

P R E L I M I N A R Y

RCRA PART B POST-CLOSURE PERMIT APPLICATION

Submitted to
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012

Prepared for
United Musical Instruments USA, Inc.
1000 Industrial Parkway
Elkhart, IN 46516

Prepared by

Woodward-Clyde



December 31, 1997

December 31, 1997
Reference No. 944X050F

Jeff Bryan
Hazardous Waste Permits Unit
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012

Subject: United Musical Instruments USA, Inc. RCRA Part B Post-Closure Permit Application

Dear Mr. Bryan:

Transmitted herewith are two copies of the Preliminary RCRA Part B Post-Closure Permit Application for the United Musical Instruments USA, Incorporated (UMI) facility located in Nogales, Arizona. Woodward-Clyde International-Americas is submitting this document on behalf of UMI. Currently, UMI is preparing a Plume Delineation Work Plan to further define the extent of VOC contamination. Therefore, information in the Preliminary RCRA Part B Post-Closure Permit Application related to plume delineation is not complete. For your reference two copies of the Revised Interim Startup Plan submitted to ADEQ on October 9, 1997 are also provided.

Additional items were requested by ADEQ in a letter to UMI dated November 13, 1997 (REF: HW97-0381). These items are provided as indicated in the table below.

Requested Item	Location
Groundwater Remediation System (GWRS) Operation and Maintenance (O&M) Manual	Updated cutsheets for Capacitive Proximity Switches and Photohelic Pressure Switch/Gage are provided as an attachment to this letter. The motor of pump PS-1 was replaced, not the entire pump; therefore, no cutsheet is provided.
Drawing/diagram with all dimensions of the GWRS (tank sizes, piping diameters, etc.)	Appendix 3 (Figure 2-2)
Revised Post-Closure Plan	Appendix 3
Complete floodplain and surface water information and a Flood Insurance Rate Map	Section 3.11.2 & Figure 3-5
Recent aerial photo	Appendix 4 (Figure A4-4)
Topographic Map	Figure 3-1 and Figure A4-1
Site soil and geologic maps	Soil Map - Appendix 4 (Figure A4-2) Geologic Map - Appendix 4 (Figure A4-5)
Current property ownership maps	Figures 3-7a and 3-7b
RCRA Part A Permit Application	Appendix 4

\$10,000 application fee per Arizona Administrative Code (AAC) R18-8-270.G.1.a	To be submitted directly by UMI
Security Plan (e.g., access control, etc.)	Section 3.4 and Appendix 3 (Section 2.5)
Updated Contingency Plan	Appendix 3 (Section 2.7)
Character/Background Reference for Hazardous Waste Facility Applicants	Appendix 1

Please feel free to call either of the undersigned with any questions or comments.

Sincerely,

WOODWARD-CLYDE INTERNATIONAL-AMERICAS

Laurie T. LaPat-Polasko

Laurie T. LaPat-Polasko, Ph. D.
Vice President

Brock Rogers
Brock Rogers
Staff Engineer

cc: Robert Palmer, UMI
Wes Stevens, UMI

P R E L I M I N A R Y

**RCRA PART B POST-CLOSURE
PERMIT APPLICATION
UNITED MUSICAL
INSTRUMENTS USA, INC.
NOGALES, ARIZONA FACILITY**

Prepared for
United Musical Instruments USA, Inc.
1000 Industrial Parkway
Elkhart, In 46516

December 31, 1997



Woodward-Clyde International-Americas
410 N. 44th Street, Suite 350
Phoenix, Arizona 85008
(602) 225-0150
944X050F

Revised 2006-2009 by
Tim Bock
Corporate Environmental Mgr
Conn-Selmer, Inc.
600 Industrial Parkway
Elkhart, IN 46516

February 27, 2009



RCRA PART B POST-CLOSURE PERMIT APPLICATION

United Musical Instruments USA, Inc.

December 31, 1997

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

UNITED MUSICAL INSTRUMENTS USA, INC.



Robert W. Palmer
President

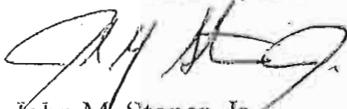
2006-2009 REVISIONS TO RCRA PART B POST-CLOSURE PERMIT APPLICATION

Conn-Selmer, Inc.

February 27, 2009

I certify under penalty of law that this document and attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

CONN-SELMER, INC.



John M. Stoner, Jr.
President & CEO



3.19.3 Delineation of Waste Management Area, Property Boundary, 3-8
and Point of Compliance

3.19.4 Description of Contaminant Plume 3-8

3.19.5 Plans and Engineering Report Describing the Groundwater 3-9
Monitoring Program

3.19.6 Detection Monitoring Program..... 3-10

3.19.7 Compliance Monitoring Program 3-10

3.19.7.1 Description of Wastes 3-10

3.19.7.2 Characterization of Groundwater 3-11

3.19.7.3 Compliance Monitoring Constituents 3-11

3.19.7.4 Proposed Concentration Limits 3-11

3.19.7.5 Proposed Groundwater Monitoring System 3-12

3.19.7.6 Sampling, Analysis, and Statistical Procedures 3-12

3.19.7.7 Sampling for Appendix IX parameters 3-12

3.19.7.8 Compliance Monitoring Schedule..... 3-13

3.19.7.9 Reporting 3-13

3.19.7.10 Exceeding Concentration Limits 3-13

3.19.8 Corrective Action Program..... 3-14

3.19.8.1 Applicability 3-14

3.19.8.2 Description of Corrective Action Program 3-14

3.19.8.3 Groundwater Remediation System..... 3-14

3.19.8.4 Groundwater Protection Standards..... 3-14

3.19.8.5 Groundwater Monitoring System..... 3-14

3.19.8.6 Corrective Action Period..... 3-14

3.19.8.7 Corrective Action Property Boundary 3-15

3.19.8.8 Reports 3-15

3.19.8.9 Modifications 3-15

Section 4 References 4-1

Figures

Figure 3-1	Site Location Map
Figure 3-2	Facility Layout Diagram
Figure 3-3	Monitoring Well Location Map
Figure 3-4	Local Surface Water Flow
Figure 3-5	Flood Insurance Rate Map
Figure 3-6	Regional Surface Water Map
Figure 3-7a	Property Ownership Map
Figure 3-7b	Property Ownership Map
Figure 3-8	TCE Concentrations in Groundwater
Figure 3-9	1,1-DCE Concentrations in Groundwater

Tables

Table 3-1	Estimated Quantities of Select Compounds Discharged to the Former Surface Impoundment (1970-1982)
Table 3-2	Location Of AWQS Exceedences and Highest Observed Concentrations for Groundwater Monitoring Wells
Table 3-3	Proposed Concentration Limits for Groundwater Constituents
Table 3-4	Compliance Monitoring Schedule
Table 3-5	Corrective Action Program Periods

Appendixes

Appendix 1	Character/Background Reference for Hazardous Waste Facility Permit Applicants
Appendix 2	Consent Order D-47-93
Appendix 3	Revised Post-Closure Plan
Appendix 4	Part A Permit Application
Appendix 5	ADEQ Letter PS 785 and Closure and Post-Closure Plans (1986
Appendix 6	Historical Volatile Organic Compound (VOC) Groundwater Monitoring Data
Appendix 7	Groundwater Flow Direction and Pumping Activity of City of Nogales Well No. 2 (DWW-2)

RCRA PART B POST-CLOSURE PERMIT APPLICATION

United Musical Instruments USA, Inc.

December 31, 1997

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

UNITED MUSICAL INSTRUMENTS USA, INC.



Robert W. Palmer
President

1,1-DCA	1,1-Dichloroethane
1,2-DCA	1,2-Dichloroethane
1,1-DCE	1,1-Dichloroethene
1,1,1-TCA	1,1,1-Trichloroethane
1,1,2-TCA	1,1,2-Trichloroethane
A.A.C.	Arizona Administrative Code
AADT	Annual Average Daily Traffic
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
AHWMA	Arizona Hazardous Waste Management Act
atm	atmospheres
AWQS	Aquifer Water Quality Standards
bls	Below land surface
Cis-1,2-DCE	Cis-1,2-Dichloroethene
CFR	Code of Federal Regulations
cfm	cubic feet per minute
CHWMU	Closed Hazardous Waste Management Unit
cm	centimeters
EPA	Environmental Protection Agency
ft	feet
GQPP	Groundwater Quality Protection Permit
gpd	gallons per day
gpm	Gallons per minute
MCLs	Maximum contaminant levels
µg/L	micrograms per liter
mg/L	Milligrams per liter
NA	Not applicable
NPDES	National Pollutant Discharge Elimination System
NS	No Standard
OAQ	Office of Air Quality
OSHA	Occupational Safety and Health Administration
PCE	Perchloroethylene (tetrachloroethylene)
psi	pounds per square inch
PQGWP	Poor Quality Groundwater Withdrawal Permit
PVC	Polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
scfm	standard cubic feet per minute
SEAGO	Southeast Arizona Governments Organization
sec	seconds
TCE	Trichloroethylene
Trans-1,2-DCE	Trans-1,2-Dichloroethene
UMI	United Musical instruments
USGS	United States Geological Survey
VOCs	Volatile organic compounds

The subject property formerly owned and operated by Conn-Selmer, Inc., successor to United Musical Instruments USA, Inc. (UMI) in Nogales, Arizona, was the site for musical instrument manufacturing from 1966 to 2003. During the time it operated on the site, UMI treated its process wastewater on-site using a pH neutralization tank, a surface impoundment, and two land treatment units, collectively referred to as the closed hazardous waste management units (CHWMU). Effluent from the pH neutralization tank was discharged to the surface impoundment. Occasionally, excess water in the surface impoundment was pumped to the land treatment units. Discharges of waste to the surface impoundment were terminated in November 1985 and closure of the impoundment was completed in 1987. However, investigations have shown that volatile organic compounds (VOCs) discharged to the surface impoundment have migrated to the groundwater beneath and downgradient of the site.

40 CFR § 270.1(c) states that a land-based facility ceasing to receive waste after July 26, 1982 or submitting a closure certification after January 26, 1983 is required to obtain a Resource Conservation and Recovery Act (RCRA) Post-Closure Permit for the closed facility. Since discharges to the surface impoundment did not cease until 1985, UMI is required to submit a Post Closure Permit Application in accordance with 40 CFR § 270.1(c). The objective of this report is to address this requirement.

1.1 Report Scope

This report includes a RCRA Part B Permit Application, an amended Part A Hazardous Waste Permit Application, and a Revised Post-Closure Plan for the UMI facility located at 1310 West Fairway Drive in Nogales, Arizona. The Part A Permit Application is discussed in Section 2 and consists of the completed US Environmental Protection Agency (EPA) Part A Form 8700-23 (Rev. 2-28-95) and relevant attachments and figures. The Part B Permit Application presented in Section 3 consists of responses to relevant regulatory requirements of 40 CFR § 270 with supporting tables, figures, and appendixes. Regulatory requirements are addressed in a citation-response format. Major headings and citation of applicable federal regulations are presented in bold-face type and the corresponding permit application discussion in normal type. If a section does not apply to the application, it is stated that the section part is not applicable and an explanation is provided.

In addition to the Part A and Part B Permit Applications, the Arizona Department of Environmental Quality (ADEQ) requires Part B Permit applicants to supply character background information sufficient to demonstrate their reliability, expertise, integrity and competence to operate a hazardous waste facility. This application supplement is provided in Appendix 1.

1.2 FACILITY REGULATORY STATUS AND HISTORY

On August 18, 1980, UMI (formerly C.G. Conn) filed a notice of hazardous waste activity at its Nogales, Arizona facility with the EPA as required under RCRA. On November 19, 1980, UMI submitted a RCRA Part A Permit Application. The Part A application identified a surface

impoundment which was used to dispose of certain hazardous wastes at the Nogales facility. The facility was consequently given RCRA interim status and groundwater monitoring was performed to comply with interim status requirements. The monitoring of the groundwater indicated that the surface impoundment affected groundwater quality. UMI investigated and began remediation of the contamination. The impoundment was subsequently excavated and closed to provide necessary source control. The closure was conducted pursuant to a plan which was approved by the ADEQ in December 1986. UMI notified ADEQ in February 1988 that the impoundment had been closed under RCRA and the Arizona Hazardous Waste Management Act (AHWMA). Although certified as closed, the facility remains under RCRA interim status standards until a Part B Post-Closure Permit is issued.

To mitigate the impacts of contamination on groundwater resources, UMI conducted an evaluation of groundwater remediation alternatives in early 1987 based on data collected to date (Woodward-Clyde Consultants, 1987a). The results of this evaluation indicated that extraction well(s) should be used to remove groundwater for above-ground treatment via air stripping at the UMI Nogales facility. The alternative evaluation also recommended the use of treated water for irrigation by the City of Nogales at Meadow Hills Golf Course.

In order to expedite groundwater remediation at the facility, a Consent Order (No. D-47-93) was signed between UMI and ADEQ. The Consent Order became effective August 18, 1993, and describes the work to be performed to remediate groundwater contamination near the UMI facility. Amendments were made in July 1994, May 1995, and January 30, 1998 (Consent Order No. Z-10-98), with the latter superseding Consent Order No. D-47-93.

Following a facility inspection in December 1992, ADEQ requested that UMI resume quarterly groundwater monitoring of the monitoring wells specified in the Consent Order. UMI resumed quarterly groundwater monitoring activities in January 1993, and has continued monitoring in accordance with the schedule set forth in the Consent Order and amendments.

UMI entered into an agreement in 1988 with the City of Nogales to be the recipient of the treated groundwater to be used as irrigation for the Meadow Hills Country Club Golf Course. During the summer of 1995, UMI, Woodward-Clyde, and ADEQ participated in a series of public workshops designed to provide information regarding the proposed cleanup activities at UMI and the preferred end-use alternatives for the treated water from the UMI remediation system. As a result of the public participation process, public approval of the use of the treated water as an irrigation supply for the Meadow Hills Country Club Golf Course was obtained. Treated groundwater has been delivered to the golf course storage pond and will be analyzed for VOCs and metals prior to use for irrigation.

1.3 CERTIFICATION OF PERMITS AND AGREEMENTS

In accordance with applicable regulations, UMI has obtained or applied for the appropriate environmental permits required to operate the groundwater treatment system located at the Nogales Facility. A general description and current status of each permit is given below. A copy of each permit is provided in the *Revised Interim Startup Plan* (Woodward-Clyde International-Americas, 1997a).

PRELIMINARY SECTION ONE

Introduction

- **ADWR Poor Quality Groundwater Withdrawal Permit (PQGWP No. 59-518472)** - This permit was originally issued on December 14, 1987. In 1993, a renewal application was approved by the Arizona Department of Water Resources (ADWR) and the permit was reissued.
- **ADEQ Groundwater Quality Protection Permit (GQPP No. G-0004-12)** - This permit was issued on November 11, 1987, and was superseded by the Aquifer Protection Permit No. P-100311 issued October 16, 1998.
- **ADEQ Aquifer Protection Permit (APP No. P-100311)** - This permit was issued on October 16, 1998. An APP application was originally submitted to ADEQ by UMI in December of 1992. UMI filed addendums to the application with ADEQ in March and December of 1993. In response to a letter issued by ADEQ on August 4, 1993, additional information was submitted by UMI to ADEQ. By letter dated October 14, 1997, ADEQ notified UMI that the technical review of the APP application and additional information was complete. Based on the review, ADEQ requested that UMI supply ADEQ with additional information, which it did.
- **ADEQ Air Quality Division Class II Air Permit (AQCP No. 1000388)** - An installation permit application was received from the Office of Air Quality (OAQ) in January 1988 for the groundwater treatment system. Due to the low emission rates associated with this system, the OAQ subsequently determined on September 8, 1990, that an operating permit was not required. Accordant with new permit requirements issued by the ADEQ Air Quality Division, UMI applied for a Class II Permit on February 16, 1996. This permit was issued in 1998, then terminated in October 2004 based on ADEQ's determination that, based on annual emissions from the treatment system (0.765 tons per year), the permit would no longer be required (*Letter from Nancy Wrona, Air Quality Division, ADEQ, to John Stoner, Conn-Selmer, Inc., dated October 19, 2004*).

