NATIVE VILLAGE OF NORTHEAST CAPE

SITE INVESTIGATION REPORT

REVISION 1

Northeast Cape, St. Lawrence Island, Alaska

December 2009

Prepared for:

Native Village of Savoonga IRA Council

P.O. Box 120

Savoonga, Alaska 99769

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ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing material
Bristol	Bristol Environmental Remediation Services, LLC
DoD	U.S. Department of Defense
EPA	U.S. Environmental Protection Agency
HBMS	Hazardous Building Materials Survey
LBP	lead-based paint
mg/cm^2	milligrams per square centimeter
NALEMP	Native American Lands Environmental Mitigation Program
NE Cape	Northeast Cape
NVNC	Native Village of Northeast Cape
NVS	Native Village of Savoonga
PLM	Polarized Light Microscopy
PM	Project Manager
Satori	Satori Group, Inc.
SOW	Scope of Work
SPIP	Strategic Project Implementation Plan
USACE	U.S. Army Corps of Engineers

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1.0 INTRODUCTION

This Site Investigation Report has been developed for the Native Village of Savoonga (NVS) for submittal to the U.S. Army Corp of Engineers (USACE), Alaska District, and the Alaska Department of Environmental Conservation, as documentation of field investigation and sampling activities performed at the Native Village of Northeast Cape (NVNC) site. The NVNC is located adjacent to a former U.S. Department of Defense (DoD) site that impacts the people of St. Lawrence Island, Alaska. This report was prepared by Bristol Environmental Remediation Services, LLC (Bristol), under the direction of the NVS.

The purpose of this report is to document site investigation activities, including the sampling and screening of building materials for the presence of asbestos-containing materials (ACM) and lead-based paint (LBP). Site investigation activities were performed on and inside structures and debris piles at the NVNC site, located at the Northeast Cape (NE Cape) of St. Lawrence Island, Alaska (Figures 1, 2, and 3). Site investigation activities included the inspection, sampling, and mapping of the NVNC. The purpose of the site investigation activities was to address issues that pose the greatest risk to the community, and activities that need to be completed in order to guide future remedial actions.

A number of other sites were identified as sites of concern by the NVS, and were briefly inspected during the site investigation. These additional sites will be fully described and prioritized in NVS's Strategic Project Implementation Plan (SPIP).

This report is meant to describe site investigation activities that were performed at the NVNC site on July 8-9, 2009.

1.1 ORGANIZATION OF THE SITE INVESTIGATION REPORT

This report includes the following sections in order:

- Introduction;
- Site Description;
- Objectives and Scope of Work (SOW);
- Project Management;
- Site Investigation Activities;

- Survey Results;
- Conclusions; and
- References.

2.0 SITE DESCRIPTION

2.1 LOCATION AND DESCRIPTION

Saint Lawrence Island is located in the Bering Sea, near the territorial waters of Russia, approximately 135 air miles southwest of Nome, Alaska (Figure 1). The NVNC site, located near the Northeast Cape of the island, falls between Kitnagak Bay to the northeast, Kangighsak Point to the northwest, and the Kinipaghulghat Mountains to the south (Figure 2). The site is located at 63 degrees 20 minutes north latitude, 168 degrees 58 minutes 26 seconds west longitude. The legal description of the site is Sections 14 and 15, Township 25 South, Range 54 West. Both sections are in the Kateel River Meridian.

The NVNC was once a year-round village site used by the Siberian Yupik Eskimos of Saint Lawrence Island, Alaska. The NVNC has also been termed "Northeast Cape Fish Camp" and "Fish Camp" by various government agencies and past environmental contractors. The NVNC site, located at NE Cape, is mainly used by the residents of the NVS as a traditional fishing, hunting, and food-gathering camp. The site is also utilized throughout the year as a rest stop to wait out storms and bad weather, and as a source of drinking water which is hauled to other locations in the area.

The NVNC site and surrounding areas are owned in common by Sivuqaq, Inc., and Kukulget, Inc., consisting of tribal members of the NVS and the Native Village of Gambell.

2.2 SITE BACKGROUND AND HISTORY

Located near the NVNC site was a former U.S. Air Force base and White Alice radio relay site, which the military operated during the 1950s through the early 1970s. During and since the operation of the base, various building materials have been donated by the Government operations or salvaged from excess Government supplies for use at the NVNC. Residents of NVNC recall that military personnel gave away building materials, including lumber, paint, wiring, and insulation when the DoD abandoned the base. At the time of donation and use of the building materials, local residents were unaware of the potential danger posed by the materials. The materials provided by the military are thought to contain ACM and LBP, which are potentially harmful to current and future residents.

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3.0 OBJECTIVES AND SCOPE

The primary focus of the current scope was to survey the military-generated materials at the NVNC site, and to assess whether ACM and/or LBP materials exist in significant quantities. Option 1 of the Cooperative Agreement between the NVS and the USACE, had it been approved by the USACE, would have allowed for the collection of soil samples from areas of concern at the NVNC site. As per USACE direction, Option 1 was not exercised during this phase of the project.

Although other sites at NE Cape have evidence of past DoD activities, they were not the focus of this phase of the project. A number of sites were identified as sites of concern by the NVS, and were briefly inspected and documented during the site investigation. These additional sites will be fully described and prioritized in the SPIP. The primary objectives of the NVNC site investigation were as follows:

- Mobilize to and demobilize from the NVNC site;
- Perform site reconnaissance to inventory current conditions at the NVNC, including documentation of debris and suspected contaminated areas, and to determine the physical dimensions of the affected areas; and
- Perform ACM and LBP sampling of building materials and/or debris at NVNC.

3.1 SCOPE OF WORK

The SOW for investigation activities at the NVNC site was as follows:

- Access and map the conditions at the NVNC using detailed notes and photographs, and by performing a Global Positioning System survey; and
- Determine if building materials remaining at the NVNC contain lead and asbestos by performing field screening and collecting samples.

