

**PHASE I AND PHASE II
ENVIRONMENTAL SITE ASSESSMENTS
WITH COST ESTIMATE FOR CLEAN UP
FOR
ST. JOSEPH'S DORMITORY 90000D
MARTY INDIAN SCHOOL
MARTY, CHARLES MIX COUNTY, SOUTH DAKOTA**

Prepared for:

**YANKTON SIOUX TRIBE
MARTY INDIAN SCHOOL**
9000 388th Avenue
Marty, SD 57361

Prepared by:

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November 2013

Reviewed by:

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LIST OF ACRONYMS

AAI	All Appropriate Inquiries
ACM	asbestos containing material
ASB	asbestos
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
EDR	Environmental Data Resources, Inc.
EPA	U.S. Environmental Protection Agency
EPDM	ethylene propylene diene monomer
ESA	Environmental Site Assessment
FGH	Former Guest House
LBP	lead-based paint
LUST	leaking underground storage tank
MIS	Marty Indian School
N/A	Not Applicable
PCB	polychlorinated biphenyl
P.G.	Professional Geologist
REC	recognized environmental condition
START	Superfund Technical Assessment and Response Team
TDD	Technical Direction Document
UST	underground storage tank
WESTON	Weston Solutions, Inc.
YST	Yankton Sioux Tribe

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EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA) tasked the Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START) to assist the EPA in conducting a Phase I and Limited Phase II Environmental Site Assessment (ESA) at St. Joseph's Dormitory 90000D located on the Marty Indian School Campus at 9000 388th Avenue, Marty, Charles Mix County, South Dakota (subject property). The ESA was conducted in accordance with Technical Direction Document (TDD) 0003/1307-12, 40 Code of Federal Regulations (CFR) Part 312 - Standards and Practices for All Appropriate Inquiries (AAI), and American Society for Testing and Materials (ASTM) International - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-05 and Limited Phase II Environmental Site Assessment Process E1903-11. Any exceptions to or deletions from these practices are described in Section 1.6 and Section 2.9.1.1 of this report.

The Phase I site visit was performed on September 26, 2013 by Ms. Mary Kenner and Mr. Gary Snow (RESPEC). The subject property is located on the campus of Marty Indian School south of 303rd Street and St. Paul's Catholic Parish.

The St. Joseph's Dormitory building is an abandoned two-story brick structure with basement built around 1923. The building was used as a student dormitory quarters for the Marty Indian School until new quarters were constructed. The building square footage totals approximately 11,500 sq. ft. It contains a basement, 1st floor and 2nd floor, each consisting of approximately 3,800 square feet. The roof is ethylene propylene diene monomer (EPDM).

This Phase I ESA has revealed evidence of four RECs in connection with the property:

- Two previous asbestos inspections at St. Joseph's have confirmed the presence of asbestos containing material (ACM).

- Based upon the age and composition of the building, and the 1989 AHERA Inspection and 1995 re-inspection, the potential for the presence of additional ACM is high. Materials identified at the subject property include, but are not limited to roof materials, flooring, plaster, caulking, and mastics.

- Based upon the age of the building, the potential for the presence of lead-based paint (LBP) is high.

- Based upon the apparent age of light fixtures observed in the subject building, the potential for the presence of polychlorinated biphenyls (PCBs) is high.

- Based upon the extensive water damage observed throughout the building, the potential for the presence of mold in the building is high.

This assessment has also revealed three issues of potential environmental concern in connection with the property:

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Based upon the age of the building, the potential for thermostats to contain mercury is of potential environmental concern.

The potential for lithium batteries in emergency and exit lighting is of potential environmental concern.

- Live pigeons are roosting within the building and dead pigeons and pigeon guano covers the floors, walls and building materials through the building. The guano (biological) is an environmental concern.

The following de minimis conditions were noted on or adjacent to the subject property:

- De minimis amounts of cleaning supplies were observed on the subject property. All containers appeared to be in good condition.

Based on the uncertain structural integrity of the building and extensive contamination with mold and pigeon droppings, START personnel determined that the limited Phase II ESA sampling would be focused on external components and a walk-through of the building for photograph documentation. A walk through was conducted for visual inspection to determine the presence or non-presence of mold, PCBs, and/or mercury at the subject property.

Results of the limited Phase II sampling indicate the presence of ACM (>1%) in the ceiling tile mastic, and visual presence of light fixtures (PCBs/mercury) and emergency/exit lighting (lithium batteries), and the presence of mold. The 1989 inspection indicates ACM (>1%) in the floor tiles.

