APPENDIX E
EXAMPLE DEED NOTICE

EXAMPLE DEED NOTICE

MODEL INSTITUTIONAL CONTROL
RESTRICTIVE COVENANT

Commercial Metals Company, Corpus Christi Facility
4614 Agnes Street
Corpus Christi, Nueces County, Texas 78405

STATE OF TEXAS

COUNTY OF Nueces

This Notice is filed to provide information concerning certain environmental conditions and/or use limitations pursuant to the Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program Rule (TRRP) found at 30 Texas Administrative Code (TAC), Chapter 350 and Environmental Protection Agency (EPA) 40 CFR §761.61, and affects the real property (Property) described as follows:

> ***[Insert legal description or a reference to an attached Exhibit A with the phrase, "attached hereto and incorporated herein by reference." This legal description needs to include the entire recorded tract of land held by the owner executing this deed notice. The description should consist of the property description used in the last recorded vesting deed covering the Property or, if the Property has since been subdivided, the legal description for the subdivision with reference to the recorded plat map thereof (where the vesting deed covered multiple lots, tracts, or parcels of land, only the lot(s), tract(s), or parcel(s) containing the identified chemicals of concern would need to be included.) This is not a legal description of the Affected Property as set forth below. If the Affected Property (as set forth below) that is being made subject to the deed notice impacts the land of more than one owner, a separate deed notice needs to be filed for each tract.]***

Portions of the *soils and groundwater* of the Property contain certain identified chemicals of concern causing those portions of the Property to be considered an Affected Property as that term is defined in the TRRP. The portion considered to be Affected Property is described as follows:

> ***[Insert legal description and reference to an attached Exhibit B, with the phrase, "attached hereto and incorporated herein by reference." Exhibit B needs to include a metes and bounds description of the Affected Property and a plat map clearly demarcating the portions of the Property that contain the Affected Property. The map must contain a north arrow, a correlating map scale, and a legend identifying any used symbols or abbreviations. The metes and bounds description and plat map must be accompanied by a certification from a registered professional land surveyor so registered by the Texas Board of Professional Surveying attesting to the accuracy of the descriptions. Also, list each COC by environmental medium that exceeds the critical PCL.]***

This Notice is required for the following reasons:

The Property shall not be used for any purposes other than commercial/industrial uses, as defined in 30 Texas Administrative Code, Chapter 350, Section 350.4(a)(13).

The Affected Property is subject to the TRRP requirements for properties containing concentrations of chemicals of concern in soil and is subject to the requirements in 30 TAC §350.33(e)(2) and 40 CFR §761.61 to prevent exposure to soils that contain chemicals of concern in excess of the protective concentration level. The attached Exhibit B describes and provides the location of the physical control and the extent of the soil that exceeds the TCEQ-approved protective concentration levels for certain chemicals of concern. The attached Exhibit B also describes the required maintenance and monitoring required for the physical control. This program must be implemented unless and until TCEQ approves any modification. This deed notice must not be removed or modified without prior approval from TCEQ and EPA.

The Affected Property is subject to the TRRP requirements for properties with an area overlying a TCEQ-approved plume management zone. A plume management zone is defined as an area of groundwater-containing concentrations of chemicals of concern exceeding the TCEQ-approved protective concentration levels for the site, plus any additional area allowed by TCEQ in accordance with 30 TAC §350.33(f)(4). The undersigned has established a plume management zone so that the chemicals of concern in the groundwater are managed such that human exposure is prevented and that other groundwater resources are protected. The attached Exhibit B provides the location and extent of the plume management zone and describes the maintenance and monitoring required. This maintenance and monitoring is required until TCEQ approves some modification of those requirements. Exposure to groundwater within the plume management zone for any purpose is not advised until such time when all of chemicals of concern no longer exceed their respective protective concentration levels. This deed notice [and the physical control] must not be removed or modified without prior approval from TCEQ and EPA.

Groundwater wells may not be installed in the first groundwater-bearing zone within the Plume Management Area for extraction of groundwater, and no groundwater may be pumped from the first groundwater-bearing zone for any residential or non-residential use with the exception of pumping in order to achieve response action goals.

The site is being used for disposal of PCB remediation waste with a maximum PCB concentration of 500 mg/kg beneath the physical control and surrounded by a fence.

As of the date of this Notice, the record owner of fee title to the Property is CMC Americas, with an address of:

CMC Americas
1 Steel Mill Drive
Seguin, Texas 78155

For additional information, contact:

TCEQ
Central Records
12100 Park 35 Circle, Building E
Austin, Texas 78753

Mail: TCEQ - MC 199
P O Box 13087
Austin, Texas 78711-3087

TCEQ Program and Identifier No.: VCP 222

This Notice may be rendered of no further force or effect only by a superseding deed notice executed by the TCEQ or its successor agencies and filed in the same Real Property Records as those in which this Deed Notice is filed.

Executed this _____day of _____, _____ .

CMC Americas

By:_____

Name:_____

Title:_____

Executed this _____day of _____, _____ .

LAND OWNER

By:_____

Name:_____

Title:_____

Accepted as Third Party Beneficiary this_____day of_____,_____.

STATE OF TEXAS
NUECES COUNTY

BEFORE ME, on this the_____day of _____, personally appeared _____[name],_____[title],of CMC Americas known to me to be the person whose name is subscribed to the foregoing instrument, and they acknowledged to me that they executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the _____ day of_____, ____.

Notary Public in and for the State of Texas,
County of Nueces
My Commission Expires:_____

EXHIBIT A

LEGAL DESCRIPTION OF
4614 Agnes Street, Corpus Christi, Texas

EXHIBIT B

Metes and Bounds Description of Affected Property

APPENDIX F
EXAMPLE OPERATION AND MAINTENANCE INSPECTION CHECKLIST

EXAMPLE
CAP
INSPECTION FORM

Site Name: _____ Permit No.: _____

Weather: _____ Inspection Date: _____

Reviewed by: _____ Inspector (Print): _____

Site Map Attached: Yes ____ No ____ Signature: _____

Location-Inspection Criteria	Yes	No	N/A	Comments
GENERAL SITE				
1. Security Fencing/Gate				
a. Evidence of deterioration				
b. Signs of unauthorized entry				
c. Warning signs not properly posted				
2. Evidence of unauthorized dumping				
CAP				
1. Evidence of settlement/ponding				
2. Evidence of erosion or exposed wastes				
3. Evidence of cracking				
4. Evidence of burrowing animals				
7. Vegetation adequate				
GROUNDWATER MONITORING WELLS				
1. Deteriorating, damaged, or missing concrete pads or guard posts				
2. Damaged or deteriorating well pipe				
3. Deteriorating, damaged, or missing protective casings or locks				
4. Deteriorating, damaged, or missing well caps				
5. Deteriorating well labels.				
SURFACE WATER SYSTEMS				
1. Deterioration/Erosion of drainage channels				
3. Evidence of obstructed drainage				
4. Deterioration of monitoring point labels				
5. Deterioration of retention pond				
6. Sediment pond cleaning needed				

N/A Not applicable to site location

APPENDIX G
COMMUNITY OUTREACH PLAN

COMMUNITY OUTREACH PLAN

Prepared for

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
and the
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

On behalf of

Commercial Metals Company

6565 N MacArthur Blvd, Suite 800
Irving, Texas 75039

Prepared by

WESTON SOLUTIONS, INC.
2705 Bee Cave Road, Suite 100
Austin, Texas 78746
512-651-7100 • Fax 512-651-7101

July 12, 2011

W.O. No. 14160.001.009.0002

WESTON SOLUTIONS

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3. SUMMARY OF PROPOSED REMEDIATION ACTIVITIES AT CMC'S CORPUS CHRISTI FACILITY **1**

4. COMMUNITY INVOLVEMENT ACTIVITIES **2**

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4.2 PUBLIC COMMENT PERIOD 3
4.3 PUBLIC INFORMATION MEETINGS 3
4.4 MEETING RESPONSE AND REMEDATION IMPLEMENTATION 3

LIST OF FIGURES

Figure 1 CMC Corpus Christi Facility Location Map

Figure 2 CMC Corpus Christi Facility On-site Property Map

1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), on behalf of the Commercial Metals Company (CMC), has developed this Community Outreach Plan (COP) as part of planning for public involvement in anticipated cleanup activities at CMC's Recycling facility in Corpus Christi, Texas. This COP is a planning tool for public involvement in the remediation process and is designed to foster an open channel of communication between CMC and the local community, the U.S. Environmental Protection Agency (EPA), and the Texas Commission on Environmental Quality (TCEQ) Voluntary Cleanup Program (VCP). Assisting area residents, interested groups, and local organizations in providing input into the cleanup process, this COP is structured to allow modifications in response to changing community needs.

2. CMC'S CORPUS CHRISTI FACILITY SITE DESCRIPTION

CMC's facility is a 17.2-acre property located at 4614 Agnes Street, Corpus Christi, Nueces County, Texas. The property is bounded by Navigation Blvd and the City of Corpus Christi water storage facility to the west, various commercial/industrial businesses to the east, Texas-Mexican Railroad right-of-way (ROW) and Agnes St to the south, and a radio tower and undeveloped land to the north. A Property Location Map is provided as Figure 1.

CMC has recently purchased the formerly off-site property, known as the former Flato property, to the north and is in the last stages of acquiring the adjacent, undeveloped portion of Paxton Street right-of-way as part of the remediation. The acquisition will not change the remediation approach, but may affect volume of soils disposed off-site. Property location and boundary maps are provided as Figures 1 and 2.

3. SUMMARY OF PROPOSED REMEDIATION ACTIVITIES AT CMC'S CORPUS CHRISTI FACILITY

The proposed remediation approach includes the removal and off-site disposal of on-site soils with PCB concentrations greater than 500 mg/kg, removal and off-site disposal of off-site soils with PCB concentrations greater than 1 mg/kg, and placement of most of the affected on-site PCB soils under a fenced-in, clay cap. Future use of the non-capped portion of the facility is anticipated to be for receipt and transport of scrap metal material.

The schedule for remediation activities is proposed below.

Activity	Anticipated Start Date
Approval of Application for Risk Based Cleanup by EPA	September 2011
Public Notice Period and Response/Changes (if necessary)	October - November 2011
Final Engineering Design and Bid Specifications	December 2011 – January 2012
Bid Selection	February 2012
Relocation	March – April 2012
Concrete Demolition Activities	May 2012
On-Site and Off-Site Soil Excavation and Confirmation Sampling	June – July 2012
Backfilling of Excavated Areas and Construction of Clay Cap	August 2012
Final Grades, Stormwater Retention Improvements, and Final Fencing	October 2012
Final Summary Report submitted to EPA and TCEQ	December 2012

4. COMMUNITY INVOLVEMENT ACTIVITIES

CMC's Corpus Christi Facility will be prepared to address areas of community concern and public involvement through this COP in the following activities:

4.1 PUBLIC NOTICE

Public notice of the proposed remediation at CMC's Corpus Christi Facility will be made known to the public in three ways:

- A newspaper display advertisement will be printed in a newspaper of general circulation in the community (The *Corpus Christi Caller-Times).* The display ad will be located in such a place as to give effective notice to the general public and sized to be easily readable. Notices will also be posted in Spanish.
- Notice of the proposed remediation will be provided on a clearly marked, visible, and accessible signs along each side of the CMC facility. The signs will be large enough to be read from the nearest point where the public would pass -- on foot or by vehicle -- by the site. The sign will use 1.5 inch font, be 18 inches high and 28 inches wide.
- Notice of the project will be broadcast at least once on local radio in English.

4.2 PUBLIC COMMENT PERIOD

The day the posting of public notice is printed in the newspaper as described above, a public comment period of 45 calendar days will begin in order to allow members of the community and concerned organizations to communicate questions and concerns regarding the proposed remediation activities. Contact information for those submitting questions and comments will be recorded so that interested parties can be notified for future public information meetings and additional issuances of information.

4.3 PUBLIC INFORMATION MEETINGS

After the public comment period, if significant community interest is generated and a public meeting is requested during the public comment period, CMC's Corpus Christi Facility will conduct a public meeting. Representatives of CMC will be in attendance, and representatives of EPA and TCEQ will be invited. CMC will announce the time and place of the meeting in The *Corpus Christi Caller-Times,* and through the mailing list that will be constructed during the public comment period.

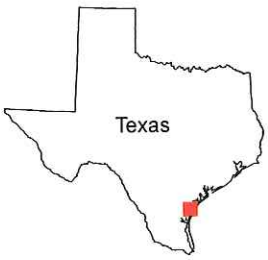
4.4 MEETING RESPONSE AND REMEDATION IMPLEMENTATION

After completion of the public meeting, if conducted, CMC, EPA, and TCEQ will take into account comments provided by the public prior to implementation of planned remediation activities. After EPA approval of the Application for Risk Based Cleanup, the approval will be announced via display advertisement in the *Corpus Christi Caller-Times.*

0 0.25 0.5
Miles

Legend

Property Boundary



N

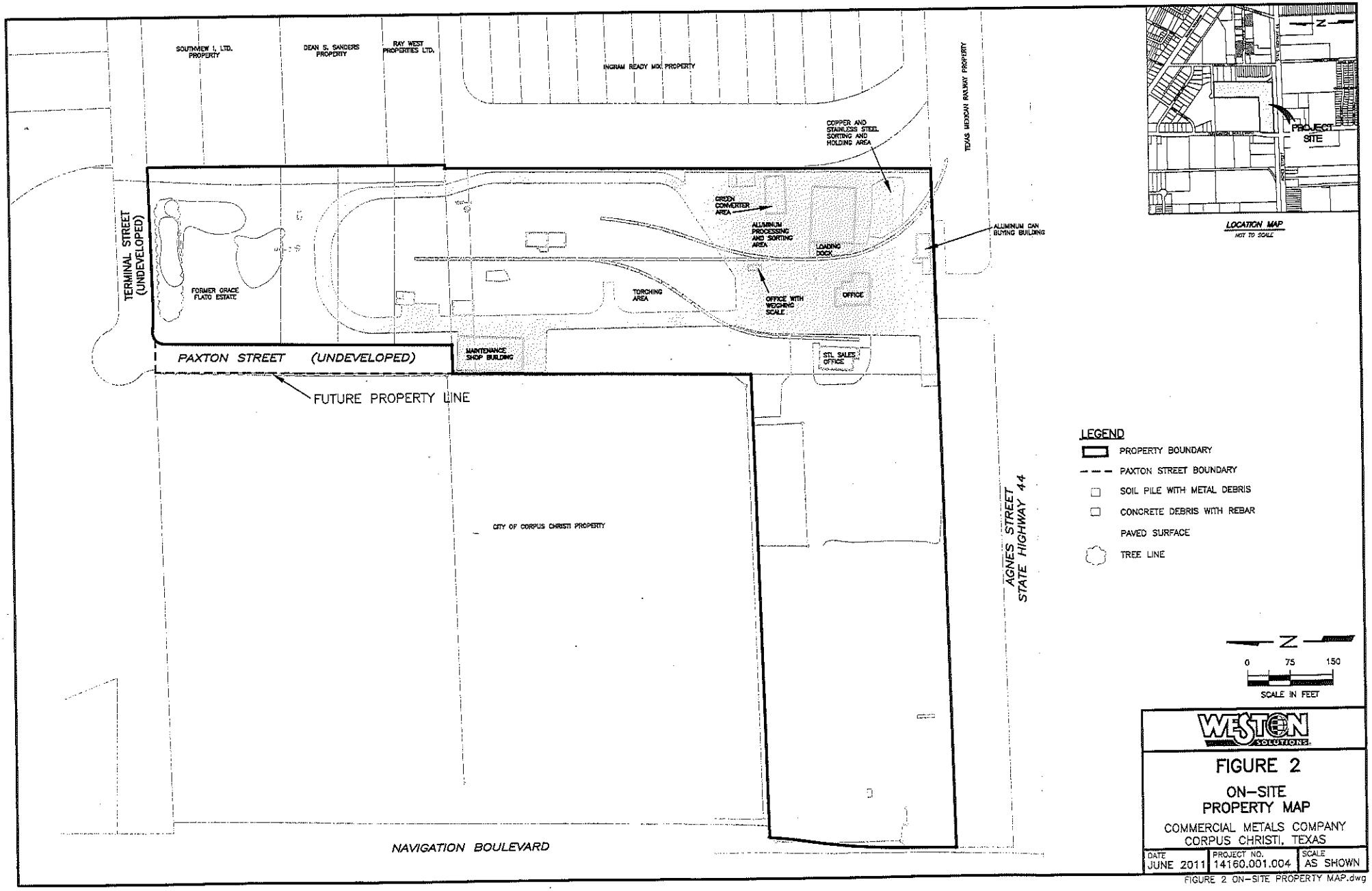
SOURCE: Texas Strategic Mapping Program (StratMap), TNRIS, 2008-2009 Texas Orthoimagery Program, Image Date - 2009

WESTON SOLUTIONS

FIGURE 1
SITE LOCATION MAP
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS

DATE	PROJECT NO	SCALE
JUNE, 2011	14160.001.004.0001.01	AS SHOWN

FILE: Site Location Map


SOUTHVIEW I, LTD. PROPERTY
DEAN S. SANDERS PROPERTY
RAY WEST PROPERTIES LTD.
INGRAM READY MIX PROPERTY
TEXAS MEXICAN RAILWAY PROPERTY
COPPER AND STAINLESS STEEL SORTING AND HOLDING AREA
GREEN CONVERTER AREA
ALUMINUM PROCESSING AND SORTING AREA
LOADING DOCK
ALUMINUM CAN BUYING BUILDING
OFFICE WITH WEIGHING SCALE
OFFICE
TORCHING AREA
MAINTENANCE SHOP BUILDING
STL SALES OFFICE
TERMINAL STREET (UNDEVELOPED)
FORMER GRACE FLATO ESTATE
PAXTON STREET (UNDEVELOPED)
FUTURE PROPERTY LINE
CITY OF CORPUS CHRISTI PROPERTY
AGNES STREET STATE HIGHWAY 44
NAVIGATION BOULEVARD
PROJECT SITE
LOCATION MAP
NOT TO SCALE
LEGEND
PROPERTY BOUNDARY
PAXTON STREET BOUNDARY
SOIL PILE WITH METAL DEBRIS
CONCRETE DEBRIS WITH REBAR
PAVED SURFACE
TREE LINE
N
0 75 150
SCALE IN FEET
WESTON SOLUTIONS
FIGURE 2
ON-SITE PROPERTY MAP
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS
DATE JUNE 2011
PROJECT NO. 14160.001.004
SCALE AS SHOWN
FIGURE 2 ON-SITE PROPERTY MAP.dwg

TEMPORARY MEASURES PLAN

Prepared for

Commercial Metals Company

6565 N MacArthur Blvd, Suite 800
Irving, Texas 75039

Prepared by

WESTON SOLUTIONS, INC.
2705 Bee Caves Road, Suite 100
Austin, Texas 78746
512-651-7100 • Fax 512-651-7101

June 2011

W.O. No. 14160.001.004.0001.01

WESTON SOLUTIONS

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APPENDIX C INSPECTION FORM

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Figure 2 Topographic Map

Figure 3 Silt Fence and Signage Locations

LIST OF ACRONYMS

BMPs	best management practices
CMC	CMC Recycling
EPA	Environmental Protection Agency
PCB	polychlorinated biphenyl
WESTON	Weston Solutions, Inc.

