UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

JAN 03 2002

Certified Mail - Return Receipt Requested

DE-9J

Mr. Scott C. Carr
Techalloy
Union Wire Plant
6509 Olson Rd. - P.O. Box 423
Union , Illinois 60180-0423

Re: Request for Extension/Completion of Asphalt Cap
Techalloy Company, Inc.
EPA ID No.: ILD 005 178 975

Dear Mr. Carr:

This letter is in response to your request for a time extension to complete the asphalt cap. In your letter, dated November 28, 2001, you stated that it was necessary to extend the completion date to June 30, 2002 in order to ensure the structural integrity of the sub-grade soil under the cap. Based on the information that you provided, we are extending your completion date until June 30, 2002.

If you have any questions regarding this matter please contact me at 312-886-3543.

Sincerely,

Pamela Molitor

Pamela Molitor
Enforcement and Compliance Assurance Branch

cc: Carlos Serna, InteGreyted Consultants

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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
TECHALLOY COMPANY, INC. 6509 OLSON ROAD UNION, ILLINOIS 60180	)))	MODIFICATION TO ADMINISTRATIVE ORDER ON CONSENT
	)	
EPA ID NO. ILD 005 178 975	))	U.S. EPA DOCKET NO.: R8H-5-99-008
	)	
RESPONDENT	)))))	Proceeding under Section 3008(h) of the Resource Conservation and Recovery Act, as amended 42 U.S.C. §6928(h).

I. JURISDICTION

On September 30, 1999, an Administrative Order on Consent ("Consent Order") was issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency ("U.S. EPA") by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 ("RCRA"), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The authority to issue administrative orders requiring corrective action pursuant to RCRA 3008(h) vested in the Administrator has been delegated to the Regional Administrators by U.S. EPA Delegation No. 8-32, dated May 11, 1994. This authority was further delegated by the Regional Administrator of Region 5 to the Chief of the Enforcement and Compliance Assurance Branch in the Waste, Pesticides and Toxics Division, by EPA Region 5

Delegation 8-32, dated April 24, 1996.

The Consent Order was issued to Techalloy Company, Inc. ("Techalloy" or "Respondent"), the owner/operator of a facility at 6509 Olson Road, Union, Illinois.

II. MODIFICATION

Pursuant to Section XXIII (MODIFICATION) of the September 30, 1999, Consent Order, the Consent Order may only be modified by mutual agreement of U.S. EPA and Respondent. Section XXIII further states that any modification shall be in writing, shall be signed by both parties, shall have its effective date the date on which the modification is signed by U.S. EPA, and shall be incorporated into the September 30, 1999, Consent Order.

Therefore, pursuant to Section XXIII of the Consent Order, the parties by their signatures below agree to modify the Consent Order by substituting paragraph F in Section VIII (WORK TO BE PERFORMED) with the following language:

VIII. WORK TO BE PERFORMED

F. Asphalt Cap

1. Respondent shall install the asphalt cap at the area indicated in Exhibit D. Respondent shall not be required to implement Task II.A, II.B, and II.D set forth in Attachment I. Respondent shall install the asphalt cap in accordance with Task II.C of Attachment I. The asphalt cap installation shall be completed by November 15, 2001. Respondent shall notify U.S. EPA in writing of the completion of the asphalt cap

installation within fifteen (15) days of such completion.

2. Following installation of the asphalt cap, Respondent shall perform groundwater monitoring on a semi-annual (twice a year) basis for total metals (Method 6010B) at the following wells: MW2, MW4, MW5, MW5D, MW6, MW7, MW8, MW9 and the Highbridge Well. Respondent shall provide U.S. EPA with the results of each round of semi-annual groundwater sampling for metals when submitting the next Progress Report, except that if MCLs for metals are exceeded at the Highbridge Well, Respondent shall notify U.S. EPA within fifteen (15) days of obtaining the results. If U.S. EPA determines that additional work is necessary, it shall be accomplished pursuant to Section VIII, paragraph Q of this Consent Order.