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4.0 PROJECT MANAGEMENT

Fieldwork for the site investigation was coordinated and conducted by Bristol in cooperation with personnel from the NVS and Satori Group, Inc. (Satori). Key personnel are described below.

4.1 NATIVE VILLAGE OF SAVOONGA

The NVS IRA Council designated Mr. Fritz Waghiyi as the Project Manager (PM) for managing the project for the NVS. Mr. Waghiyi and Mr. Merton Miklahook represented the NVS during site investigation activities. Mr. Eugene Toolie was also present during parts of the site investigation, and contributed his knowledge of the history of the DoD facility at NE Cape, and the locations of suspected environmentally-impacted areas at the NVNC and NE Cape sites.

4.2 BRISTOL

The Bristol PM/Field Manager for the Savoonga Native American Lands Environmental Mitigation Program (NALEMP) Project is Mr. Tyler Ellingboe. Mr. Ellingboe prepared the NALEMP Site Investigation Work Plan (Bristol, 2009) for the NVNC site. Mr. Ellingboe was physically present during site investigation activities, and prepared this report with support from the NVS and Satori. Bristol's responses to USACE comments on Revision 0 of this report are included as Appendix A.

4.3 SUBCONTRACTORS

4.3.1 Satori Group, Inc.

Mr. Alan Caldwell, a Certified American Industrial Hygiene Association Asbestos Analyst Registry inspector, representing Satori, conducted a Hazardous Building Materials Survey (HBMS) at the NVNC site. The primary focus of the survey was to identify the existence and quantity of ACM and LBP in site structures and associated debris piles. Survey activities were conducted in accordance with the Work Plan and are documented in Satori's Post Project Report, which is included as Appendix B.

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5.0 SITE INVESTIGATION ACTIVITIES

This section details site investigation activities that were performed, and procedures that were followed in accordance with the Work Plan.

5.1 MOBILIZATION AND DEMOBILIZATION

Personnel, equipment, and materials were mobilized to and from Anchorage, Alaska, to Nome by commercial airlines (Alaska Airlines). Mobilization to and from NE Cape was provided by charter airline service (Bering Air). During the NVNC site investigation, Bristol and Satori personnel were housed at Bristol's camp located at the NE Cape airstrip (the camp was established for a separate USACE/Bristol project).

5.2 DOCUMENTATION

Site investigation activities were carefully documented and recorded. Site photographs were collected and are presented in Appendix C. Dates, times, sample locations and identifications, field personnel present, and pertinent field observations, were recorded in a field notebook and are attached as Appendix D. Bristol field personnel observations documented in the field notebook were also provided to Satori and have been included in Section 3.1 – Descriptions of Buildings, of the Satori Post Project Report included as Appendix B.

Other items noted and other sites investigated, unrelated to the building material survey for ACM and LBP at the NVNC, will be addressed in the SPIP.

5.3 SITE RECONNAISSANCE

Prior to actual inspection of site structures and debris piles, a site reconnaissance was performed to determine the physical boundaries of the NVNC site and the number of structures and debris piles present. The site boundaries were estimated with a surveyor's tape to be approximately 600 feet from north to south from Cargo Beach, along Cargo Beach Road. East to west dimensions of the site were estimated to be approximately 815 feet, excluding the area east of Cargo Beach Road.

Twelve intact structures, in varying states of disrepair, were surveyed for hazardous materials. These structures were surveyed because the building inspector deemed them structurally

sound and safe for entry of personnel. Debris piles/collapsed structures were not generally sampled due to safety concerns for personnel. Due to widespread debris and debris piles present at the NVNC, debris piles were not quantified.

Only three of the twelve structures surveyed are habitable, and are currently being used as seasonal residences. Structures 1, 3, and 11 are habitable and their locations are identified on Figures 3 and 4. The remaining structures are in various states of disrepair, and are open to the elements. Some of the remaining structures are missing windows, doors, and/or have partially collapsed roofs.

5.4 BUILDING MATERIALS INSPECTION AND SAMPLING

Building materials were screened and sampled in accordance with the Work Plan. A total of 30 different suspect materials from the interior and exterior of structures were sampled for ACM. A total of 96 interior and exterior building structure components were tested for LBP content using the Niton XL Spectrum Analyzer. Building material screening and sampling procedures are documented in the Satori Post Project Report in Appendix B.

6.0 SURVEY RESULTS

Results from the HBMS for ACM and LBP can be found in Sections 3.2 and 3.3 of the Satori Post Project Report, and are summarized below.

6.1 ASBESTOS RESULTS

A total of 30 different suspect materials from the interior and exterior of building structures were sampled for ACM. All suspect asbestos samples were sent to LA Testing, located in Los Angeles, California, for asbestos sample analysis. All asbestos bulk samples were analyzed using Polarized Light Microscopy (PLM) U.S. Environmental Protection Agency (EPA) Method 600/R-93/116. Initial laboratory results identified nine samples to contain 1-5 percent asbestos. Positive samples were from 9-inch by 9-inch tile, cement asbestos board siding, roofing paper, and ceiling mastic.

Satori requested additional confirmation analyses on eight of the nine initial samples found to contain 1-5 percent asbestos using the EPA 400 Point Counting Method, which allows the laboratory to calculate a more quantitative amount of asbestos present in each sample. Sometimes the result from this test will reclassify a material from ACM (greater than 1 percent asbestos) to a material below the regulated limit of 1 percent asbestos.

Review of the Point Count results identified all eight samples to contain less than 1 percent asbestos. The ceiling tile mastic sample had insufficient material to complete the test, and was not submitted for Point Count analysis.