1. PURPOSE AND OVERVIEW

Weston Solutions, Inc (WESTON®) prepared this Temporary Measures Plan for the Commercial Metals Company (CMC), dba CMC Recycling, located at 4614 Agnes Street, Corpus Christi, Texas, as part of its risk-based disposal pursuant to 40 CFR 761.61(c). A Site Location Map is provided as Figure 1. In a 13 April 2011 letter, the Environmental Protection Agency (EPA) requested that a Temporary Measures Plan be developed to prevent any further off-site migration of polychlorinated biphenyls (PCBs) and necessary mitigation to prevent off-site PCB exposure (according to 40 CFR §761.61). This plan has been developed to 1) prevent any further off-site migration, 2) present mitigation to prevent off-site exposure, and 3) describe engineering controls such as fencing and signage.

The temporary measures set forth in this plan will be implemented until such time as the permanent remedial solution is constructed.

2. GENERAL SITE INFORMATION

Name:	CMC Recycling
Physical Address:	4614 Agnes Street, Corpus Christi, Texas
Type of Facility:	Metal Recycling Facility
Point Source Discharges to:	City of Corpus Christi storm sewer system, thence to Corpus Christi Bay
Person Responsible for Storm Water Pollution Prevention:	Coulter James
Phone Number:	(361) 884-4071
Responsibilities:	▪ Overseeing implementation of best management practices (BMPs) ▪ Conducting routine inspections

3. POLLUTANT SOURCES, DRAINAGE, AND TEMPORARY MEASURES

3.1 POLLUTANT SOURCES

PCBs were identified in on-site surface soils. CMC has not used the southwestern portion of the property (approximately 2 acres) for recycling activities. Sample results in the vicinity indicate that no PCBs have been reported above the detection limits, and it has been documented that there are no off-site impacts near this area. As such, stormwater from this portion of the property will not be targeted for temporary measures.

The CMC property contains a PCB impacted area currently covered by concrete. Additional temporary measures will not be targeted for this location, as the concrete cover provides an adequate temporary measure to prevent off-site migration.

This plan primarily addresses the northern area of the property. Surface soils in this area are impacted with PCBs.

3.2 DRAINAGE

As shown in Figure 2, the entire facility is relatively flat, with about a 3 foot drop in elevation from north to south. A 3 foot crown on the north end of the property extends from the east to the west side of the property. The area to the north of the crown has not been impacted with PCBs; therefore stormwater runoff from this drainage area is not planned to be controlled with silt fencing. The area south of the crown drains to the west and south and will be controlled with silt fencing along the west side of the property, as indicated in Figures 2 and 3. There are two main outfall points on the west property line that discharge to off-property stormwater drainage ways. These drainage ways divert stormwater to the Corpus Christi stormwater collection system.

Along the lower portion of the property, where the property line turns straight west, there is a 1-foot decrease in grade changing back to a 2 foot rise on the far west property line. Each of the corners on the western property line tapers off towards Navigation Road. The south property line is mostly flat, with low point at approximately midway. The drainage along the east property line flows mostly to the west with a small drainage area that flows to the east. Photographs taken during site reconnaissance show the flat topography and are included in

Appendix A. The two main stormwater discharge points on the western property line lead to off-site drainage ways as shown on Figure 3; *also see* Appendix A, Photograph 13.

3.3 TEMPORARY MEASURES

Temporary measures to be implemented at the site include engineering controls in conjunction with inspections to ensure that the controls are in good condition.

3.3.1 ENGINEERING CONTROLS

The majority of impacted soils at the facility are covered by scrap/shredded metal, asphalt, concrete, or vegetation. The majority of the facility is surrounded by a vegetative strip that grows along the fence line. Photos of this are shown in Appendix A. The relatively flat nature of the site combined with the vegetative coverage helps to reduce the velocity of stormwater and settle suspended solids.

Silt fences will be installed at the locations shown in Figures 2 and 3 as a temporary measure to retain suspended solids on-site. The key areas the silt fence will control are the two main outfall points on the west property line that discharge to off-property stormwater drainage ways. In addition, each of the corners on the western property line will be controlled with silt fence. The south property line has one low area that will be controlled with silt fence. The east property line has a small drainage area that will be controlled with silt fence as well. Silt fence is not proposed for the far north end of the property. This area has dense grass and brush, and results from sampling efforts in this area have been reported with no detections of PCBs. The silt fence locations are based on the site inspection and a property elevation drawing that identified the most likely locations where significant stormwater flow exits the property. Silt fences will be installed in accordance with the installation instructions included in Appendix B.

3.3.2 INSPECTIONS

The silt fences will be inspected once a month to ensure that they have not been damaged by vehicles or other equipment. The inspections will be documented using the inspection form in Appendix C, which will be maintained on-site for record keeping. Damaged silt fence will be repaired or replaced as necessary. Additionally, silt fences will be inspected to determine whether they are meeting effective treatment capacity. If sediments are mounded up to 1/3 of the

height of the silt fence, the sediments will be removed. Sediments that are removed will be placed in containers and retained on-site. The contained sediment will be addressed with the final remedial solution, *i.e.*, placement under the cap.

3.3.3 RECORD KEEPING

Records of the inspections will be maintained on-site up to and through the remediation period until the permanent stormwater plan is approved and implemented. Completed inspection forms will either be retained in Appendix C of this plan or in a designated file at the facility.

3.4 MITIGATION

Temporary measures related to mitigation of off-site impacts are not anticipated. Given that off-site areas have limited access and personnel are not in contact with these areas, exposure is not likely. Limited off-site impacts have been identified adjacent to the property line and will be addressed in the remedial solution for the site. If, however, it is determined through inspections that sediments have been transported off-site, these sediments will be removed, as described in Section 3.3.2.

4. SECURITY

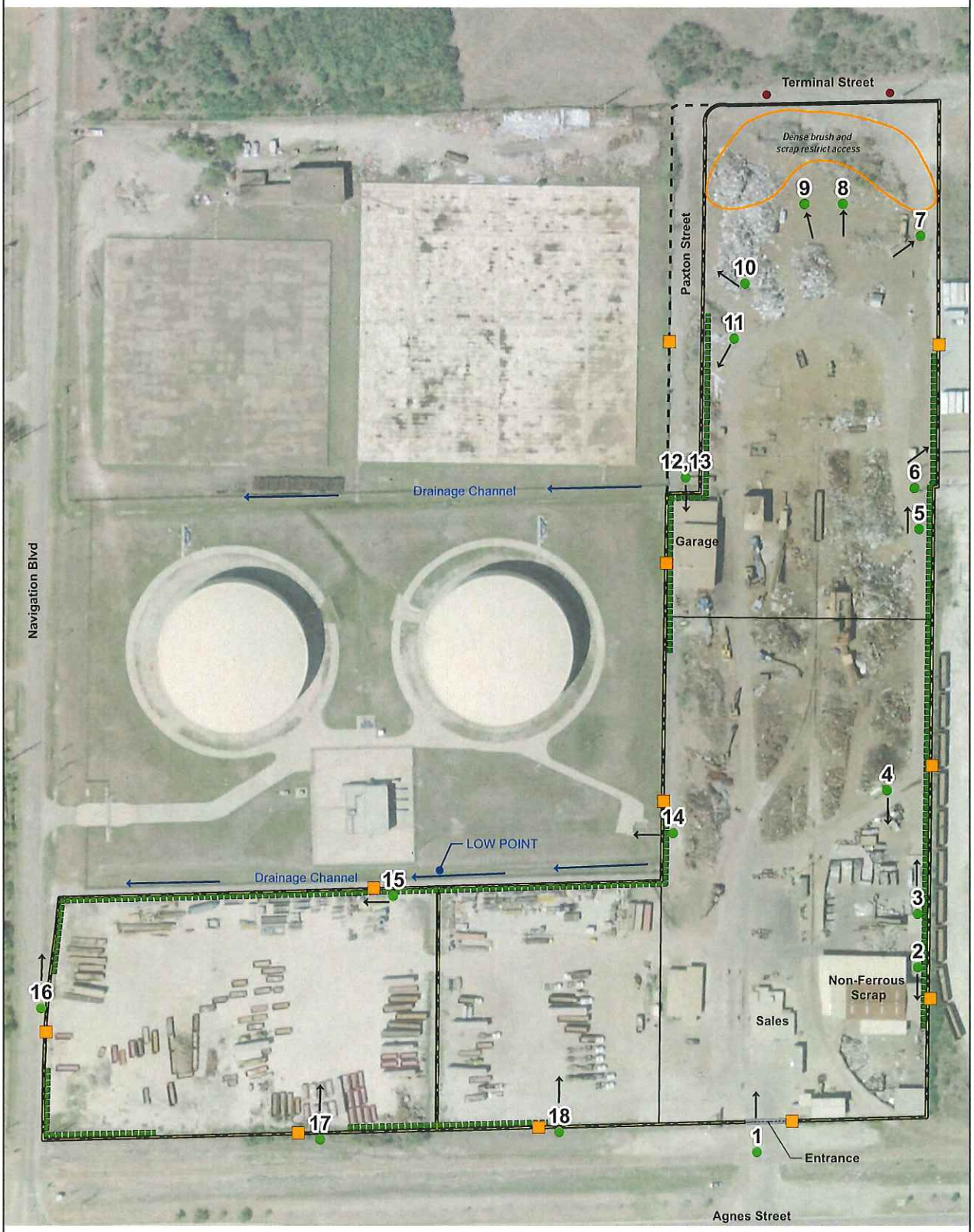
4.1 FENCING

The CMC Recycling facility is fenced along the property boundary, with the exception of the north side of the property next to the Terminal Street area. Although this portion of the property is unfenced, practical considerations eliminate the need for a fence in this area. First, a line of dense vegetation and scrap metal at the north end of the property makes access from the north difficult, as shown in Appendix A, Photograph 9. Second, as seen in Figure 3, there are no roads or other open points of access to the northern boundary of the property. The lack of access, dense vegetation, and scrap metal effectively serve as a fence to discourage trespassers. Additionally, the immediate vicinity is used for commercial/industrial purposes only, reducing the potential for trespassers in the area.

4.2 SIGNAGE (PERIMETER PCB LABELS)

Labels will be placed around the perimeter of the facility to indicate that soils on the property are contaminated. (Appendix A contains an aerial map of the site showing the approximate locations where the labels will be placed around the perimeter. The numbers on the map correspond to the photographs immediately following the aerial map in Appendix A.) Specifically, the signs will be placed (1) on the exterior of the fence (Appendix A, Photographs 1-18), and (2) at the entrances to the facility (the main and emergency entrances) (Appendix A, Photograph 1). In addition to the signs on the perimeter of the fence and entrances, additional signs will be placed on posts at the north end of the property (Appendix A, Photographs 8-10). These locations were selected based on the most likely access points to the property based on off-site property use. An example of the label is shown below. The actual text of the label (6" X 6") will read: "**Notice: On-site Soils Potentially Contaminated with PCB**"

APPENDIX A
PHOTOLOG



0 125 250

Feet

Legend

- Fence Post with Sign Location
- Sign Location
- Photograph Location
- Silt Fence (Approximate)
- Photograph Direction
- Paxton Street Boundary
- Entrance Gate
- Fence Line
- Property Boundary

SOURCE: Globexplorer, 2009

Notes:
1. Stormwater discharge from the property is by sheet flow.

2. Vegetation along fence line will effectively reduce offsite sediment transport.

N

WESTON SOLUTIONS

APPENDIX A
PHOTOGRAPH LOCATION MAP
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS

DATE	PROJECT NO	SCALE
JUNE, 2011	14160.001.004	AS SHOWN

FILE: I:\GIS Project Files\CMC (14160) Corpus Christi Revised PCB Remediation Work Plan Photograph Location Map for Appendix.mxd 2:19:35 PM 6/29/2011 wilder

The following photographs correspond to the Appendix A Photograph Location Map (Arial view on the first page of Appendix A). The numbering scheme starts with Photograph No. 1 at the facility entrance on the southern portion of the property and moves counter clockwise around the parameter of the property.

Photograph NO. 1

Date: 6/28/11

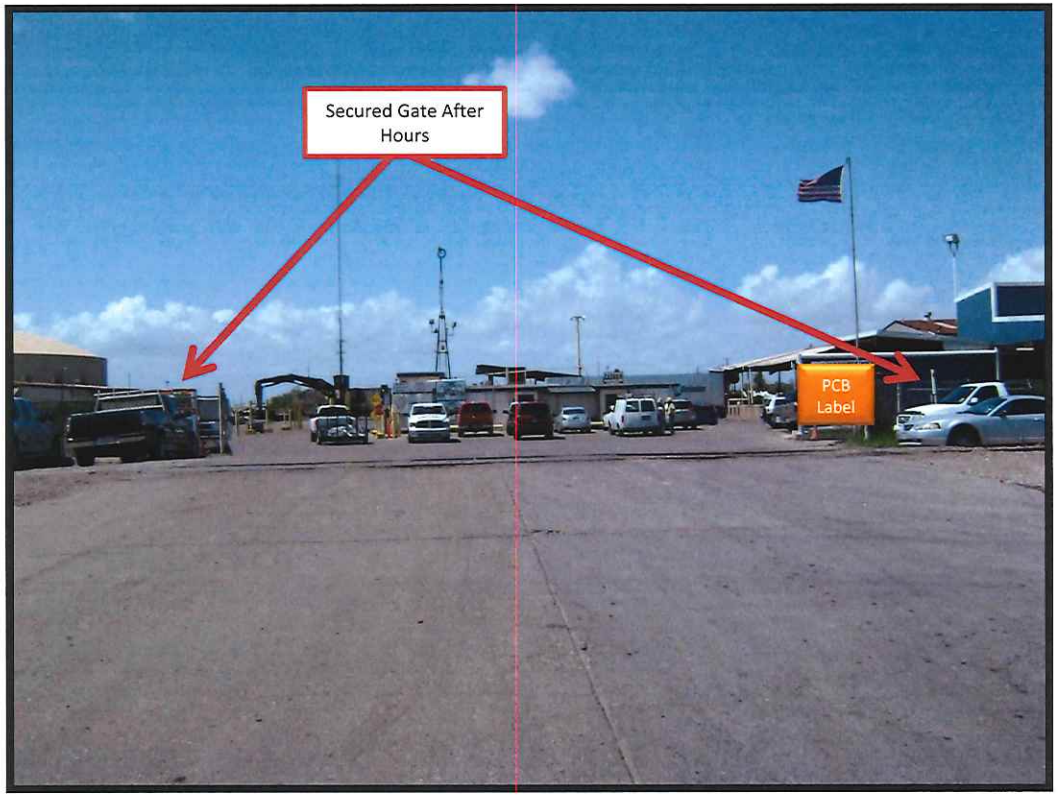
Photo Direction: N

Photo Description: Facility entrance (southern property line).

Topography Description: Flat with mild slope toward facility (See Figure 2).

Security Fence Description: Secured gate after hours.

Sign Description: A PCB label (6"x 6") will be posted at the facility entrance (see Figure 3 for approximate placement location).



Photograph NO. 2

Date: 5/11/11

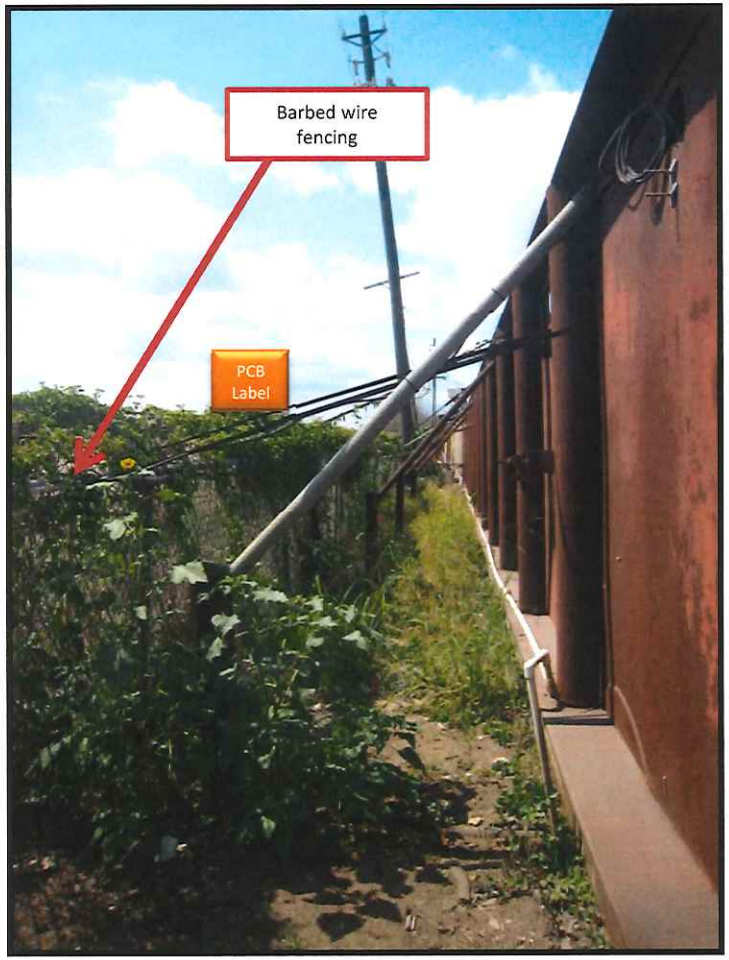
Photo Direction: S

Photo Description: Southeastern property fence line.

Topography Description: Flat (see Figure 2).

Security Fence Description: Barbed wire fencing.

Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).



Photograph NO. 3

Date: 5/11/11

Photo Direction: N

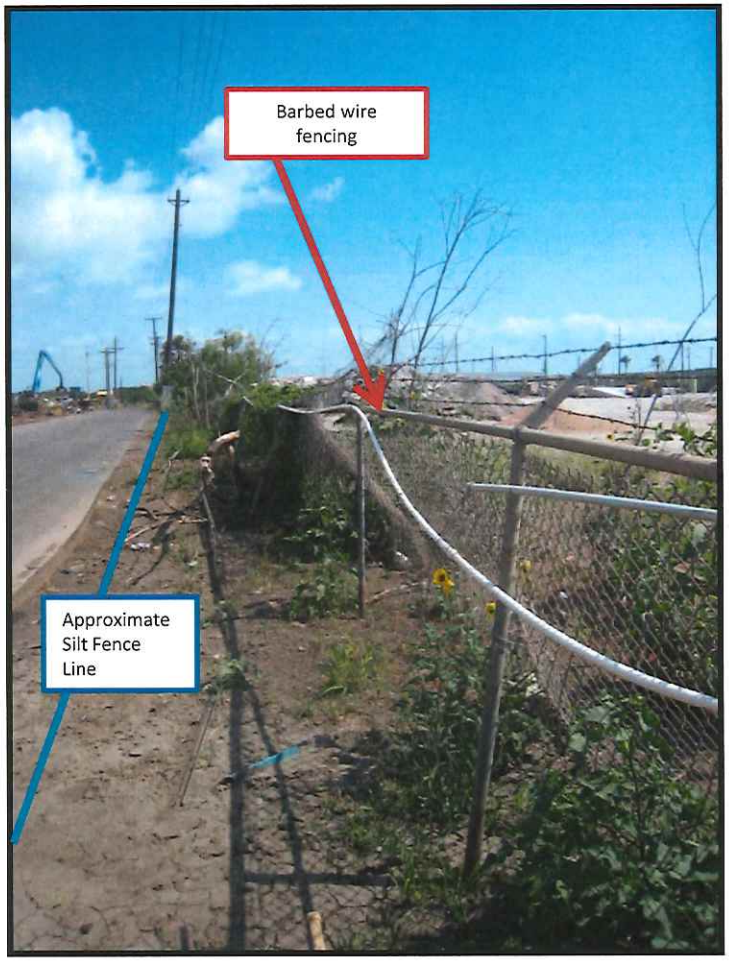
Photo Description: Southeastern property fence line.