Relevant agreements associated with the groundwater treatment facility include the Consent Order previously referenced and an Agreement between UMI and the City of Nogales to use treatment system effluent for irrigation at Meadow Hills Golf Course. A general description of both agreements follows:

- **Consent Order Z-10-98 Between ADEQ and UMI** - The Consent Order between UMI and ADEQ was originally executed on August 18, 1993, as D-47-93 and described the work to be performed to remediate groundwater contamination near the UMI facility. The Consent Order included requirements for: the installation and subsequent monitoring of groundwater wells, startup of the groundwater treatment system, submission of quarterly groundwater monitoring reports, and submission of a RCRA Part B Post-Closure Permit Application. The Consent Order also described additional requirements such as inspections, right of entry, data collection, and record preservation. The Consent Order was amended on July 22, 1994, to clarify monitoring requirements. A second amendment was executed on May 25, 1995, and provided for interim operation of the treatment system and discharge of the treated groundwater on-site for irrigation. The last amendment was executed on January 30, 1998 (Consent Order No. Z-10-98), that superseded Consent Order No. D-47-93. Consent Order No. Z-10-98 included the additional requirements of Quarterly Progress (status) Reports and an Annual Groundwater Monitoring Report summarizing the monitoring data for the year. A copy of the Consent Order is provided in Appendix 2.

- **Agreement Between the City of Nogales and UMI (the Agreement)** - The original agreement (dated August 18, 1988) provides for inspection and startup of the groundwater remediation system, additional groundwater contamination evaluation, and continued groundwater monitoring. The original agreement was amended on September 18, 1996, and contains explicit sampling frequencies for the initial phase of startup activities. Both the original and amended agreements are provided in the Revised Post-Closure Plan (Appendix 3).

In a letter dated November 13, 1997, ADEQ requested that UMI submit an amended RCRA Part A Permit Application (EPA 8700-23-95). The Part A Permit Application included in Appendix 4 replaces the Part A application previously submitted to ADEQ and EPA.

3.1 GENERAL FACILITY DESCRIPTION [§270.14(b)(1)]

The 8-acre site is located at 1310 West Fairway Drive, Nogales, Arizona, in a low-density area, zoned for light industrial use within the city limits, approximately 800 feet west of Interstate 19 at 1310 W. Fairway Drive (see Figure 3-1), in the northeast quadrant of the northeast quadrant of Section 36, Township 23 South, Range 13 East, Santa Cruz County, Arizona. The facility was the site for musical instrument manufacturing from 1966 to 2003, and is currently being used for vehicle dismantling. Prior to 1966, the property was undeveloped land.

Conn-Selmer sold the property December 2, 2004, to AD & R Fairway, LLC. As part of the transaction, AD & R Fairway agreed to provide Conn-Selmer the control center and office space inside the building, and the fenced-in area comprising the Corrective Action Management Unit, at no cost to Conn-Selmer, and allow its representatives access to the site for the purpose of managing the Corrective Action Management Unit and conducting groundwater sampling. In turn, Conn-Selmer retained full responsibility for the continued compliance and costs of the Corrective Action Management Unit until such time that its obligations have been determined to have been met by the ADEQ.

3.1.1 Former Hazardous Waste Management Units

Three waste management units were previously located at the site. The units were a surface impoundment, pH adjustment tank with associated piping, and two land treatment areas. These units were closed under RCRA and AHWMA on February 1, 1988. A brief description of the former hazardous waste management units is provided below. The former location of these units is shown on Figure 3-2.

Surface Impoundment. The surface impoundment was used for the disposal of industrial and sewage wastewater from the plant. Groundwater investigations have shown that VOCs discharged to the surface impoundment have migrated to the groundwater beneath and downgradient from the site. During closure, the contents of the surface impoundment and contaminated soils associated with the surface impoundment were excavated, removed from the site and properly disposed. The surface impoundment was backfilled with clean material and graded such that ponding would not occur.

pH Adjustment Tank. The pH adjustment tank was an underground concrete vault used as a contact chamber for industrial wastewater with crushed limestone. The purpose of this contact was to raise the pH and precipitate metal carbonates from solution prior to discharging the industrial wastewater into the surface impoundment. As part of closure activities, the material inside the tank, the piping and contaminated soil associated with the tank were removed from the site and properly disposed.

Land Treatment Areas. The land treatment areas were located to the northeast of the manufacturing building as shown on Figure 3-2. During the years 1980-1983 these areas received excess water that had ponded on the surface impoundment. The excess water was discharged through a garden hose from the surface impoundment to one of the two treatment areas. Approximately 57,600 gallons of wastewater was pumped to these areas over the three year period. The contaminated soil in the land treatment areas were disced during closure so that contaminants were volatilized, and thus removed from the soil.

3.1.2 Groundwater Treatment System

VOC contaminated groundwater associated with the former surface impoundment is currently being withdrawn from extraction well (EW-2) located immediately north of the UMI property (Figure 3-3). The extracted groundwater is treated using two air stripping towers operated in series. Treated effluent is transferred via pipelines to a lined irrigation pond (coordinates 31°22'53.4"N, 110°58'28.43"W) for use in surface irrigation at the Meadow Hills Country Club Golf Course, owned by the City of Nogales. All groundwater treatment activities occur in an above ground concrete bermed area that provides secondary containment for the groundwater treatment system. A detailed description of the treatment system is provided in the Revised Post-Closure Plan (Appendix 3).

3.2 CHEMICAL AND PHYSICAL ANALYSIS OF HAZARDOUS WASTES [§270.14(b)(2)]

In 1966, C.G. Conn constructed a surface impoundment at the current UMI facility. Discharges to the impoundment included both sanitary and industrial liquid waste produced on-site. Neutralized industrial waste and treated sanitary waste were blended in the surface impoundment, which was aerated at the time.

The industrial wastewater consisted of rinse water from plating and buffing operations. Table 3-1 shows a list of the estimated amount of chemicals discharged to the surface impoundment between 1970 and 1982. Discharge quantity estimates were obtained from the *Closure and Post-Closure Plans* (Woodward-Clyde Consultants, 1986a), provided in Appendix 5. Discharge of industrial liquid waste to the surface impoundment prior to 1970 was not measured. According to Mr. Robert Hartman, the Facilities Environmental Manager at UMI, the chemicals used prior to 1970 were similar to those used between 1970 and 1982.

3.3 WASTE ANALYSIS PLAN [§ 270.14(b)(3)]

A Waste Analysis Plan per § 270.14(b)(3) is not required for the CHWMU since these units were approved as closed by ADEQ in February 1988. However, Section 3.19.7.6 presents a sampling and analysis plan for the contaminated groundwater associated with the former surface impoundment.

3.4 SECURITY PROCEDURES AND EQUIPMENT [§ 270.14(b)(4)]

Since the sources of contamination (solid, liquid, and sludges) have been removed from the site and the surface impoundment was backfilled with clean soil, physical contact with waste, structures, or equipment by unauthorized persons or livestock is not possible. Therefore, the requirements identified in §264.14(a) are not applicable to the CHWMU. However, the security procedures and equipment used for the groundwater treatment facility is presented in the Revised Post-Closure Plan (Appendix 3). The *Health and Safety Plan* included in the *Revised Interim Startup Plan* (Woodward-Clyde International-Americas, 1997a) presents safety guidelines to be utilized during operation of the groundwater treatment facility.

3.5 GENERAL INSPECTION SCHEDULE [§ 270.14(b)(5)]

As part of post-closure care obligations, UMI is required to have an inspection schedule in place as stated in Arizona Administrative Code (A.A.C.) R18-8-270 A (40 CFR 270.14(b)(5)). Inspectors are required to document each inspection in the operating record and sign their names and date of the inspection. The inspection schedule for the UMI facility is discussed in Section 2.6 of the Revised Post-Closure Plan (Appendix 3). The inspection schedule may be modified once continuous operation of the groundwater treatment system occurs.

3.6 REQUEST FOR WAIVER OF PREPAREDNESS AND PREVENTION REQUIREMENTS OF PART 264, SUBPART C [§270.14(b)(6)]

As stipulated under § 264.31, preparedness and prevention requirements adequate to minimize fire, explosion, or any unplanned sudden or non-sudden release of hazardous materials to air, soil, or surface water must be in place for the facility. UMI requests a waiver of this requirement, based on the following information:

- The surface impoundment was excavated, and backfilled with clean material;
- The hazardous waste management units were approved as closed by ADEQ on February 1, 1988;
- No flammable or explosive materials are associated with the CHWMU.

3.7 CONTINGENCY PLAN [§270.14(b)(7)]

A contingency plan and emergency procedures, as required under §264 Subpart D, for the CHWMU are not required since the former hazardous waste management units at the UMI facility were approved as closed. However, a contingency plan for the groundwater treatment system is included in the Revised Post-Closure Plan (Appendix 3).

3.8 DESCRIPTION OF PROCEDURES STRUCTURES AND EQUIPMENT [§270.14(b)(8)]

In accordance with the general requirements of 40 CFR 270.14 (b)(8), the following sections identify various procedures, structures and equipment associated with the CHWMU previously described to mitigate or prevent adverse impacts on human health and the environment. Since the hazardous waste management units are certified as closed, requirements of certain items in this section are not applicable.

3.8.1 Hazard Prevention in Unloading Operations

There are no unloading operations associated with the CHWMU. No existing procedures, structures, or equipment are applicable to hazard prevention in unloading operations.

3.8.2 Runoff and Flooding Prevention

There is no impacted soil or groundwater associated with the CHWMU in direct contact with surface water runoff at the UMI site. Ponding is mitigated by appropriate grading. Figure 3-4 presents the former location of the CHWMU at the site and shows the approximate direction of storm water flow based on the results of field reconnaissance activities. The primary building on the property is located atop a bluff that rises approximately 50 feet above the surrounding area. Drainage from the bluff flows radially downhill. A rock-filled drainage ditch to the north of the building is intended to provide erosion control to a relatively steep sloping region between the building and the vicinity of the former surface impoundment. Runoff from the north side of the building drains into the drainage ditch and is diverted, principally around the former surface impoundment location, to the east and west toward lower ground. During significant storm events, ponding can be observed near the northeast property boundary. Regional surface water flow is addressed in Section 3.11.2 (Location of the 100-Year Floodplain).

3.8.3 Water Supply Contamination Prevention

Residual groundwater contamination associated with the former surface impoundment exists in the vicinity of the UMI site. Section 3.19.4 presents a description of the contaminated plume and identifies existing wells in the region. The City of Nogales (the City) intermittently operates a water supply well to the south of the UMI site [Drinking Water Well No. 2 (DWW-2)]. The results of sampling conducted by the City indicates that none of the primary compounds disposed of in the former surface impoundment have been detected in DWW-2. UMI is currently preparing a plan to delineate groundwater contamination associated with the former surface impoundment. Descriptions of the groundwater monitoring program currently used to evaluate groundwater contamination and the existing treatment facility used to remediate groundwater on-site are presented in Section 3.19.7 (Compliance Monitoring Program) and the Revised Post-Closure Plan (Appendix 3), respectively.

3.8.4 Equipment Failure and Power Outage

There is no equipment and therefore no power outage impacts associated with the CHWMU. However, a description of equipment and procedures used to mitigate the impacts of equipment failure and power outage on the existing groundwater treatment facility are presented in the Revised Post-Closure Plan (Appendix 3).

3.8.5 Personnel Exposure Prevention

There is no direct human exposure to impacted soil or in situ groundwater associated with the closed units at the UMI site. Infrastructure and procedures used to mitigate personnel exposure during ex situ treatment of groundwater are presented in the *Health and Safety Plan* in the *Revised Interim Startup Plan* (Woodward-Clyde International-Americas, 1997a).

PRELIMINARY

SECTION THREE

General Part B Application Requirements

3.8.6 Atmospheric Release Prevention

Since residual groundwater contamination associated with the former surface impoundment exists only in the subsurface (see Section 3.19.4), atmospheric release of volatile contaminants from this former hazardous waste unit is expected to be minimal. However, volatile compounds are released from the air strippers. UMI applied for a Class II Permit in 1996. This permit was issued in 1998, then terminated in 2004 based on ADEQ's determination that, based on annual emissions from the treatment system (0.765 tons per year), the permit would no longer be required (*Letter from Nancy Wrona, Air Quality Division, ADEQ, to John Stoner, Conn-Selmer, Inc., dated October 19, 2004*).

3.9 PRECAUTIONS TO PREVENT IGNITION OR REACTION [§270.14(b)(10)]

The wastes (sources of contamination) have been removed from the site; therefore, there are no chemicals that would cause ignition or reaction at the CHWMU.

3.10 TRAFFIC PATTERNS [§270.14(b)(10)]

There are three roads bordering the UMI facility, the frontage road to the east, Fairway Drive to the south, and a dirt road that is maintained by the US Forest Service. The frontage road provides access to the primary (northern) building of the facility, while Fairway Drive provides access to the southern building (See Figure 3-2). Frontage Road and Fairway Drive are two-lane paved roadways extending north-south and east-west, respectively. Traffic at the facility is limited to employee and service vehicles. Employee parking is located to the west and south of the primary UMI building.

Based on verbal communications with Mr. Robert Obregon (Arizona Department of Transportation, 1997 - personal correspondence) of the Arizona Department of Transportation (ADOT), the closest available traffic count to the UMI facility is from Interstate 19 Exit Ramp 8, which has a 12,000 Annual Average Daily Traffic (AADT) count. The distance from the facility to the exit ramp is approximately 1/2 mile; therefore, traffic at UMI is significantly less than that of the exit ramp. According to Mr. Richard Gaar of the Southeast Arizona Governments Organization (SEAGO), no traffic survey has ever been performed for Fairway Drive or the frontage road in Nogales, Arizona (Southeast Arizona Governments Organization, 1997 - personal correspondence).

3.11 FACILITY LOCATION INFORMATION [§ 270.14(b)(11)]

3.11.1 Applicability of Seismic Standard

The UMI site is located in Santa Cruz County, Arizona, which is not listed in Appendix VI of 40 CFR 264. Therefore, the seismic standard does not apply.

3.11.2 Location of 100 Year Floodplain

Facility surface elevations range from approximately 3,650 feet to 3,710 feet above mean sea level (msl). As presented in Figure 3-5 (Flood Insurance Rate Map), the site is not situated in a regulated floodway or in a 100-year floodplain.

Surface runoff from the UMI facility proceeds via overland flow to the northeast for a distance of approximately 1,500 feet. Flow is then channeled by Potrero Creek. The creek is an intermittent stream which carries flow northward for a distance of approximately one mile before intersecting with Nogales Wash. The combined flows of Potrero Creek and Nogales Wash enter the Santa Cruz River approximately 4.5 miles north of the UMI facility. Figure 3-6 shows the regional surface water flow direction in the area of the UMI facility.

3.12 OPERATOR TRAINING [§ 270.14(b)(12)]

The CHWMU are no longer in operation; therefore, operator training is not required. However, the operator of the groundwater treatment system shall have completed a 40 hours OSHA (29 CFR 1910.120) course and shall meet current OSHA certification requirements.