Presumed ACM that was not accessible or sampled during the HMBS was Air-O-Cell pipe insulation, hose, wiring, vent stack material, and the 8-foot section of transite pipe. Each material is assumed to contain asbestos until it can be sampled and confirmed otherwise.

Asbestos sample results are presented in the Satori Post Project Report (Appendix B). The Satori Post Project Report includes maps showing locations where asbestos bulk samples were collected from the interior and exterior of NVNC structures.

6.2 LBP RESULTS

A total of 96 interior components were tested for LBP content at the NVNC site. Tests were conducted using a Niton XL Spectrum Analyzer for LBP. The analyzer used for this survey irradiates the paint on a given surface causing the lead in the paint, if present, to emit a characteristic frequency of x-ray radiation. The instrument identifies and counts these x-rays to determine the lead concentration. The intensity of this radiation is measured by the detector, and is related to the amount of lead present in the paint. The lead concentration results are reported in milligrams per square centimeter (mg/cm^2).

Various building materials tested positive for lead. These materials include window trim, walls, ceiling rafters, interior and exterior doors, and miscellaneous debris. The highest concentration of lead detected was 5.8 mg/cm^2, which was found in the yellow window trim in Structure #3. Structure #3 is owned by Mr. Eugene Toolie.

The Satori Post Project Report includes all of the results for LBP screening locations, and identifies those samples with concentrations greater than 1 mg/cm^2 of LBP. The Satori Post Project Report includes maps showing the locations of where LBP samples were collected.

7.0 CONCLUSIONS

Quantity estimations of ACM and LBP present at the NVNC site, along with a regulatory overview and pre-demolition recommendations for ACM and LBP management, are provided in Section 4.0 of the Satori Post Project Report, and are summarized in Table 1.

Table 1 Total Quantity Estimation of Hazardous Materials

Hazardous Material	EPA Category/ Regulatory Condition	Regulated Minimum Content %	Total Quantity
ACM CAB	Cat II Non-Friable/ Good	> 1% Asbestos	100 square feet
ACM Transite Pipe	Cat II Non-Friable/ Good	> 1% Asbestos	8 linear feet
PACM Air-o-Cell Pipe Insulation	RACM/ Good	> 1% Asbestos	Unknown
PACM Wiring	Cat II Non-Friable/ Good	> 1% Asbestos	Unknown
PACM Vent Stack	RACM/ Good	> 1% Asbestos	Unknown
PACM Hose	Cat II Non-Friable/ Good	> 1% Asbestos	Unknown

Notes:

%	=	percent
>	=	greater than
ACM	=	asbestos-containing material
CAB	=	cement asbestos board
EPA	=	U.S. Environmental Protection Agency
PACM	=	possible asbestos-containing material
RACM	=	regulated asbestos-containing material

In summary, the HBMS identified asbestos-containing building materials, including 100 square feet of cement asbestos board and eight linear feet of transite piping. "Good" regulatory condition, as referenced in Table 1, refers to the classification of material that is used under Asbestos Hazard Emergency Response Act guidelines for assessing the condition of suspect materials. "Good" regulatory condition is defined as material with no visible damage or deterioration, or showing only very limited damage or deterioration. Potential ACM not sampled included: Air-O-Cell pipe insulation, hose material, vent stack materials, and electrical wiring.

The ACM at the site is in an undamaged state. Due to the remote nature of the NVNC and the usage of the site, the asbestos present does not represent a health hazard if left undisturbed.

However, the potential for physical disturbance and degradation of the ACM at the NVNC site is high. Extremely adverse weather conditions exist at the site, including high winds, rain, snow, and freezing temperatures. These adverse weather conditions have the potential to physically impact the ACM and could cause it to become airborne, creating a health hazard. Airborne ACM could potentially be inhaled and/or ingested by NVNC residents or visitors. Any future removal methods should avoid sanding, abrading, grinding, or any other method that further breaks, crumbles, or disintegrates the ACM.

Survey results indicate that materials found to contain LBP may be left in place, as they are unlikely to present an immediate health hazard. The LBP-containing materials were found on various site structures, including door framing, window trim, roof fascia, and on scattered debris around the NVNC site. Although not an immediate health hazard, extreme weather conditions may cause LBP to become airborne at the NVNC site. The LBP could potentially be ingested and/or inhaled by NVNC residents or visitors.

Lead painted materials are unlikely to pose a disposal concern because of the low lead concentrations observed in comparison to the mass of the materials. A representative Toxicity Characteristic Leaching Procedure composite sample of the total waste stream should be completed for hazardous waste characterization prior to any disposal activities.

Building materials found to contain ACM and LBP at the NVNC site were either donated by the Government operations, or salvaged from excess Government supplies during former DoD operations at NE Cape. Although the NVNC is not classified as a Formerly Used Defense Site, DoD activities were performed near the site and the building materials present originated from DoD facilities and operations. The potential exists for the ACM and LBP-containing materials present to adversely impact the health of NVNC residents and visitors. The NVS would like to request that NALEMP funding be made available to abate, demolish, remove, transport, and dispose of building materials from the NVNC site.

Currently, there are three habitable shelters located at the NVNC site. As in the original Public Land Order 790, dated January 10, 1952, the shelters at the NVNC provide St. Lawrence Island inhabitants a vital refuge in times of poor weather conditions and as a base during seasonal food gathering activities. The NVS would like to formally request that ACM

and LBP abatement operations be conducted on the three remaining habitable structures in order to remove the environmental hazard. In addition, the NVS would like to request that all other debris piles and structures located at the NVNC be abated, demolished, and removed from the NVNC site.

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8.0 REFERENCES

Bristol Environmental Remediation Services, LLC. 2009 (September). NALEMP Site Investigation Work Plan for the Native Village of Northeast Cape "Northeast Cape Fish Camp." Saint Lawrence Island, Alaska.