Topography Description: Flat with minor slope to the southeast (see Figure 2).

Security Fence Description: Barbed wire fencing (will be shored up at implementation).

Silt Fencing Description: Silt fencing as shown in Figure 2 and 3.

Sign Description: This photo is for fencing and topography illustration.



Photograph NO. 4

Date: 5/11/11

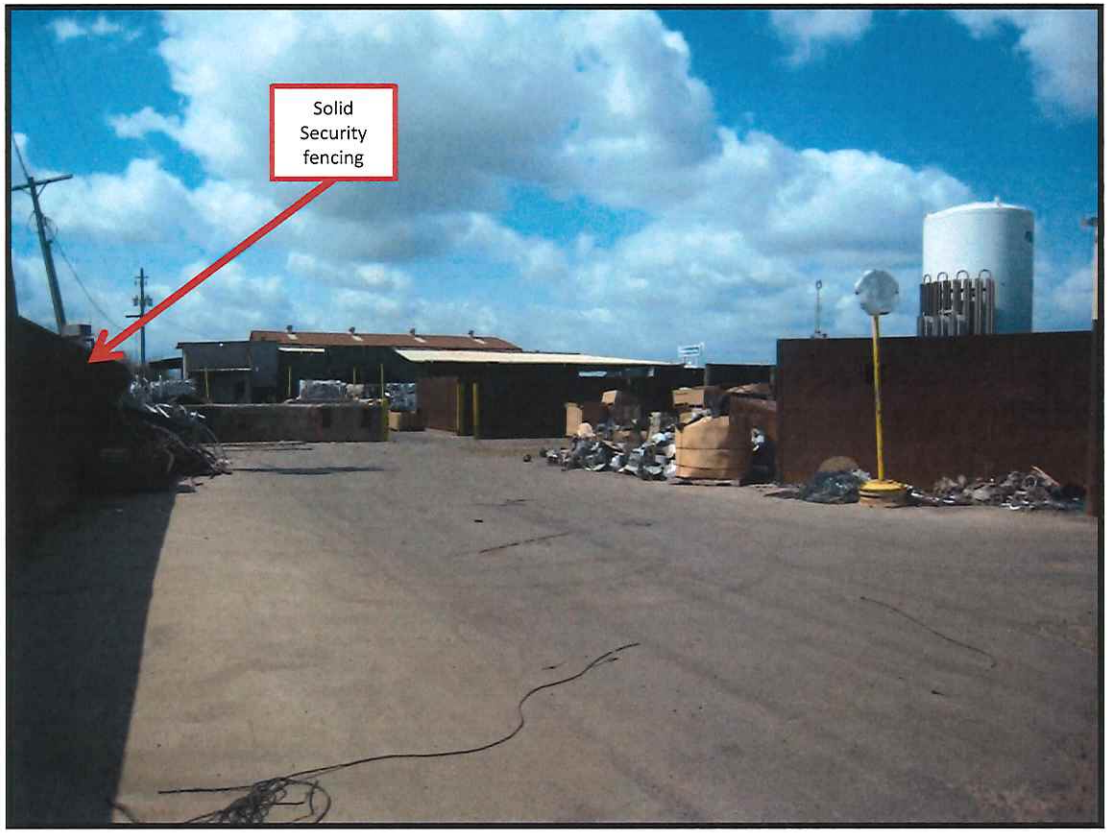
Photo Direction: S

Photo Description: Eastern property fence line.

Topography Description: Flat with minor slope to the southeast (see Figure 2).

Security Fence Description: Solid security fencing.

Sign Description: This photo is for fencing and topography illustration.



Photograph NO. 5

Date: 5/11/11

Photo Direction: N

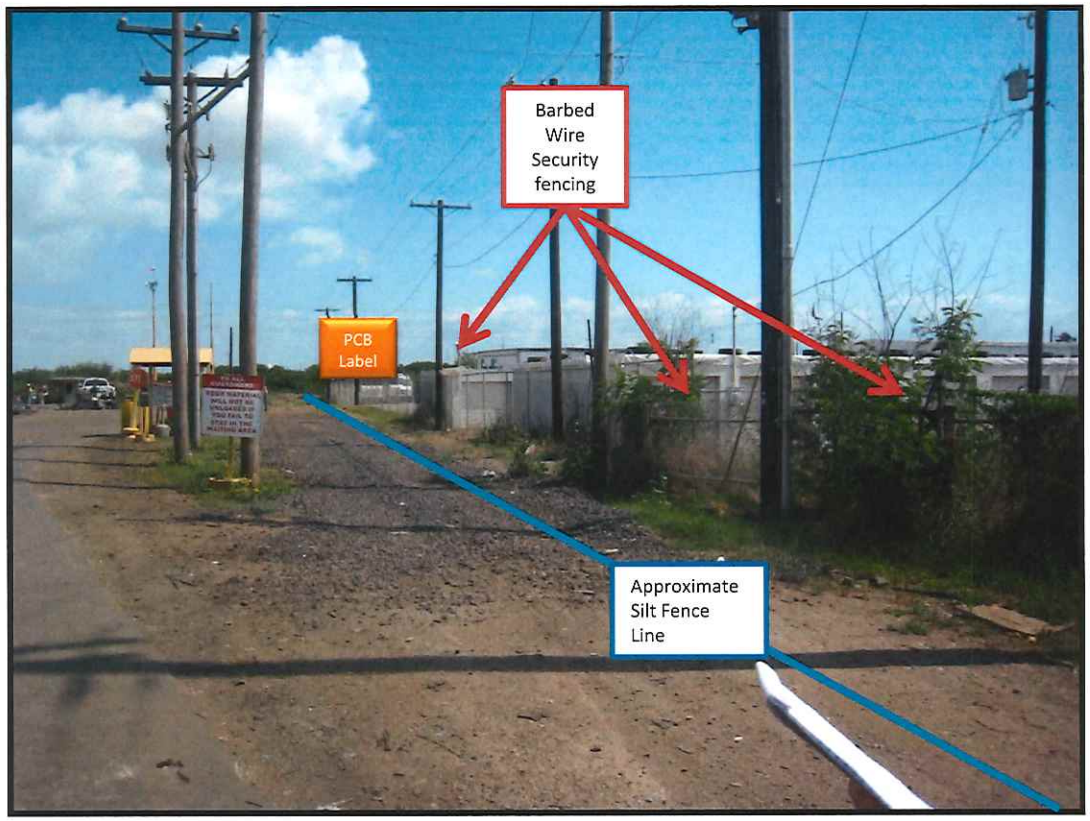
Photo Description: Eastern property fence line.

Topography Description: Flat with minor slope to the northeast (see Figure 2).

Security Fence Description: Barbed wire security fencing.

Silt Fencing Description: Silt fencing as shown in Figure 2 and 3. Road provides some barrier between industrial activity and the fence line.

Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).



Photograph NO. 6

Date: 5/11/11

Photo Direction: E

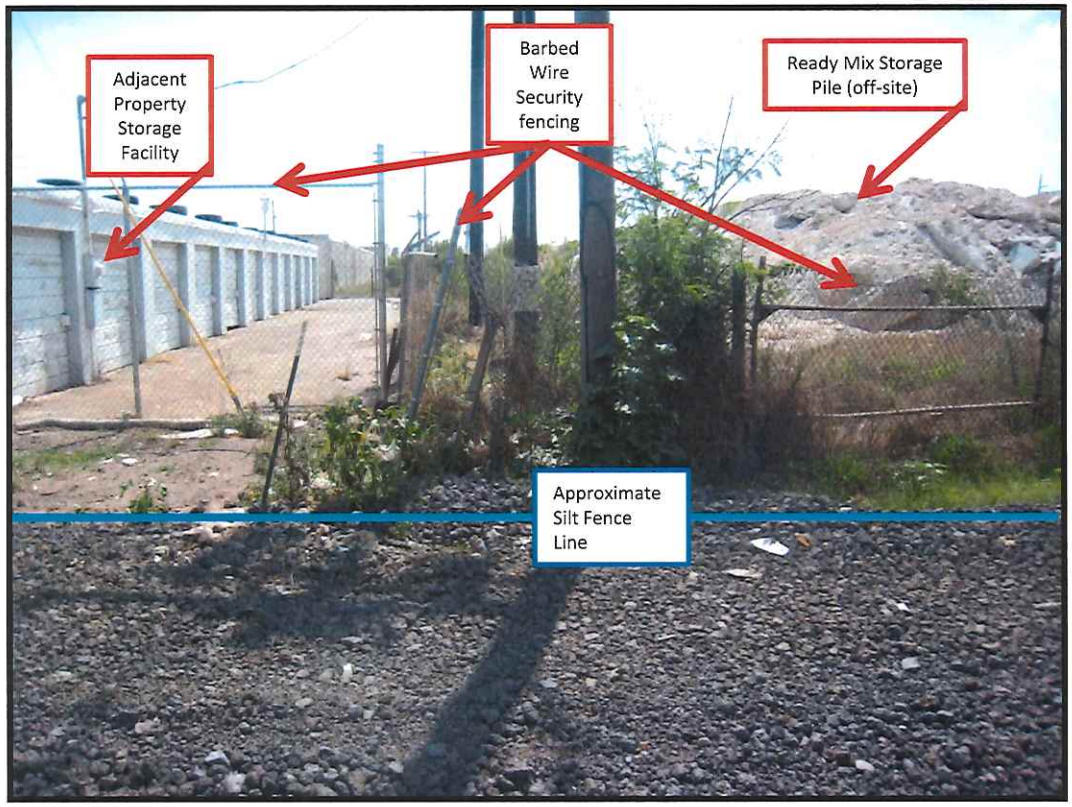
Photo Description: Eastern property fence line. East of road. Material in background belongs to neighboring property owner (Ready Mix).

Topography Description: Flat with minor slope to the northeast (see Figure 2).

Security Fence Description: Barbed wire security fencing (will be shored up at implementation).

Silt Fencing Description: Silt fencing as shown in Figure 2 and 3. Road provides some barrier between industrial activity and the fence line.

Sign Description: This photo is for fencing and topography illustration.



Photograph NO. 7

Date: 5/11/11

Photo Direction: NE

Photo Description: Northeastern property fence line.

Topography Description: Flat with minor slope to the northeast (see Figure 2)

Security Fence Description: Barbed wire security fencing.

Sign Description: This photo is for fencing and topography illustration.

Photograph NO. 8

Date: 6/28/11

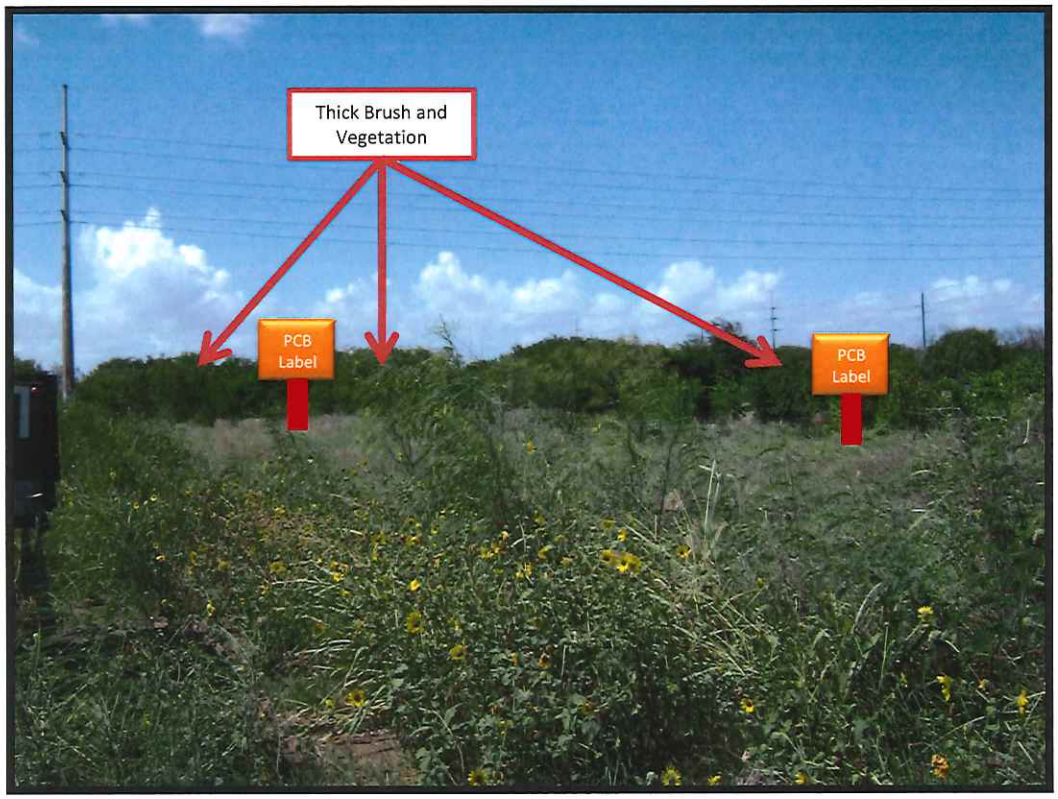
Photo Direction: N

Photo Description: North end of property (beyond work area).

Topography Description: Flat with minor slope to the northeast or northwest from center of property (see Figure 2).

Security Fence Description: Access is limited from the north due to thick brush and vegetation.

Sign Description: PCB labels (6"x 6") will be posted on fence posts near northern property line (see Figure 3 for approximate placement location).



Photograph NO. 9

Date: 6/28/11

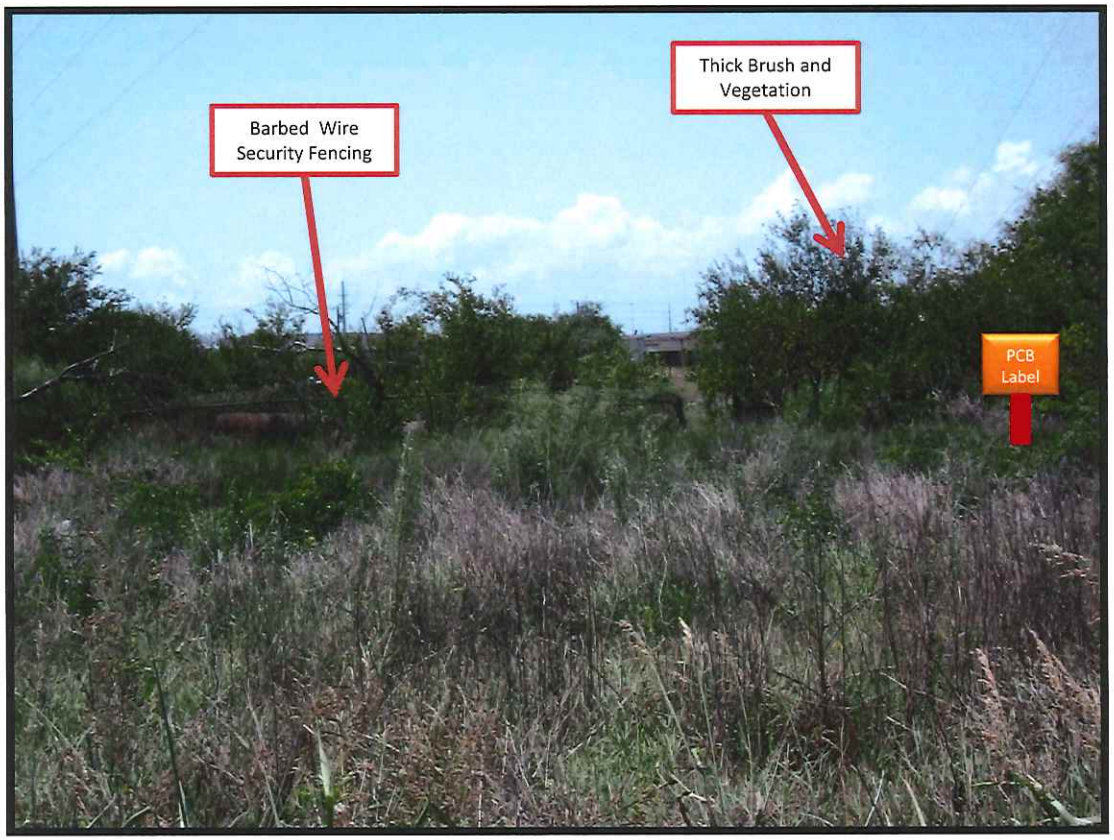
Photo Direction: NW

Photo Description: North end of property (beyond work area).

Topography Description: Flat with minor slope to the northwest (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of property boundary. Access is limited from the north due to thick brush and vegetation.

Sign Description: A PCB label (6"x 6") will be posted on a fence post near northern property line (see Figure 3 for approximate placement location).



Photograph NO. 10

Date: 5/11/11

Photo Direction: NW

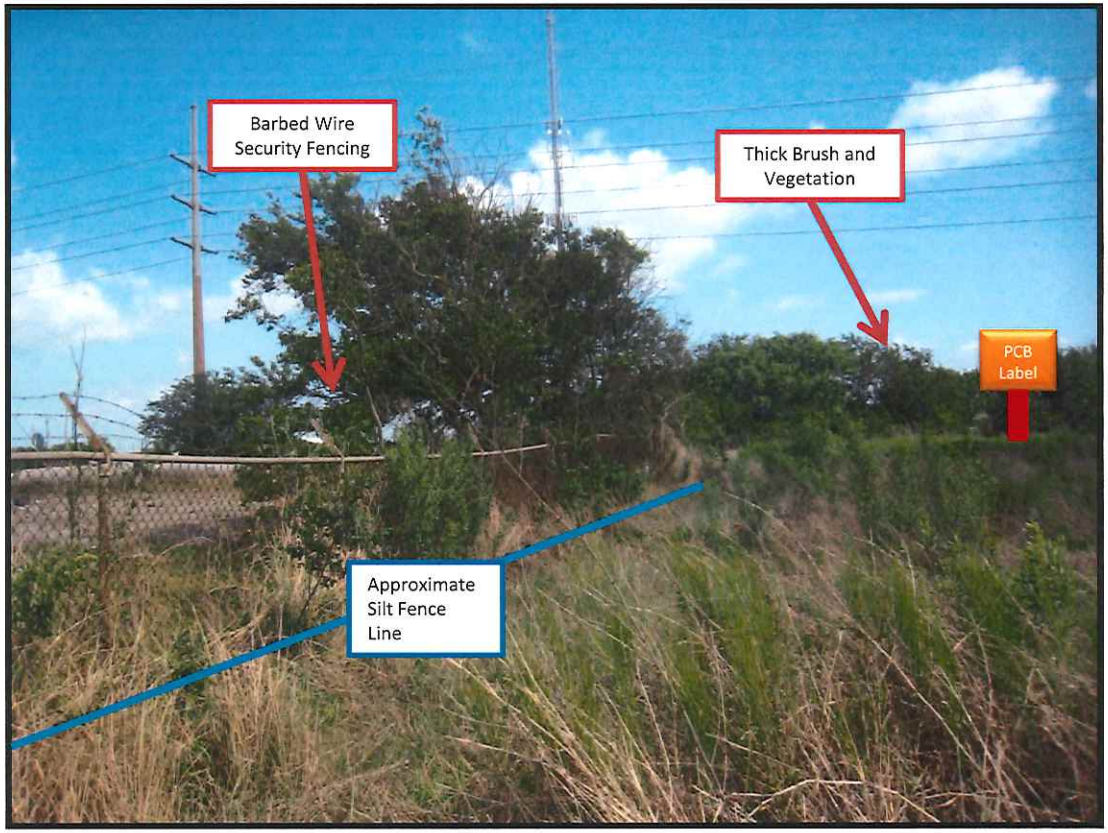
Photo Description: Northwestern property fence line.