Furthermore, the parties explicitly acknowledge that, by substituting the above paragraph F for the paragraph F that appears in Section VIII of the September 30, 1999, Consent Order, the soil stabilization area at the Facility is no longer designated to be a Corrective Action Management Unit.

A new Exhibit D is attached to this Modification, and replaces the Exhibit D which was attached to the Consent Order.

IT IS SO AGREED AND ORDERED:

DATE: 10/17/01

BY: _____
TECHALLOY COMPANY, INC.
RESPONDENT

DATE: October 29, 2001

BY: Joseph M. Boyle
JOSEPH M. BOYLE, CHIEF
ENFORCEMENT AND COMPLIANCE
ASSURANCE BRANCH
WASTE, PESTICIDES AND
TOXICS DIVISION
U.S. EPA, REGION 5

Memorandum
Modification to Soil Remediation Alternative
Techalloy Company, Inc.
Union, Illinois
ILD 005 178 975

This memorandum provides a summary of the soil remediation approach to be implemented at Techalloy Company, Inc. (Techalloy) facility located at the intersection Olson and Jefferson Roads in Union, Illinois (herein referred to as the subject property). Corrective Measures Implementation is currently being conducted at the subject property as a requirement of a RCRA Section 3008(h) Administrative Order on Consent between the United States Environmental Protection Agency (U.S. EPA) and Techalloy issued September 30, 1999 and modification to the Order dated March 9, 2000.

In order to provide a clear understanding of the rationale and scope of this modification to the remedial approach for metal constituents in soil, the following sections present a discussion of project background, soil remediation rationale and implementation issues.

Background Information

The subject property is located at the intersection of Olson and Jefferson Roads near the Village of Union, Coral Township, McHenry County, Illinois. The developed portion of the property occupies five acres. The subject property includes an additional 35 acres of agricultural land surrounding the facility. A property boundary map is presented in Figure 1.

Techalloy has completed both a RCRA Facility Investigation (RFI) and the Corrective Measure Study (CMS) at the subject property. The RFI was conducted between August/September 1994 and March/April 1996 and involved investigations that determined the extent of potential releases of hazardous waste and/or constituents at potential source areas. The CMS was completed in August 1997 and recommended remedial alternatives for both soil and groundwater. A Statement of Basis was prepared, and a Final Decision and Response to Comments was signed by the U.S. EPA on May 26, 1998. The Final Decision included off-site groundwater extraction/treatment, on-site groundwater sparging, on-site soil vapor extraction to address volatile organic compounds (VOCs) in the soil and groundwater, and on-site soil stabilization and asphalt capping to minimize the leaching of soil contaminants into the groundwater, and to prevent direct human exposure to the contaminated soil.

Currently, there are two groundwater extraction wells pumping a total of approximately 600 gallons per minute from the aquifer. Techalloy is then treating VOCs in water prior to discharging the clean water in to the South Branch of the Kishwaukee River. This remediation technology is preventing the VOCs in groundwater from migrating further. In addition to off-site groundwater extraction, Techalloy has implemented an air sparging system that injects air into the aquifer, which removes VOCs from the groundwater. The

on-site soil remediation technology that has been implemented for remediation of VOCs in the soil is accomplished through the soil vapor extraction system. This system is removing VOCs by simply vacuuming the VOCs from the unsaturated soil.

In March 2001, an investigation at the subject property was conducted to more accurately assess the detailed extent of metals contamination in the soil. The investigation determined that the area of metals impacted soil was approximately half the size of what was originally assessed from the RFI data. The area of metals contamination consisted of four discreet areas totaling approximately 100 feet by 100 feet to a depth of approximately 7 feet below the ground surface (Figure 2).

In addition, in May 2001, Techalloy conducted a round of groundwater sampling from wells located on-site and off-site for metal constituents (Figure 3). Metals were not detected in the off-site groundwater monitoring well at the intersection of Union and Highbridge Roads. Comparing the concentrations from the same wells collected in 1994 and 1996 indicate that metal concentrations have decreased. This indicates that although the metal constituents in soil are leaching to groundwater, they have not migrated to the off-site well location. This lack of metal migration in groundwater is likely the result of the metals adsorbing to the clay particles in the soils.