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FIGURES

Drawing: O:\JOBS\49029 SAVOONGA NALEMP\ACAD-ENVIRO\FIGURES\DWG\49029_FIG1_MAY09.DWG - Layout: 49029_FIG1_MAY09
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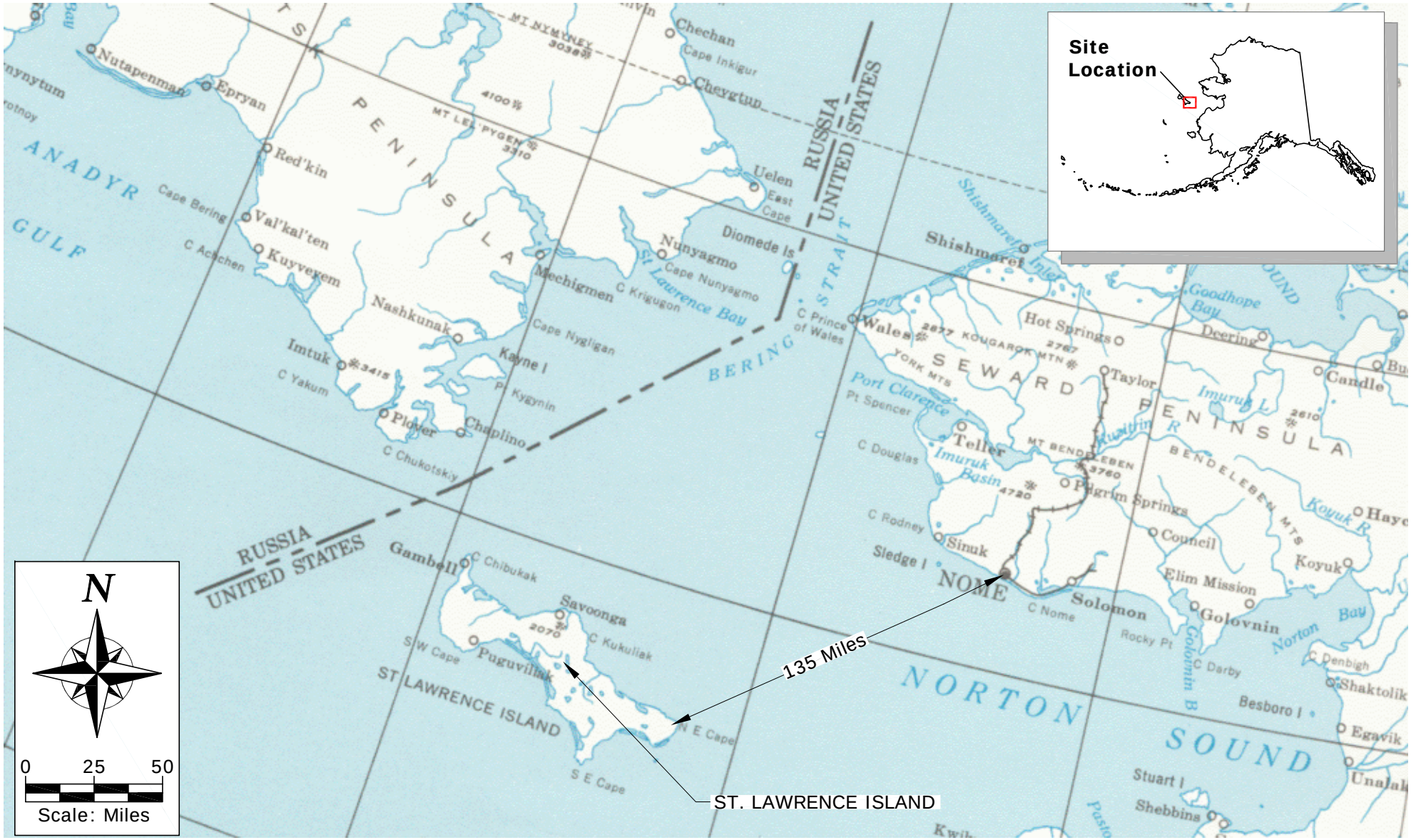

Source: USGS National Atlas Sheet Number 42-43

FIGURE 1
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
SAVOONGA NALEMP
VICINITY MAP

Bristol
ENVIRONMENTAL
REMEDIATION SERVICES, LLC
Phone (907) 563-0013 Fax (907) 563-6713
PROJECT NO. 49029

DATUM: NA
PROJECTION: NA

DATE 05/11/09
DWN. MTG
SCALE SHOWN
APPRVD. TE

Drawing: O:\JOBS\49029 SAVOONGA NALEMP\ACAD-ENVIRO\FIGURES\DWG\49029_FIG2_MAY09.DWG - Layout: 49029_FIG2_MAY09
User: MGARCIA May 15, 2009 - 10:08am Xrefs: - Images: NE1.JPG