Topography Description: Flat with minor slope to the northwest (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of site.

Silt Fencing Description: Silt fencing as shown in Figures 2 and 3.

Sign Description: A PCB label (6"x 6") will be posted on a fence post near northern property line (see Figure 3 for approximate placement location).



Photograph NO. 11

Date: 5/11/11

Photo Direction: SW

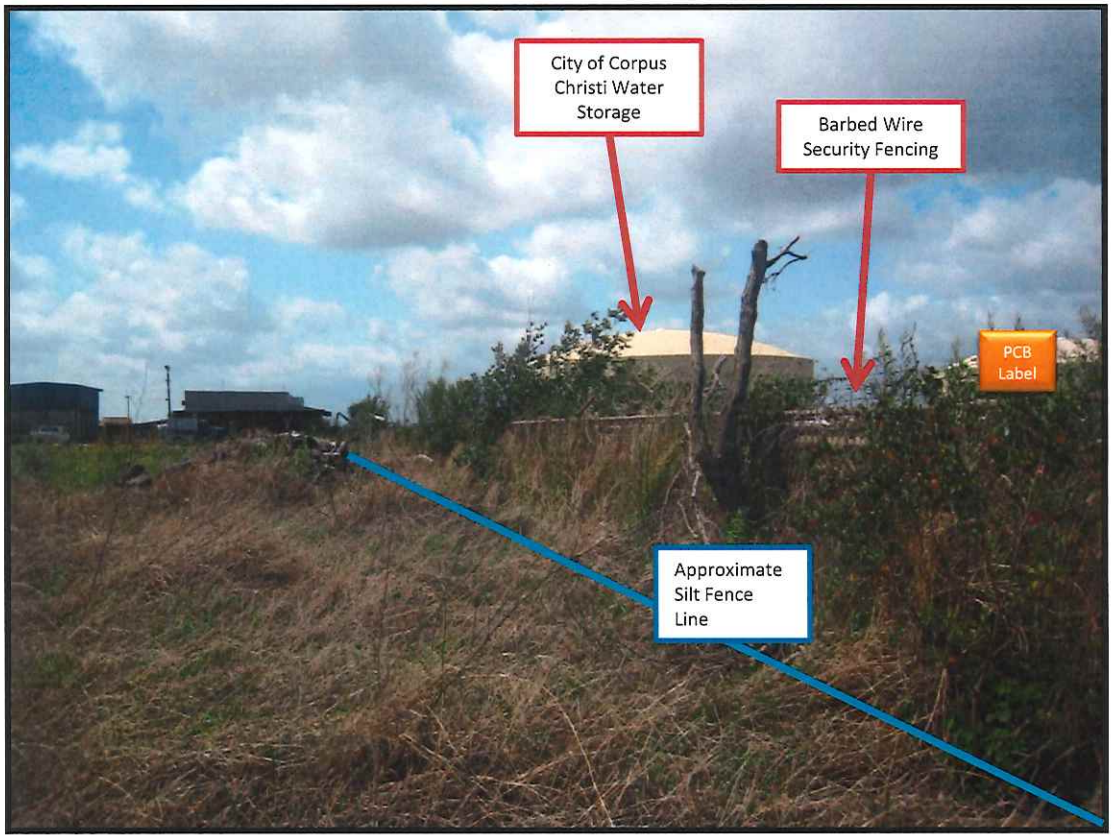
Photo Description: northwestern property fence line.

Topography Description: Flat with minor slope to the west (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of site.

Silt Fencing Description: Silt fencing as shown in Figures 2 and 3.

Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).



Photograph NO. 12

Date: 5/11/11

Photo Direction: S

Photo Description: Western property fence line behind building.

Topography Description: Flat with minor slope to the west (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of site.

Silt Fencing Description: Silt fencing as shown in Figure 2 and 3.

Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).

Photograph NO. 13

Date: 5/11/11

Photo Direction: SW

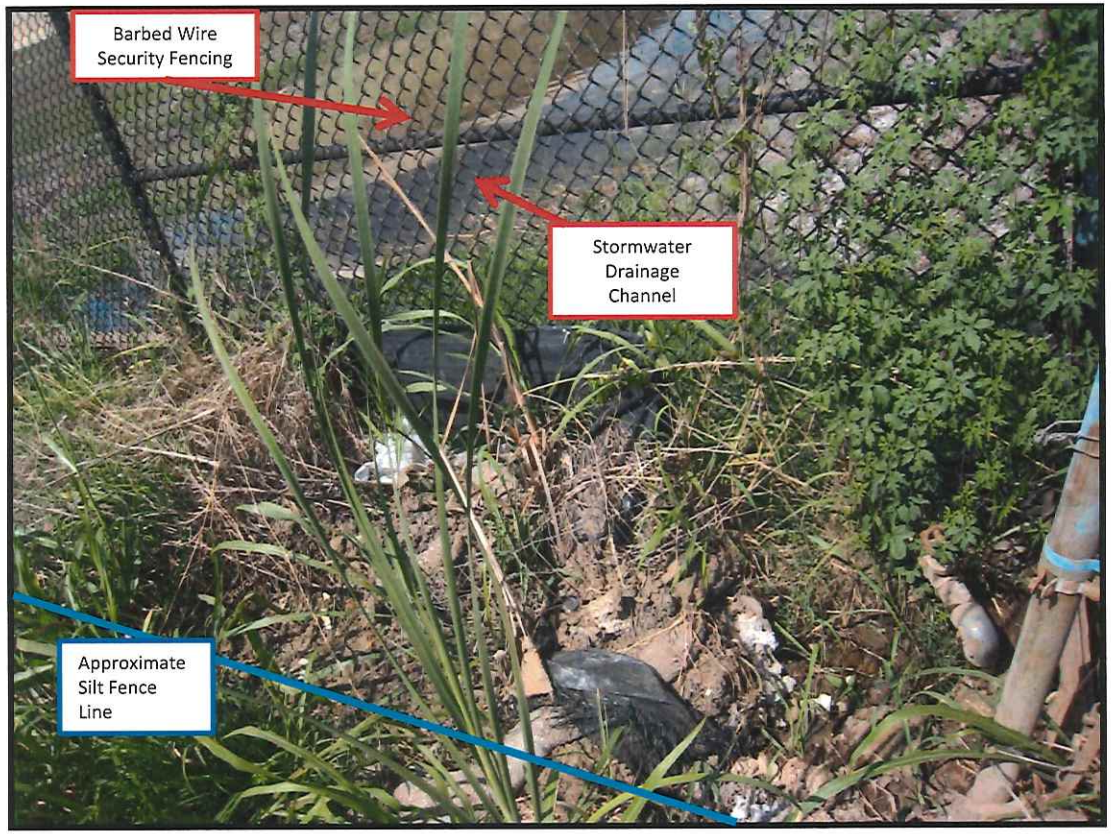
Photo Description: Western property fence line. Location where stormwater leaves the property to the off-site drainage channel visible in the background.

Topography Description: Flat with minor slope to the west (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of site.

Silt Fencing Description: Silt fencing as shown in Figures 2 and 3.

Sign Description: This photo is for fencing and topography illustration. The water in the drainage channel is the result of the City of Corpus Christi emptying one of the below ground water storage tanks at the time this photo was taken. This drainage channel is normally dry.



Photograph NO. 14

Date: 5/11/11

Photo Direction: W

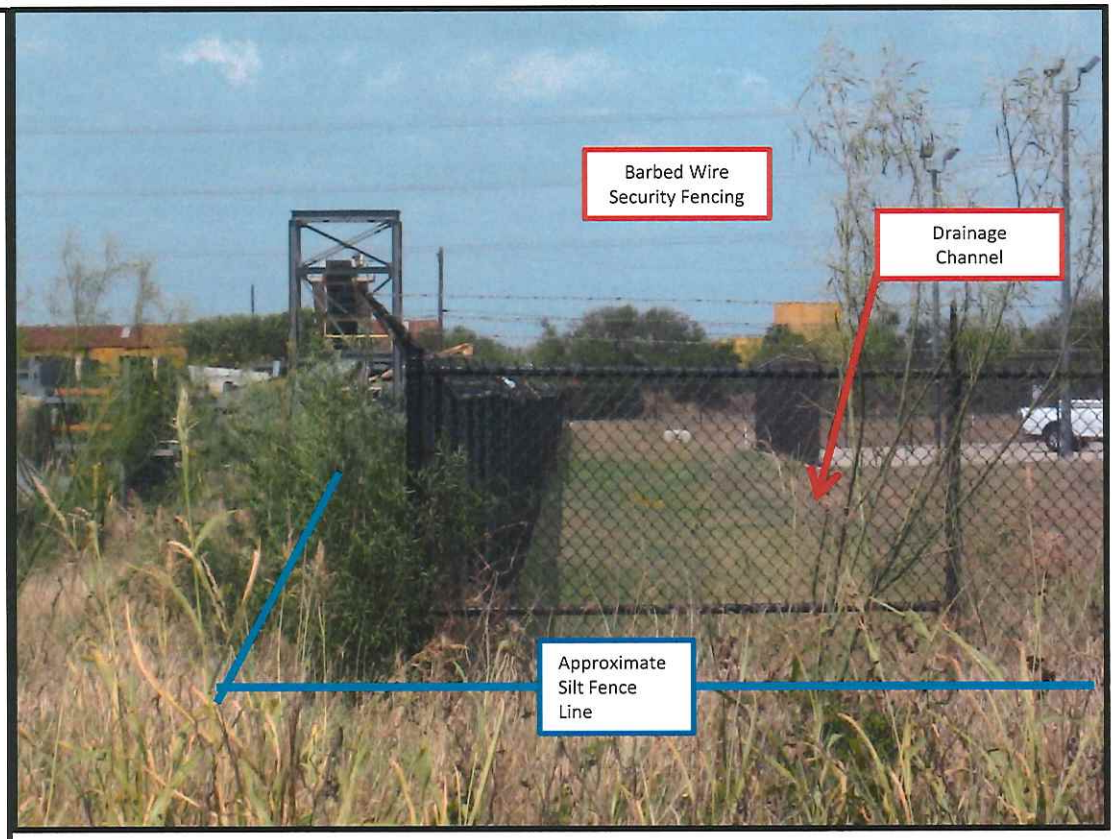
Photo Description: Western property fence line.

Topography Description: Flat with minor slope to the west (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of site.

Silt Fencing Description: Silt fencing as shown in Figure 2 and 3.

Sign Description: This photo is for fencing and topography illustration.



Photograph NO. 15

Date: 5/11/11

Photo Direction: W

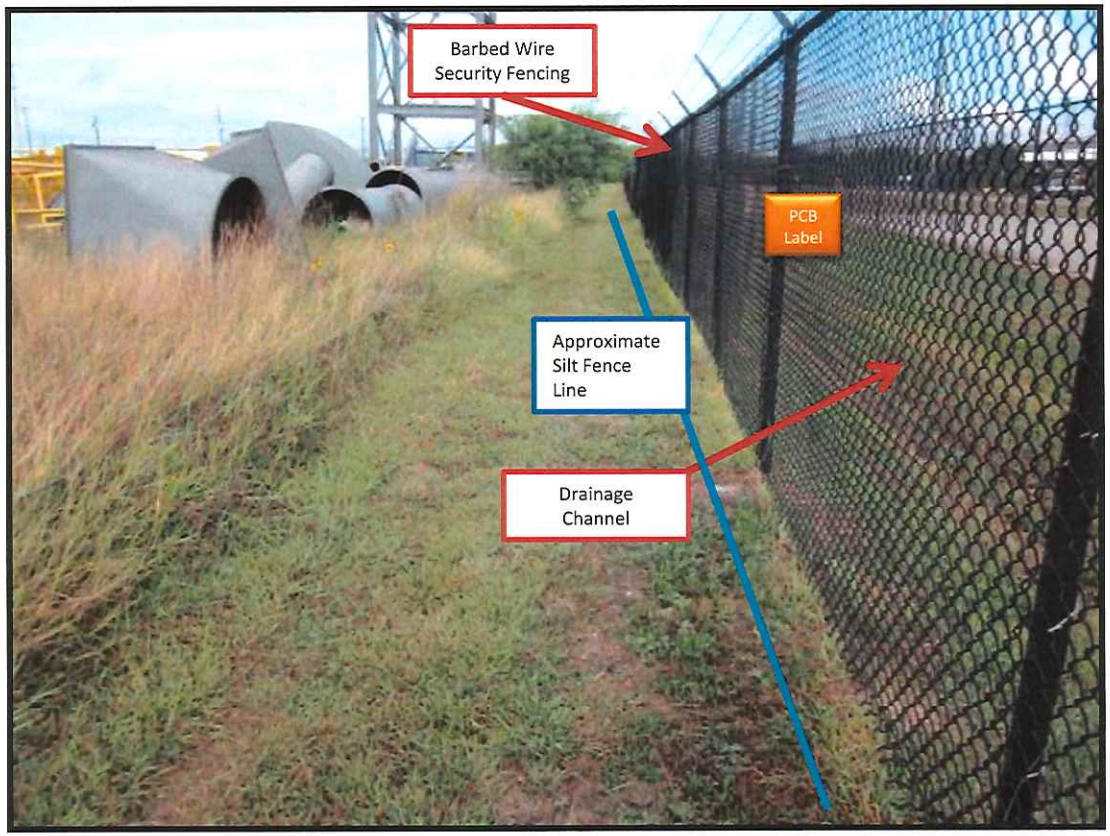
Photo Description: Western property fence line.

Topography Description: Flat with minor slope to the west (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of site.

Silt Fencing Description: Silt fencing as shown in Figures 2 and 3.

Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).



Photograph NO. 16

Date: 6/28/11

Photo Direction: NE

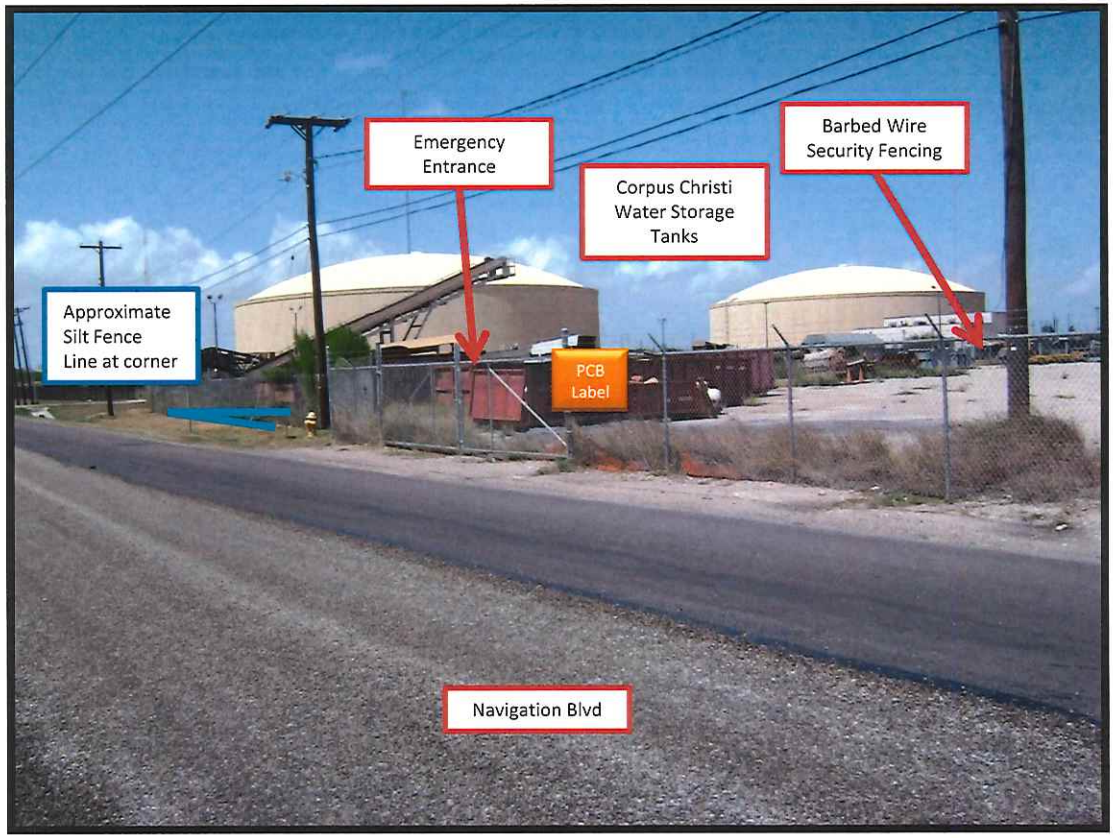
Photo Description: Western property fence line along Navigation Blvd showing the location of the emergency entrance/exit.

Topography Description: Flat with minor slope to the north and east (see Figure 2).

Security Fence Description: Barbed wire security fencing along western portion of site.

Silt Fencing Description: Silt fencing as shown in Figures 2 and 3.

Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).



Photograph NO. 17

Date: 5/11/11

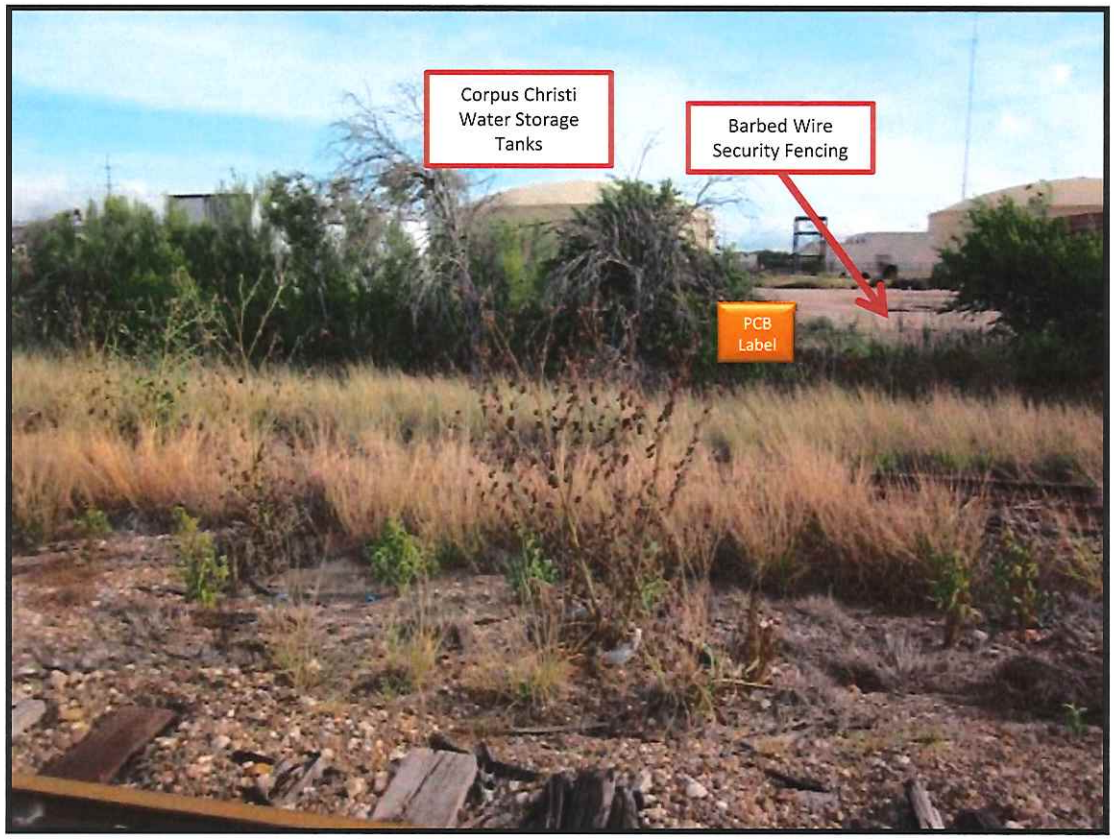
Photo Direction: N

Photo Description: Southern property fence line along Agnes St.