The September 2013 Phase I and II ESAs and the material from the original asbestos inspection (1989) and re-inspection (1995), provide sufficient data to proceed without additional sampling. Based on the September 2013 site visit and questionable structural integrity of the building, no further activity (inspection or remediation) should be permitted until reviewed by a structural engineer.

Based on the deteriorating condition of the building, presence of mold, and pigeon guano, demolition leaving building materials in place is the preferred option. The cost for this (with a 20% contingency of \$41,000 to \$55,000 added) is estimated to be approximately **\$246,000 to \$330,000**. If review by a structural engineer indicates the building is sound, the estimated cost to abate and demolish the building is approximately between \$293,300 and \$363,300.

This Summary is intended to be a general description of the recognized environmental conditions (RECs) identified as a result of the Phase I ESA and limited Phase II ESA sampling of the subject property conducted by WESTON. However, this section is not intended to be a "stand-alone" document or to include the basis of all conclusions presented. The report should be read and used in its entirety. Information included in this section is subject to the scope of services and limitations noted in the original TDD and the complete report.

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1.0 PHASE I

1.1 PHASE I INTRODUCTION

1.1.1 Scope of Work and Purpose

The Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START) conducted a Phase I Environmental Site Assessment (ESA) at St. Joseph's Dormitory 9000D located on the campus of Marty Indian School, 9000 388th Avenue, Marty, Charles Mix County, South Dakota (subject property). The ESA was conducted in accordance with Technical Direction Document (TDD) 0003/1307-12, *40 Code of Federal Regulations (CFR) Part 312 – Standards and Practices for All Appropriate Inquiries (AAI)*, and *American Society for Testing and Materials (ASTM) International – Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-05*.

The purpose of a Phase I Environmental Site Assessment (ESA) is to identify the following: (1) recognized environmental conditions (RECs) associated with the historical and current uses of the property; (2) recognized physical conditions of buildings and adjacent grounds; and (3) recognized present operational practices. *ASTM E1527-05* defines RECs as follows:

"...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions."

A Phase I ESA consists of four general components: (1) a records review; (2) a site reconnaissance; (3) interviews; and (4) a report. The first three are conducted to identify environmental conditions related to the subject property. This Phase I ESA report provides the results of the first three components and fulfills the fourth.

This assessment report contains the results of reconnaissance of the subject property and surrounding properties (dates provided in each section), and a review of property, government, and historical records. Information used to complete this ESA was reasonably ascertainable and visually and physically observable.

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1.2 SPECIAL TERMS AND CONDITIONS

This document has been prepared by the WESTON START as tasked by the U.S. Environmental Protection Agency (EPA) solely for the use and benefit of the EPA and Yankton Sioux Tribe (YST) and Marty Indian School (MIS). Any use of this document or information herein by persons or entities other than the EPA, YST, or MIS, without the express written consent of WESTON, will be at the sole risk and liability of said person or entity. WESTON will not be liable to the EPA, YST, MIS, or such persons or entities for any damages resulting therefrom. It is understood that this document may not include all information pertaining to the described site.

1.2.1 Limitations and Exceptions of Assessment

ASTM E1527-05 (Section 4.5.1) acknowledges that, "No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property." The ESA "[...] is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost." Furthermore, *ASTM E1527-05* (Section 4.5.2) states, "There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions."

1.2.2 Personnel Performing ESA and Qualifications

This ESA was completed by the following START personnel; personnel qualifications are provided in Section 5 of the report:

- Ms. Mary Kenner, ACM Inspector and Environmental Professional
- Mr. Gary Snow, ACM Inspector and Environmental Professional
- Mr. Greg Geras, Professional Geologist (P.G.), Geoscientist and Environmental Professional

Ms. Mary Kenner and Mr. Snow are considered Environmental Professionals, as defined by 40 CFR Part 312.10, and have undertaken the inquiry as defined in 40 CFR Part 312.21(b). Ms. Mary Kenner is considered an Environmental Professional as defined by 40 CFR Part 312.10 and have undertaken the inquiry as defined in 40 CFR Part 312.21(b). The following is the Environmental Professional certification:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR Part 312.10 of this part. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Mary Kenner

Certifying Environmental Professional (Print)

Scientist

Title

Signature

Date

1.2.3 User Responsibilities

Section 6 of *ASTM E1527-05* outlines the following responsibilities of the user of a Phase I ESA to assist in the identification of potential RECs:

- Communication to the environmental professional, by the user, of information relative to any environmental cleanup liens filed or recorded under federal, tribal, state, or local law of which the user is aware. *As part of this ESA, START has not been notified of any such environmental liens.*
- Communication to the environmental professional, by the user, of information relative to any activity and land use limitations such as engineering controls, land use restrictions or deed restrictions, etc., that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law of which the user is aware. *As part of this ESA, START has not been notified of any such restrictions.*
- Communication to the environmental professional, by the user, of any specialized knowledge or experience, or other information that might be material to the identification of RECs. *Information regarding contamination at the subject property has been disclosed to START with respect to this ESA.*
- Communication to the environmental professional, by the user, of the relationship of the purchase price to the fair market value of the property assuming the property has not been contaminated through past usage. *No information regarding the purchase price or fair market value was provided to START.*
- Communication to the environmental professional, by the user, of any commonly known or reasonably ascertainable information, or other information of which the user is aware,

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that might be material to the identification of RECs: *Information regarding contamination at the subject property has been disclosed to START with respect to this ESA.*

- Communication to the environmental professional, by the user, of the obviousness of the presence or likely presence of contamination at the property of which the user is aware, that might be material to the identification of RECs. *Information regarding contamination at the subject property has been disclosed to START with respect to this ESA.*

1.2.4 Disclaimers

START has performed this Phase I ESA in general conformance with the scope and limitations of the ASTM standard and TDD 0003/1307-12. The information from the site reconnaissance and sampling is based on the conditions existing on the date of START's visit to the property. The findings and conclusions presented herein are professional opinions based solely on visual observations of the facility and vicinity, laboratory analysis, and interpretation of information provided or reasonably available to START. Past conditions were considered on the basis of observations, readily available records, interviews, and recollections.

START does not warrant or guarantee information obtained from third parties contained in the environmental record sources and recollections used for this assessment are correct, complete, and/or current. Such information is the product of independent investigation by parties other than WESTON and/or information maintained by government agencies.

START did not collect samples or perform any testing as part of the Phase I ESA activities during the subject property visit. It is possible that past contamination remains undiscovered or that property conditions will change in the future. START does not warrant or guarantee the property suitable for any particular purpose or certify the property as "clean."

Detailed asbestos, indoor air quality, lead-based paint, vapor intrusion, occupational health and safety, radon, and wetland surveys, are not included as part of the Phase I ESA portion of this project. Any such survey conducted, if applicable, are part of a Phase II ESA conducted at the subject property and detailed in Section 2.

Information, limitations, and disclaimers provided in this general section apply to all remaining sections included in this report.

1.3 PROPERTY DESCRIPTION

1.3.1 Property description, Location, and Property History

Facility Name	St. Joseph's Dormitory 90000D
Address	9000 388 th Avenue, Marty, South Dakota
Size of property (acres)	Approximately 0.1 acres
Latitude/Longitude	42°59'33.07"N 98° 25' 29.40"
Site and Vicinity General Characteristics	The site is located on the Marty Indian School Campus (See Figure 1 – Subject Property Location Map and Figure 2 – Subject Property Vicinity Map).
Property Description	Adjacent properties include Open space (north), St. Katherine's, (south), Boy's Dormitory (east) and open space and apartment building (west) (Figure 2).
Size of building(s)	Approximately 3,800 square feet each floor.
Construction date of building(s)	Construction estimated at 1923.
Renovation dates and description (if applicable)	Unknown.
Building(s) description	Two story brick building (irregular shape) with basement measuring approximately 3,800 square feet each floor.
No. of employees	Not Applicable (N/A)
Owned or leased	Yankton Sioux Tribe/Marty Indian School
Current property operations	The property is currently vacant.
Date current operations commenced at facility	N/A – The facility is not currently operating.
Legal description(s)	Located in NE ¼ NE ¼, Section 5, Township 94N, Range 64W (USA Trust)

Summary of current and previous property uses, and dates of operation		
Based on interviews, review of available topographic maps, aerial photos, and/or previous environmental reports, the history of the subject property is as follows:		
Start	End	Description
1911		Marty Indian School formerly known as St. Paul's Indian Mission established
1975 to current		Transferred ownership and operation of the school to the Yankton Sioux Tribe.

1.3.2 Surrounding properties

Surrounding properties are shown on Figure 2; site photographs are provided in Appendix A. A summary of the surrounding properties, as observed during the September 26, 2013 site reconnaissance, is provided in the table below.

	Description
North	Open space (trees, grass, sidewalks). St. Paul's Mission Parish located northwest.
East	Open space (trees) and Boy's Dormitory Building
South	Open space (grass, sidewalk) and St. Katherine's is located southwest.
West	Open space (trees, sidewalk) and apartment building.