3.13 CLOSURE PLAN AND POST-CLOSURE PLAN [§ 270.14(b)(13)]

Closure and Post-Closure Plans were submitted to ADEQ on August 25, 1986. The Closure Plan was approved by ADEQ in December 1986. ADEQ acknowledged the closure of the UMI surface impoundment, pH adjustment tank, and two land treatment units in a letter (PS 785) to Mr. Tom Burzycki of UMI, dated February 1, 1988. A copies of the approved closure plan and the referenced letter are provided in Appendix 5.

An amended Post-Closure Plan prepared by Woodward-Clyde Consultants was submitted to ADEQ on February 21, 1991. In a letter dated November 13, 1997 (HW97-0381), ADEQ requested that UMI submit a Revised Post-Closure Plan for the Nogales facility. The revised plan was requested because of changes that occurred since the original plan was submitted (i.e. closure of the impoundment, impending remediation of groundwater). A copy of the Revised Post-Closure Plan is provided in Appendix 3.

3.14 DOCUMENTATION OF CLOSURE NOTICES [§ 270.14(b)(14)]

On February 1, 1988, UMI received a letter from ADEQ (PS 785) that acknowledged the complete closure of the facility under the RCRA and AHWMA. Closure was granted based on the review and approval of investigation and closure plans, submittal of the associated reports and closure certifications (§264.115), and filing of the notice to deed (§264.119). A copy of the aforementioned letter is provided in Appendix 5.

3.15 POST-CLOSURE COST ESTIMATES, FINANCIAL ASSURANCE, AND INSURANCE [§ 270.14(b)(15, 16, 17, 18)]

The most recent post-closure cost estimates, financial assurance, and insurance information are provided in the Revised Post-Closure Plan (see Appendix 3).

3.16 TOPOGRAPHIC MAPS [§ 270.14(b)(19)]

As required under §270.14(b)(19), a topographic map showing a distance of 1,000 feet around the facility is provided in Figure 3-1 (The Site Location Map). A map showing the approximate surface water flow direction in the vicinity of UMI is provided in Figure 3-4. Figure 3-7 shows the property owners of adjacent property to the UMI facility.

3.17 INFORMATION REQUIRED UNDER § 270.3 [§ 270.14(b)(20)]

To the best of UMI's knowledge, none of the acts cited in § 270.3 are applicable to this facility.

3.18 COPY OF THE NOTICE OF APPROVAL [§ 270.14(b)(21)]

UMI has not applied for an extension to any effective date of any applicable restrictions as established under Subpart C of Part 268 (§ 268.5). UMI has not petitioned for an exemption from any prohibition defined in Part 268 Subpart C (§ 268.6). Therefore, the requirements for copies of the notice of approval for extensions or petitions is not applicable.

3.19 ADDITIONAL INFORMATION REQUIREMENTS [§ 270.14(c)]

3.19.1 Summary of Groundwater Monitoring Data

A summary of all groundwater monitoring data is included in Appendix 6.

3.19.2 Hydrogeologic Setting

Three aquifers, the Younger Alluvium, the Older Alluvium, and the Nogales Formation, all yield water to wells and are utilized for municipal, domestic, and agricultural water supplies in the Nogales area. The Older Alluvium and Nogales Formation have not been developed extensively for water supply purposes, and therefore, less information is available concerning their aquifer characteristics.

The Quaternary Younger alluvial aquifer is the most productive and is present along the major washes and riverbeds near the UMI facility. The unit is composed of unconsolidated gravel, sand, and silt, and ranges from a few feet to 100 feet thick (Woodward-Clyde, 1992). Depth to water in the Younger Alluvium ranges from land surface to 35 feet below land surface. Reported aquifer characteristics include an average transmissivity of 413,000 gallons per day per foot (gpd/ft), a hydraulic conductivity of about 10^{-3} cm/sec and a specific yield of 0.17 (Woodward-Clyde Consultants, 1986b).

The site vicinity is underlain by slightly to moderately consolidated Quaternary and Tertiary alluvium. This Older Alluvium unconformably overlies both crystalline quartz monzonite bedrock

and the Nogales Formation within the study area. The Older Alluvium consists of interbedded cobbles, gravel, sand, silt, and clay and is essentially flat lying (Woodward-Clyde Consultants, 1992).

The Nogales Formation consists of interbedded sandstone, conglomerate, fanglomerate, and silicic tuffs. It is deformed, showing dips of between 5 and 15 degrees to the west or southwest. (Woodward-Clyde Consultants, 1992). Depth to the top of the Nogales Formation is approximately 200 to 230 feet below land surface (bls) (Woodward-Clyde Consultants, 1992). The thickness of the unit is estimated to be as great as 5,000 feet (Woodward-Clyde Consultants, 1987b).

The regional groundwater flow direction has been reported to be to the north-northwest (Cella Barr Associates, 1991). This direction is parallel to the general surface water flow direction of the Nogales Wash and Upper Santa Cruz river. However, depth-to-water measurements in the UMI groundwater monitoring wells indicate a variation in the local groundwater flow direction near the UMI facility. In the past, the local gradient in the vicinity of UMI was to the east (Woodward-Clyde Consultants, 1986b). In more recent years, however, the local gradient has been shown to vary from northwest to south depending on the activity of the City of Nogales water supply well (DWW-2) south of the UMI facility (Woodward-Clyde International-Americas, 1997b). The zone of influence of DWW-2 is large enough to reverse the groundwater gradient underneath the UMI facility and subsequently change the groundwater flow direction to the south. Potentiometric maps showing the variation in the groundwater flow direction of the past couple of years are presented in Appendix 7. The variation in flow direction may be correlated with the activity of DWW-2. The pumping activity of DWW-2 is also presented Appendix 7.

3.19.3 Delineation of Waste Management Area, Property Boundary, and Point of Compliance

The CHWMU at the UMI facility were approved closed under RCRA and AHWMA in February 1988. The location of the CHWMU, along with the UMI property boundary are shown on Figure 3-2. The groundwater contamination associated with the former surface impoundment will be treated on-site using two air strippers operating in series. The location of the treatment unit is also shown in Figure 3-2. ADEQ issued a letter October 3, 2002, to request a Groundwater Plume Delineation Plan to satisfy the requirements of the Consent Order, a draft of which was then submitted to ADEQ February 18, 2003. Following comments by ADEQ in a May 6, 2003, letter, a revised GPDP was submitted June 6, 2003, and approved by ADEQ July 1, 2003.

A Groundwater Plume Delineation Completion Report was submitted to ADEQ March 7, 2005. Following comments by ADEQ, a revised GPDCR was submitted October 17, 2005. As of February 8, 2007, the plume of VOC-contaminated groundwater has not yet been completely delineated, and accordingly a point of compliance has not yet been selected.

3.19.4 Description of Contaminate Plume

A total of 17 wells were installed to evaluate the extent of the groundwater contamination associated with the former surface impoundment at the facility. One well, DMW-4, has been placed on standby status with the May 6, 2003, approval of ADEQ. Two wells, DMW-11 and DMW-12 were installed in November 2004. VOCs including trichloroethylene (TCE), 1,1,2-trichloroethane (1,1,2-TCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), 1,2-dichloroethane (1,2-DCA), and tetrachloroethylene (PCE) have been detected in groundwater samples from these wells. Concentrations of VOCs above Arizona Aquifer Water

Quality Standards (AWQS) have extended as far as well DMW-8 located 1,200 feet northeast, UMW-3 located 1,000 feet south, and DMW-10 located 800 feet northwest of the former surface impoundment, respectively.

VOC results from the 2nd Quarter 2006 sampling event indicate that TCE concentrations exceeded AWQS (i.e., 5.0 µg/L) in wells UMW-2 (depths 178, 183 and 188 ft bgs), DMW-3 (depth of 130 ft bgs), DMW-5 (depths of 123, 129, and 136 ft bgs), DMW-5-D (depths of 163, 169, and 176 ft bgs), DMW-6 (depth 123 ft bgs), DMW-7 (depths of 137 and 148 ft bgs), EW-1 (depths 136 and 141 ft bgs) and EW-2 (extraction well). TCE was also reported in wells UMW-1 (depth of 148 ft bgs), UMW-3 (depth of 158 ft bgs), and DMW-2 (depth 139 ft bgs) at concentrations below the AWQS. The other sampled wells did not detect TCE above the method reporting limits (MRLs).

Review of the distribution of 1,1-DCE for the 2nd Quarter 2006 indicates concentrations of this compound exceeding AWQS (i.e., 7.0 µg/L) in wells UMW-1 (depth 148 ft bgs), UMW-2 (depths of 178, 183 and 188 ft bgs), DMW-2 (depth of 139 ft bgs) DMW-3 (depth of 130 ft bgs), DMW-5 (depths of 123, 129, and 136 ft bgs), DMW-7 (depths of 137 and 148 ft bgs), and EW-1 (depths of 136 and 141 ft bgs). 1,1-DCE was also reported in wells UMW-3 (depth of 158 ft bgs), DMW-5D (depths of 163, 169, and 176 ft bgs), DMW-6 (depth of 123 ft bgs), and DMW-8 (depth of 116 ft bgs) at concentrations below the AWQS. The other sampled wells did not detect 1,1-DCE above the MRLs.

In terms of the distribution of cis-1,2-DCE, the 2nd Quarter 2006 results indicate concentrations of this compound in well DMW-3 (depth of 130 ft bgs), DMW-5 (depths of 123, 129, and 136 ft bgs), DMW-5-D (depths of 163, 169, and 176 ft bgs), and EW-1 (depth of 141 ft bgs) that exceeded the AWQS (i.e., 70 µg/L). cis-1,2-DCE was also reported in wells UMW-1 (depth of 148 ft bgs), DMW-2 (depth of 139 ft bgs), DMW-6 (depth of 123 ft bgs), DMW-7 (depths of 137 and 148 ft bgs), DMW-8 (depth of 116 ft bgs), and EW-1 (depth of 136 ft bgs) at concentrations below the AWQS. The other sampled wells did not detect cis-1,2-DCE above the MRLs.

3.19.5 Plans and Engineering Report Describing the Groundwater Monitoring Program

As of September 2006, a total of 16 groundwater monitoring wells are used to evaluate groundwater contamination associated with the former surface impoundment at CSI (Figure 3-3). The wells were installed during various phases of a hydrogeologic investigation that began in March 1985. During the initial phase of the investigation, UMW-1, DMW-1, DMW-2, and DMW-3, were installed for the purpose of detecting the presence of groundwater constituents. Analytical parameters were selected based on an audit of CSI operations and wastewater characterization. One monitoring well (UMW-1) located upgradient (groundwater flow direction has since changed) of the former surface impoundment and three downgradient wells (DMW- 1, DMW-2, DMW-3), were sampled four times, at 10-week intervals. Groundwater samples were analyzed by Analytical Technologies, Inc., of Tempe, Arizona for the following:

- VOCs (EPA Method 624)
- Priority Pollutant Metals
- Total Organic Carbon
- Total Phenols
- Total Fecal Coliform
- Cyanide

Although metals associated with wastewater discharged to the former surface impoundment were not detected at concentrations exceeding standards, results of the May 9, 1985 groundwater analyses

showed that lead was present at concentrations greater than AWQS. Subsequent analytical results of July 15, 1985 indicated that lead detected above the AWQS in the initial sample analyses may have been the result of inadequate well development. Field records from the water sampling field effort noted a significant amount of turbidity and water color was described as tan to light brown.

Sampling of the initial groundwater monitoring wells indicated the presence of VOCs at concentrations greater than ADEQ Action Levels for drinking water in wells DMW-1, DMW-2, and DMW-3. Subsequent to the identification of VOCs in groundwater downgradient from the former surface impoundment, a soil gas investigation was performed to provide an initial estimate the horizontal extent of VOCs in the groundwater. Soil gas was extracted from 62 shallow borings that were located along transects both parallel and perpendicular to the former surface impoundment. Each sample was analyzed in the field for 1,1-DCE, 1,1,1-TCA, TCE, and PCE. Results of the investigation indicated the presence of a plume of VOCs extending 600 feet north and east of the former surface impoundment. Details of the soil gas investigation were presented to ADHS in the Phase II Plan of Investigation (Woodward-Clyde Consultants, 1986b).

Based on the results of the initial groundwater investigation and soil gas evaluation, 11 additional groundwater monitoring wells were installed. Locations of these wells: DMW-4, DMW-5, DMW5D, DMW-6, DMW-7, DMW-8, DMW-9, DMW-10, UMW-2, UMW-3, and UMW-3D were selected with the intent of defining the horizontal and vertical extents of VOC contamination in groundwater. Criteria for plume definition were AWQS for VOCs in drinking water. Following well development, groundwater samples were obtained from each well and were analyzed for VOCs using EPA Method 601/602.

During the weeks of November 7, 14, and 21, 2004 MACTEC installed two additional monitoring wells to further delineate plume boundaries. Monitoring well DMW-11 was placed on the Bodega Drive right-of-way (ROW) north of the facility and monitoring well DMW-12 was placed on the City of Nogales sewer easement south of the facility. Following well development, these wells were sampled for VOCs using EPA Method 624.

Appendix 6 shows the historical concentrations of VOCs CSI monitoring wells. The extent of the VOC contaminated groundwater was discussed in Section 3.19.4.

All monitoring wells were installed in such a manner that the requirements of § 264.97(c) have been satisfied (i.e., wells were cased in a manner that maintains the integrity of the boreholes, casings were screened, the screened intervals were packed with sand, and then annular space was sealed above the depth of sample collection).

3.19.6 Detection Monitoring Program

The presence of hazardous constituents has been detected in the groundwater; therefore, this section does not apply to the UMI facility at this time. However, upon completion of compliance monitoring requirements, UMI will develop a detection monitoring program as discussed in Section 3.19.7.8.

3.19.7 Compliance Monitoring Program (per § 264.99)

3.19.7.1 Description of Wastes

A description of the wastes disposed of at UMI between 1970 and 1982 is provided in Table 3-1.

3.19.7.5 Proposed Groundwater Monitoring System

UMI proposes that the existing groundwater monitoring system be used for post-closure groundwater monitoring. Groundwater monitoring will be conducted in accordance with the pertinent RCRA requirements of 40 CFR 270.14©. Currently there are a total of seventeen monitoring wells that have been installed to evaluate the extent of groundwater contamination identified in association with the former surface impoundment at the facility. Based on results of the implementation of the Plume Delineation Work Plan, additional monitoring wells may be added to the groundwater monitoring system. In addition, UMI will monitor two domestic water supply wells (DWW-1 and DWW-2). A complete description of the groundwater monitoring system is presented in the Revised Post-Closure Plan (Appendix 3).

3.19.7.6 Sampling, Analysis, and Statistical Procedures

The sampling and analysis program will follow the procedures outlined in the approved Sampling and Analysis Plan for United Musical Instruments (Zenitech, 1992) and the Sampling and Analysis Plan for United Musical Instruments – Revised June 3 (Zenitech, 1993) that were submitted to ADEQ on January 22, 1992 and June 3, 1993, respectively.

3.19.7.7 Sampling for Appendix IX Parameters

TCE, 1,1-DCE, and 1,1,1-TCA are wastes that were previously discharged to the former surface impoundment. As a result, other VOC contaminants, which may have formed due to biodegradation or chemical reaction with other discharged chemicals, have been detected in the groundwater. UMI will sample all monitoring wells annually for a subset of constituents listed in Appendix IX of 40 CFR 264. These constituents are listed below and will be analyzed to determine if additional hazardous constituents are present in the groundwater.