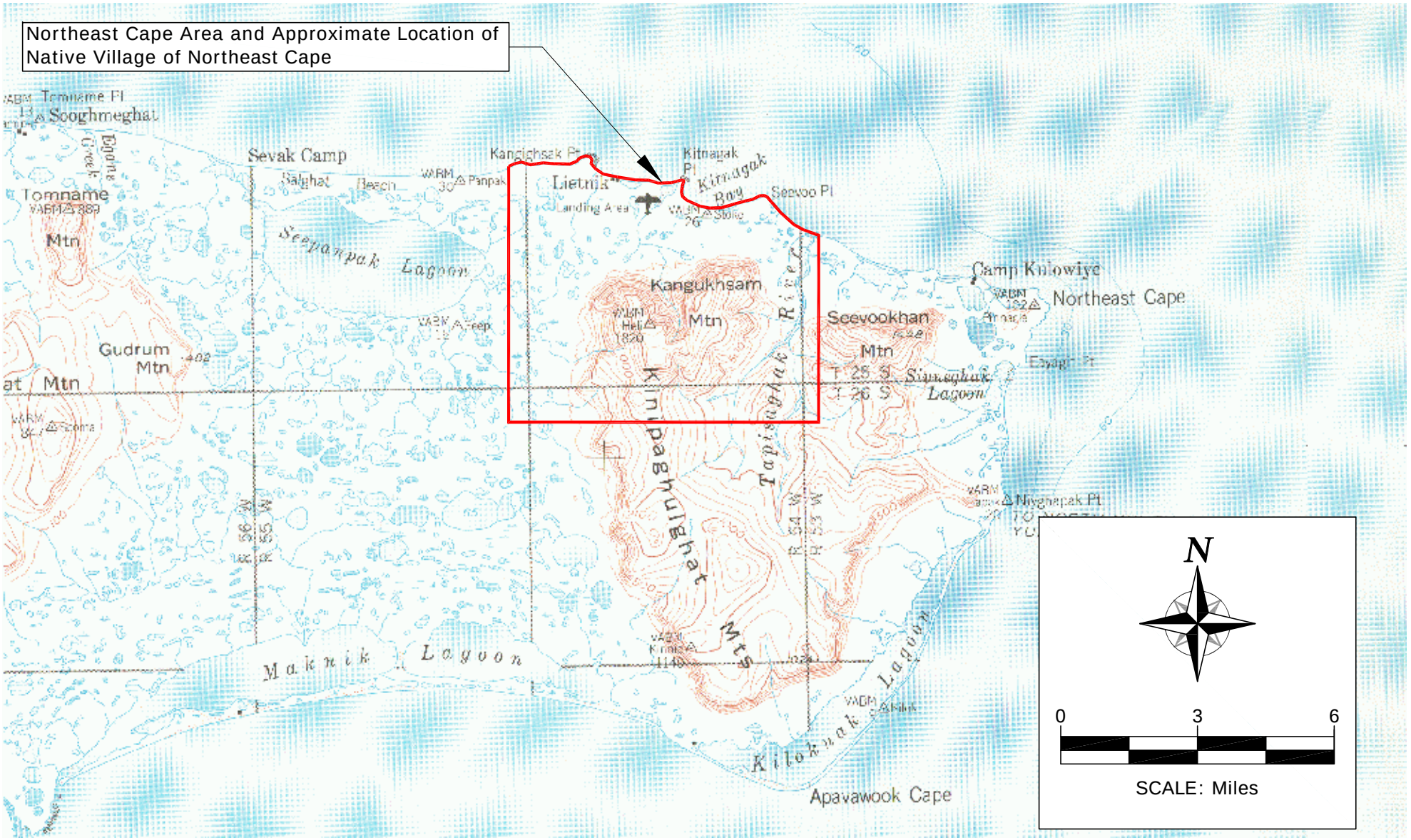

FIGURE 2
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
SAVOONGA NALEMP
SITE AREA MAP

Bristol
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DATUM:	NA
PROJECTION:	NA
DATE	05/11/09
DWN.	MTG
SCALE	NTS
APPRVD.	TE

Site Inspection Locations		
Location Description	**Easting**	**Northing**
Structure #1	603560	7023731
Structure #2	603538	7023766
Structure #3	603516	7023731
Structure #4	603516	7023744
Debris Pile with ACM Pipe	603510	7023758
Structure #5	603516	7023782
Structure #6	603478	7023794
Structure #7	603472	7023802
Structure #8	603463	7023721
Structure #9	603344	7023800
Structure #10	603344	7023824
Structure #11	603329	7023851
Structure #12	603409	7023696

Projection: UTM Datum: NAD83

LEGEND:

- POSITIVE RESULT FOR ASBESTOS CONTAINING MATERIALS (ACM)
- 10 EXISTING STRUCTURE
- DEBRIS PILE

SOURCE:
U.S. ARMY ENGINEER DISTRICT, CORP OF ENGINEERS ANCHORAGE, ALASKA
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
WHITE ALICE SITE REMOVAL ACTION DEMOLITION, SITE LOCATION MAP
REFERENCE NUMBER: D-1 SHEET 1 OF 8, RFP# DACA85-02-R-0004
DRAWING #: 16-13-52, DATE: 06-5-2001

FIGURE 3
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
NATIVE VILLAGE OF NORTHEAST CAPE
SITE INSPECTION AND POSITIVE ACM LOCATIONS