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1.4 RECORDS REVIEW

1.4.1 Previously Prepared Environmental Reports and Records

The table on the following pages lists the previous environmental reports and records obtained by WESTON from various sources, including local agencies, for review with pertinent information relating to the subject property. A brief summary of the report or record reviewed is provided along with information relating to the subject property. A reference listing, including assessment for the quality of secondary data, is provided in Section 1.7.

Document Reviewed	Description
Document: National Register of Historic Places (Application) Date: 11/1/2011 Source: SD State Historic Preservation Office	Application Summary: Marty is a small rural community on the Yankton Sioux Reservation where St. Paul's Mission, Marty School, and, after 1975, the tribal headquarters are all located. St. Paul's Mission was established first in 1911 and assigned a resident priest in 1921, when its school and later the town were named Marty. Being reliant upon money from the church and donors, the mission and school buildings were erected piecemeal as resources were available. The earliest buildings were frame buildings salvaged from towns nearby, and, by the time that the Gymnasium and St. Therese Hall were started in the 1930s, they were much more substantial brick, stone, and concrete buildings that nonetheless still made use of salvaged materials. The campus includes over a dozen buildings, landscaped grounds, and many mature trees. St. Joseph's Hall was built in 1923.
Document: US EPA Notification of Demolition and Renovation (Heating Tunnels, Marty Indian School) Date: 6/3/2011 Source: Copy provided by MIS Facilities Department	Background Information: Tunnel Abatement Project located on the Marty Indian School indicates there was asbestos present in the heating tunnels on the MIS campus and approximately 1,000 linear feet were removed. Project completion was 12/31/11. Tunnel age estimated (80 years). The site map indicates the tunnel connecting to the subject property and a man hold located near St. Joseph's.
Document: Marty Indian School (MIS) Site Plan Date: 9/3/2008 Prepared by: Applied Management Engineers Source: MIS Facilities Department	Background Information: Site plan indicates a steam tunnel, electric lines, domestic water lines and sanitary sewer lines and lagoon locations relevant to the subject property. The subject property is identified as a Tribal building. Facilities staff stated that the property south of St. Paul's Parish is owned and managed by the MIS or YST.
Document: Roof Assessment Date: 1/12/2006 Prepared by: Schemmer Associates Source: Bureau of Indian Affairs	Relevant information: The roofing system is EPDM and consists of metal decking covered by a vapor barrier and rigid 0.060 ga EPDM insulation membrane. The three roofing areas (A, B, and C) cover 3,885 square feet. The EPDM roofing appeared to be dangerous due to its poor condition and structurally weak integrity.

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Document Reviewed	Description																				
Report: Health Hazard Evaluation (HHE) Yankton Sioux Tribe, Marty Indian School, Marty, South Dakota Date: 1998 Prepared for and by: NIOSH	Background Information: Health Hazard Evaluation conducted for worker safety during boiler cleaning. Background information indicates boilers at the school used motor oil as a fuel source. Deposits from the used motor oil (fly ash) accumulate on the surfaces inside the boilers during the burning process and are contaminated with toxic substances. Bulk samples of pipe insulation contained 40 to 50% chrysotile asbestos.																				
Document: Asbestos Inspection Date: March 1989; July 1995 Prepared by: Hazard Control Inc. Prepared for: Aberdeen Agency Source: <i>MIS Facilities Department</i>	Relevant information: An asbestos inspection was conducted in March 1989 and re-inspection conducted in July 1995. Based on review of these two reports, the following materials have been identified as ACM as determined through laboratory testing: <table><tr><th colspan="4">Confirmed ACBM (1989) Sq. Ft. Room % ACM</th></tr><tr><td>9" floor tile (red)</td><td>800</td><td>10, 11</td><td>7%</td></tr><tr><td>9" painted over tile</td><td>150</td><td>5</td><td>10%</td></tr><tr><td>Pipe Joints (3 samples)</td><td>2</td><td>8</td><td>10-25%</td></tr><tr><td>Floor Tile (tan)</td><td>90</td><td>102</td><td>7%</td></tr></table> Both reports indicate the floor materials are "Miscellaneous Material – Non-Friable". The 1989 report indicates the materials show signs of age and wear and tear with two rooms identified with high potential for damage. In 1995, there was no change in the assessment.	Confirmed ACBM (1989) Sq. Ft. Room % ACM				9" floor tile (red)	800	10, 11	7%	9" painted over tile	150	5	10%	Pipe Joints (3 samples)	2	8	10-25%	Floor Tile (tan)	90	102	7%
Confirmed ACBM (1989) Sq. Ft. Room % ACM																					
9" floor tile (red)	800	10, 11	7%																		
9" painted over tile	150	5	10%																		
Pipe Joints (3 samples)	2	8	10-25%																		
Floor Tile (tan)	90	102	7%																		