The proposed subset of Appendix IX constituents follows:

- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethane
- Cis-1,2-Dichloroethene
- Trans-1,2-Dichloroethene
- Dichloromethane
- Tetrachloroethylene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethylene

3.19.7.2 Characterization of Groundwater

As mentioned previously, VOCs including TCE, 1,1,2-TCA, 1,1-DCE, cis-1,2-DCE, 1,2-DCA, and PCE have been previously detected in groundwater samples from UMI monitoring wells above AWQS. To date, no new VOCs have been detected in the groundwater monitoring wells at UMI. Table 3-2 shows the location of AWQS exceedances for the VOCs mentioned above, as reported in the Second Quarter 2006 Groundwater Monitoring Report (MACTEC Engineering and Consulting). This table also presents the location and date of the highest observed concentrations of these VOCs. The historical VOC concentrations for the fifteen monitoring wells at UMI are provided in Appendix 6.

3.19.7.3 Compliance Monitoring Constituents

Proposed compliance monitoring constituents are based on currently evaluated analytes in the existing groundwater monitoring program. Samples from groundwater monitoring wells at the UMI facility are analyzed for VOCs by EPA Method 601. Specific analytes of concern include:

- 1,1-Dichloroethene
- Cis-1,2-Dichloroethene
- Trans-1,2-Dichloroethene
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- Dichloromethane
- Trichloroethene
- 1,1,2-Trichloroethane
- Tetrachloroethylene

Historical concentrations of these groundwater monitoring constituents are presented in Appendix 6.

3.19.7.4 Proposed Concentration Limits

UMI proposes that the concentration limits specified in Table 3-3 be used during compliance monitoring. These limits have been proposed based on the current aquifer water quality standards, where applicable. In the case where a standard does not exist for a certain constituent, UMI proposes that there be no limit established.

3.19.7.8 Compliance Monitoring Schedule

Currently, compliance monitoring wells for UMI are sampled quarterly. The monitoring locations, frequency of monitoring, and test methods are presented in Table 3-4. Results of groundwater monitoring will be assessed throughout the compliance monitoring period to evaluate the effectiveness of the groundwater treatment system. When a significant decrease in the concentration of compliance monitoring constituents is observed and verified, UMI will request a reduction in sampling frequency from quarterly to semi-annually.

If the concentration of compliance monitoring constituents remain equal to or below AWQS during three consecutive years of compliance monitoring, UMI will submit a petition to ADEQ to remove the facility from compliance monitoring requirements and request that UMI begin a detection monitoring program. The detection monitoring program will be developed and submitted to ADEQ as an addendum to this Post-Closure Permit Application. The number of detection monitoring wells, sampling frequency, test methods and monitoring constituents will be discussed in the detection monitoring plan.

The groundwater extraction well is currently sampled at the same frequency as the compliance wells. Based on existing equipment and operating procedures, the groundwater treatment system operates continuously.

3.19.7.9 Reporting

As stated in Consent Order No. Z-10-98 (see Appendix 2), UMI will submit to ADEQ Quarterly Progress (status) Reports, Quarterly Groundwater Monitoring Reports containing all monitoring data collected during the quarter, and an Annual Groundwater Monitoring Report summarizing the monitoring data for the year. Copies of other miscellaneous reports, logs, and data (i.e. inspection reports, drilling logs, laboratory data, etc.) will be made available to the Director upon request.

3.19.7.10 Exceeding Concentration Limits

Based on observed VOC exceedences in the groundwater, UMI implemented a monitoring program to evaluate the remediation of contaminated groundwater. The monitoring system consists of the monitoring wells shown on Figure 3-3. UMI will modify the current monitoring well system accordingly, based on results of future plume boundary field investigations. Currently, the operation of the groundwater treatment system follows the plan outlined in the *Revised Interim Startup Plan* (Woodward-Clyde International-Americas, 1997a) until a RCRA Part B Post-Closure Permit is issued.

3.19.8 Corrective Action Program (per § 264.100)

3.19.8.1 Applicability

Currently, groundwater quality at UMI exceeds the groundwater protection standard of §264.92. Also, hazardous constituents under §264.93 exceed concentration limits under §264.94 in groundwater at the UMI facility. Therefore, as required by §264.91, UMI must institute a corrective action program under §264.100.

3.19.8.2 Description of Corrective Action Program

Corrective Action Program activities are designed to be in accordance with the requirements described in the Consent Order (Appendix 2) and the Agreement between the City of Nogales and UMI. The objective of the Corrective Action Program is to prevent the compliance monitoring constituents listed in Section 3.19.7.3 from exceeding their respective concentration limits (see Section 3.19.7.4) at the compliance point through removal and treatment of the groundwater. To this end, an extraction well and treatment facility were installed on the UMI property to pump VOC contaminated groundwater to the surface for treatment of VOCs via air stripping prior to discharge to a golf course pond for use in irrigation. The Revised Post-Closure Plan presents a detailed description of the groundwater treatment system (see Appendix 3).

3.19.8.3 Groundwater Remediation System

A detailed description of the groundwater treatment system used to remediate VOC contaminated groundwater is provided in the Revised Post-Closure Plan (see Appendix 3).

3.19.8.4 Groundwater Protection Standard

UMI proposes to remediate the constituents listed in Section 3.19.7.3 (Compliance Monitoring Constituents) to the concentration limits proposed in Section 3.19.7.4 (Proposed Concentration Limits) for the duration of any corrective action period. Conformance with these standards will be evaluated by the Compliance Monitoring Program (as described in Section 3.19.7), which will continue throughout the compliance period as defined in § 264.96.

3.19.8.5 Groundwater Monitoring System

UMI proposes that the existing groundwater monitoring system be used for post-closure groundwater monitoring as discussed in Section 3.19.7.5. A complete description of the existing groundwater monitoring system is provided in the Revised Post-Closure Plan (Appendix 3).

3.19.8.6 Corrective Action Period

The Corrective Action Program has been divided into three periods of groundwater treatment system operation: the Integrity Test Period, the Interim Operation Period and the Comprehensive Corrective Action Program Period (see Table 3-5). Corrective action under the Integrity Test

Period began in July 1997 to provide a limited evaluation of treatment system integrity and operation through equipment inspections, test runs and frequent water quality monitoring. The Integrity Test Period will continue until approximately March 1, 1998, or until the *Revised Interim Startup Plan* (Woodward-Clyde International-Americas, 1997a), is accepted by ADEQ. Following approval of the *Revised Interim Startup Plan*, the Interim Operation Period will begin and continue until a RCRA Part B Post-Closure Permit is issued by ADEQ. Upon issuance of a RCRA Part B Post-Closure Permit in which a list of hazardous constituents, concentration limits, and a compliance period are established, the Comprehensive Corrective Action Program Period will begin. The corrective action program will continue until compliance monitoring indicates that the AWQS have not been exceeded for three consecutive years based on data from the groundwater monitoring program.

3.19.8.7 Corrective Action Boundary

The constituents of concern have already migrated beyond the property boundary; therefore, the Corrective Action Program is designed to remove or treat the hazardous constituents proposed to the levels identified in Section 3.19.7.4 (Proposed Concentration Limits). A compliance point will be established after the plume has been delineated.

3.19.8.8 Reports

UMI will submit reports on the effectiveness of the Corrective Action Program semi-annually to the Regional Administrator at ADEQ. The report will include required data and analytical results, and may be included as part of the groundwater monitoring reports currently submitted to ADEQ.

3.19.8.9 Modifications

If UMI determines as a result of plume delineation field work or other studies that the Corrective Action Program is not effective, an application for a permit modification will be submitted within 90 days of the determination, per § 264.100(h). UMI may submit a permit modification request for alternate concentration limits for the groundwater protection standard for the constituents listed in Section 3.19.7.4 in accordance with the provisions in §264.94 (b).

- Cella Barr Associates. 1991. Water Level Elevations in the Nogales, Arizona Area.
- Arizona Department of Transportation. 1997. Personal correspondence between Mr. Robert Obregon and Woodward-Clyde International-Americas.
- Southeast Arizona Governments Organization. 1997. Personal correspondence between Mr. Richard Gaar and Woodward-Clyde International-Americas.
- Woodward-Clyde Consultants. 1986a. Closure and Post-Closure Plans, Artley Flute Facility, C.G. Conn, LTD.
- Woodward-Clyde Consultants. 1986b. Phase II Plan of Investigation of Groundwater Contamination.
- Woodward-Clyde Consultants, March, 1987a, RCRA Closure of Hazardous Waste Facilities at C.G. Conn (Artley Flute) Plant, Nogales, Arizona - Evaluation of Groundwater Remediation Alternatives.
- Woodward-Clyde Consultants. 1987b. Hydrogeologic Report in Support of an Application for Poor Quality Groundwater Withdrawal Permit.
- Woodward-Clyde Consultants. 1991. Amended Post-Closure Plan. United Musical Instruments, USA, Inc.
- Woodward-Clyde Consultants. 1992. Aquifer Protection Permit Application for Operation of the Meadow Hills Golf Course Storage Pond.
- Woodward-Clyde Consultants. 1997a. Revised Interim Startup Plan. United Musical Instruments USA, Inc., Groundwater Treatment System. Nogales, Arizona.
- Woodward-Clyde Consultants. 1997b. Third Quarter 1997 Groundwater Monitoring Report, July-August 1997. United Musical Instruments USA, Inc. Nogales, Arizona.
- Zenitech Corporation. 1992. Sampling and Analysis Plan for United Musical Instruments Nogales, Arizona.
- Zenitech Corporation. 1993. Sampling and Analysis Plan for United Musical Instruments Nogales, Arizona. Revised June 3.

Table 3-1
ESTIMATED QUANTITIES OF SELECT COMPOUNDS DISCHARGED
TO THE FORMER SURFACE IMPOUNDMENT (1970-1982)
UMI NOGALES, ARIZONA

Compound	Estimated Discharge Quantity		
	[Pounds]	[Gallons]	[Acre-Feet]
Brighter-combined		434	0.00133
Potassium Cyanide	3600		
Sodium Cyanide	600		
Copper	85.14		
Silver	1.33		
Cyanide	206.24		
Liquid Nickel Sulfate		300	0.00092
Liquid Nickel Chloride		96	0.000295
Nickel Strip		4,800	0.0147
Cleaner		24,000	0.0737
Industrial Soap		7,200	0.0221
Nitric Acid		300	0.000921
Sulfuric Acid		600	0.000184
Hydrochloric Acid		3,000	0.000921
Boric Acid Granular	1200		
Chromic Acid	30		
Trichloroethylene		242	0.000741
1,1,1- Trichloroethane		700	0.000215
Cadmium Oxide	10		

NOTE:

¹ Records are not available for discharges that occurred from 1966 through 1969.

² From 1970-1982 the total volume of sanitary waste and industrial process water was 40.33 and 98.9 acre-feet, respectively.

**Table 3-2
LOCATION OF AWQS EXCEEDENCES AND HIGHEST OBSERVED
CONCENTRATIONS FOR GROUNDWATER MONITORING WELLS
CONN-SELMER, INC., NOGALES**

VOC Compound	AWQS (µg/L)	Location of AWQS Exceedence (Second Quarter 2006)	Location of Highest Observed Concentration (Second Quarter 2006)	Location and Date of Highest Observed Concentration
1,1-DCE	7	UMW-1 DMW-5 UMW-2 DMW-7 DMW-3	DMW-3 (34 µg/L)	DMW-2 (2,300 µg/L) April 1985
Cis-1,2-DCE	70	DMW-3 DMW-5D DMW-5	DMW-3 (480 µg/L)	DMW-3 (1,700 µg/L) July 7, 1998
1,2-DCA	5	NONE	NONE	DMW-2 (50 µg/L) March 1989
PCE	5	NONE	NONE	DMW-1 (7 µg/L) September 1985
1,1,2-TCA	5	NONE	NONE	DMW-2 (50 µg/L) December 1994
TCE	5	UMW-2 DMW-5D DMW-3 DMW-6 DMW-5 DMW-7	DMW-3 (130 µg/L)	DMW-1 (410 µg/L) September 1985

Table 3-3
PROPOSED CONCENTRATION LIMITS FOR
GROUNDWATER CONSTITUENTS
UMI NOGALES, ARIZONA

Constituent	Proposed Concentration Limit (µg/L)	Aquifer Water Quality Standard (AWQS) (µg/L)
1,1-Dichloroethene	7	7
Cis-1,2-Dichloroethene	70	70
Trans-1,2-Dichloroethene	100	100
1,1-Dichloroethane	None	NS
1,2-Dichloroethane	5	5
Dichloromethane	5	5
Trichloroethylene	5	5
1,1,1-Trichloroethane	200	200
1,1,2-Trichloroethane	5	5
Tetrachloroethylene	5	5

NOTE:
NS = no standard exists

**Table 3-4
COMPLIANCE MONITORING SCHEDULE
CONN-SELMER INC., NOGALES**

Monitoring Location			Analyte/ Parameter	Method of Analysis	Frequency of Analysis
UMW-1	DMW-3	DMW-8	VOCs	EPA 601	Semi-annually
UMW-2	DMW-5	DMW-9			
UMW-3	DMW-5D	DMW-10			
UMW-3D	DMW-6	DMW-11			
DMW-2	DMW-7	DMW-12			
UMW-1	DMW-3	DMW-8	VOCs, Common Ions, Trace Metals	EPA 601, EPA 200.7	Annually
UMW-2	DMW-5	DMW-9			
UMW-3	DMW-5D	DMW-10			
UMW-3D	DMW-6	DMW-11			
DMW-2	DMW-7	DMW-12			
DWW-2			VOCs, Total Metals	EPA 502.2, EPA 200 Series	Semi-annually
All except DWW-2			Water Level	Solinist Probe	Monthly
DWW-1, DMW-4			On standby status		

Note: Conn-Selmer, Inc. is required to notify the Arizona Department of Environmental Quality whenever a groundwater monitoring well needs to be redeveloped, relocated, abandoned, and additional monitor wells need to be developed.

**TABLE 3-5
CORRECTIVE ACTION PROGRAM PERIODS
RCRA PART B POST CLOSURE PERMIT APPLICATION
UMI - NOGALES, ARIZONA**

Corrective Action Program Period Title	Legal Guideline for Plan	Approximate Dates
Integrity Test Period	Consent Order Z-10-98 between UMI and ADEQ dated January 30, 1998, and the Agreement between the City of Nogales and UMI dated August 18, 1988.	From July 1997 until an Interim Startup Plan is approved by ADEQ.
Interim Operation Period	Same as above	When Interim Startup Plan is approved by ADEQ till Issuance of RCRA Part B Permit.
Comprehensive Corrective Action Program Period	RCRA Part B Post Closure Plan	From issuance of RCRA Part B Permit until the groundwater standard has not been exceeded for 3 consecutive years.