Currently, McHenry County has restricted the use of groundwater as a potable source of drinking water within the area of the groundwater plume. Also, residents that were incorporated in the groundwater-sampling program required by the 1999 Consent Order (west of the subject property), have been connected to the City of Union public water supply. Techalloy has incorporated within its Property Deed a restriction that the property will only be used for industrial purposes. These measures ensure that groundwater within the area of the groundwater plume is not being used as a drinking water source and that the subject property will only be used for industrial purposes. These measures are considered institutional controls that provide further protection to the public and the environment.

Soil Remediation Rationale

Since metal constituents are leaching from soil to groundwater and are found at the surface at concentrations which would result in an unacceptable risk due to direct contact, a remediation technology is necessary that will minimize precipitation from leaching the metals from the soil and that will place a physical barrier between the contaminated soil and receptors.

The Administrative Order on Consent stipulated the use of soil stabilization and an asphalt cap to minimize the leaching of metals and eliminating any threat due to direct contact. By letter dated July 6, 2001, Techalloy proposed an alternative of constructing an engineered barrier (asphalt cap) that would minimize precipitation from infiltrating in the areas of elevated metal impacted soil, and would eliminate the direct contact threat. U.S EPA agrees that this alternative would be equally protective of human health and the environment.

The alternative to soil stabilization is to solely implement an engineered asphalt cap that will act as a barrier and minimize the infiltration of precipitation, and consequently, minimize the leaching of metals in the soil. This technology will also effectively eliminate the potential for contact with the contaminated soil. At this property, use of this technology is as protective to human health and the environment as would be using stabilization technology with an asphalt cap. Also, by eliminating soil stabilization there will be no need for a Corrective Action Management Unit (CAMU), since impacted soil will not be removed from the subsurface. The benefit of not digging the contaminated subsurface soil is the elimination of the short-term risk of exposure to workers. Further, this modified remediation can be implemented more quickly and economically than could soil stabilization followed by capping.

To further ensure that metal constituents are not migrating in groundwater, Techalloy will be required to monitor on-site and off-site monitoring wells for metal constituents twice a year for a duration of time U.S. EPA considers appropriate (minimum five years). If at any time MCLs for metals in groundwater are exceeded at the off-site well, Techalloy will notify U.S. EPA, and will implement those measures deemed appropriate at the time by U.S. EPA. After five years, if conditions remain stable or metal concentrations in groundwater continue to decrease, Techalloy may request that U.S. EPA extend the duration between sampling events.

Technical Implementation and Schedule

The asphalt cap has been designed to be a strong and reasonably impervious layer. The cap incorporates two design types with specific purposes. The majority of the area of the cap has been designed to cover the metal impacted soil and secondly a smaller area of the cap has been designed for roadway purposes to provide access around the subject property. The majority of the cap has been designed to include 2.5 inches of Class 1 IDOT Type 3 asphalt, 2.5 inches of Class 1 IDOT Type 2 asphalt, 4 inches CA-6 aggregate, and lastly an 8-ounce geotextile membrane. The roadway design includes 2.5 inches Class 1 Type 3 asphalt, 4 inches IDOT Class 1 Type 2 asphalt, 6 inches CA-8 aggregate, 4 inches CA-6 aggregate, and lastly 6-ounce geotextile membrane. The roadway has been constructed to hold a heavier load to accommodate forklifts and trucks. The condition of the asphalt cap will be evaluated by Techalloy each spring, and resurfaced/sealed every two years, as necessary.

The boundary of the asphalt cap in relation to the identified impacted metal constituents in soil is presented in Figure 2. The cap will cover all areas of metal impacted soil.

The implementation of the cap has been initiated with the site grading and design plan. The construction of the cap is to start on or about October 13, 2001 and to be completed on or about November 15, 2001.