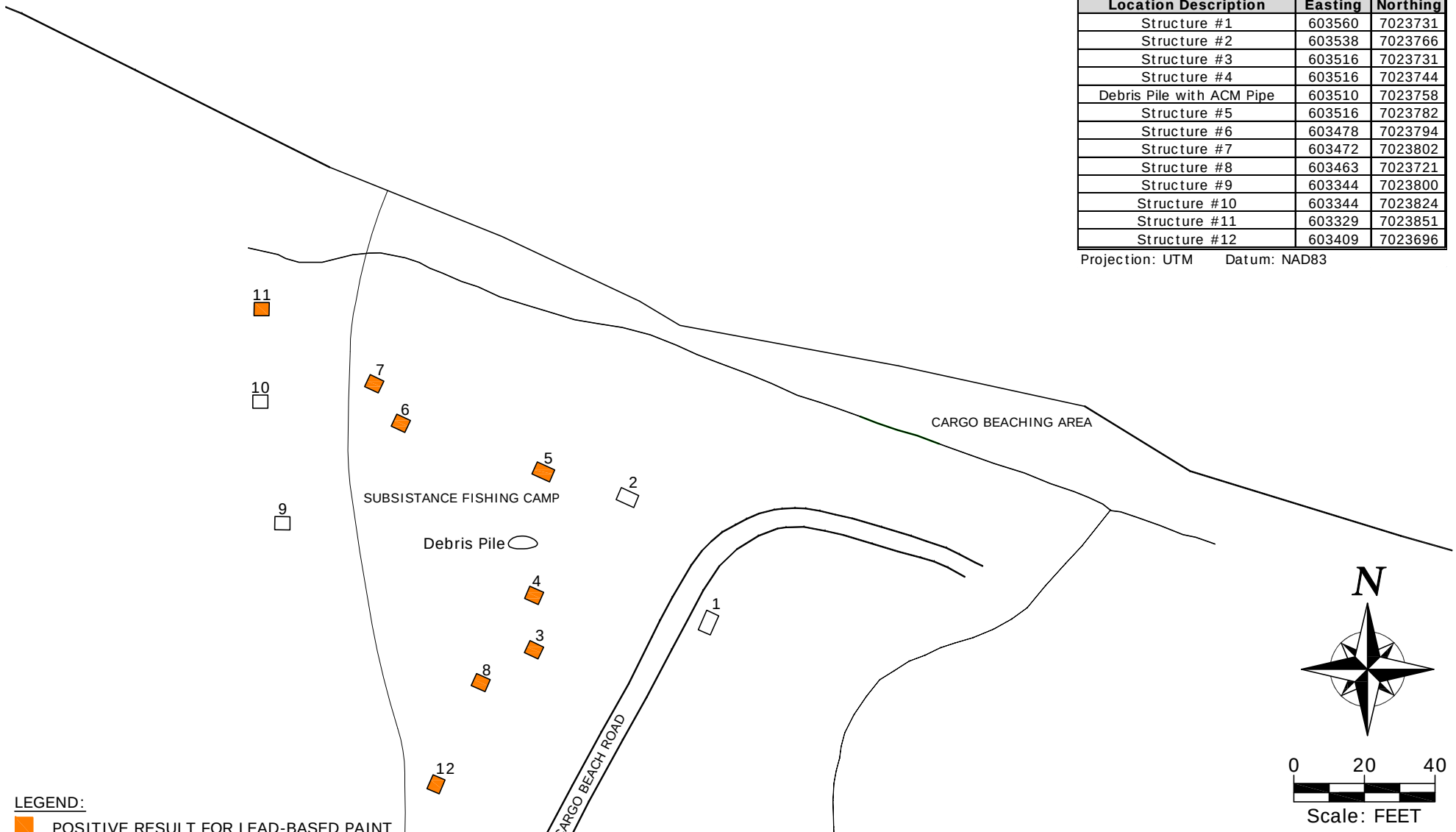
Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
Phone (907) 563-0013 Fax (907) 563-6713
PROJECT NO: 49029

DATUM: NA
PROJECTION: NA

DATE 10/14/09
DWN. MTG
SCALE SHOWN
APPRVD. TE

Site Inspection Locations		
Location Description	**Easting**	**Northing**
Structure #1	603560	7023731
Structure #2	603538	7023766
Structure #3	603516	7023731
Structure #4	603516	7023744
Debris Pile with ACM Pipe	603510	7023758
Structure #5	603516	7023782
Structure #6	603478	7023794
Structure #7	603472	7023802
Structure #8	603463	7023721
Structure #9	603344	7023800
Structure #10	603344	7023824
Structure #11	603329	7023851
Structure #12	603409	7023696

Projection: UTM Datum: NAD83



LEGEND:

- POSITIVE RESULT FOR LEAD-BASED PAINT CONTAINING MATERIALS
- 10 EXISTING STRUCTURE
- DEBRIS PILE

SOURCE:
U.S. ARMY ENGINEER DISTRICT, CORP OF ENGINEERS ANCHORAGE, ALASKA
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
WHITE ALICE SITE REMOVAL ACTION DEMOLITION, SITE LOCATION MAP
REFERENCE NUMBER: D-1 SHEET 1 OF 8, RFP# DACA85-02-R-0004
DRAWING #: 16-13-52, DATE: 06-5-2001

FIGURE 4
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
NATIVE VILLAGE OF NORTHEAST CAPE
SITE INSPECTION AND POSITIVE LEAD-BASED PAINT RESULT LOCATIONS

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PROJECT NO: 49029

DATUM: NA
PROJECTION: NA

DATE 10/14/09
DWN. MTG
SCALE SHOWN
APPRVD. TE

APPENDIX A

Responses to USACE
Site Assessment Report Comments

Cooperative Agreement: Native Village of Savoonga **DOCUMENT:** Native Village of Northeast Cape, Site Investigation Report, October 2009 **REVIEW COMMENTS** **LOCATION:** Northeast Cape, St. Lawrence Island, Alaska				
DATE: 10/28/2009 **REVIEWER:** Carey Cossaboom **PHONE:** (907) 753-2689				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** **A – Comment Accepted** **W – Comment Withdrawn** **N - Noted**	**NVS/Bristol Response**
1.	Pg. iii, Acronyms	Please add CAB, RACM, GWB, and PACM	A	Added acronyms and abbreviations to Acronym and Abbreviation section of report
2.	Pg. 1, Sec. 1.0, 1st par.	The NVNC is not a former DoD site.	A	Amended sentence to read "The NVNC is located adjacent to a former Department of Defense (DoD) site that impacts the people of St. Lawrence Island, Alaska."
3.	Pg. 3, Sec. 2.2, 1st par., 2nd sen.	"… materials have been donated by the Government operations ~~and~~ or salvaged from excess Government supplies …"	A	Amended sentence to read "During and since the operation of the base, various building materials have been donated by the Government operations or salvaged from excess Government supplies for use at the NVNC."
4.	Pg. 9, Sec. 5.3, 2nd sen.	Are the 12 structures suitable for entry? How many collapsed? The maps suggest 5.	A	Section 5.3 amended as follows: Prior to actual inspection of site structures and debris piles, a site reconnaissance was performed to determine the physical boundaries of the NVNC site and the number of structures and debris piles. The site boundaries were estimated with a surveyors tape to be approximately 600 feet from north to south from Cargo Beach south along Cargo Beach Road. East to west dimensions of the site were estimated to be approximately 815 feet, excluding the area east of Cargo Beach Road. Twelve intact structures, in varying states of disrepair, were surveyed for hazardous materials. These structures were surveyed because the building inspector deemed them structurally sound and safe for entry of personnel. Debris piles/collapsed structures were not generally sampled due to safety concerns for personnel. Due to widespread debris and debris piles present at the NVNC, debris piles were not quantified. Only three of the twelve structures surveyed are habitable and are currently being used as seasonal residences. Structures 1, 3, and 11 are habitable and their locations are identified on Figures 3 and 4. The remaining structures are in various states of disrepair and are open to the elements. Some of the remaining structures are missing windows, doors, and/or have partially collapsed roofs.
5.	Pg. 9, Sec. 5.3	Which buildings are still habitable and that the villagers would like to retain in the event that NALEMP agrees to remove old buildings.	A	Addressed as part of Item 4 above.