1.4.2 Standard Environmental Record Sources

For the subject property, WESTON relied on the following reports provided by Environmental Data Resources, Inc. (EDR) for information:

The EDR Radius Map™ Report with GeoCheck® (The Radius Report) - An electronic search of the standard environmental record sources. This report contains certain information obtained from a variety of public and other sources reasonably available to EDR. A copy of the report is provided as Appendix B.

The EDR Aerial Photo Decade Package - Aerial photographs are provided for the subject property and are included in Appendix C.

EDR Historical Topographic Map Report - Topographic maps are provided for the subject property and are included in Appendix D.

EDR Chain of Title Search - Information relating to deed ownership of the subject property back to 1942. A copy of the chain of title search report is provided in Appendix E.

- *The EDR Environmental LienSearch™ Report* - As part of the records search, EDR provides a search for environmental liens. A copy of the lien search report is provided as Appendix F.

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The EDR Radius Map™ Report identified Yankton Sioux Tribe on the following databases. However, the address for the property 9000 388th Avenue includes the entire campus of Marty Indian School, which includes numerous buildings.

- *Facility Index System (FINDS) database and Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA) Tracking System (FTTS), and Historical FTTS (HIST FTTS) database for all ten EPA regions. An inspection was conducted on June 5, 2001. No violations occurred. Due to no violations having been reported, the listings of the subject property on these databases are not considered RECs.*

The EDR Radius Map™ Report identified the following sites located within the appropriate search distances near the subject property:

- *Three State and Tribal Leaking Underground Storage Tank (LUST) sites are identified within ¼ mile radius.*

Included on the following pages are details for the subject property database listings and/or nearby site listings that WESTON believes may have the potential to impact the subject property.

Property	EDR Radius Report Map ID	Address	Approx. Distance (Miles)	Relative Elevation	Database(s)	Summary of Information from EDR Radius Report (Appendix B)
Marty Indian School	3	303 rd St. & 388 Ave.	1/8 mile	1,445 ft.	LUST	Petroleum contaminated soils from an underground storage tank (UST), Marty Indian School; Boy's Dormitory. Reported on July 5, 2011; closed on November 16, 2011. No further action. The potential for this LUST facility to adversely impact the subject property is low. This listing is not considered a REC in relation to the subject property.
YST Tribal Building	4	Tribal Bldg.	1/8 mile	1,442 ft.	LUST	Petroleum release upon flood water at Tribal Building located near Mosquito Creek. Fuel oil from UST. Reported June 12, 2010; closed June 14, 2010. No further action. The potential for this LUST facility to adversely impact the subject property is low. This listing is not considered a REC in relation to the subject property.
Marty Tribal Store	5	Marty Tribal Store	1/4 mile	1,441 ft.	LUST	Petroleum spill (gasoline). 2 USTs removed. Reported November 10, 1998. Facility Status Open. Bureau of Indian Affairs responsible party. The potential for this LUST facility to adversely impact the subject property is low. This listing is not considered a REC in relation to the subject property.

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1.4.3 Orphan Sites Summary

The Orphan Sites summary included in *The Radius Report* is a listing of site(s) that could not be mapped by EDR due to insufficient addresses. The majority of the sites are located in nearby communities (Lake Andes and Wagner). Only two sites were located in Marty and identified in the Solid Waste Facility (SWF) and Emergency Response Notification System (ERNS) databases. The ERNS website indicates it is the same spill as identified in Map ID 4 (Tribal Building). No information on the SWF database could be located. WESTON did not identify any site(s) that appear to represent potential adverse impacts to the subject property.

1.4.4 Local Government and/or Private Inquiries

Requests for information regarding the subject property and/or surrounding properties were submitted to Charles Mix County and Marty Indian School Facilities Director. A summary of the information obtained from file/records reviewed is presented in Section 3.1.

1.4.5 Water and Oil/Gas Well Summary

No groundwater monitoring wells or oil & gas wells were observed on the subject property during the site visit. Information regarding area wells, including water supply wells and groundwater monitoring wells, as well as oil and natural gas wells, was provided by EDR. The identified wells are shown on the Physical Setting Source Map in *The Radius Report*, included as Appendix B. No Public Water Systems are located within the one-mile radius. One well was identified within 1/8-mile of the subject property. A list of all wells within a one-mile radius of the subject property is provided in Appendix B.