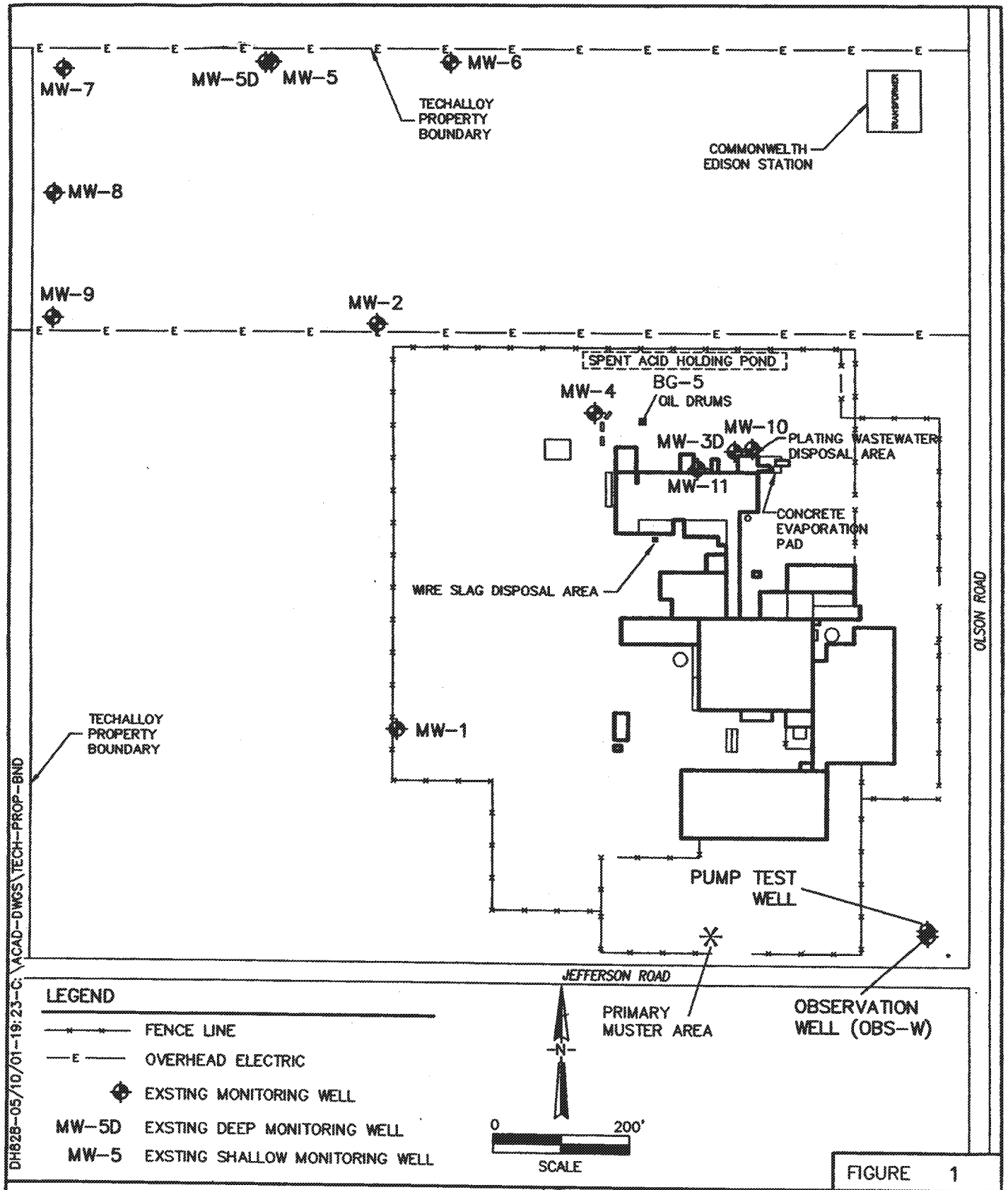


FIGURE 1

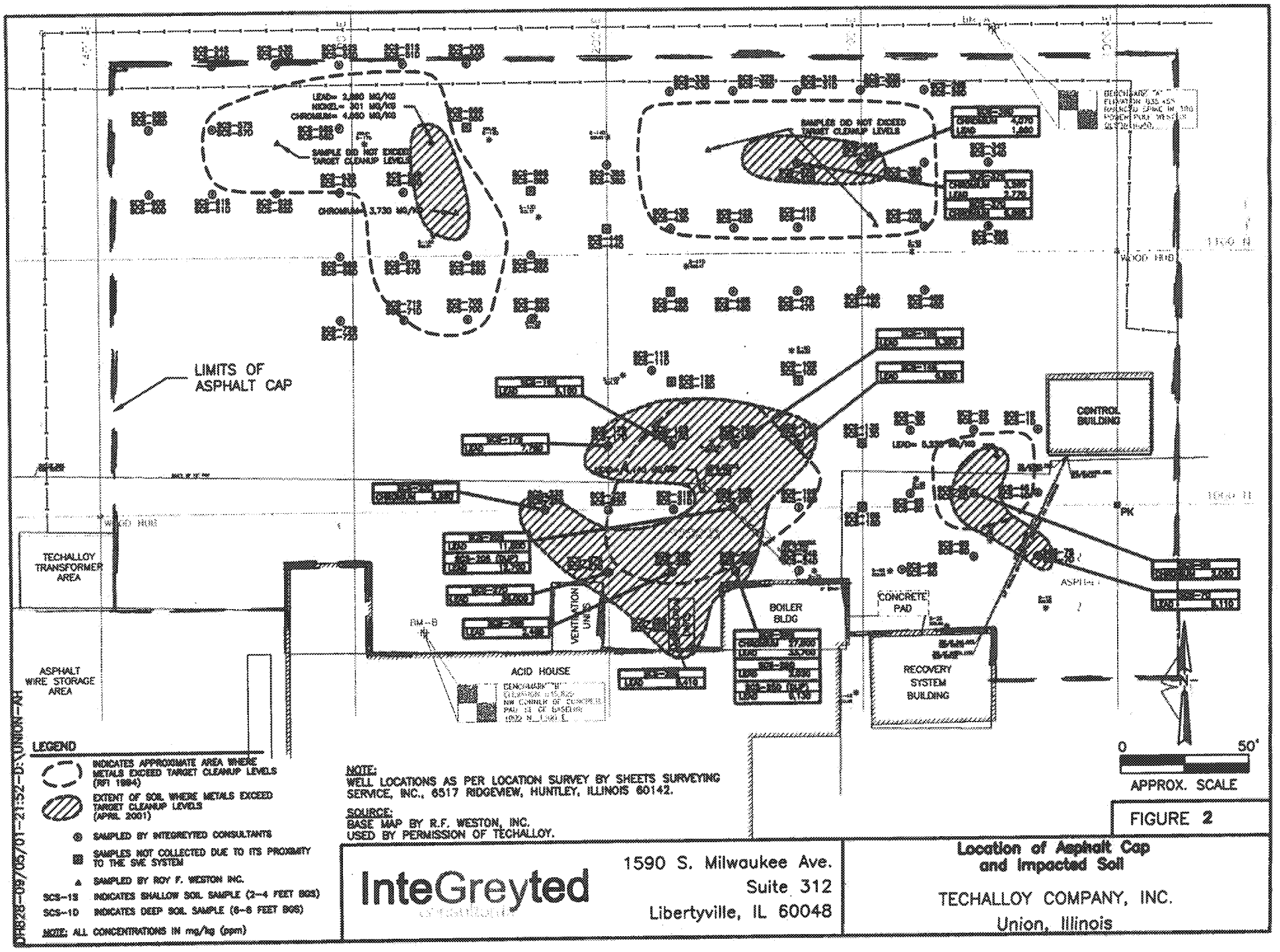
InteGreyted consultants

1590 S. Milwaukee Ave.
Suite 312
Libertyville, IL 60048

TECHALLOY PROPERTY BOUNDARY

TECHALLOY COMPANY, INC.