Topography Description: Flat with minor slope to the north on-site (see Figure 2).

Security Fence Description: Barbed wire security fencing along southern portion of site.

Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).



Photograph NO. 18

Date: 5/11/11

Photo Direction: N

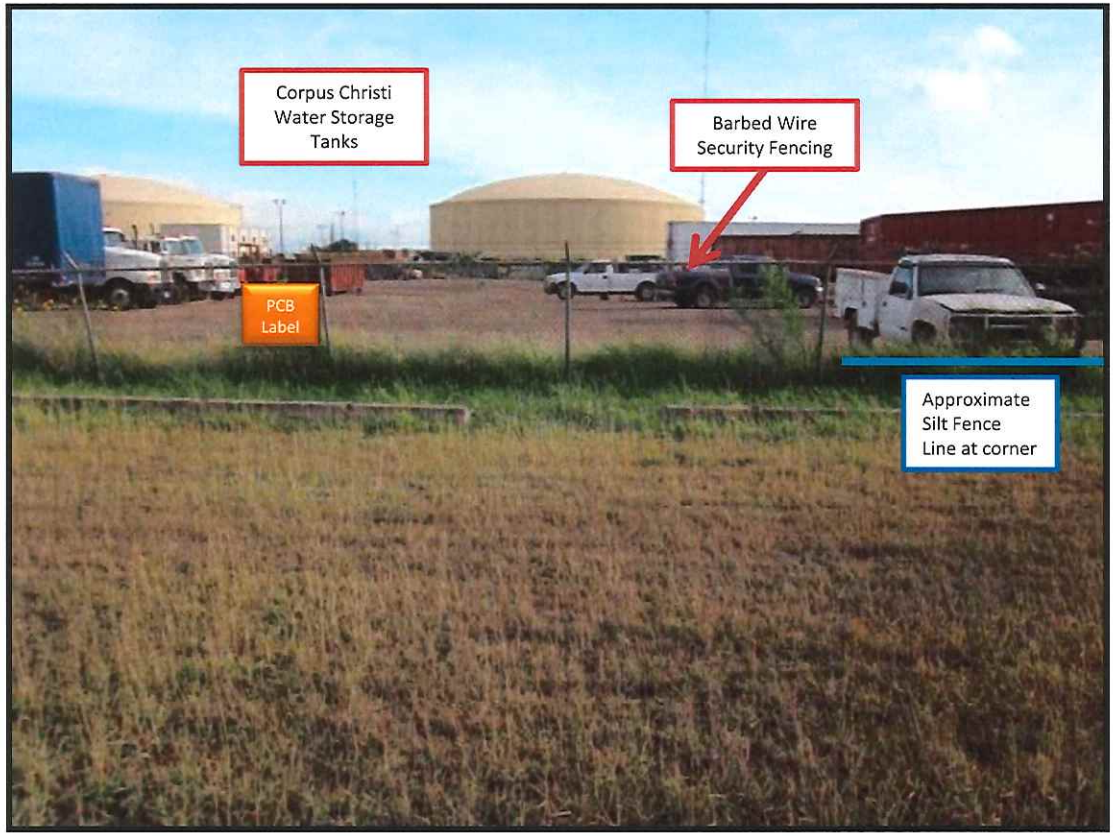
Photo Description: Southern property fence line along Agnes St.

Topography Description: Flat with minor slope to the east on-site (see Figure 2).

Security Fence Description: Barbed wire security fencing along southern portion of site.

Silt Fencing Description: Silt fencing as shown in Figures 2 and 3.

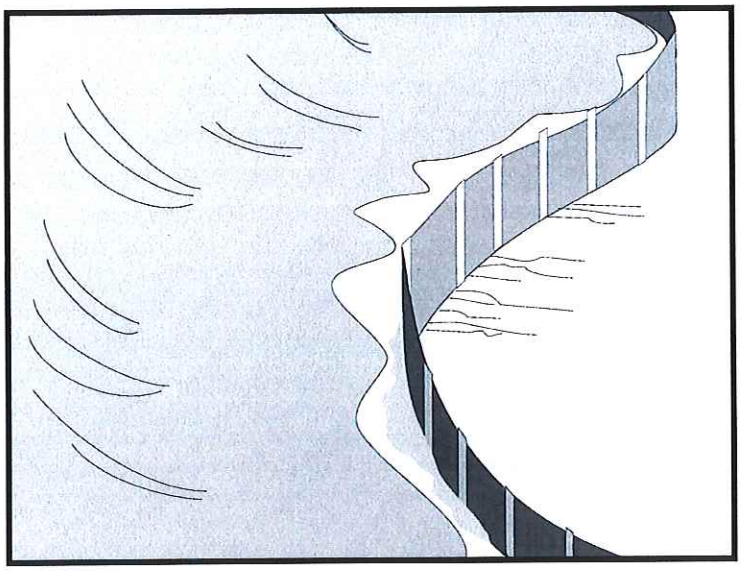
Sign Description: A PCB label (6"x 6") will be posted on the outside fence line (see Figure 3 for approximate placement location).



APPENDIX B
SILT FENCE INFORMATION

Silt Fence

SE-1



Objectives

EC	Erosion Control	
SE	Sediment Control	☑
TR	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-9 Straw Bale Barrier

Description and Purpose

A silt fence is made of a filter fabric that has been entrenched, attached to supporting poles, and sometimes backed by a plastic or wire mesh for support. The silt fence detains sediment-laden water, promoting sedimentation behind the fence.

Suitable Applications

Silt fences are suitable for perimeter control, placed below areas where sheet flows discharge from the site. They should also be used as interior controls below disturbed areas where runoff may occur in the form of sheet and rill erosion. Silt fences are generally ineffective in locations where the flow is concentrated and are only applicable for sheet or overland flows. Silt fences are most effective when used in combination with erosion controls. Suitable applications include:

- Along the perimeter of a project.
- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels.
- Around temporary spoil areas and stockpiles.
- Below other small cleared areas.

Limitations

- Do not use in streams, channels, drain inlets, or anywhere flow is concentrated.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Do not use in locations where ponded water may cause flooding.
- Do not place fence on a slope, or across any contour line. If not installed at the same elevation throughout, silt fences will create erosion.
- Filter fences will create a temporary sedimentation pond on the upstream side of the fence and may cause temporary flooding. Fences not constructed on a level contour will be overtopped by concentrated flow resulting in failure of the filter fence.
- Improperly installed fences are subject to failure from undercutting, overlapping, or collapsing.
  - Not effective unless trenched and keyed in.
  - Not intended for use as mid-slope protection on slopes greater than 4:1 (H:V).
  - Do not allow water depth to exceed 1.5 ft at any point.

Implementation

General

A silt fence is a temporary sediment barrier consisting of filter fabric stretched across and attached to supporting posts, entrenched, and, depending upon the strength of fabric used, supported with plastic or wire mesh fence. Silt fences trap sediment by intercepting and detaining small amounts of sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence.

Silt fences are preferable to straw bale barriers in many cases. Laboratory work at the Virginia Highway and Transportation Research Council has shown that silt fences can trap a much higher percentage of suspended sediments than can straw bales. While the failure rate of silt fences is lower than that of straw bale barriers, there are many instances where silt fences have been improperly installed. The following layout and installation guidance can improve performance and should be followed:

- Use principally in areas where sheet flow occurs.
- Don't use in streams, channels, or anywhere flow is concentrated. Don't use silt fences to divert flow.
- Don't use below slopes subject to creep, slumping, or landslides.
- Select filter fabric that retains 85% of soil by weight, based on sieve analysis, but that is not finer than an equivalent opening size of 70.
- Install along a level contour, so water does not pond more than 1.5 ft at any point along the silt fence.
- The maximum length of slope draining to any point along the silt fence should be 200 ft or less.
- The maximum slope perpendicular to the fence line should be 1:1.

- Provide sufficient room for runoff to pond behind the fence and to allow sediment removal equipment to pass between the silt fence and toes of slopes or other obstructions. About 1200 ft^2 of ponding area should be provided for every acre draining to the fence.
- Turn the ends of the filter fence uphill to prevent stormwater from flowing around the fence.
- Leave an undisturbed or stabilized area immediately down slope from the fence where feasible.
- Silt fences should remain in place until the disturbed area is permanently stabilized.

Design and Layout

Selection of a filter fabric is based on soil conditions at the construction site (which affect the equivalent opening size (EOS) fabric specification) and characteristics of the support fence (which affect the choice of tensile strength). The designer should specify a filter fabric that retains the soil found on the construction site yet that it has openings large enough to permit drainage and prevent clogging. The following criteria is recommended for selection of the equivalent opening size:

1. If 50 percent or less of the soil, by weight, will pass the U.S. Standard Sieve No. 200, select the EOS to retain 85 % of the soil. The EOS should not be finer than EOS 70.
2. For all other soil types, the EOS should be no larger than the openings in the U.S. Standard Sieve No. 70 except where direct discharge to a stream, lake, or wetland will occur, then the EOS should be no larger than Standard Sieve No. 100.

To reduce the chance of clogging, it is preferable to specify a fabric with openings as large as allowed by the criteria. No fabric should be specified with an EOS smaller than U.S. Standard Sieve No. 100. If 85% or more of a soil, by weight, passes through the openings in a No. 200 sieve, filter fabric should not be used. Most of the particles in such a soil would not be retained if the EOS was too large and they would clog the fabric quickly if the EOS were small enough to capture the soil.

The fence should be supported by a plastic or wire mesh if the fabric selected does not have sufficient strength and bursting strength characteristics for the planned application (as recommended by the fabric manufacturer). Filter fabric material should contain ultraviolet inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature range of 0 °F to 120 °F.

- Layout in accordance with attached figures.
- For slopes steeper than 2:1 (H:V) and that contain a high number of rocks or large dirt clods that tend to dislodge, it may be necessary to install additional protection immediately adjacent to the bottom of the slope, prior to installing silt fence. Additional protection may be a chain link fence or a cable fence.
- For slopes adjacent to sensitive receiving waters or Environmentally Sensitive Areas (ESAs), silt fence should be used in conjunction with erosion control BMPs.

Materials

- Silt fence fabric should be woven polypropylene with a minimum width of 36 in. and a minimum tensile strength of 100 lb force. The fabric should conform to the requirements in ASTM designation D4632 and should have an integral reinforcement layer. The reinforcement layer should be a polypropylene, or equivalent, net provided by the manufacturer. The permittivity of the fabric should be between 0.1 sec^{-1} and 0.15 sec^{-1} in conformance with the requirements in ASTM designation D4491.

- Wood stakes should be commercial quality lumber of the size and shape shown on the plans. Each stake should be free from decay, splits or cracks longer than the thickness of the stake or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable.

- Staples used to fasten the fence fabric to the stakes should be not less than 1.75 in. long and should be fabricated from 15 gauge or heavier wire. The wire used to fasten the tops of the stakes together when joining two sections of fence should be 9 gauge or heavier wire. Galvanizing of the fastening wire will not be required.

- There are new products that may use prefabricated plastic holders for the silt fence and use bar reinforcement instead of wood stakes. If bar reinforcement is used in lieu of wood stakes, use number four or greater bar. Provide end protection for any exposed bar reinforcement.

Installation Guidelines

Silt fences are to be constructed on a level contour. Sufficient area should exist behind the fence for ponding to occur without flooding or overtopping the fence.

- A trench should be excavated approximately 6 in. wide and 6 in. deep along the line the proposed silt fence.

- Bottom of the silt fence should be keyed-in a minimum of 12 in.

- Posts should be spaced a maximum of 6 ft apart and driven securely into the ground a minimum of 18 in. or 12 in. below the bottom of the trench.

- When standard strength filter fabric is used, a plastic or wire mesh support fence should be fastened securely to the upslope side of posts using heavy–duty wire staples at least 1 in. long. The mesh should extend into the trench. When extra-strength filter fabric and closer post spacing are used, the mesh support fence may be eliminated. Filter fabric should be purchased in a long roll, and then cut to the length of the barrier. When joints are necessary, filter cloth should be spliced together only at a support post, with a minimum 6 in. overlap and both ends securely fastened to the post.

- The trench should be backfilled with compacted native material.

- Construct silt fences with a setback of at least 3 ft from the toe of a slope. Where a silt fence is determined to be not practicable due to specific site conditions, the silt fence may be constructed at the toe of the slope, but should be constructed as far from the toe of the slope as practicable. Silt fences close to the toe of the slope will be less effective and difficult to maintain.

- Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the barrier; in no case should the reach exceed 500 ft.

Costs

- Average annual cost for installation and maintenance (assumes 6 month useful life): $7 per lineal foot ($850 per drainage acre). Range of cost is $3.50 - $9.10 per lineal foot.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric. The lifespan of silt fence fabric is generally 5 to 8 months.
- Silt fences that are damaged and become unsuitable for the intended purpose should be removed from the site of work, disposed of, and replaced with new silt fence barriers.
- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- Silt fences should be left in place until the upstream area is permanently stabilized. Until then, the silt fence must be inspected and maintained.
- Holes, depressions, or other ground disturbance caused by the removal of the silt fences should be backfilled and repaired.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas, United States Environmental Protection Agency, 2002.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group-Working Paper, USEPA, April 1992.

Sedimentation and Erosion Control Practices, and Inventory of Current Practices (Draft), UESPA, 1990.

Southeastern Wisconsin Regional Planning Commission (SWRPC). Costs of Urban Nonpoint Source Water Pollution Control Measures. Technical Report No. 31. Southeastern Wisconsin Regional Planning Commission, Waukesha, WI. 1991

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

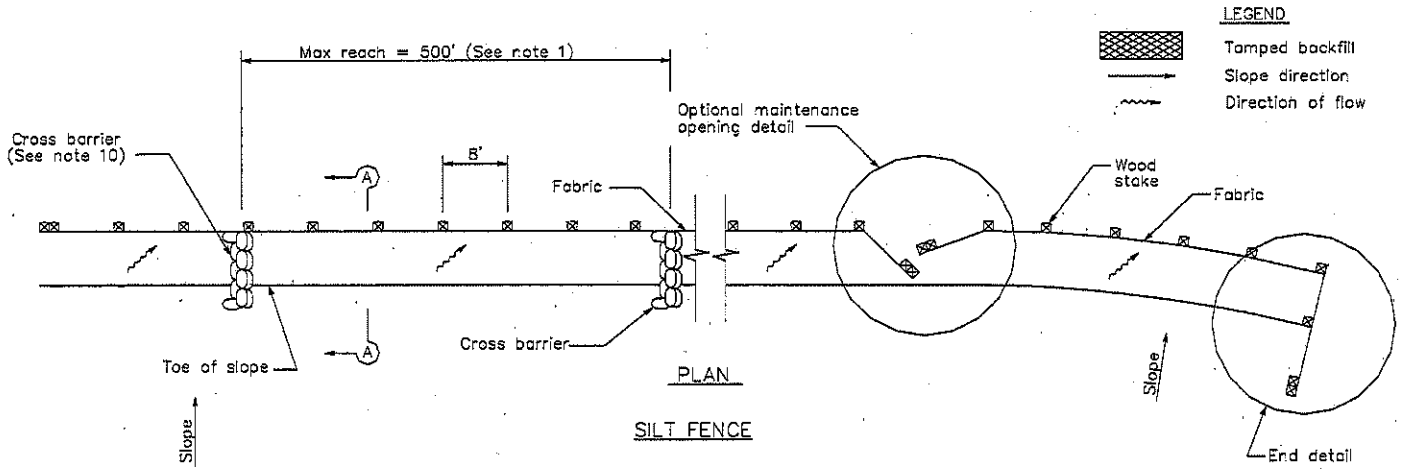
Stormwater Management Manual for The Puget Sound Basin, Washington State Department of Ecology, Public Review Draft, 1991.

U.S. Environmental Protection Agency (USEPA). Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. U.S. Environmental Protection Agency, Office of Water, Washington, DC, 1992.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Silt Fence

SE-1

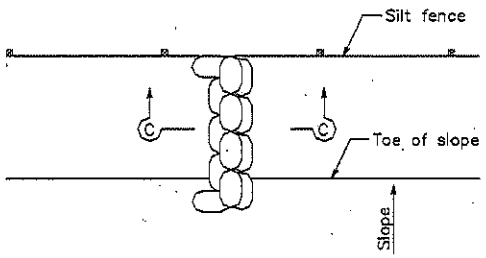


PLAN

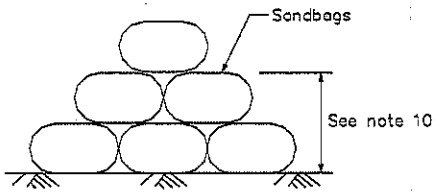
SILT FENCE

NOTES

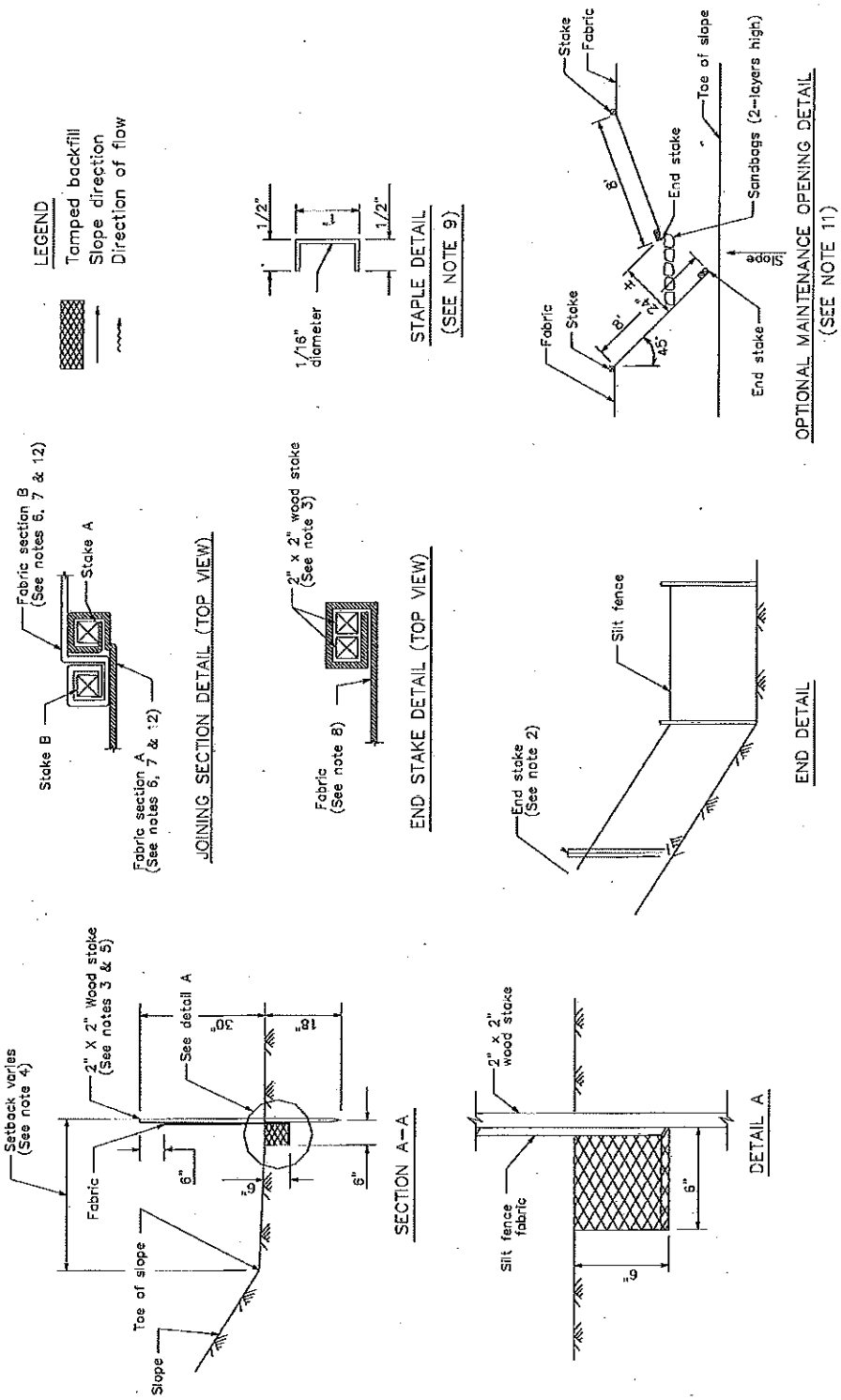
1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 500'.
2. The last 8'–0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 8'–0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow–through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.