1.4.6 Physical Setting

Setting	Description
Topography	The YST reservation is mostly farmland with some small areas of timber. The remainder is rolling hills and prairie suitable for grazing. (Akta Lakota Museum & Cultural Center, 2013). According to <i>The Radius Report</i> , the elevation of the subject property is approximately 1,445 feet above mean sea level (amsl), and the general topographic gradient is generally south (EDR 2013a).
Soil and Groundwater	<u>Soil</u> : According to <i>The Radius Report</i> , the dominant surficial soil component in the vicinity of the subject property is AGAR. Agar silt loam has moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderate coarse textures. The soil layers include silt loam (0-5 inches); silty clay loam (5-38 inches) and silt loam (38-59 inches). <u>Groundwater</u> : Based upon topographic maps, the general groundwater trend is southeast. According to depths to water data obtained from wells in the nearby vicinity, groundwater is encountered at approximately 12 feet bgs on the subject property (EDR, 2013a).
Geology	The geologic age identification category is continental deposits. The stratified sequence at the subject property is dated to the Cenozoic era, Tertiary system, and Miocene series (EDR, 2013a).

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Setting	Description
Wetlands	No potential wetland areas were observed on the subject property during the site reconnaissance. The closest wetland area identified in <i>The Radius Report</i> is located approximately 1/8 -mile to the south of the subject property. Areas north of 303 rd Street and east of 388 th Avenue are located in the 100-year flood zone. (EDR 2013).
Surface Water	According to <i>The Radius Report</i> , The closest 100-year floodplain was identified less than 1/4-mile from the subject property to the north and east. No 500-year floodplains were identified within one-mile of the subject property (EDR, 2013a). According to YST and MIS staff, flooding occurred in the area in June 2010 with 5 to 7 inches of precipitation and extensive damage to tribal headquarters and Marty Indian School (KSFY, 2010). No surface water bodies are present on the subject property. The Missouri River is located approximately 1/2-mile southwest of the subject property and along the southern border of the reservation. Fort Randall Dam creates Lake Francis Case which is on the southwestern part of the reservation.

1.4.7 Aerial Photograph Review

Aerial photographs were provided by EDR (EDR, 2013b). Due to the scale of all the aerial photographs and quality of the 1960 and 1990 aerial photographs, observable site specific details are limited. Copies of the aerial photographs are included in Appendix C. The review is summarized below:

Year	Source	Description
1962	EDR	<u>Subject Property</u> : The subject property is part of the MIS campus. <u>Surrounding Properties</u> : The adjacent properties are part of the Marty Indian School Campus.
1988	EDR	<u>Subject Property</u> : No significant changes are observed since the previous aerial photograph. <u>Surrounding Properties</u> : No significant changes are observed since the previous aerial photograph to subject property. Development of new campus area north of 303 rd Street.
1991	EDR	<u>Subject Property</u> : No significant changes are observed since the previous aerial photograph. <u>Surrounding Properties</u> : No significant changes are observed since the previous aerial photograph.
1998	EDR	<u>Subject Property</u> : No significant changes are observed since the previous aerial photograph. <u>Surrounding Properties</u> : No significant changes are observed since the previous aerial photograph.
2005	EDR	<u>Subject Property</u> : No significant changes are observed since the previous aerial photograph. <u>Surrounding Properties</u> : Additional development to the north of 303 rd Street and east of MIS campus observed since the previous aerial photograph.
2008, 2010, and 2012	EDR	<u>Subject Property</u> : No significant changes are observed since the previous aerial photograph. <u>Surrounding Properties</u> : No significant changes are observed since the previous aerial photograph.

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1.4.8 Topographic Map Review

Topographic maps were provided by EDR (EDR, 2013c). Copies of the topographic maps are included in Appendix D. The topographic maps were reviewed to evaluate development on the subject property and adjacent properties. The review is summarized below:

Year	Description
1964	<u>Subject Property</u> : St. Joseph's structure observed on topographic map. <u>Surrounding Properties</u> : Several structures observed as part of the Marty Indian School (MIS) campus.
1974	<u>Subject Property</u> : No significant changes are observed since the previous topographic map. <u>Surrounding Properties</u> : No significant changes are observed since the previous topographic map.
1986	<u>Subject Property</u> : No significant changes are observed since the previous topographic map. <u>Surrounding Properties</u> : No significant changes are observed since the previous topographic map.