PREVAILING WINDS
FROM SOUTH @ 5.77mph



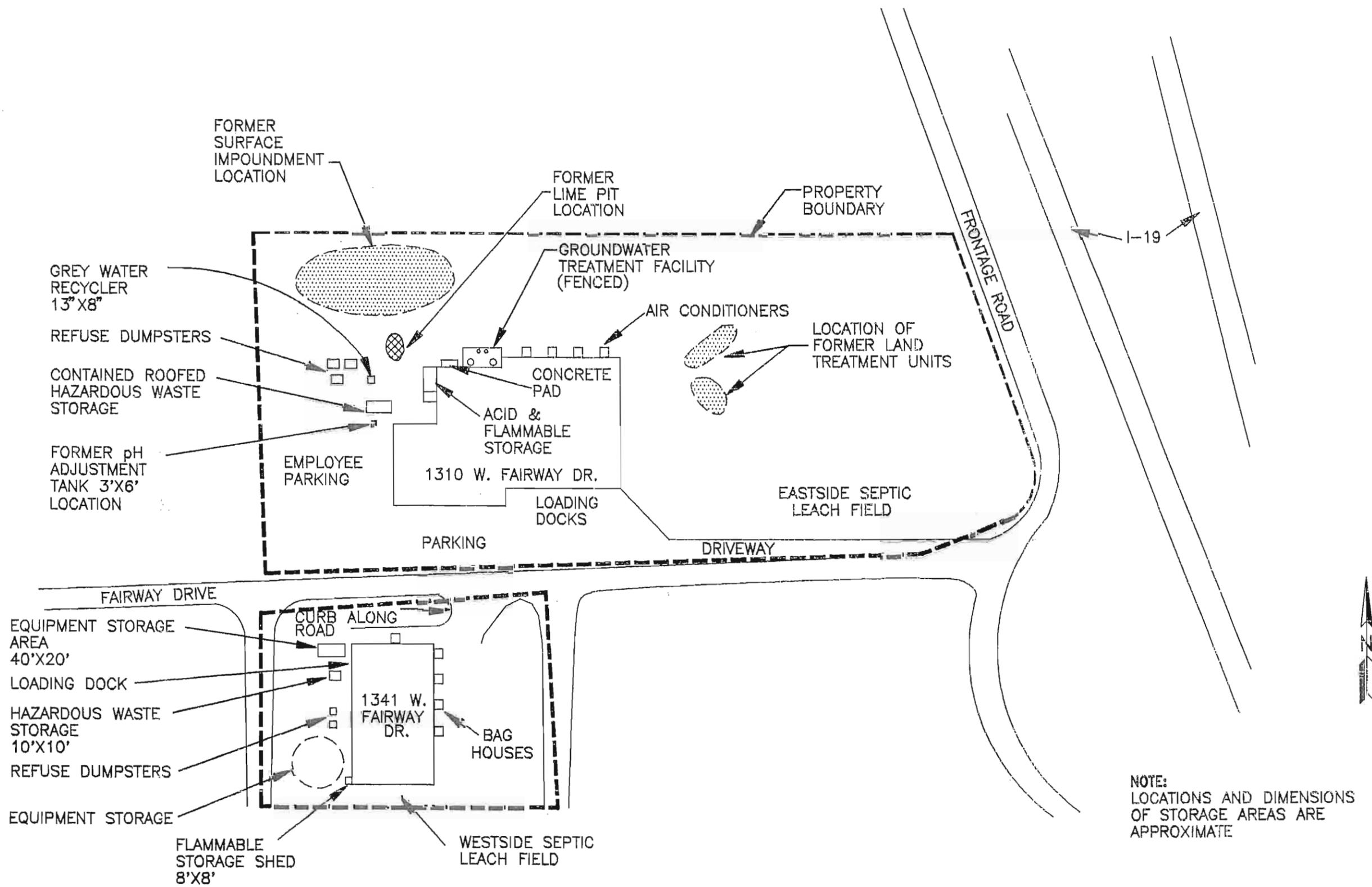
NOTES:

1. SURROUNDING LAND IS COMMERCIAL
2. AIR STRIPPERS LOCATED IN FENCED, GATED, LOCKED COMPOUND

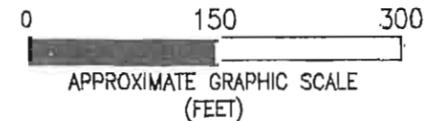
SITE LOCATION MAP

FIGURE 3-1

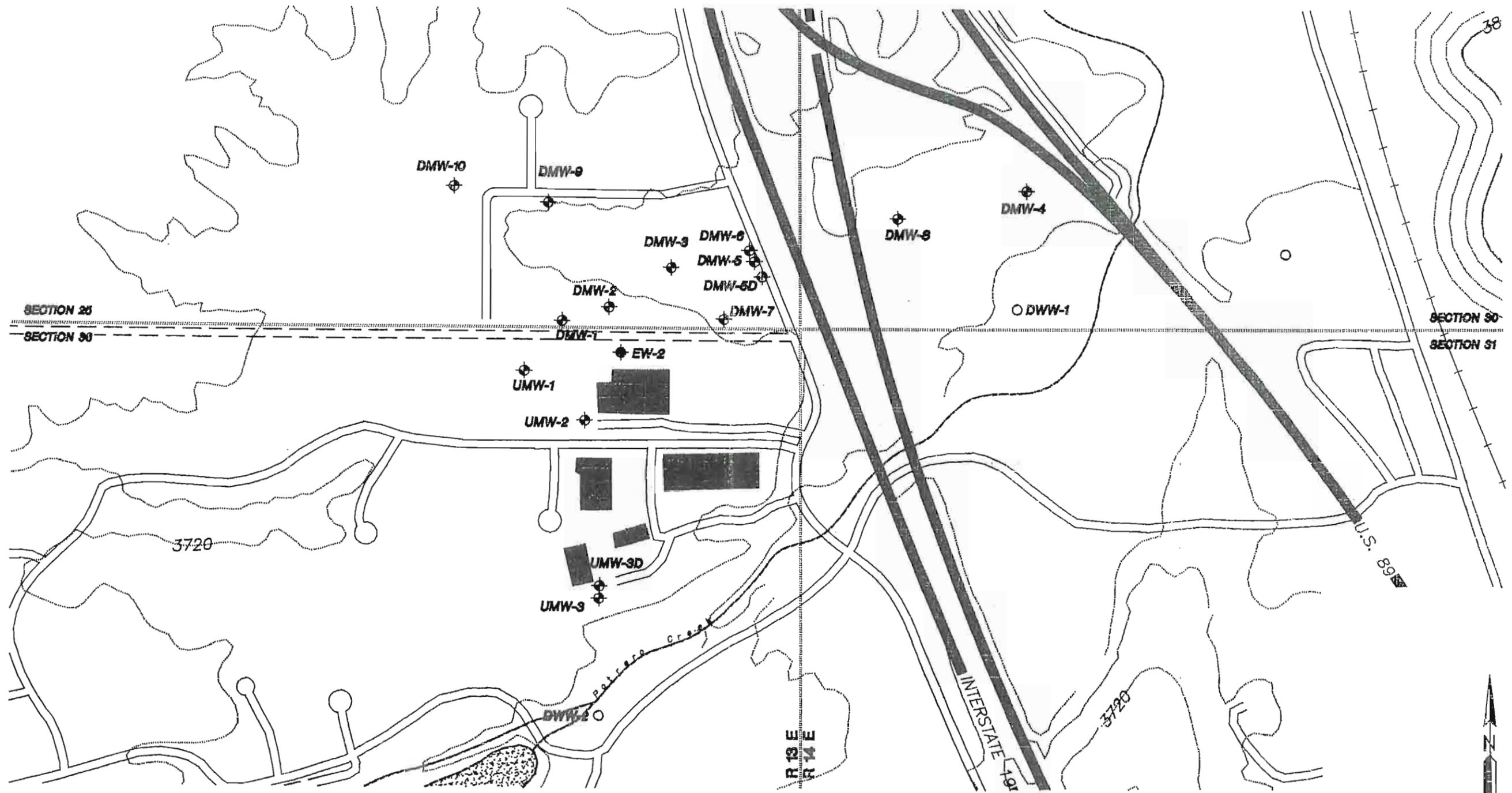
MACTEC PROJECT NAME: CONN-SELMER
 MACTEC PROJECT NO: 4972-03-2034.999
 DATE: 09/20/06 E-FILE: 32034.999 FIGURE 3-1
 DRAWN BY: CJH CHECKED BY: _____



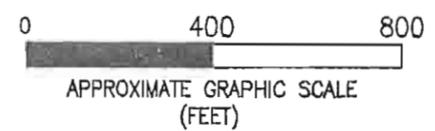
NOTE:
LOCATIONS AND DIMENSIONS
OF STORAGE AREAS ARE
APPROXIMATE



FACILITY LAYOUT DIAGRAM		
RCRA PART B POST-CLOSURE PERMIT APPLICATION		
UNITED MUSICAL INSTRUMENTS		
DRAWN BY: CM	CHECKED BY:	FIGURE NO: 3-2
FN: FACILITY	DATE: 12-17-97	PROJECT NO: 944.X050F

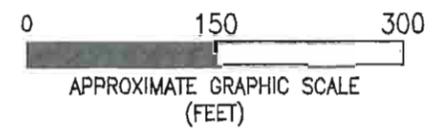
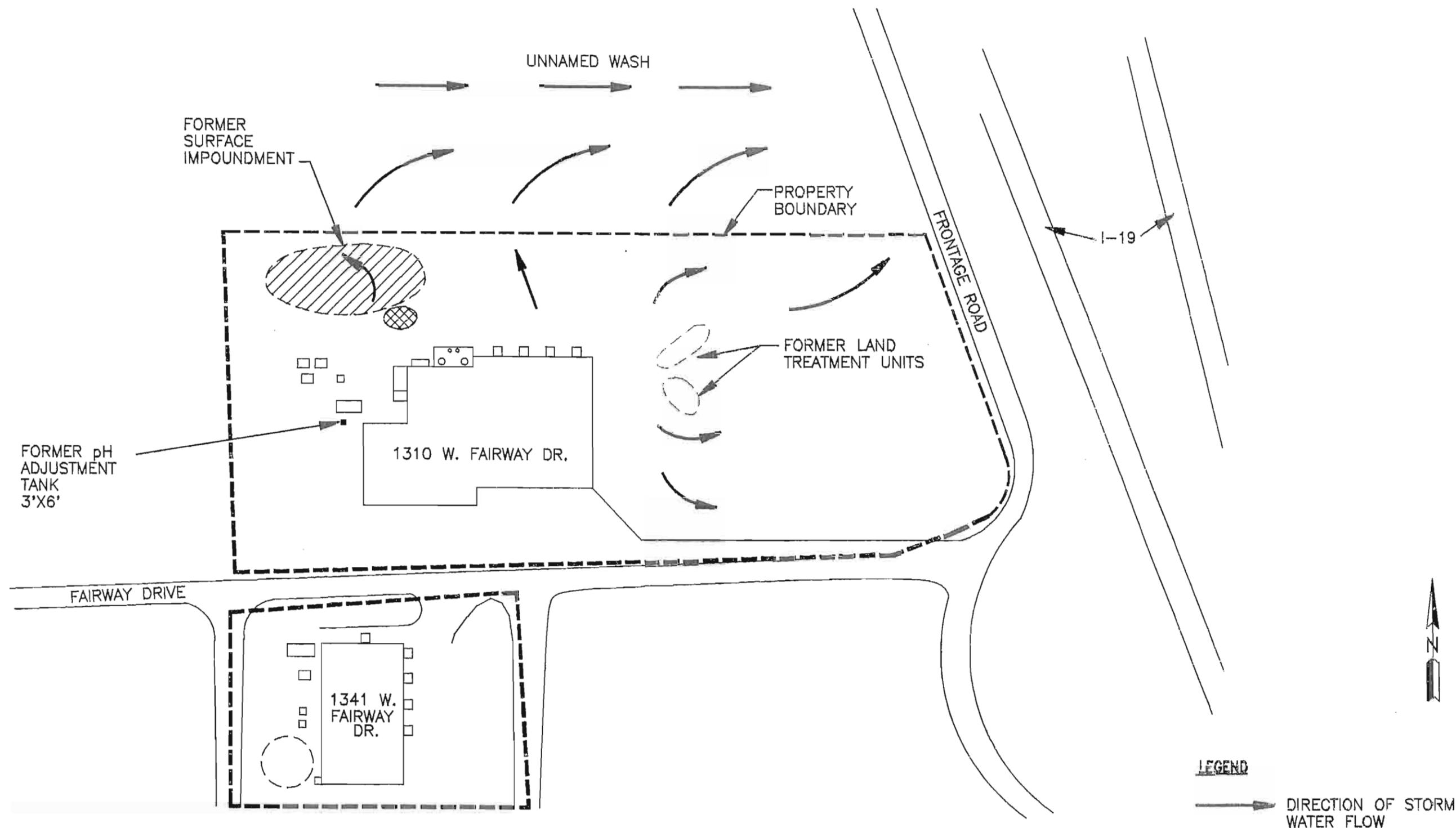


- ⊕ DMW-4 UMI MONITORING WELL
- DWW-1 WATER SUPPLY WELL
- ◆ EW-2 EXTRACTION WELL



MONITORING WELL LOCATION MAP		
RCRA PART B POST-CLOSURE PERMIT APPLICATION		
UNITED MUSICAL INSTRUMENTS		
DRAWN BY: CM	CHECKED BY:	FIGURE NO: 3-3
FN: WELLS	DATE: 12-17-97	PROJECT NO: 944X050F

WOODWARD-CLYDE



LOCAL SURFACE WATER FLOW		
RCRA PART B POST-CLOSURE PERMIT APPLICATION		
UNITED MUSICAL INSTRUMENTS		
DRAWN BY: CM	CHECKED BY:	FIGURE NO: 3-4
FN: FACILITY	DATE: 12-17-97	PROJECT NO: 944X050F

WOODWARD-CLYDE

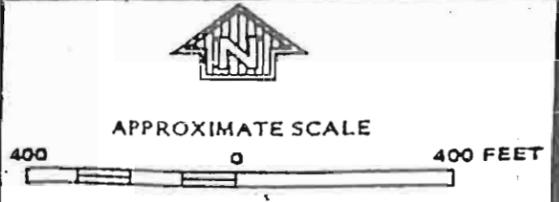
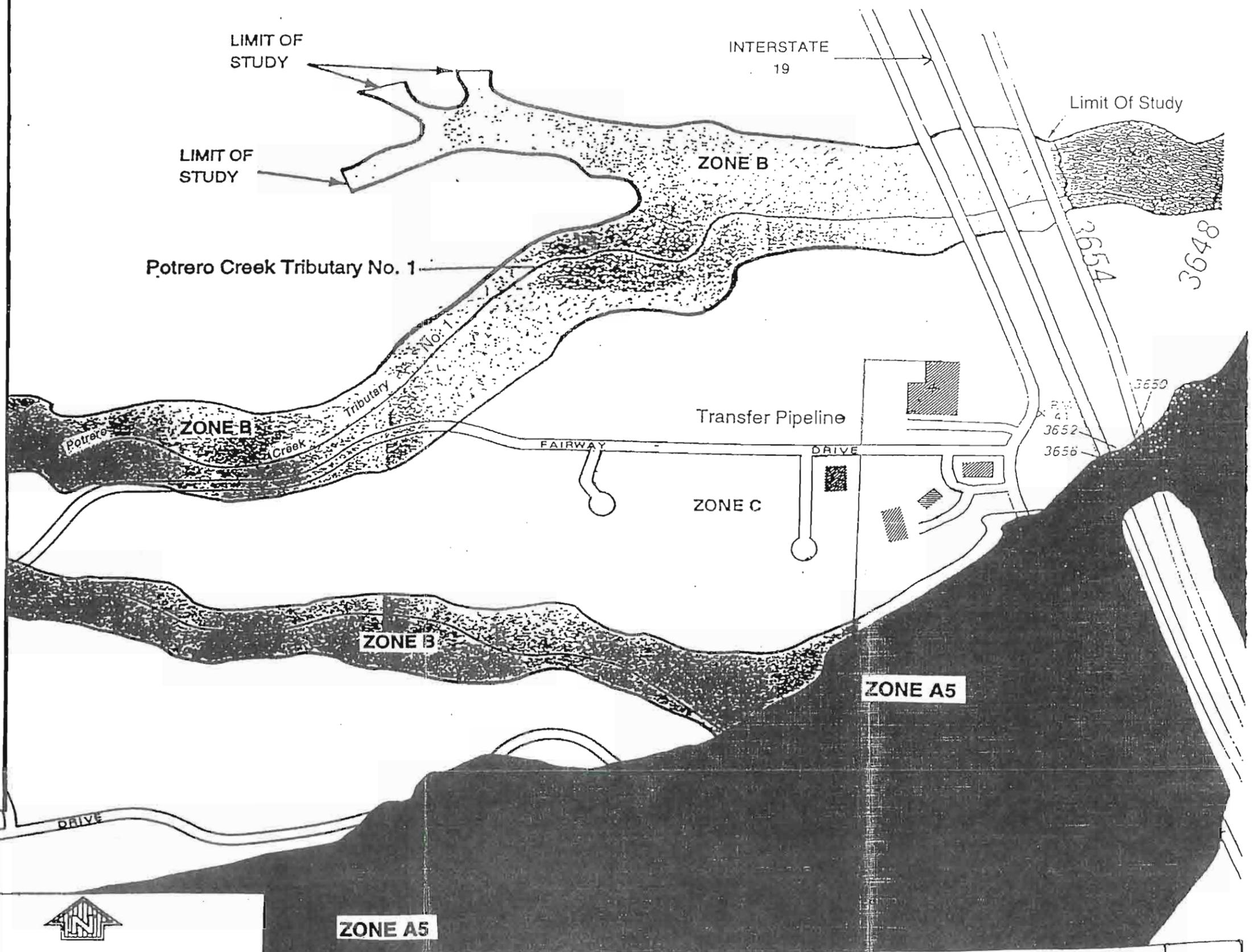
KEY TO MAP

