratory analysis of three selected soil samples from each well and all groundwater samples for diesel fuel using EPA Method 8015M and for benzene, toluene, ethylbenzene and xylene using EPA Method 8020.

VII. LOCAL AGENCY/RWQCB REPRESENTATIVE DATA

OCHCA NAME: Peter Peuron Title: Hazardous Waste Specialist

SIGNATURE: Note: Concurrent approval granted via telephone on 10/11/96 (conversation between Peter Peuron of the OCHCA and Nancy Olson-Martin of the RWQCB.

RWQCB NAME: Kenneth R. Williams Title: Senior Engineering Geologist

SIGNATURE:  DATE: 10-15-96