CROSS BARRIER DETAIL



SECTION C–C


LEGEND
Tamped backfill
Slope direction
Direction of flow
1/2"
1/16" diameter
1/2"
STAPLE DETAIL
(SEE NOTE 9)
Stake
Fabric
Toe of slope
8'
End stake
Sandbags (2-layers high)
Slope
4'
2'
8'
45°
Fabric
Stake
End stake
OPTIONAL MAINTENANCE OPENING DETAIL
(SEE NOTE 11)
Fabric section B
(See notes 6, 7 & 12)
Stake A
Stake B
Fabric section A
(See notes 6, 7 & 12)
JOINING SECTION DETAIL (TOP VIEW)
2" x 2" wood stake
(See note 3)
Fabric
(See note 8)
END STAKE DETAIL (TOP VIEW)
Silt fence
End stake
(See note 2)
END DETAIL
Setback varies
(See note 4)
2" X 2" Wood stake
(See notes 3 & 5)
See detail A
30"
18"
Fabric
6"
9"
6"
Toe of slope
Slope
SECTION A-A
2" x 2"
wood stake
Silt fence
fabric
6"
9"
DETAIL A

APPENDIX C
INSPECTION FORM

CMC Corpus Christi Monthly Inspection Form

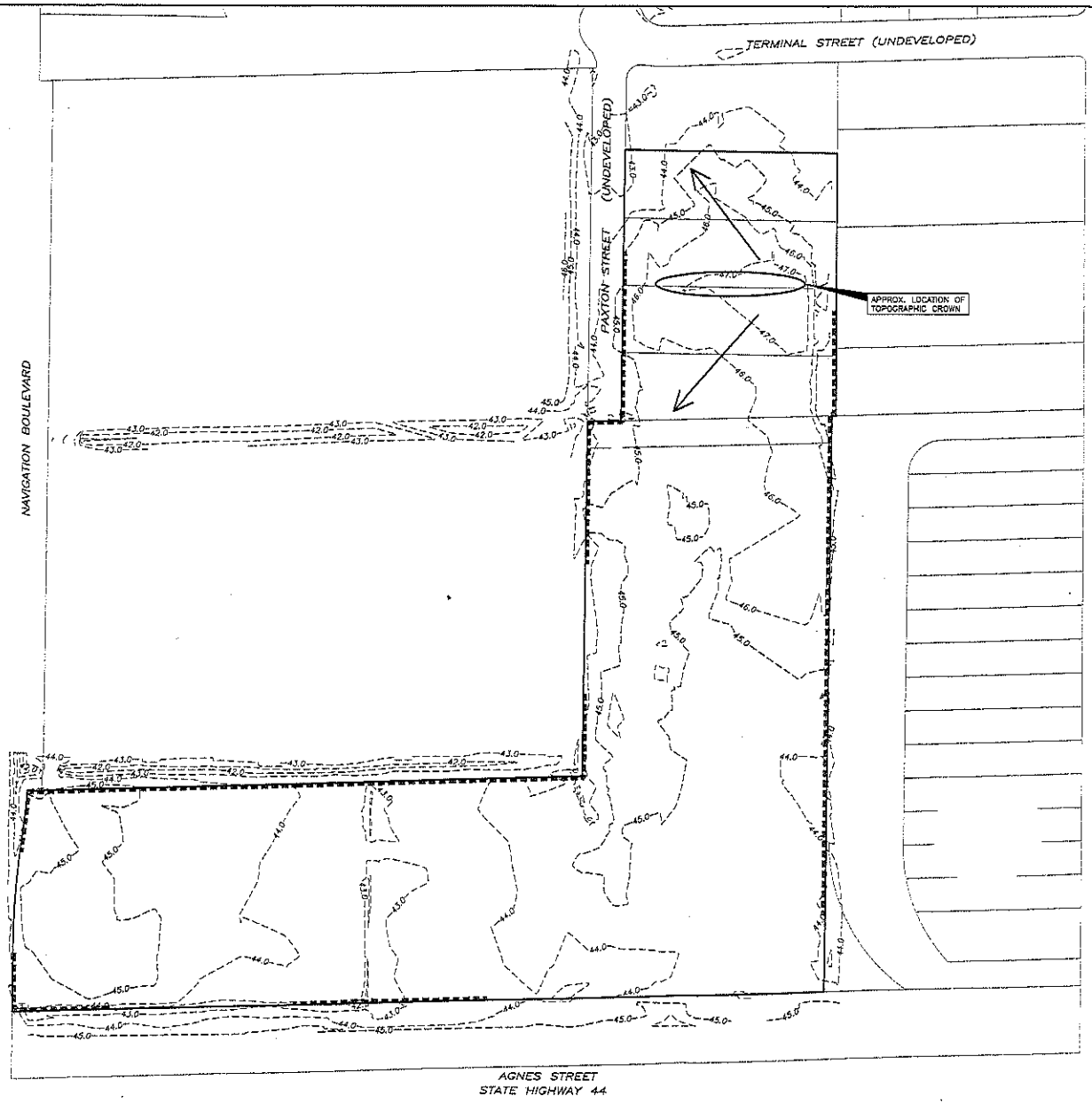
Date: _____ Inspector _____

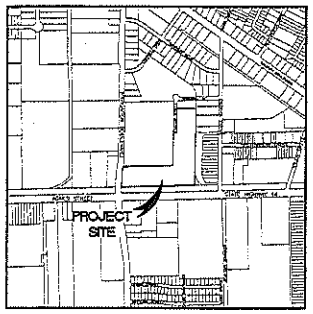
Inspection Item	Answer (Y/ N)	Comments	Corrective Action?
Silt Fences			
Are silt fences in good condition?			
Has silt accumulated more than 1/3 up the side of the fence?			
Roads			
Evidence of sediment transported off-site after a rain event?			
Fenceline			
Fence in good physical condition?			
Visual signs of sediment transport outside the fence?			
Signage			
All signs are present?			
Signs are in good condition and clearly visible?			

I certify that all items requiring corrective action have been corrected by the date listed below.

Date _____ _____

Inspector





LOCATION MAP
NOT TO SCALE

LEGEND:

- GROUNDWATER FLOW DIRECTION
- SURFACE CONTOUR
- SILT FENCE (APPROXIMATE)

N

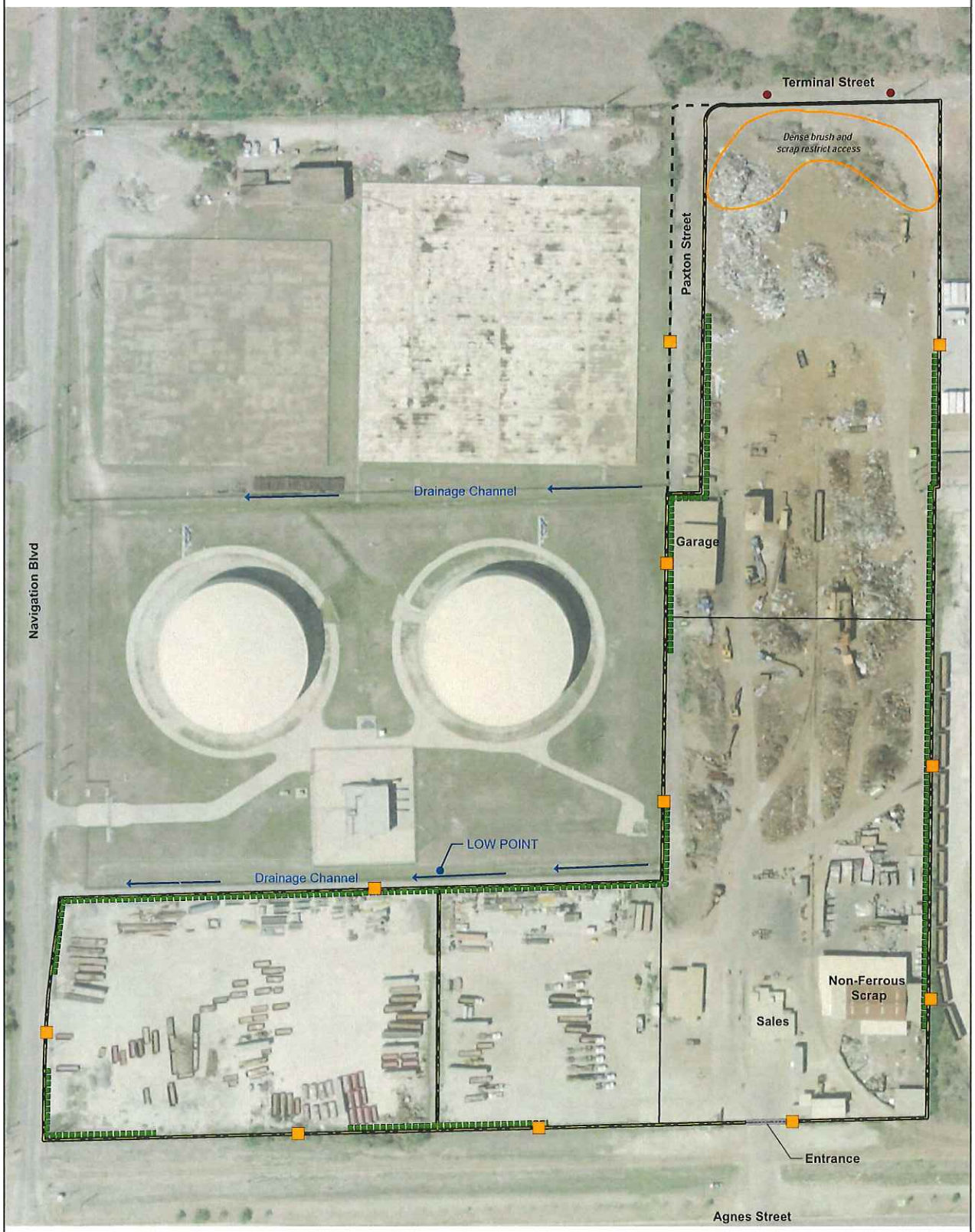
GRAPHIC SCALE
80 0 40 80 160
(SCALE IN FEET)
1" = 80'

SOURCE: COMMERCIAL METALS COMPANY.
SURVEY COMPLETED BY GOLDSTON ENGINEERING, INC.

WESTON

FIGURE 2
TOPOGRAHPIC SURVEY
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS

DATE	PROJECT NO.	SCALE
JUNE 2011	14150.001.004	AS SHOWN



0 125 250
Feet

Legend

- Fence Post with Sign Location
- Sign Location
- Silt Fence (Approximate)
- Paxton Street Boundary
- Entrance Gate
- Fence Line
- Property Boundary

SOURCE: Globexplorer, 2009

Notes:
1. Stormwater discharge from the property is by sheet flow.

2. Vegetation along fence line will effectively reduce offsite sediment transport.

N

WESTON SOLUTIONS

FIGURE 3
DRAINAGE, SILT FENCE, AND SIGNAGE LOCATIONS
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS

DATE	PROJECT NO	SCALE
JUNE, 2011	14160.001.004	AS SHOWN

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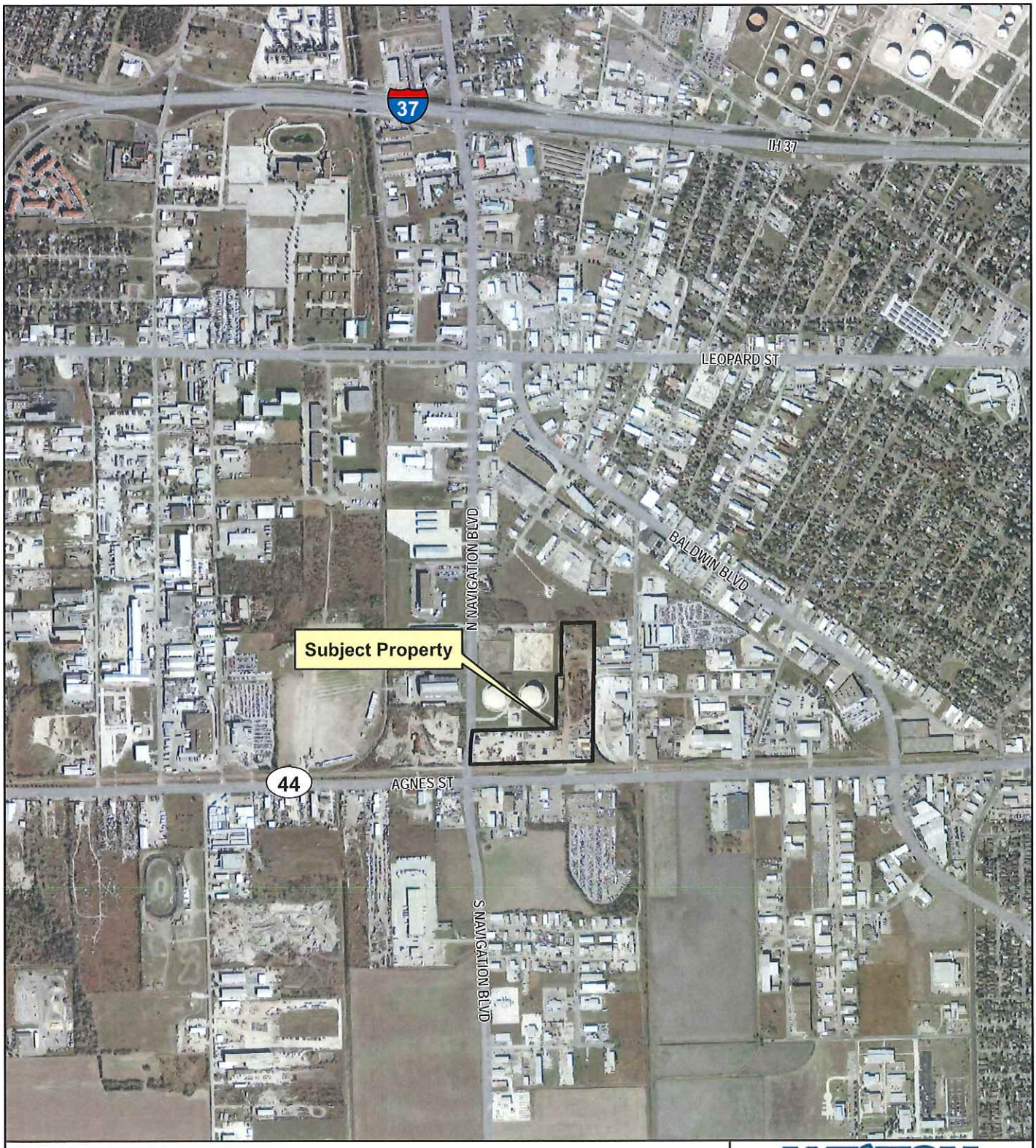
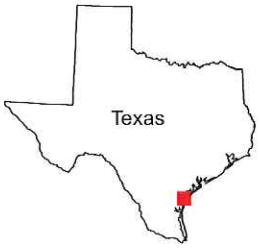


0 0.25 0.5
Miles

Legend

Property Boundary



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SOURCE: Texas Strategic Mapping Program (StratMap), TNRIS, 2008-2009 Texas Orthoimagery Program, Image Date - 2009

WESTON SOLUTIONS

FIGURE 1
SITE LOCATION MAP
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS

DATE	PROJECT NO	SCALE
JUNE, 2011	14160.001.004.0001.01	AS SHOWN

FILE: I:\GIS Project Files\CMC (14160)\Corpus Christi\Site Location Map.mxd 11:28:44 AM 6/22/2011 WILDERJ

Figure 2

Jim —
looks ok except for signage — must be PCB label as concentration > 50 ppm.
Jan

what about runoff water - samples - during rain event?
probably not necessary

CMC Americas

May 20, 2011

Ms. Susan Spalding (MC-6PD)
Associate Director for RCRA
Multimedia Planning and Permitting Division
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

more justification for limited silt fencing
need pictures

Re: Temporary Measures Plan for Commercial Metals Company (CMC), Corpus Christi (VCP Application No. 122)

Dear Ms. Spalding:

As requested in your April 13, 2011 letter, CMC is providing our "Temporary Measures Plan" for consideration. The attached plan has been developed to 1) prevent any further off-site migration, 2) present mitigation to prevent off-site exposure and 3) describe engineering controls such as fencing and signage. The temporary measures described in the plan will be implemented until such time as the permanent remedial solution is constructed.

CMC appreciates your attention to this matter and willingness to work with CMC to resolve the matter expeditiously through the well-established protocols with both EPA and the TCEQ. If you should have any questions, please do not hesitate to call me at 830.372.8305.

COMMERCIAL METALS COMPANY

Michael Peters

Michael Peters
Director of Environmental, CMC Americas

c: Jim Sales (EPA, Region 6) w/att
Otu Ekpo Otu (TCEQ) w/att
Robert Chapin (Weston Solutions, Inc.) w/att

P.O. Box 911
Seguin, TX 78156-0911

1 Steel Mill Dr.
Seguin, TX 78155-7510

Phone 830.372.8200
Fax 830.372.9873

www.cmc.com

TEMPORARY MEASURES PLAN

Prepared for

CMC Americas
1 Steel Mill Dr.
Seguin, TX 78155

Prepared by

WESTON SOLUTIONS, INC.
2705 Bee Caves Road, Suite 100
Austin, Texas 78746
512-651-7100 • Fax 512-651-7101

May 2011

W.O. No. 14160.001.004.0001.01

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APPENDIX A **SILT FENCE INFORMATION**
APPENDIX B **INSPECTION FORM**

LIST OF FIGURES

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LIST OF ACRONYMS

BMPs	best management practices
CCRF	Corpus Christi Recycling Facility
EPA	Environmental Protection Agency
PCB	polychlorinated biphenyl
WESTON	Weston Solutions, Inc.