500-Year Flood Boundary	-----				
100-Year Flood Boundary	-----				
Zone Designations* With Date of Identification e.g., 12/2/74	<table border="1"> <tr> <td>ZONE B</td> </tr> <tr> <td>ZONE A1 DATE</td> </tr> <tr> <td>ZONE A5 DATE</td> </tr> <tr> <td>ZONE B</td> </tr> </table>	ZONE B	ZONE A1 DATE	ZONE A5 DATE	ZONE B
ZONE B					
ZONE A1 DATE					
ZONE A5 DATE					
ZONE B					
100-Year Flood Boundary	-----				
500-Year Flood Boundary	-----				
Base Flood Elevation Line With Elevation In Feet**	~~~~~ 513 ~~~~~				
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)				
Elevation Reference Mark	RM7 x				
River Mile	• M1.5				

**Referenced to the National Geodetic Vertical Datum of 1929

***EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

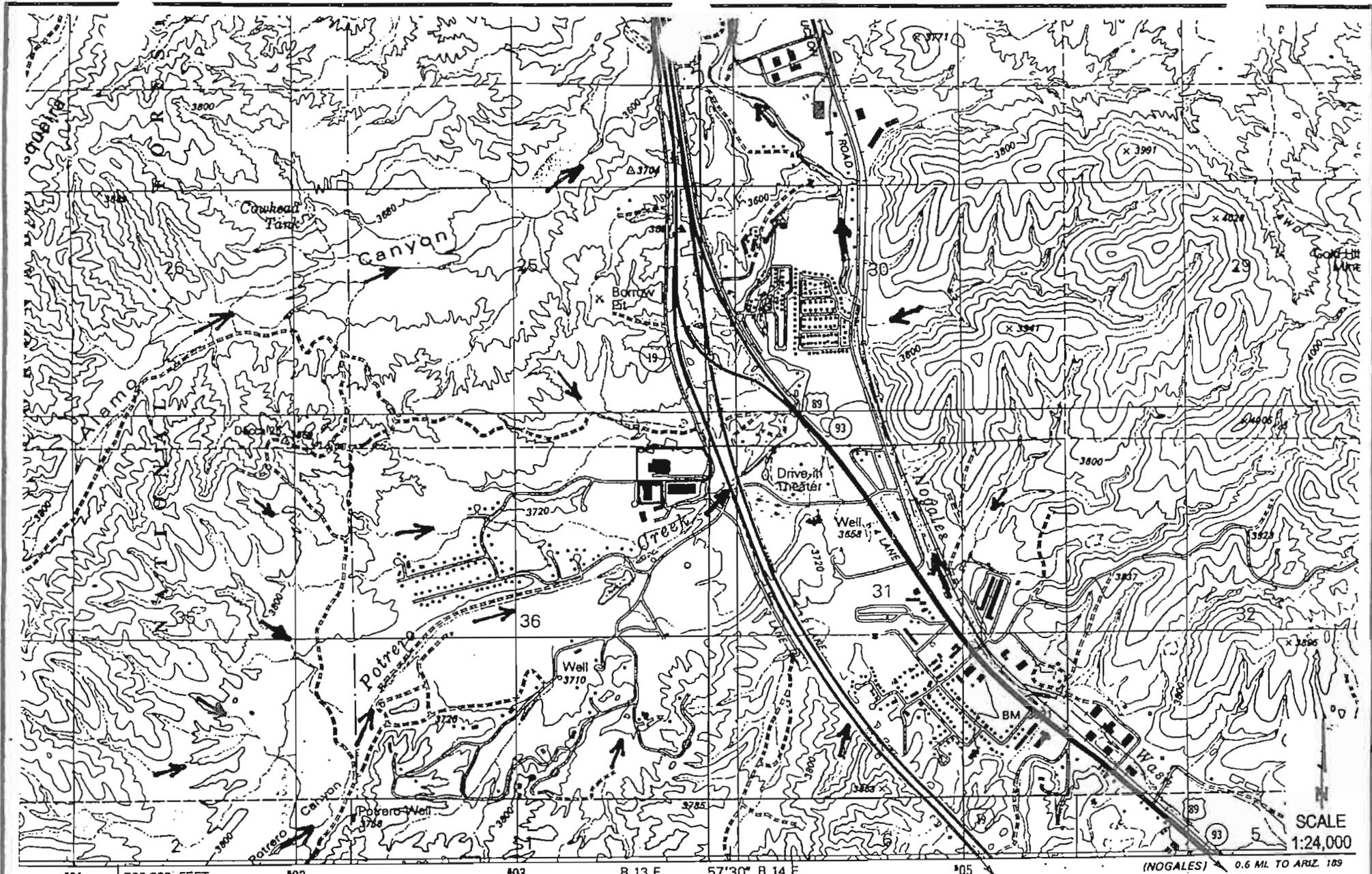


ZONE A5

Project No. 944X050F
RCRA Part B Post Closure Permit Application
UMI - Nogales, AZ
Woodward-Clyde Consultants

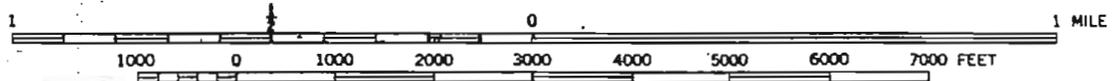
Flood Insurance Rate Map

Figure 3-5



SCALE
1:24,000

(NOGALES) 0.6 MI. TO ARIZ. 189

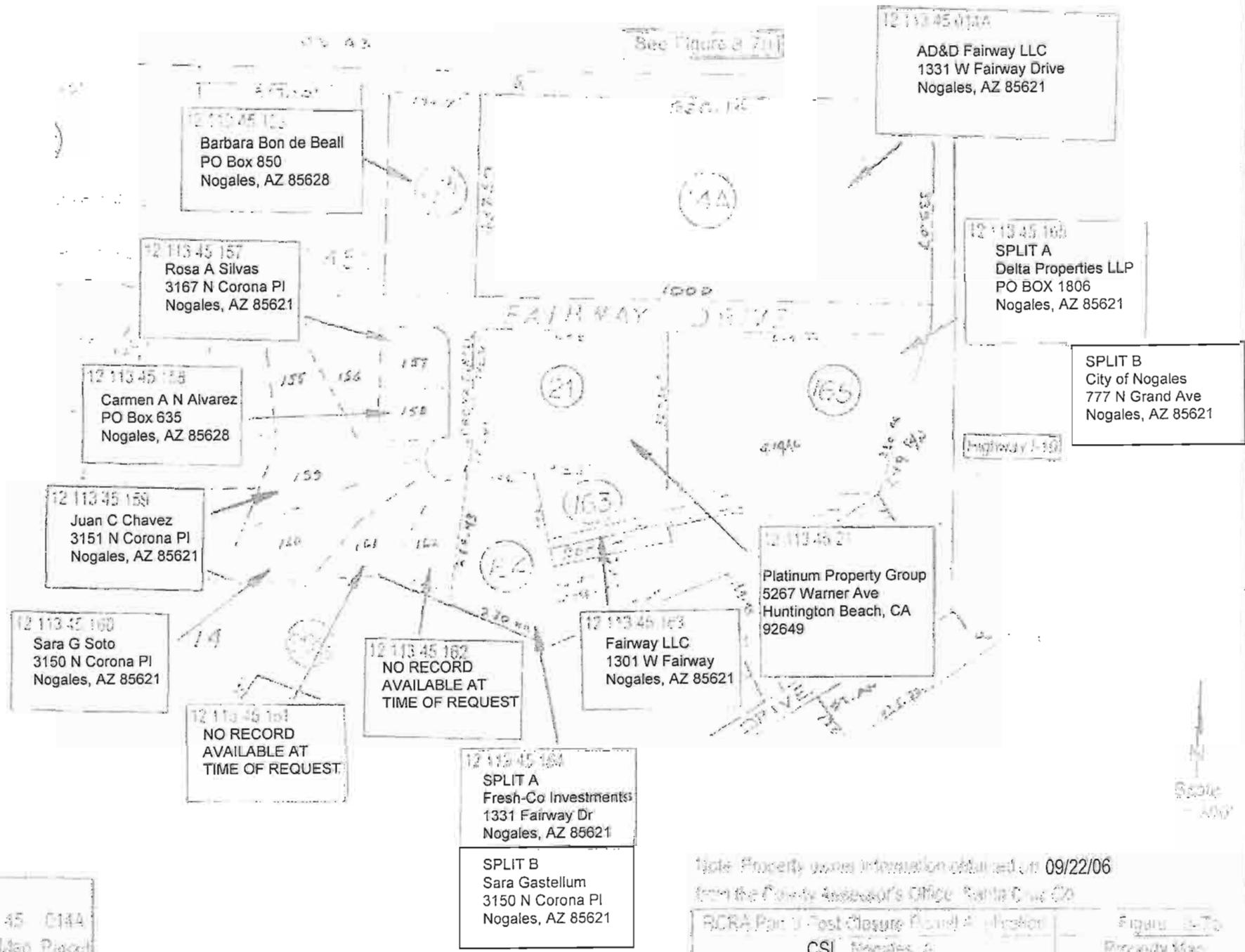


Key:
— Facility Boundary

RCRA Part B Post Closure Permit Application	Figure 3-6
UMI - Nogales, AZ	Surface Water Map

Woodward-Clyde

944X050F/RCRA Part B/Figures/Borders

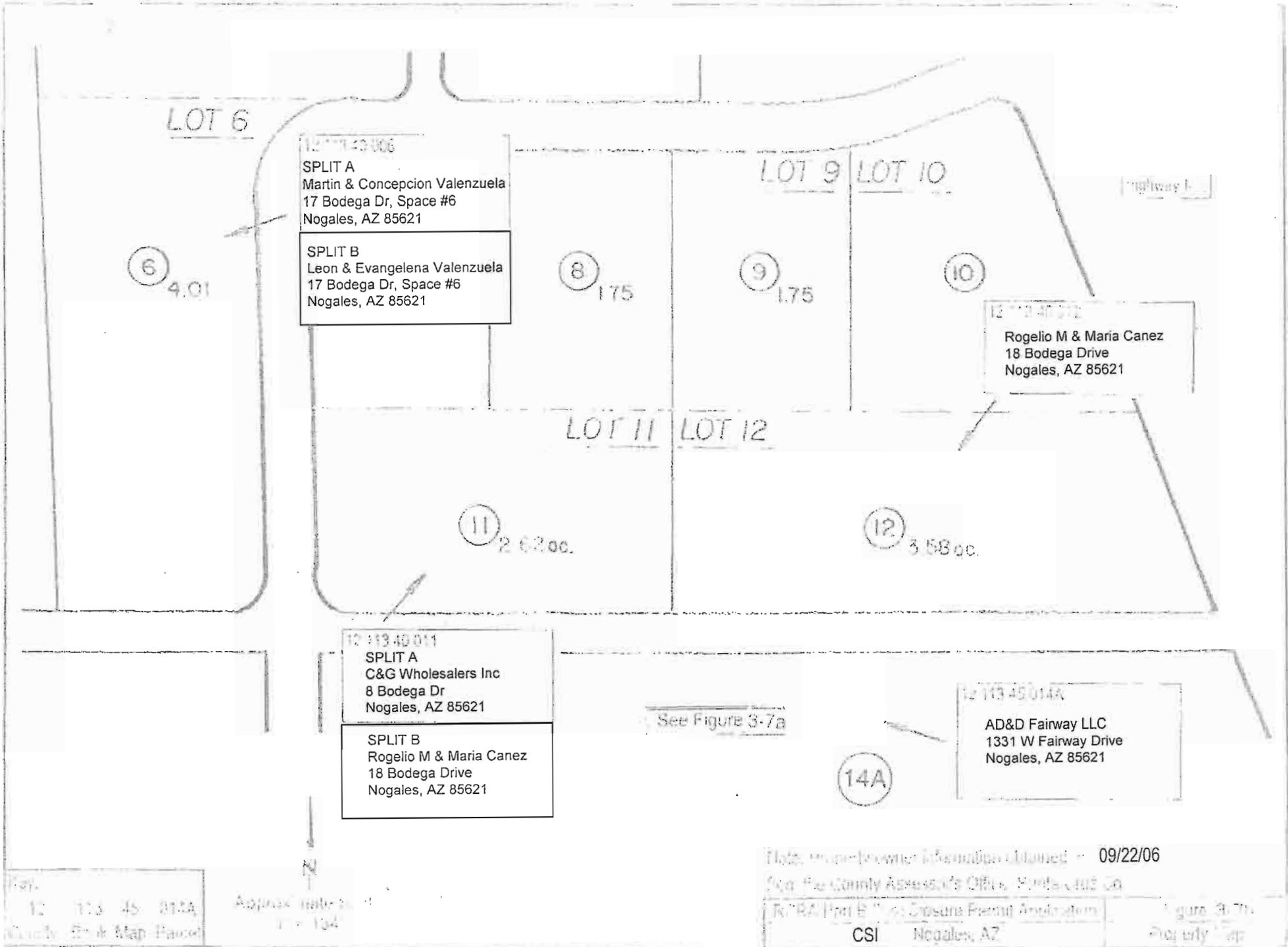


12 113 45 014A
County Back Map Parcel

Note: Property owner information obtained on 09/22/06
from the County Assessor's Office, Santa Cruz Co.

RCRA Part 1 Post Closure Round 4 Inspection
CSI Nogales, AZ

Figure 3-701
Property Map



LOT 6

12 113 43 006
 SPLIT A
 Martin & Concepcion Valenzuela
 17 Bodega Dr, Space #6
 Nogales, AZ 85621

SPLIT B
 Leon & Evangelena Valenzuela
 17 Bodega Dr, Space #6
 Nogales, AZ 85621

LOT 9

LOT 10

Highway 1

6 4.01

8 1.75

9 1.75

10

12 113 40 012
 Rogelio M & Maria Canez
 18 Bodega Drive
 Nogales, AZ 85621

LOT 11 LOT 12

11 2.62 ac.