1.4.9 Chain-Of-Title

WESTON reviewed *The EDR Chain of Title Report* (EDR, 2013f) provided. Information obtained from this report is listed in the table below. A copy of *The EDR Chain of Title Report* is included in Appendix E.

The following ownership, agreement, and commitment information was obtained for the subject property located in Charles Mix County. GIS Administrator, Charles Mix County provided a map of ownership for the school property (USA in Trust For). See Appendix E.

Historical Chain of Ownership, Agreements, and Commitments Associated with the Subject Property				
Date Executed	Date Recorded	Type	Grantor	Grantee
N/A	N/A	Deed	N/A	Yankton Sioux Tribe

1.4.10 Environmental Lien

WESTON reviewed *The EDR Environmental LienSearch™ Report* (EDR, 2013g) provided for the subject property. No environmental liens or other activity and use limitations (AULs) associated with the subject property were discovered. A copy of *The EDR Environmental LienSearch™ Report* is included in Appendix F.

1.5 SITE RECONNAISSANCE AND INTERVIEWS

1.5.1 Site Visit

Site Assessor(s)	Mary Kenner and Gary Snow
Date of Reconnaissance	September 26, 2013
Methodology Used	Visual inspection/walk-through of the subject property. ACM, lead-in soil sampling.
Limiting Conditions	Condition of the building precluded interior sampling. One sample was collected during

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a limited walk-through for documentation and photographs.

1.5.2 Interviews Records

Name	Mr. Gaylen Drapeau and Ms. Celeste Reynolds
Employer	Marty Indian School
Position	Facilities Director/Staff
Time with Company	Unknown
Time at this Facility	N/A
Date & Method of Interview	Spoke with Ms. Reynolds and Mr. Drapeau on 9/10/13 to verify age of the structures and to obtain a campus map. On 9/26/13 Mr. Drapeau provided access to the site and accompanied us for the part of the site visit. He stated that the flood in June 2010 caused damage to the buildings on campus. Ms. Reynolds provided additional background information on 10/9/13. A steam tunnel runs from the boiler at the Pacelli building to other buildings on campus. The tunnel contains heating pipes (which have since been capped) and lines rerouted. The entrance for the tunnel is located next door to St. Joseph's building. Mr. Drapeau stated that this building presents health concerns for the campus due to water damage, mold, pigeons roosting (and guano) and odors emitted from the building.

Name	Mr. Richard Leasure
Employer	Yankton Sioux Tribe
Position	Environmental Director
Time with Company	Unknown
Time at this Facility	N/A
Date & Method of Interview	Mr. Leasure was present during the site visit on September 26, 2013. He mentioned the health concerns with pigeons, mold and deteriorating condition of the building.

1.5.3 Waste Generation, Permitting and Utilities

Water Supply	Randall Community Water
Electricity	Northwestern Energy
Natural Gas	N/A
Wastewater	Sewage Lagoon (located south and east of MIS campus)
Stormwater	N/A
Air	N/A
Cooling Towers	N/A
Solid Wastes	Jackson, Nebraska
Hazardous Wastes	Picked up by Hidden Waters
Waste Disposal Areas	N/A

1.5.4 Hazardous/Dangerous Materials

Products and Chemicals Used/Managed/ Stored	No hazardous materials were observed on-site. Cleaning supplies are located in the basement.
Storage Tanks	No evidence of underground storage tanks (USTs) were observed on the subject property. However, the property east of this site (Boy's Dormitory) was listed as a

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	LUST site for petroleum contaminated soil (SD DENR, 2011).
Chlorinated Solvents Used	No evidence of chlorinated solvents was observed on the subject property.