Cooperative Agreement: Native Village of Savoonga **DOCUMENT:** Native Village of Northeast Cape, Site Investigation Report, October 2009 **REVIEW COMMENTS** **LOCATION:** Northeast Cape, St. Lawrence Island, Alaska				
DATE: 10/28/2009 **REVIEWER:** Carey Cossaboom **PHONE:** (907) 753-2689				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** **A – Comment Accepted** **W – Comment Withdrawn** **N - Noted**	**NVS/Bristol Response**
6.	Pg. 13, Sec. 7.0, Table 1	What does Regulatory Condition "Good" mean? Explain in text.	A	Amended second paragraph of Section 7.0 to read as follows: In summary, the HBMS identified asbestos-containing building materials, including 100 square feet of cement asbestos board and eight linear feet of transite piping. "Good" regulatory condition, as referenced in Table 1, refers to the classification of material that is used under Asbestos Hazard Emergency Response Act guidelines for assessing the condition of suspect materials. "Good" regulatory condition is defined as material with no visible damage or deterioration, or showing only very limited damage or deterioration. Potential ACM not sampled included: Air-O-Cell pipe insulation, hose material, vent stack materials, and electrical wiring.

Cooperative Agreement: Native Village of Savoonga **DOCUMENT:** Native Village of Northeast Cape, Site Investigation Report, October 2009 **REVIEW COMMENTS** **LOCATION:** Northeast Cape, St. Lawrence Island, Alaska				
DATE: 10/28/2009 **REVIEWER:** Carey Cossaboom **PHONE:** (907) 753-2689				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** **A – Comment Accepted** **W – Comment Withdrawn** **N - Noted**	**NVS/Bristol Response**
7.	Pg. 13, Sec. 7.0	You conclude that the asbestos does not present a health hazard if left undisturbed. And that LBP may be left in place as it is unlikely to present an immediate health hazard. Are we to conclude that the Native Village of Savoonga doesn't want NALEMP to fund building demolition? If you believe that there is a problem here that warrants NALEMP funding, you'd best make your case here. I don't know if NALEMP will go for the hazardous debris argument since it isn't a Government facility, but you might want to express those concerns as well.	A	**Amend third paragraph of Section 7.0 as follows:** The ACM at the NVNC site is in an undamaged state. Due to the remote nature and usage of the NVNC site, the ACM present does not represent a health hazard if left undisturbed. However, the potential for physical disturbance and degradation of the ACM at the NVNC site is high. Extremely adverse weather conditions exist at the site including high winds, rain, snow, and freezing temperatures. These adverse weather conditions have the potential to physically impact the ACM and could cause it to become airborne creating a health hazard. Airborne ACM could potentially be inhaled and/or ingested by NVNC residents or visitors. Any future removal methods should avoid sanding, grinding, or any other method that further breaks, crumbles, or disintegrates the ACM. **Amend fourth paragraph of Section 7.0 as follows:** Survey results indicate that materials found to contain LBP may be left in place, as they are unlikely to present an immediate health hazard. LBP-containing materials were found on various site structures, including door framing, window trim, roof fascia, and on scattered debris around the NVNC site. Although not an immediate health hazard, extreme weather conditions may cause LBP to become airborne at the NVNC site. LBP could potentially be ingested and/or inhaled by NVNC residents or visitors. **Add following as sixth paragraph in Section 7.0 as follows:** Building materials found to contain ACM and LBP at the NVNC site were either donated by Government operations or salvaged from excess Government supplies during former DoD operations at NE Cape. Although the NVNC is not a classified as a formerly used defense site, DoD activities were performed near the site and the building materials present originated from DoD facilities and operations. The potential exists for the ACM and LBP-containing materials present to adversely impact the health of NVNC residents and visitors. The NVS would like to request that NALEMP funding be made available to abate, demolish, remove, transport, and dispose building materials from the NVNC site. **Add following as seventh and last paragraph in Section 7.0 as follows:** Currently, there are three habitable shelters located at the NVNC site. As in the original Public Land Order 790, dated January 10, 1952, the shelters at NVNC provide St. Lawrence Island inhabitants a vital refuge in times of poor weather conditions and as a base during seasonal food gathering activities. The NVS would like to formally request that ACM and LBP abatement operations be conducted on the three remaining habitable structures in order to remove the environmental hazard. In addition, the NVS would like to request that all other debris piles and structures located at the NVNC be abated, demolished, and removed from the NVNC site.
8.	Appendix A, Pg. 1, Sec. 1.2, 1st Par.	The NVNC is SE of Gambell and Savoonga	A	Corrected to read southeast in lieu of northeast.