12 3.58 ac.

12 113 40 011
 SPLIT A
 C&G Wholesalers Inc
 8 Bodega Dr
 Nogales, AZ 85621

SPLIT B
 Rogelio M & Maria Canez
 18 Bodega Drive
 Nogales, AZ 85621

See Figure 3-7a

12 113 45 014A
 AD&D Fairway LLC
 1331 W Fairway Drive
 Nogales, AZ 85621

14A

N

Date: map/owner information obtained - 09/22/06

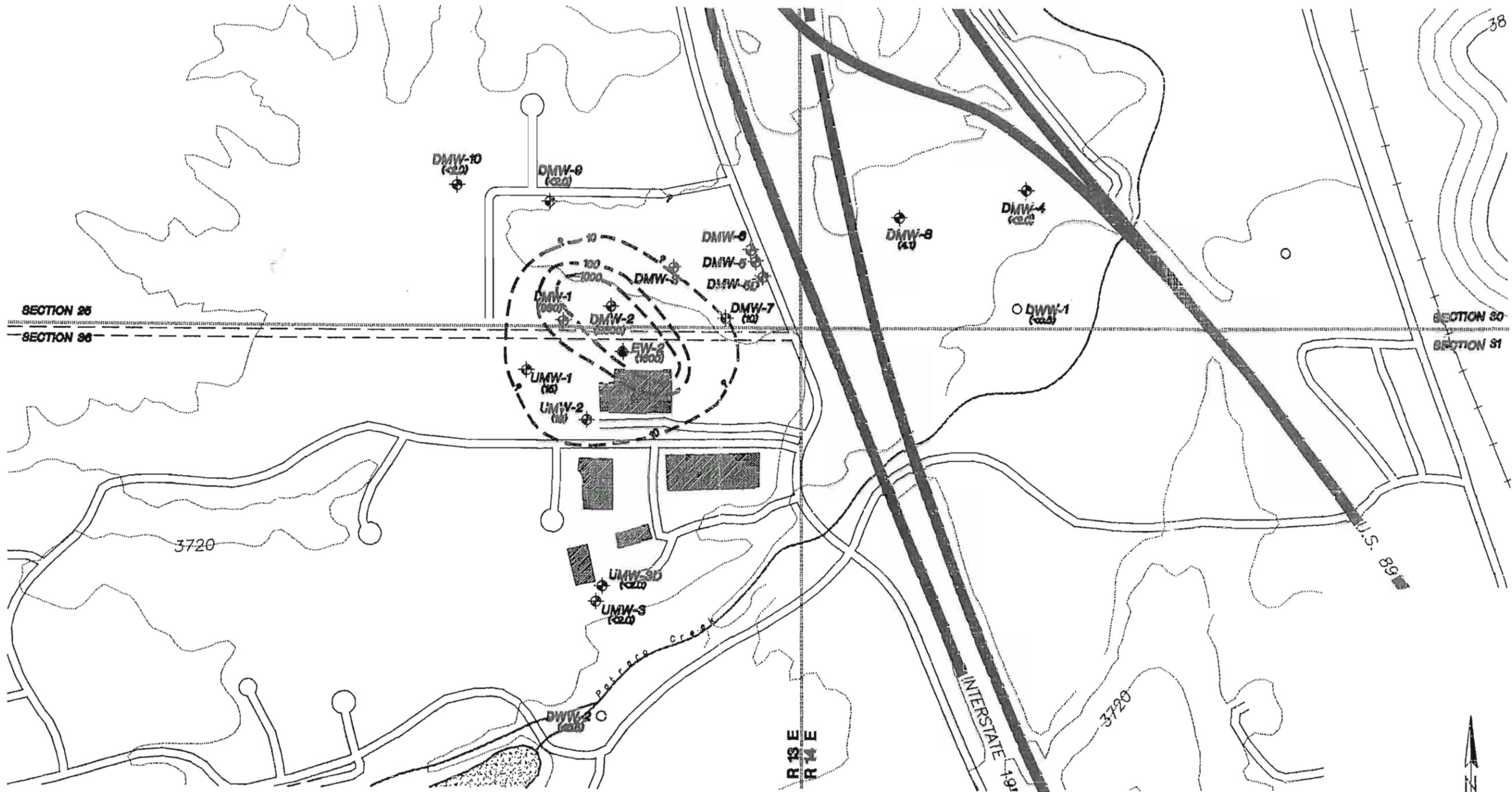
See the County Assessor's Office, Santa Cruz Co

RE: RA/Part B - 2006 Disposal Permit Application

CSI Nogales, AZ

Figure 3-7a
 Property Map

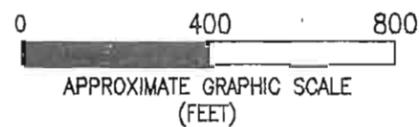
County Clerk Map Parcel
 12 113 45 012A



- ⊕ DMW-2 UMI MONITORING WELL
- DWW-1 WATER SUPPLY WELL
- ⊕ EW-2 EXTRACTION WELL

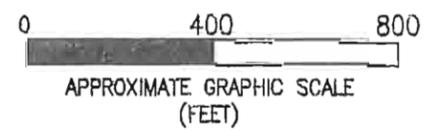
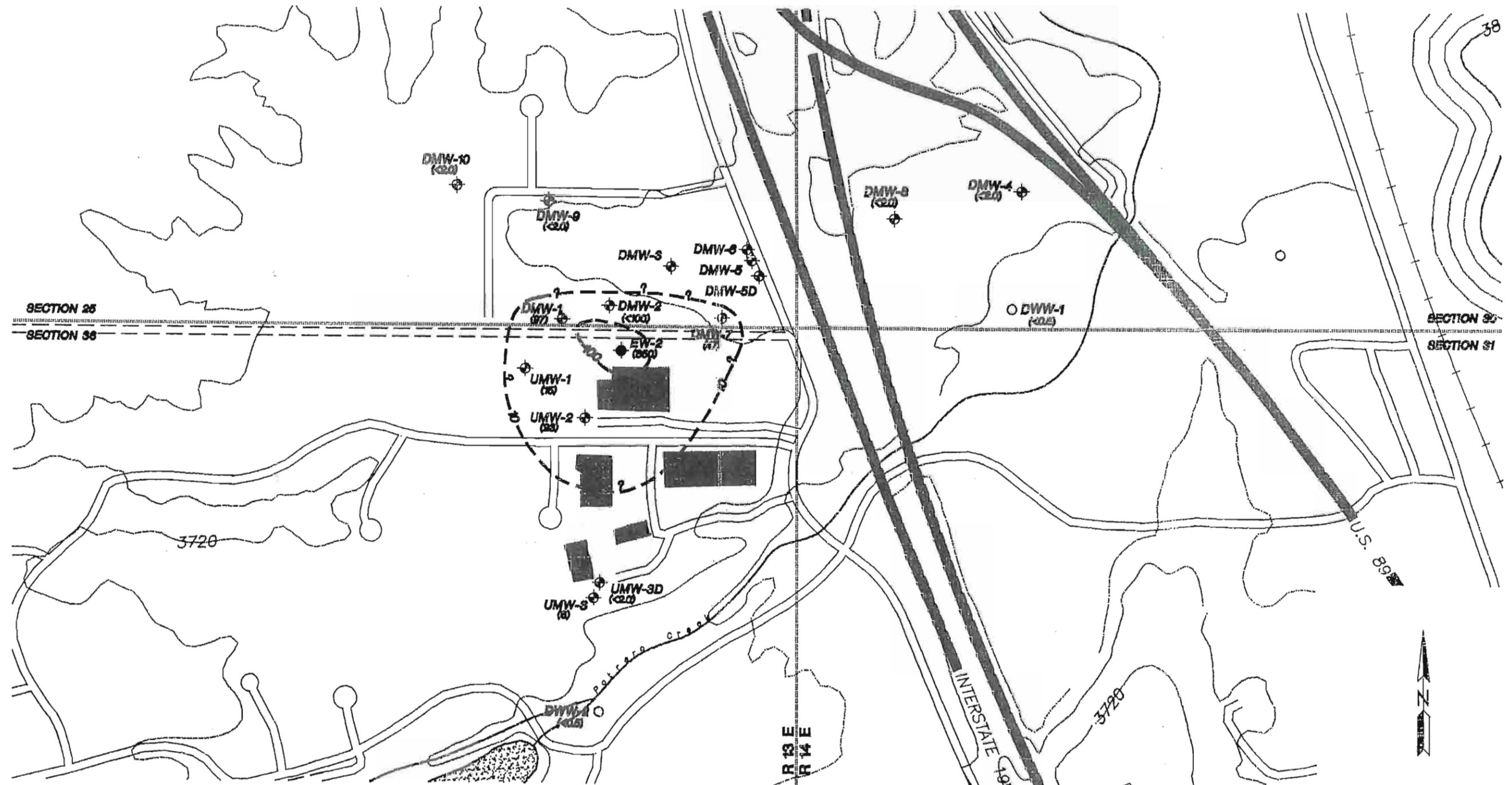
--- 1000 --- ESTIMATED 1,1-DCE CONCENTRATION CONTOUR IN MICROGRAMS/LITER

(<2.0) 1,1-DCE CONCENTRATION IN MICROGRAMS/LITER



TCE CONCENTRATIONS IN GROUNDWATER—AUGUST 1997		
RCRA PART B POST-CLOSURE PERMIT APPLICATION		
UNITED MUSICAL INSTRUMENTS		
DRAWN BY: CM	CHECKED BY:	FIGURE NO: 3-B
FN: 944X050	DATE: 12-17-97	PROJECT NO: 944X050F

WOODWARD-CLYDE



- ⊕ DMW-4 UMI MONITORING WELL
- DWW-1 WATER SUPPLY WELL
- ⊕ EW-2 EXTRACTION WELL

--- 10 --- ESTIMATED TCE CONCENTRATION
CONTOUR IN MICROGRAMS/LITER

(47) TCE CONCENTRATION IN
MICROGRAMS/LITER

1,1-DCE CONCENTRATIONS IN GROUNDWATER—AUGUST 1997
RCRA PART B POST-CLOSURE PERMIT APPLICATION
UNITED MUSICAL INSTRUMENTS

DRAWN BY: CM	CHECKED BY:	FIGURE NO: 3-9
FN: 944X050	DATE: 12-17-97	PROJECT NO: 944X050F

**PRELIMINARY
APPENDIX ONE**

**Character/Background Reference
for Hazardous Waste Facility Permit Applicants**

**CHARACTER/BACKGROUND REFERENCE
FOR HAZARDOUS WASTE FACILITY
PERMIT APPLICANTS**

Pursuant to ARS § 49-922.C. and A.A.C. R18-8-270.J, The Arizona Department of Environmental Quality (ADEQ) requires that permit applicants and other persons associated with a proposed hazardous waste management facility, supply character background information sufficient to demonstrate their reliability, expertise, integrity, and competence to operate a hazardous waste facility. The attached application supplement shall be provided to ADEQ at the time that a "part B" permit application to treat, store, or dispose of hazardous waste is submitted. It may also be required in any request to transfer, reissue, or modify a hazardous waste permit.

All persons signing the part B permit application must complete the form. Signatories will be responsible for also providing this information of officers, directors, partners, key employees, or persons or business entities which hold ten percent or more of the equity or debt liability of the company. "Key employee" is defined as any person employed by an applicant or permittee in a supervisory capacity or empowered to make discretionary decisions with respect to the solid waste or hazardous waste operations of the business concern. This includes the emergency coordinator and training director.

The entire permit application, including this supplement, shall be considered public information except for those sections granted confidentiality by the Director in accordance with A.A.C. R18-8-260.D. The Attorney General's Office may conduct background investigations on any or all of the persons identified in the applicant's submittals.

If you believe that it will help the ADEQ to render a decision on your application, additional background or reference information may be submitted.

NOTICE

To whom it may concern:

Character/background reference forms for the United Musical Instruments USA, Inc. key personnel have been placed in the CONFIDENTIAL FILE for the facility.

Jeffrey N. Bryan
Hazardous Waste Permits Unit

**UNITED MUSICAL INSTRUMENTS
USA, INC.**

FINANCIAL STATEMENTS
December 31, 1996 and 1995

UNITED MUSICAL INSTRUMENTS USA, INC.
Elkhart, Indiana

FINANCIAL STATEMENTS
December 31, 1996 and 1995

CONTENTS

REPORT OF INDEPENDENT AUDITORS	1
CONSOLIDATED FINANCIAL STATEMENTS	
CONSOLIDATED STATEMENTS OF INCOME AND RETAINED EARNINGS	2
CONSOLIDATED BALANCE SHEETS	3
CONSOLIDATED STATEMENTS OF CASH FLOWS	4
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS	5



CROWE CHIZEK

REPORT OF INDEPENDENT AUDITORS

Board of Directors and Shareholder
United Musical Instruments USA, Inc.
Elkhart, Indiana

We have audited the accompanying consolidated balance sheets of United Musical Instruments USA, Inc. as of December 31, 1996 and 1995 and the related consolidated statements of income and retained earnings and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of United Musical Instruments USA, Inc. as of December 31, 1996 and 1995, and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

Crowe Chizek & Company LLP
Crowe, Chizek and Company LLP

Elkhart, Indiana
February 21, 1997, except
for Note 5 as to which the
date is March 31, 1997

UNITED MUSICAL INSTRUMENTS USA, INC.
CONSOLIDATED STATEMENTS OF INCOME AND RETAINED EARNINGS
Years ended December 31, 1996 and 1995

	<u>1996</u>		<u>1995</u>	
	<u>Amount</u>	<u>% to Sales</u>	<u>Amount</u>	<u>% to Sales</u>
Sales	\$ 66,227,651	100.00%	\$ 63,827,026	100.00%
Cost of goods sold	<u>43,156,669</u>	<u>65.16</u>	<u>42,426,017</u>	<u>66.47</u>
Gross margin	23,070,982	34.84	21,401,009	33.53
Operating expenses	<u>13,049,929</u>	<u>19.71</u>	<u>11,499,275</u>	<u>18.02</u>
Income before other expense	10,021,053	15.13	9,901,734	15.51
Other income (expense)				
Interest expense	(3,486,012)	(5.26)	(3,394,258)	(5.32)
Interest and finance charges	1,627,520	2.46	1,641,385	2.57
Other income	24,536	.03	3,439	.01
Loss on sale of subsidiary	<u>-</u>	<u>-</u>	<u>(93,218)</u>	<u>(.14)</u>
	<u>(1,833,956)</u>	<u>(2.77)</u>	<u>(1,842,652)</u>	<u>(2.88)</u>
Income from operations before income taxes	8,187,097	12.36	8,059,082	12.63
Provision for income taxes (Note 2)	<u>3,336,724</u>	<u>5.04</u>	<u>3,012,194</u>	<u>4.72</u>
Net income	4,850,373	<u>7.32%</u>	5,046,888	<u>7.91%</u>
Retained earnings at beginning of year	6,335,868		2,701,926	
Dividends declared	<u>(4,291,078)</u>		<u>(1,412,946)</u>	
Retained earnings at end of year	<u>\$ 6,895,163</u>		<u>\$ 6,335,868</u>	

See accompanying notes to consolidated financial statements.