1.5.5 Additional Observations and Information

Vapor Intrusion	No evidence of hazardous vapors present was observed on the subject property.
Polychlorinated Biphenyl (PCB) Containing Equipment	Potential PCB containing light ballasts were observed on the subject property. The potential presence is considered a REC. No transformers were observed on the subject property.
Radon	No known testing has been performed at subject property. According to <i>The Radius Report</i> , the U.S. EPA map of radon zones indicates the U.S. EPA Radon Zone for Charles Mix County is a Zone 1 area. Average radon levels for Zone 1 are greater than (>) 4 picocuries per liter (pCi/L). Air sampling was not performed at the subject property to evaluate actual radon levels.
Asbestos Containing Material (ACM)	Testing has been conducted at the subject property and several components contain ACM. The presence is considered a REC. See Section 2 for detailed information.
Lead Based Paint (LBP)	No XRF testing was performed due to the condition of the building. Based on the age of the building, the presence for LBP is high and considered a REC.
Lead and Drinking Water	N/A – Water is provided by Randall Community Water District. No water quality testing results were provided.
Mercury	Thermostats were identified during the inspection.
Fluorescent Lights	Fluorescent light fixtures and emergency lights were observed in the subject property. The presence of mercury is considered a REC. Exit lights may contain lithium batteries.
Monitoring Wells, Vent Pipes, Manhole Covers, etc.	No monitoring wells or vent pipes were observed on the subject property. A manhole to enter the steam tunnel is located near the subject property.
Staining	No evidence of staining was observed during the site visit.
Stressed Vegetation	None observed during site reconnaissance.
Ponds, Pits, Lagoons, and Debris Piles	None observed during the site reconnaissance, other than household debris located within the vacated building.
Water Staining or Mold Within Building	Severe water staining and mold was observed in the building. The presence of mold is considered a REC and health hazard.
Indoor Air Quality Issues (complaints and/or testing)	No known testing has been performed at subject property. Radon zone for Charles Mix County is 1.
Odors	Odors were detected during the site reconnaissance within and outside the building from pigeon guano.
Pools of Liquid	None observed during site reconnaissance.
Unidentified Substance Containers	None observed during site reconnaissance.

1.6 EXCEPTIONS, DELETIONS, AND GAPS

WESTON has performed this Phase I and Phase II ESA in general conformance with the scope and limitations of *ASTM E1527-05* and *ASTM E1903-11* for the property located at 9000 388th Avenue, Marty, Charles Mix County, South Dakota. Exceptions to, or deletions from, this practice or data gaps include the following:

Data Gap Description	Good Faith Effort	Opinion on Data Gap Significance
<u>Historical Records</u> : Complete historic record documentation back to 1940 was not available. Examples of historic record gaps include: <ul style="list-style-type: none">▪ Aerial photographs were only obtained back to 1962. Data gaps from 1940 to 1962.▪ Topographic maps were obtained back to 1964.	START attempted to construct a complete historic record for the subject property by conducting interviews and obtaining other historical records readily available for review such as aerial photographs and topographic maps, however, a complete historic record was unable to be constructed.	Low Significance - Based on the historical information available for review, the gaps in the historic record constructed does not indicate a high potential for environmentally adverse conditions at the subject property.
<u>Interviews</u> : Complete interviews with past owners and/or occupants were not available. <ul style="list-style-type: none">▪ Limited interviews include MIS Facilities Office and the YST Environmental Director.	START contacted YST and MIS staff; however, complete records and contact information were not readily available for all past owners and/or occupants.	Low Significance - Based on the historical information available for review, the gaps in owner and/or occupant interviews does not indicate a high potential for environmentally adverse conditions at the subject property.

These exceptions are not thought to have a material impact on the findings and conclusions of the ESA.

1.7 FINDINGS, OPINIONS, AND CONCLUSIONS PHASE I ESA

START has performed a Phase I ESA in conformance with the scope and limitations of TDD 1307-12, 40 CFR Part 312, and ASTM Practice E1527-05 on the subject property. Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This Phase I ESA has revealed evidence of four RECs in connection with the property:

Two previous asbestos inspections at St. Joseph's have confirmed the presence of ACM.

Based upon the age and composition of the building, and the 1989 AHERA Inspection and 1995 re-inspection, the potential for the presence of additional ACM is high. Materials identified at the subject property include, but are not limited to roof materials, flooring, plaster, caulking, and mastics.

Based upon the age of the building, the potential for the presence of LBP is high.

Based upon the apparent age of light fixtures observed in the subject building, the potential for the presence of PCBs is high.

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- Based upon the extensive water damage observed throughout the building, the potential for the presence of mold in the building is high.

This assessment has also revealed three issues of potential environmental concern in connection with the property:

Based upon the age of the building, the potential for thermostats to contain mercury is of potential environmental concern.

The potential for lithium batteries in emergency and exit lighting is of potential environmental concern.

- Live pigeons are roosting within the building and dead pigeons and pigeon guano covers the floors, walls and building materials through the building. The guano (biological) is an environmental concern.

The following de minimis conditions were noted on or adjacent to the subject property:

- De minimis amounts of cleaning supplies were observed on the subject property. All containers appeared to be in good condition.

Based on the uncertain structural integrity of the building and extensive contamination with mold and pigeon droppings, Weston personnel determined that sampling would be focused on external components and a walk-through of the building for photograph documentation. A walk through was conducted for visual inspection to determine the presence or non-presence of mold, PCBs, and/or mercury at the subject property. Results of the limited Phase II opportunity sampling are provided in Section 2 of this report.