Union, Illinois



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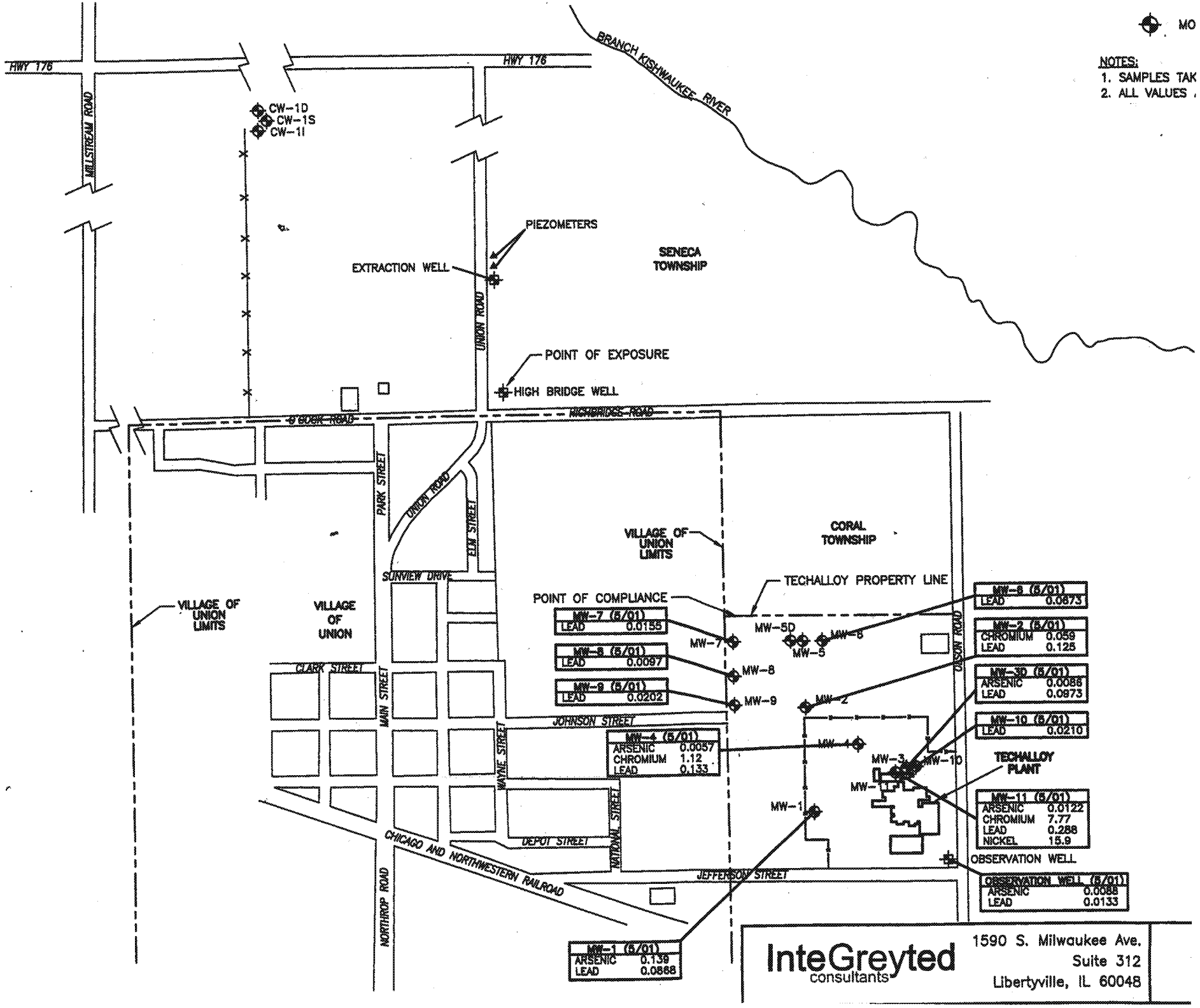

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