UNITED MUSICAL INSTRUMENTS USA, INC.
CONSOLIDATED BALANCE SHEETS
December 31, 1996 and 1995

	<u>1996</u>	<u>1995</u>
ASSETS		
Current assets		
Cash	\$ 521,106	\$ 270,455
Accounts and notes receivable (after allowance for doubtful accounts of \$800,000 in 1996 and 1995)	33,156,124	27,380,767
Inventories (Note 3)	32,721,760	30,986,233
Prepaid expenses	<u>168,750</u>	<u>159,876</u>
Total current assets	66,567,740	58,797,331
Net property, plant and equipment (Note 4)	11,257,907	11,793,895
Other assets		
Long-term accounts and notes receivable	3,210,681	2,841,836
Intangible pension asset (Note 7)	580,100	641,200
Other	<u>39,529</u>	<u>44,130</u>
	<u>3,830,310</u>	<u>3,527,166</u>
	<u>\$ 81,655,957</u>	<u>\$ 74,118,392</u>
LIABILITIES AND SHAREHOLDER'S EQUITY		
Current liabilities		
Notes payable (Notes 5 and 6)	\$ 22,656,739	\$ 16,600,976
Accounts payable	3,038,925	2,199,500
Deferred income taxes	746,000	1,041,000
Accrued income taxes	693,400	1,244,000
Due to parent	925,318	-
Other current liabilities	<u>3,787,178</u>	<u>3,437,050</u>
Total current liabilities	31,847,560	24,522,526
Noncurrent liabilities		
Notes payable (Notes 5 and 6)	25,430,466	25,811,477
Other liabilities	943,499	1,158,411
Deferred income taxes	<u>1,299,000</u>	<u>1,005,000</u>
	27,672,965	27,974,888
Shareholder's equity		
Common stock, no par value: 1,000 shares authorized and 500 shares outstanding	50,000	50,000
Additional paid-in capital	15,318,000	15,318,000
Equity adjustment from foreign currency translation	(127,731)	(82,890)
Retained earnings	<u>6,895,163</u>	<u>6,335,868</u>
	<u>22,135,432</u>	<u>21,620,978</u>
	<u>\$ 81,655,957</u>	<u>\$ 74,118,392</u>

See accompanying notes to consolidated financial statements.

UNITED MUSICAL INSTRUMENTS USA, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
Years ended December 31, 1996 and 1995

	<u>1996</u>	<u>1995</u>
Cash flows from operating activities		
Net income	\$ 4,850,373	\$ 5,046,888
Adjustments to reconcile net income to net cash from operating activities		
Depreciation	1,242,382	1,180,305
Provision for losses on accounts receivable	874,001	601,000
Deferred income taxes	(1,000)	298,000
Translation adjustment	(44,841)	125,044
Change in assets and liabilities		
Accounts receivable	(7,018,203)	(2,799,752)
Inventories	(1,735,527)	(7,537,296)
Other current assets	(8,874)	739,170
Intangible pension asset	61,100	61,100
Other assets	4,601	9,584
Accounts payable and accrued expenses	638,953	2,508,731
Due to parent	925,318	-
Other liabilities	(214,912)	(96,285)
Net cash from operating activities	<u>(426,629)</u>	<u>136,489</u>
 Cash flows from investing activities		
Capital expenditures	<u>(706,394)</u>	<u>(3,477,138)</u>
Net cash from investing activities	(706,394)	(3,477,138)
 Cash flows from financing activities		
Principal payments on debt	(2,225,248)	(6,057,901)
Proceeds from issuance of debt	7,900,000	11,025,000
Dividends paid	<u>(4,291,078)</u>	<u>(1,412,946)</u>
Net cash from financing activities	<u>1,383,674</u>	<u>3,554,153</u>
 Net change in cash	250,651	213,504
 Cash at beginning of year	<u>270,455</u>	<u>56,951</u>
 Cash at end of year	<u>\$ 521,106</u>	<u>\$ 270,455</u>
 Supplemental disclosures of cash flow information		
Cash paid during the year for		
Interest	\$ 3,526,420	\$ 3,302,564
Income taxes	2,963,006	721,194

See accompanying notes to consolidated financial statements.

UNITED MUSICAL INSTRUMENTS USA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1996 and 1995

NOTE 1 - NATURE OF BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES

Operations: The Company is a manufacturer of musical instruments and sells to distributors and retailers worldwide.

Basis of Presentation: United Musical Instruments USA, Inc. is a wholly-owned subsidiary of United Musical Instruments Holdings, Inc. These financial statements present only the financial position, results of operations and cash flows of United Musical Instruments USA, Inc. and its subsidiaries.

Principles of Consolidation: The consolidated financial statements include the accounts of United Musical Instruments USA, Inc. and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated.

Use of Estimates in the Preparation of Financial Statements: In preparing financial statements, management must make estimates and assumptions. These estimates and assumptions affect the amounts reported for assets, liabilities, revenue, and expenses, as well as affecting the disclosures provided. Future results could differ from the current estimates.

Allowance for Doubtful Accounts: The Company establishes an allowance for doubtful accounts based on historical expense and their estimates regarding collectibility of their accounts receivable. Should future actual bad debts exceed management's current estimates, significant losses could occur. At December 31, 1996, no estimate can be made of the amount of loss, or range of loss, that is reasonably possible should bad debts exceed management's estimates.

Inventories: Domestic inventories are stated at the lower of cost (last-in, first-out method) or market. Foreign inventories are stated at the lower of cost (first-in, first-out method) or market.

Property, Plant and Equipment: Assets are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets.

Accounting for Income Taxes: The Company records income tax expense based on the amount of taxes due on its tax return plus deferred taxes computed based on the expected future tax consequences of temporary differences between the carrying amounts and tax bases of assets and liabilities, using enacted tax rates.

Foreign Currency Translation: The Company translates all assets and liabilities to U.S. dollars using the exchange rates in effect at the balance sheet date. Results of operations are translated using the average exchange rates during the period. Resulting translation adjustments are recorded as a separate component of shareholders' equity.

(Continued)

UNITED MUSICAL INSTRUMENTS USA, INC.
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
 December 31, 1996 and 1995

NOTE 2 - PROVISION FOR INCOME TAXES

The provision for income taxes for the years ended December 31, 1996 and 1995 consists of the following:

	<u>1996</u>	<u>1995</u>
Current taxes		
Federal	\$ 2,721,202	\$ 2,239,400
State	<u>616,522</u>	<u>474,794</u>
	3,337,724	2,714,194
Deferred income taxes	<u>(1,000)</u>	<u>298,000</u>
	<u>\$ 3,336,724</u>	<u>\$ 3,012,194</u>

Deferred tax assets and liabilities are as follows:

	<u>1996</u>	<u>1995</u>
Deferred tax liabilities	\$ 3,290,000	\$ 3,071,000
Deferred tax assets	1,245,000	1,025,000

No valuation allowance was provided on deferred tax assets.

The Company's deferred tax liabilities result primarily from temporary tax and financial differences in inventories and depreciation of property, plant and equipment. The deferred tax assets result primarily from temporary tax and financial differences in the allowance for bad debts and certain accrued expenses.

The Company is a member of a consolidated group and will be included in a consolidated tax return. Income tax expense is allocated to the Company based on its proportionate share of taxable income.

NOTE 3 - INVENTORIES

Inventories at December 31, 1996 and 1995 consist of the following:

	<u>1996</u>	<u>1995</u>
Raw materials	\$ 2,893,148	\$ 4,013,705
Work in process	12,938,803	11,410,842
Finished goods	<u>20,740,999</u>	<u>19,351,461</u>
Total inventories at FIFO	36,572,950	34,776,008
LIFO reserve	<u>3,851,190</u>	<u>3,789,775</u>
	<u>\$ 32,721,760</u>	<u>\$ 30,986,233</u>

(Continued)

UNITED MUSICAL INSTRUMENTS USA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1996 and 1995

NOTE 3 - INVENTORIES (Continued)

The effect of determining cost of inventories by the LIFO method as compared with the FIFO method was to decrease net income for the year ended December 31, 1996 by approximately \$36,000 and increase net income for the year ended December 31, 1995 by approximately \$2,207,000.

NOTE 4 - NET PROPERTY, PLANT AND EQUIPMENT

Net property, plant and equipment consists of the following at December 31, 1996 and 1995:

	<u>1996</u>	<u>1995</u>
Land	\$ 171,000	\$ 171,000
Buildings and improvements	6,396,483	6,187,695
Machinery and equipment	9,953,454	9,585,285
Office equipment	3,019,399	1,337,445
Construction in progress	<u>400,076</u>	<u>1,952,593</u>
	19,940,412	19,234,018
Accumulated depreciation	<u>8,682,505</u>	<u>7,440,123</u>
	<u>\$ 11,257,907</u>	<u>\$ 11,793,895</u>

NOTE 5 - NOTES PAYABLE

The Company has a revolving credit agreement with Sparbanken Sverige AB, Sweden. The agreement provides for maximum borrowings of \$38,000,000 which consist of various short-term notes. Interest is at a rate related to the London Interbank Offered Rate (LIBOR). The agreement is secured by accounts receivable.

On March 31, 1997, the Company received a commitment from Sparbanken Sverige AB which gives the Company the option to extend the maturity date on \$25,000,000 of the above notes until March 1998. It is the intention of management to exercise this option. Accordingly, the current and long-term notes payable on the balance sheet reflect this modification.

On March 27, 1996, the Company received a commitment from Sparbanken Sverige AB which gave the Company the option to extend the maturity date on \$25,000,000 of the above short-term notes until March 1997. The Company exercised this option during 1996. Accordingly, at December 31, 1995, the current and long-term notes payable on the balance sheet reflect this modification.

(Continued)

UNITED MUSICAL INSTRUMENTS USA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1996 and 1995

NOTE 5 - NOTES PAYABLE (Continued)

At December 31, 1996, the Company also had a \$8,000,000 demand line of credit agreement with Valley American Bank and Trust Company, South Bend, Indiana. Interest is at the bank's prime rate and the agreement is secured by accounts receivable, inventory and equipment.

Additionally, notes payable at December 31, 1996 and 1995 consist of other short-term notes payable to foreign lending institutions totaling \$1,280,401 and \$2,187,453, respectively. Interest rates on these notes varied between 5.16% to 9.25%. The agreements are secured by substantially all assets of one of the Company's subsidiaries.

NOTE 6 - LONG-TERM DEBT

Long-term debt at December 31, 1996 and 1995 consisted of the following:

	<u>1996</u>	<u>1995</u>
Prime rate note payable to Valley American Bank and Trust Company, South Bend, Indiana, payable in monthly installments of \$35,800 through September 1998; secured by computer equipment.	\$ 806,804	\$ 1,125,000
Current maturities	<u>376,338</u>	<u>313,523</u>
	<u>\$ 430,466</u>	<u>\$ 811,477</u>

Long-term debt is due as follows:

1997	\$ 376,338
1998	430,466

The loan agreement with Valley American Bank and Trust Company requires the Company to meet certain covenants related to net worth and their debt to net worth ratio. The Company has complied with these covenants at December 31, 1996.

NOTE 7 - PENSION PLAN

The Company has a defined benefit pension plan covering substantially all hourly employees covered by the collective bargaining agreement at the Eastlake, Ohio, facility. The pension plan provides benefits under a flat benefit formula relating directly to the employee's years of service. The Company makes annual contributions to the plan that comply with the minimum funding provisions of the Employee Retirement Income Security Act. The assets of the plan are comprised primarily of stocks and bonds.

(Continued)

UNITED MUSICAL INSTRUMENTS USA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1996 and 1995

NOTE 7 - PENSION PLAN (Continued)

The net periodic pension cost for 1996 and 1995 included the following components:

	<u>1996</u>	<u>1995</u>
Service cost-benefits earned during the year	\$ 89,400	\$ 72,800
Interest cost on projected benefit obligation	259,800	255,000
Actual return on plan assets	(256,900)	(369,000)
Net amortization and deferral	<u>107,900</u>	<u>260,600</u>
	<u>\$ 200,200</u>	<u>\$ 219,400</u>

Assumptions used in accounting for pension plans at December 31, 1996 and 1995 are as follows:

	<u>1996</u>	<u>1995</u>
Discount rate	7.75%	7.5%
Expected long-term rate of return on assets	8.5%	8.5%

The following table sets forth the plan's funded status at December 31, 1996 and 1995:

	<u>1996</u>	<u>1995</u>
Actuarial present value of accumulated benefit obligation including vested benefits of \$3,322,400 in 1996 and \$3,378,300 in 1995	<u>\$ (3,510,400)</u>	<u>\$ (3,501,800)</u>
Actuarial present value of projected benefit obligation	\$ (3,510,400)	\$ (3,501,800)
Plan assets at fair value	<u>2,843,400</u>	<u>2,490,600</u>
Project benefit obligation in excess of fair value of plan assets	(667,000)	(1,011,200)
Unrecognized net loss	238,700	377,000
Unrecognized prior service cost	498,600	546,000
Unrecognized initial net obligation	<u>81,500</u>	<u>95,200</u>
Prepaid pension cost included in balance sheets	<u>\$ 151,800</u>	<u>\$ 7,000</u>

(Continued)

UNITED MUSICAL INSTRUMENTS USA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1996 and 1995

NOTE 7 - PENSION PLAN (Continued)

At December 31, 1996 and 1995, the additional minimum pension liability included in other (noncurrent) liabilities is \$818,800 and \$1,018,200, respectively, which represents the excess of the accumulated benefit obligation over the fair value of plan assets. Also, an intangible asset, which represents the unrecognized prior service cost and the unrecognized initial net obligation has been recorded in other assets in the balance sheet.

NOTE 8 - PROFIT SHARING PLAN

The Company has a profit sharing plan containing Internal Revenue Code Section 401(k) provisions. The plan covers substantially all employees not covered by the collective bargaining agreement. The Company is required to contribute a certain percentage of employee contributions. Additional contributions are discretionary. The expense for the years ended December 31, 1996 and 1995 was \$267,000 and \$239,525, respectively.

NOTE 9 - ENVIRONMENTAL REMEDIATION LIABILITIES

At December 31, 1996 and 1995, the Company is involved in environmental remediation projects at their Eastlake, Ohio and Nogales, Arizona locations.

The Company submitted a Corrective Measures Study, relative to the Eastlake location, to the U.S. Environmental Protection Agency (USEPA) which included several remediation alternatives and the Company's preference for remediation alternatives. The Company has received approval for the remediation alternative preferred by the Company.

The Company has complied with substantially all provisions of consent agreements with the Arizona Department of Environmental Quality and the City of Nogales, relative to the remediation performed at their Nogales location.

The estimated cost of these remediation projects is approximately \$500,000 and is included in other current liabilities in the December 31, 1996 and 1995 balance sheets. It is the opinion of management that no material loss for any additional costs will be incurred, based on current testing results and their assumptions about future testing results at each location. This estimate may change depending on actual results of future testing. At December 31, 1996, no estimate can be made of the amount of loss, or range of loss, that is reasonably possible should actual environmental costs exceed management's estimates.

(Continued)

UNITED MUSICAL INSTRUMENTS USA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 1996 and 1995

NOTE 10 - CONTINGENT LIABILITY

At December 31, 1996 and 1995, the Company is contingently liable to First Waco National Bank, Waco, Texas, for \$224,734 and \$339,090, respectively of an operating loan made to a dealer. It is the opinion of management that no material loss will be incurred as a result of this contingent liability.

NOTE 11 - PENDING LITIGATION

The Company is a party to various legal proceedings. In management's opinion, the Company has adequate legal defenses and management does not believe that they will materially affect the Company's operations or financial position.

**PRELIMINARY
APPENDIX TWO**

Consent Order D-47-93