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1. PURPOSE AND OVERVIEW

Weston Solutions, Inc. (WESTON®) prepared this Temporary Measures Plan for the CMC Americas Corpus Christi Recycling Facility located in Corpus Christi, Texas. The Corpus Christi Recycling Facility (CCRF), owned and operated by CMC Americas, is a polychlorinated biphenyl (PCB) impacted facility located at 4614 Agnes Street, Corpus Christi, Texas. In a letter dated 13 April 2011, the Environmental Protection Agency (EPA) requested that a Temporary Measures Plan be developed to prevent any further off-site migration of PCBs and necessary mitigation to prevent off-site PCB exposure (according to 40 CFR §761.61). This plan has been developed to 1) prevent any further off-site migration, 2) present mitigation to prevent off-site exposure and 3) describe engineering controls such as fencing and signage.

The temporary measures set forth in this plan will be implemented until such time as the permanent remedial solution is constructed.

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2. GENERAL SITE INFORMATION

Name:	CMC America Corpus Christi Recycling Facility
Physical Address:	4614 Agnes Street, Corpus Christi, Texas
Type of Facility:	Metal Recycling Facility
Point Source Discharges to:	City of Corpus Christi storm sewer system, thence to Corpus Christi Bay
Person Responsible for Storm Water Pollution Prevention:	Coulter James
Phone Number:	(361) 884-4071

Responsibilities:

- Overseeing implementation of best management practices (BMPs)
- Conducting routine inspections

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3. POLLUTANT SOURCES, DRAINAGE AND TEMPORARY MEASURES

3.1 POLLUTANT SOURCES

PCBs have been identified in surface soils at the property. The southwest portion of the property is relatively unimpacted, and it has been documented that there are no off-site impacts nearby in this area. As such, stormwater from this portion of the property will not be targeted for temporary measures.

The CMC property contains a PCB impacted area currently covered by concrete. Additional temporary measures will not be targeted for this location, as the concrete cover provides an adequate temporary measure to prevent off-site migration.

This plan primarily addresses the northern area of the property. Surface soils in this area are impacted with PCBs.

3.2 DRAINAGE

The entire facility is flat with little change in topography; see Figure 2. Additionally, there are no improvements at the facility related to stormwater conveyance. In general, stormwater from the facility flows by sheet flow to the property boundary. Two small depressions lead to off-site ditches as shown on Figure 3. Due to the very flat topography, water in the ditches is stagnant except during periods of high runoff.

3.3 TEMPORARY MEASURES

Temporary measures to be implemented at the site include engineering controls in conjunction with inspections to ensure that the controls are in good condition.

3.3.1 ENGINEERING CONTROLS

Currently, the majority of impacted soils at the facility are covered by scrap/shredded metal, asphalt, concrete, or vegetation. The majority of the facility is surrounded by a vegetative strip

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that grows along the fence line. The relatively flat nature of the site combined with the coverage of impacted soils serves to reduce the flow of stormwater and settle sediments.

Silt fences will be installed at the proposed locations shown in Figure 2, as a temporary measure to retain on-site sediments that could potentially contain PCBs. The proposed silt fence locations were determined as a result of site reconnaissance that identified the most likely locations where significant sheet flow exits the property. The silt fences will be installed in accordance with the installation instructions included in Appendix A.

3.3.2 INSPECTIONS

The silt fences will be inspected once a month to ensure that they have not been damaged by vehicles or other equipment. The inspections will be documented using the inspection form in Appendix B, which will be maintained onsite for record keeping. Silt fences will be repaired or replaced within 24 hours of discovery of damage. Additionally, silt fences will be inspected to determine whether they are meeting effective treatment capacity. If sediments are mounded up to 1/3 of the height of the silt fence, the sediments will be removed. Sediments that are removed will be placed in containers and retained on-site. The contained sediment will be addressed with the final remedial solution, *i.e.*, placement under the cap.

3.3.3 RECORD KEEPING

Records of the inspections will be maintained on-site up to and through the remediation period until the permanent storm water plan is approved and implemented. Completed inspections forms will either be retained in Appendix B of this Plan or in a designated file at the facility.

3.4 MITIGATION

Temporary measures related to mitigation of off-site impacts are not anticipated. Given that off-site areas have limited access and personnel are not in contact with these areas, exposure is not likely. Limited off-site impacts have been identified adjacent to the property line and will be addressed in the remedial solution for the site. If, however, it is determined through inspections that sediments have been transported off-site, these sediments will be removed, as described in Section 3.3.2.

4. SECURITY

4.1 FENCING

The CCRF is fenced along the property boundary with the exception of the north side of the property next to the Terminal Street area. Although this portion of the property is unfenced, practical considerations eliminate the need for a fence in this area. First, a line of dense vegetation and scrap metal at the north end of the property makes access from the north difficult. Second, as seen in Figure 1, there are no roads or other open points of access exist to the northern boundary of the property. The lack of access, dense vegetation, and scrap metal effectively serve as a fence to discourage trespassers. Additionally, the immediate vicinity is used for commercial/industrial purposes only, reducing the potential for trespassers in the area.

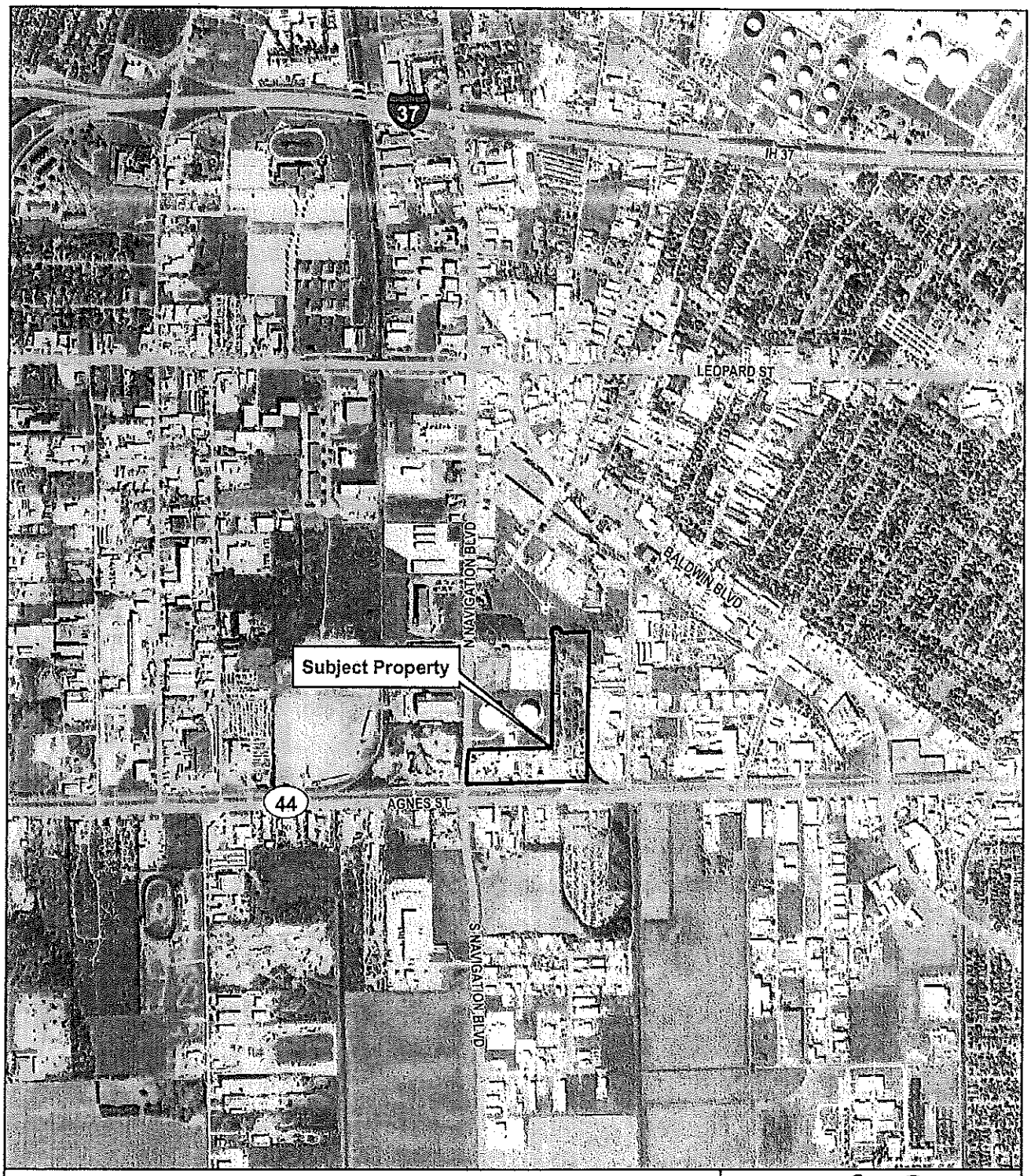
4.2 SIGNAGE

Signs will be placed on the exterior of the fence to indicate that soils on the property are contaminated. The signs will be placed in the approximate locations shown on Figure 2. These locations were selected based on the most likely access points to the property based on off-site property use. The signs will be in both Spanish and English and will read as follows:

"Notice: Potentially Contaminated Soils On-site"
"Adviso: Tierra Puede Estar Contaminada"

NO PCB Added

The letters on the signs will be at least 3 inches in height.



0 0.25 0.5

Miles

LEGEND

Property Boundary

N

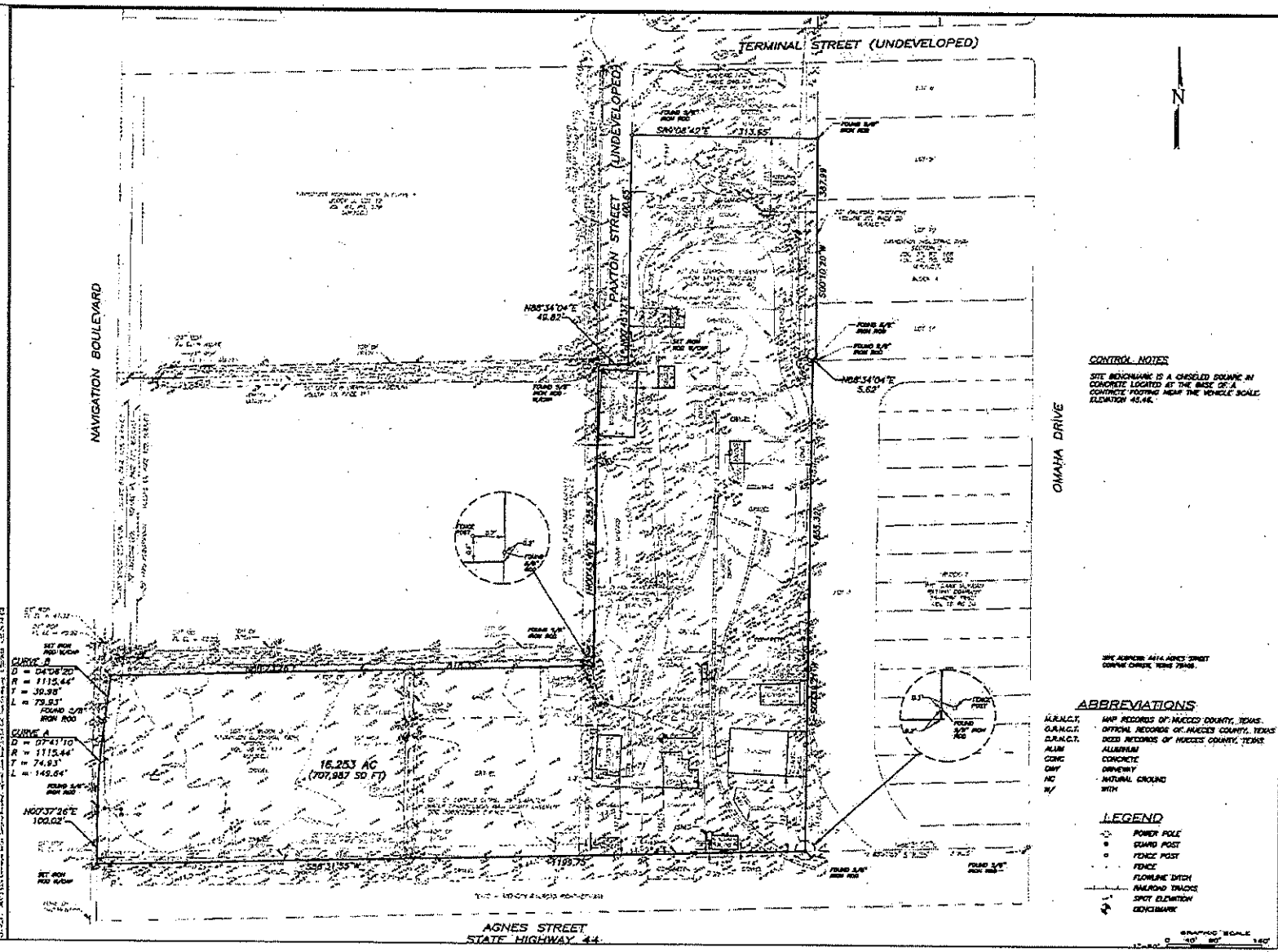
SOURCE: Texas Strategic Mapping Program (StratMap), TNRIS, 2008-2009 Texas Orthoimagery Program, Image Date - 2009

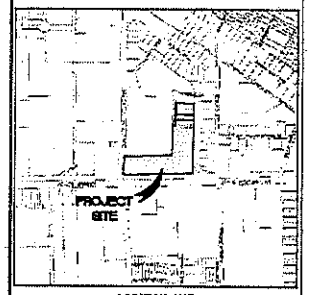
WESTON SOLUTIONS

FIGURE 1
SITE LOCATION MAP
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS

DATE	PROJECT NO	SCALE
MAY, 2011	14160.001.004.0001.01	AS SHOWN

FILE:\\GIS Project Files\CMC (14160)\Corpus Christi\Site Location Map.mxd 10:33:00 AM 5/13/2011 WILDER1





LOCATION MAP
NOT TO SCALE

NOTES

1) TOPOGRAPHIC SURVEY WAS PERFORMED ON THE GROUND ON SEPTEMBER 19, 2008.

2) BEARINGS ARE BASED ON STATE PLANE COORDINATE SYSTEM WASHINGTON TEXAS SOUTH ZONE OF SURVEY FEET.

3) THE PROJECT SITE IS WITHIN SPECIAL FLOOD HAZARD AREAS OF MINIMAL FLOODING, ZONE "C". FLOOD INSURANCE RATE MAP, MAP NUMBER 480464 0105 C. REVISED DATE JULY 16, 1980.

4) BOUNDARY INFORMATION IS BASED ON A SURVEY PREPARED IN FEBRUARY 2008.

5) PROPERTY MAY BE SUBJECT OF OTHER PERSONAL VALUES AND MEANING EASEMENTS NOT SHOWN ON THIS SURVEY. SPECIFIC EASEMENT RESEARCH WAS NOT PERFORMED FOR THIS SURVEY.

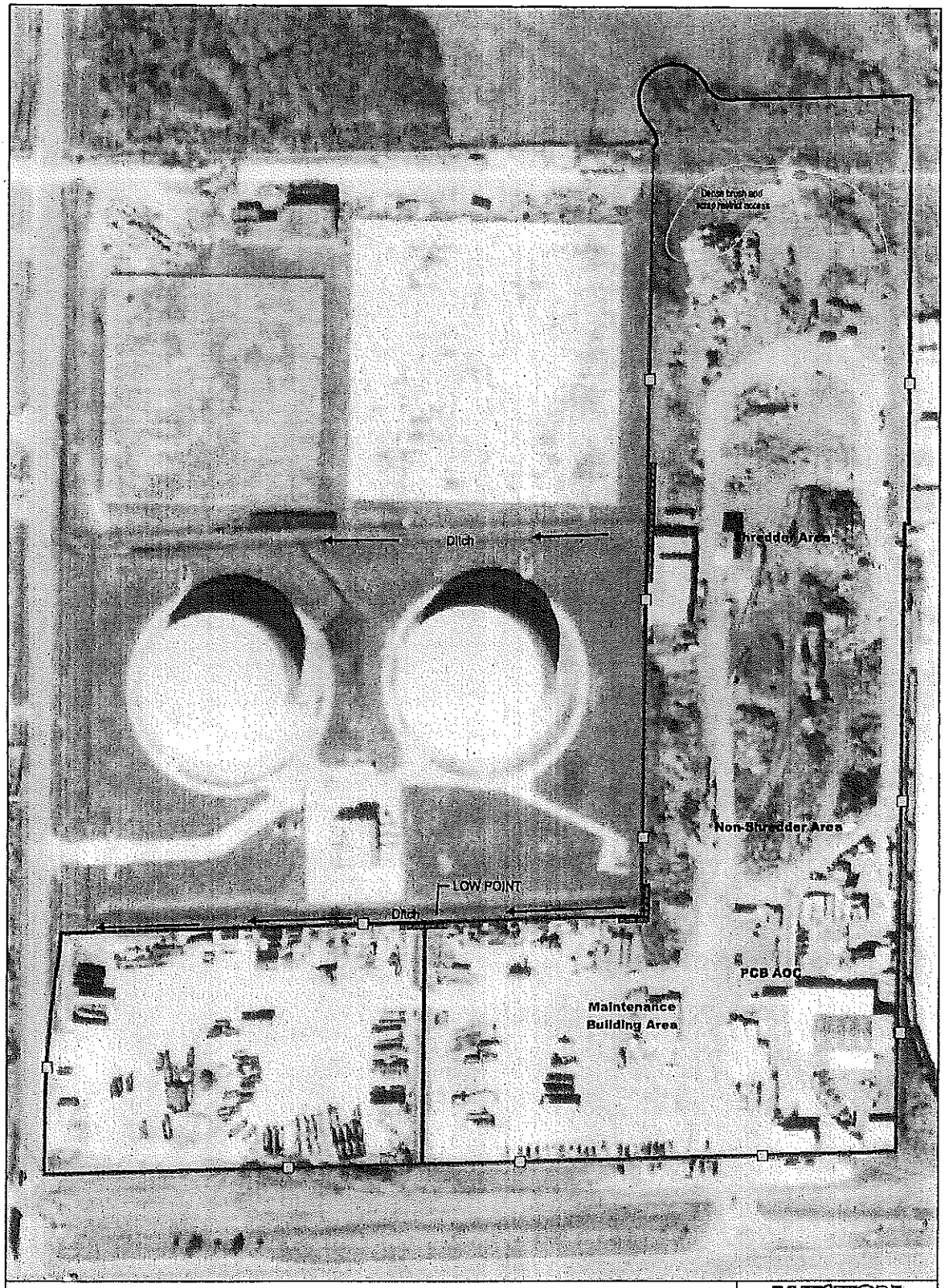
DESIGN	RAC	DATE	09/22/08
DRAWN	JD	DATE	09/22/08
CHECKED	RAC	DATE	09/22/08
APPROVED	RAC	DATE	09/22/08

SOURCE: GOLDSTONE ENGINEERING INC.
CORPUS CHRISTI, TEXAS, 2008

WESTON

FIGURE 2
TOPOGRAPHIC SURVEY
COMMERCIAL METALS COMPANY
CORPUS CHRISTI, TEXAS

DATE	PROJECT NO	SCALE
May, 2011	14190.001.004.0001.01	1" = 40'



LEGEND

- Silt Fence
- Sign Location
- Fence Line
- Property Boundary

0 125 250
Feet

Notes:

1. Stormwater discharge from the property is by sheet flow
2. Vegetation along fence line will effectively reduce offsite sediment transport.

N

SOURCE: Texas Strategic Mapping Program (StratMap), TNRIS, 2004-2009 Texas Orthoimagery Program, Image Date - 2009

WESTON SOLUTIONS

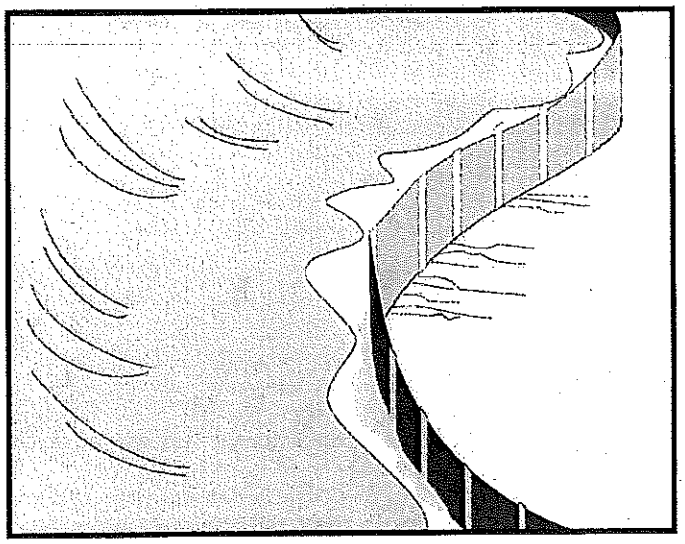
FIGURE 3
DRAINAGE, SILT FENCE AND SIGNAGE LOCATIONS
COMMERCIAL METALS COMPANY, CORPUS CHRISTI, TEXAS

DATE	PROJECT NO	SCALE
MAY, 2010	14510.010.004.0001.01	AS SHOWN

APPENDIX A
SILT FENCE INFORMATION

Silt Fence

SE-1



Objectives

EC	Erosion Control	
SE	Sediment Control	☑
TR	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-9 Straw Bale Barrier

Description and Purpose

A silt fence is made of a filter fabric that has been entrenched, attached to supporting poles, and sometimes backed by a plastic or wire mesh for support. The silt fence detains sediment-laden water, promoting sedimentation behind the fence.

Suitable Applications

Silt fences are suitable for perimeter control, placed below areas where sheet flows discharge from the site. They should also be used as interior controls below disturbed areas where runoff may occur in the form of sheet and rill erosion. Silt fences are generally ineffective in locations where the flow is concentrated and are only applicable for sheet or overland flows. Silt fences are most effective when used in combination with erosion controls. Suitable applications include:

- Along the perimeter of a project.
- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels.
- Around temporary spoil areas and stockpiles.
- Below other small cleared areas.

Limitations

- Do not use in streams, channels, drain inlets, or anywhere flow is concentrated.

- Do not use in locations where ponded water may cause flooding.
- Do not place fence on a slope, or across any contour line. If not installed at the same elevation throughout, silt fences will create erosion.
- Filter fences will create a temporary sedimentation pond on the upstream side of the fence and may cause temporary flooding. Fences not constructed on a level contour will be overtopped by concentrated flow resulting in failure of the filter fence.
- Improperly installed fences are subject to failure from undercutting, overlapping, or collapsing.
  - Not effective unless trenched and keyed in.
  - Not intended for use as mid-slope protection on slopes greater than 4:1 (H:V).
  - Do not allow water depth to exceed 1.5 ft at any point.

Implementation

General

A silt fence is a temporary sediment barrier consisting of filter fabric stretched across and attached to supporting posts, entrenched, and, depending upon the strength of fabric used, supported with plastic or wire mesh fence. Silt fences trap sediment by intercepting and detaining small amounts of sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence.

Silt fences are preferable to straw bale barriers in many cases. Laboratory work at the Virginia Highway and Transportation Research Council has shown that silt fences can trap a much higher percentage of suspended sediments than can straw bales. While the failure rate of silt fences is lower than that of straw bale barriers, there are many instances where silt fences have been improperly installed. The following layout and installation guidance can improve performance and should be followed:

- Use principally in areas where sheet flow occurs.
- Don't use in streams, channels, or anywhere flow is concentrated. Don't use silt fences to divert flow.
- Don't use below slopes subject to creep, slumping, or landslides.
- Select filter fabric that retains 85% of soil by weight, based on sieve analysis, but that is not finer than an equivalent opening size of 70.
- Install along a level contour, so water does not pond more than 1.5 ft at any point along the silt fence.
- The maximum length of slope draining to any point along the silt fence should be 200 ft or less.
- The maximum slope perpendicular to the fence line should be 1:1.

- Provide sufficient room for runoff to pond behind the fence and to allow sediment removal equipment to pass between the silt fence and toes of slopes or other obstructions. About 1200 ft^2 of ponding area should be provided for every acre draining to the fence.
- Turn the ends of the filter fence uphill to prevent stormwater from flowing around the fence.
- Leave an undisturbed or stabilized area immediately down slope from the fence where feasible.
- Silt fences should remain in place until the disturbed area is permanently stabilized.

Design and Layout

Selection of a filter fabric is based on soil conditions at the construction site (which affect the equivalent opening size (EOS) fabric specification) and characteristics of the support fence (which affect the choice of tensile strength). The designer should specify a filter fabric that retains the soil found on the construction site yet that it has openings large enough to permit drainage and prevent clogging. The following criteria is recommended for selection of the equivalent opening size:

1. If 50 percent or less of the soil, by weight, will pass the U.S. Standard Sieve No. 200, select the EOS to retain 85 % of the soil. The EOS should not be finer than EOS 70.
2. For all other soil types, the EOS should be no larger than the openings in the U.S. Standard Sieve No. 70 except where direct discharge to a stream, lake, or wetland will occur, then the EOS should be no larger than Standard Sieve No. 100.

To reduce the chance of clogging, it is preferable to specify a fabric with openings as large as allowed by the criteria. No fabric should be specified with an EOS smaller than U.S. Standard Sieve No. 100. If 85% or more of a soil, by weight, passes through the openings in a No. 200 sieve, filter fabric should not be used. Most of the particles in such a soil would not be retained if the EOS was too large and they would clog the fabric quickly if the EOS were small enough to capture the soil.

The fence should be supported by a plastic or wire mesh if the fabric selected does not have sufficient strength and bursting strength characteristics for the planned application (as recommended by the fabric manufacturer). Filter fabric material should contain ultraviolet inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature range of 0 °F to 120 °F.

- Layout in accordance with attached figures.
- For slopes steeper than 2:1 (H:V) and that contain a high number of rocks or large dirt clods that tend to dislodge, it may be necessary to install additional protection immediately adjacent to the bottom of the slope, prior to installing silt fence. Additional protection may be a chain link fence or a cable fence.
- For slopes adjacent to sensitive receiving waters or Environmentally Sensitive Areas (ESAs), silt fence should be used in conjunction with erosion control BMPs.

Materials

- Silt fence fabric should be woven polypropylene with a minimum width of 36 in. and a minimum tensile strength of 100 lb force. The fabric should conform to the requirements in ASTM designation D4632 and should have an integral reinforcement layer. The reinforcement layer should be a polypropylene, or equivalent, net provided by the manufacturer. The permittivity of the fabric should be between 0.1 sec^{-1} and 0.15 sec^{-1} in conformance with the requirements in ASTM designation D4491.

- Wood stakes should be commercial quality lumber of the size and shape shown on the plans. Each stake should be free from decay, splits or cracks longer than the thickness of the stake or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable.

- Staples used to fasten the fence fabric to the stakes should be not less than 1.75 in. long and should be fabricated from 15 gauge or heavier wire. The wire used to fasten the tops of the stakes together when joining two sections of fence should be 9 gauge or heavier wire. Galvanizing of the fastening wire will not be required.

- There are new products that may use prefabricated plastic holders for the silt fence and use bar reinforcement instead of wood stakes. If bar reinforcement is used in lieu of wood stakes, use number four or greater bar. Provide end protection for any exposed bar reinforcement.

Installation Guidelines

Silt fences are to be constructed on a level contour. Sufficient area should exist behind the fence for ponding to occur without flooding or overtopping the fence.

- A trench should be excavated approximately 6 in. wide and 6 in. deep along the line the proposed silt fence.

- Bottom of the silt fence should be keyed-in a minimum of 12 in.

- Posts should be spaced a maximum of 6 ft apart and driven securely into the ground a minimum of 18 in. or 12 in. below the bottom of the trench.

- When standard strength filter fabric is used, a plastic or wire mesh support fence should be fastened securely to the upslope side of posts using heavy–duty wire staples at least 1 in. long. The mesh should extend into the trench. When extra-strength filter fabric and closer post spacing are used, the mesh support fence may be eliminated. Filter fabric should be purchased in a long roll, and then cut to the length of the barrier. When joints are necessary, filter cloth should be spliced together only at a support post, with a minimum 6 in. overlap and both ends securely fastened to the post.

- The trench should be backfilled with compacted native material.

- Construct silt fences with a setback of at least 3 ft from the toe of a slope. Where a silt fence is determined to be not practicable due to specific site conditions, the silt fence may be constructed at the toe of the slope, but should be constructed as far from the toe of the slope as practicable. Silt fences close to the toe of the slope will be less effective and difficult to maintain.

- Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the barrier; in no case should the reach exceed 500 ft.

Costs

- Average annual cost for installation and maintenance (assumes 6 month useful life): $7 per lineal foot ($850 per drainage acre). Range of cost is $3.50 - $9.10 per lineal foot.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric. The lifespan of silt fence fabric is generally 5 to 8 months.
- Silt fences that are damaged and become unsuitable for the intended purpose should be removed from the site of work, disposed of, and replaced with new silt fence barriers.
- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- Silt fences should be left in place until the upstream area is permanently stabilized. Until then, the silt fence must be inspected and maintained.
- Holes, depressions, or other ground disturbance caused by the removal of the silt fences should be backfilled and repaired.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas, United States Environmental Protection Agency, 2002.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group-Working Paper, USEPA, April 1992.

Sedimentation and Erosion Control Practices, and Inventory of Current Practices (Draft), UESPA, 1990.

Southeastern Wisconsin Regional Planning Commission (SWRPC). Costs of Urban Nonpoint Source Water Pollution Control Measures. Technical Report No. 31. Southeastern Wisconsin Regional Planning Commission, Waukesha, WI. 1991

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

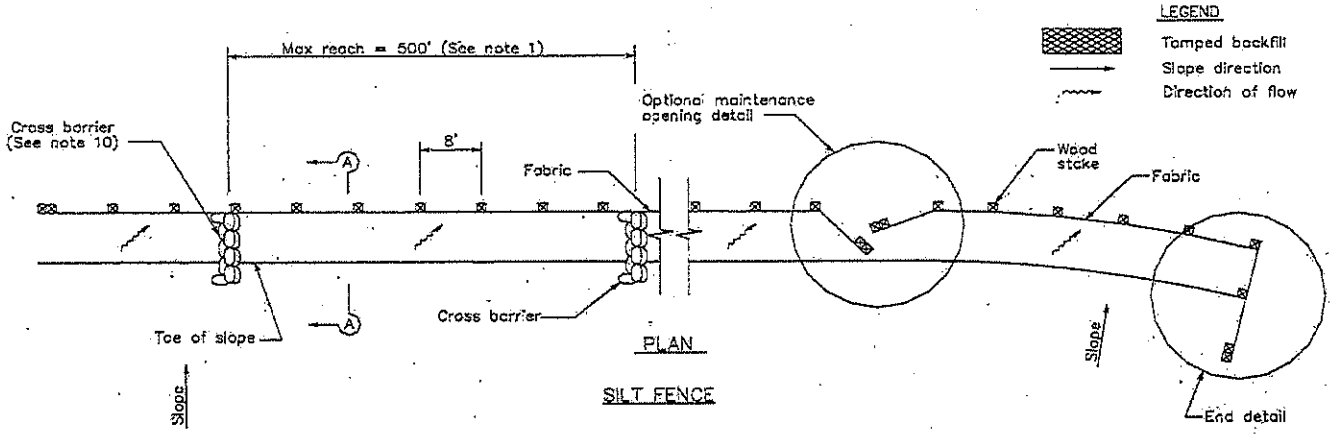
Stormwater Management Manual for The Puget Sound Basin, Washington State Department of Ecology, Public Review Draft, 1991.

U.S. Environmental Protection Agency (USEPA). Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. U.S. Environmental Protection Agency, Office of Water, Washington, DC, 1992.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Silt Fence

SE-1

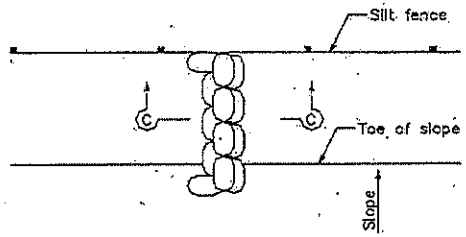


PLAN

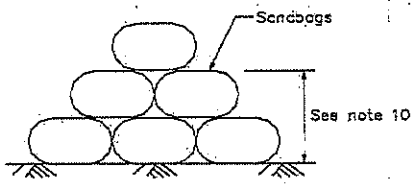
SILT FENCE

NOTES

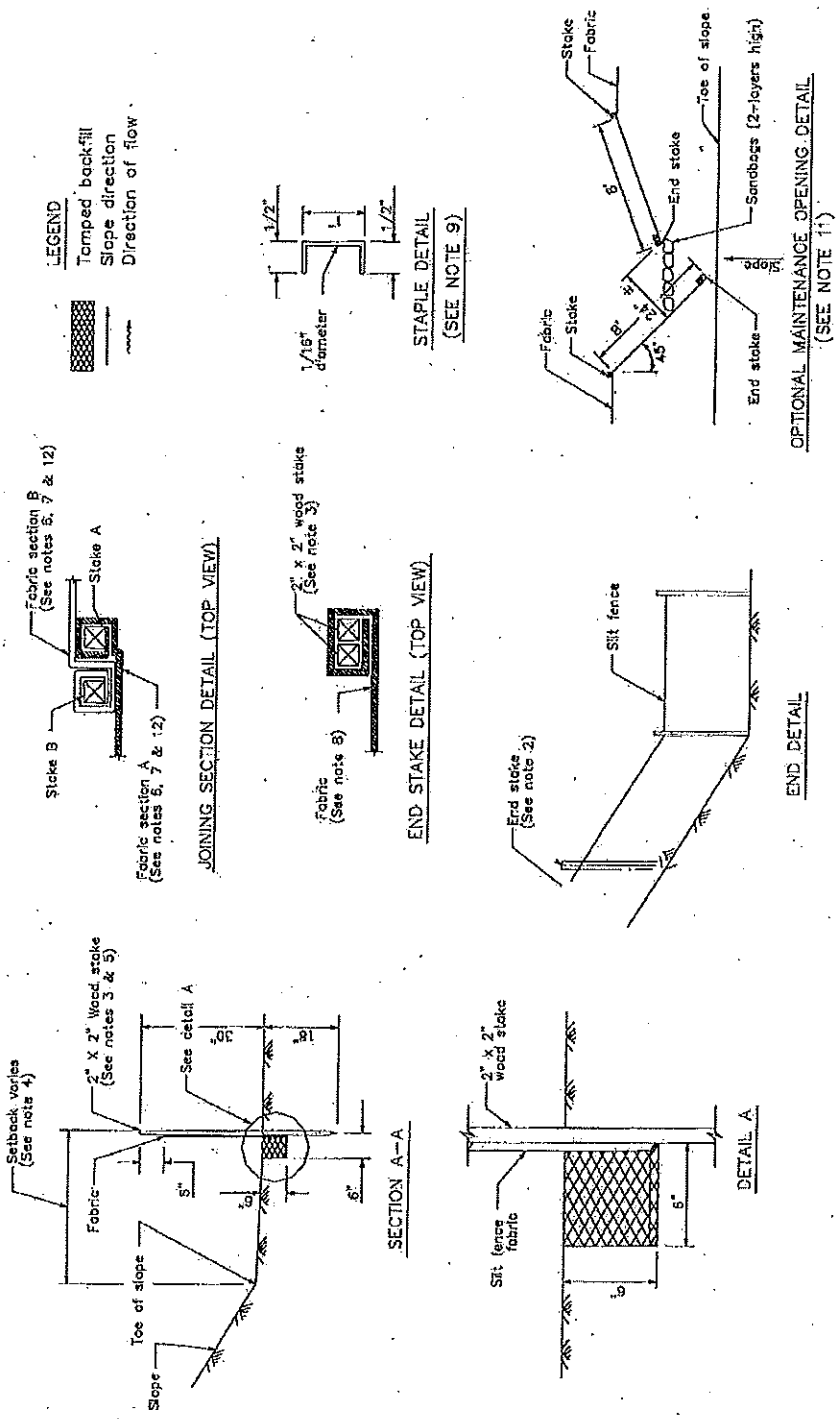
1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 500'.
2. The last 8'–0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 8'–0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow–through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.



CROSS BARRIER DETAIL



SECTION C–C


LEGEND
Tamped backfill
Slope direction
Direction of flow
Fabric section B (See notes 6, 7 & 12)
Stake A
Stake B
Fabric section A (See notes 6, 7 & 12)
JOINING SECTION DETAIL (TOP VIEW)
1/2"
1/16" diameter
STAPLE DETAIL (SEE NOTE 9)
2" x 2" wood stake (See note 3)
Fabric (See note 8)
END STAKE DETAIL (TOP VIEW)
Stake
Fabric
Toe of slope
End stake
Sandbags (2-layers high)
Slope
OPTIONAL MAINTENANCE OPENING DETAIL (SEE NOTE 11)
Setback varies (See note 4)
2" X 2" Wood stake (See notes 3 & 5)
See detail A
Fabric
Toe of slope
Slope
SECTION A–A
2" X 2" wood stake
Silt fence fabric
DETAIL A
Silt fence
End stake (See note 2)
END DETAIL

APPENDIX B
INSPECTION FORM

CMC Corpus Christi Weekly* Inspection Form

***Inspections will also be conducted after a rain event greater than 0.25 inches**

Date: _____ Inspector _____

Inspection Item	Answer (Y/ N)	Comments	Corrective Action?
Silt Fences			
Are silt fences in good condition?			
Has silt accumulated more than 1/3 up the side of the fence?			
Roads			
Evidence of sediment transported off-site after a rain event?			
Fenceline			
Fence in good physical condition?			
Visual signs of sediment transport outside the fence?			
Signage			
All signs are present?			
Signs are in good condition and clearly visible?			

I certify that all items requiring corrective action have been corrected by the date listed below.

Date _____ _____

Inspector

Temporary Measures plan
James Sales to: elizahurst 06/14/2011 02:38 PM

Hi-- We looked at the plan and have the following comments:

1. CMC needs to put the PCB label all around the perimeter of the facility;

2. They need to provide more justification for where they plan on putting the plastic fences;

3. More discussion on the area with heavy brush- is there run-off potential there or not;, and

4. Provide photographs of the facility so we can see the topography of the site and where the fences and signs are to be placed.

If you want to talk about them, let me know--