Cooperative Agreement: Native Village of Savoonga **DOCUMENT:** Native Village of Northeast Cape, Site Investigation Report, October 2009 **REVIEW COMMENTS** **LOCATION:** Northeast Cape, St. Lawrence Island, Alaska				
DATE: 10/28/2009 **REVIEWER:** Carey Cossaboom **PHONE:** (907) 753-2689				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** **A – Comment Accepted** **W – Comment Withdrawn** **N - Noted**	**NVS/Bristol Response**
9.	Appendix A, Pg. 6, Sec. 2.1.1, 1st Par., 2nd sen.	What kind of on-site, as-built specs.? Please reference previous asbestos and LBP reports.	A	Sentence incorrect. Rewritten to read The HBMS inspection included a visual inspection of on-site conditions. A complete inventory of construction building materials and other hazardous materials were documented for the report. Tape measurements were taken for building dimensions.
10.	Appendix A, Pg. 6, Sec. 2.3, 2nd Par.	Please define or describe second layer.	A	Deleted
11.	Appendix A, Pg. 26, Sec. 4.2.1, 1st Par., 1st sen.	"~~in~~" or "is in damaged condition."	A	Assumed reviewer meant Section 4.2.1. Sentenced changed to "is in damaged condition"
12.	Appendix A, Pg. 27, Sec. 5.1, 2nd Par..	Did you actually see a transformer? If not, please remove. Can you identify where you saw it?	A	Deleted transformers. Transformer were not seen at the site.
13.	Appendix A, Appendix A	This table is exactly the same as Table 3.2-1. Why repeat it?	A	Table 3.2-1 changed to reflect just positive sample. Appendix A will contain all samples
14.	Appendix A, Appendix D	This table is almost exactly the same as Table 3.3-1. Why repeat it?	A	Table 3.3-1 changed to reflect just positive sample. Appendix A will contain all samples

PROJECT: Native Village of Savoonga NALEMP DOCUMENT: Native Village of Northeast Cape, Site Investigation Report REVIEW COMMENTS				
DATE: 30 October 2009 REVIEWER: Lisa Geist, EN-EE				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** A – Comment Accepted W – Comment Withdrawn N - Noted	**Contractor Response**
1.	General	A complete PDF of the final document would be useful for our files. The original *.jpg's of the photos in Appendix B would be useful as well.	A	When finalized Bristol will provide an electronic .PDF version of Site Investigation Report. Bristol will also provide USACE electronic .jpeg copies of all site photographs taken.
2.	Section 1.0	The NVNC is adjacent to a former DoD site (Northeast Cape Air Force Station and White Alice Communication Site).	A	Corrected and addressed in Carey Cossaboom Review Comments Item #2.
3.	Section 5.3	Can you describe or define the physical boundaries that were determined during the site reconnaissance? Length along Cargo Beach?	A	Section 5.3 was amended to include approximated site dimensions and addressed in Carey Cossaboom Review Comments Item #4.
4.	Section 5.3	General site observations should be summarized. Field notebooks should be included as appendix or attachment. What other sort of items were noted during the site visit?	A	Amended paragraph in Section 5.2-Documentation to read as follows: Site investigation activities were carefully documented and recorded. Site photographs were collected and are presented in Appendix B. Dates, times, sample location and identifications, field personnel present, and pertinent field observations, were recorded in a field notebook and is attached as Appendix C. Bristol field personnel observations documented in the field notebook were also provided to Satori and have been included in Section 3.1 – Descriptions of Buildings in the Satori Post Project Report. Other items noted and other sites investigated, unrelated to the building material survey for ACM and LBP at the NVNC, will be addressed in the SPIP.

PROJECT: Native Village of Savoonga NALEMP DOCUMENT: Native Village of Northeast Cape, Site Investigation Report REVIEW COMMENTS				
DATE: 30 October 2009 REVIEWER: Lisa Geist, EN-EE				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** A – Comment Accepted W – Comment Withdrawn N - Noted	**Contractor Response**
5.	Section 6.1	It is confusing to state lab results identified nine samples of ACM with greater than 1 percent asbestos. Perhaps qualify this statement as "preliminary" or "initial" lab results? Seems contradictory to say "positive" samples were … and then later indicate these items are not ACM. What about the transite pipe that was identified as ACM? Not mentioned anywhere in this section.	A	Amended third sentence of first paragraph of Section 6.1 to read "Initial PLM laboratory results identified nine samples to contain one to five percent asbestos." Amended first sentence of second paragraph of Section 6.1 to read "Satori requested additional confirmation analyses on eight of the nine initial samples found to contain one to five percent asbestos using the EPA 400 Point Counting Method, which allows the laboratory to calculate a more quantitative amount of asbestos present in each sample. Amended third paragraph of Section 6.1 to read "Review of the Point Count results identified all eight samples to contain less than one percent asbestos. The ceiling tile mastic sample had insufficient material to complete the test and was not submitted for Point Count analysis." Amended fourth paragraph of Section 6.1 to read "Presumed ACM that was not accessible or sampled during the HBMS was Air-O-Cell pipe insulation, hose, wiring, vent stack material, and the eight foot section of transite pipe. Each material is assumed to contain asbestos until it can be sampled and confirmed otherwise."
6.	Figure 4	This appears to have incorrect legend. Titles for Figure 3 and 4 should differentiate between them (e.g. Asbestos vs LBP). Figure 4 appears to depict LBP positive results.	A	Change title of Figure 3 to "Site Inspection and Positive Asbestos Containing Material Result Locations" Change title of Figure 4 to "Site Inspection and Positive Lead-Based Paint Result Locations"
7.	Appendix A, Figure 1.1-1	Should denote "not-to-scale". Label Cargo Beach Road. Label stream. Label Kitnigak Bay.	A	Corrected

PROJECT: Native Village of Savoonga NALEMP DOCUMENT: Native Village of Northeast Cape, Site Investigation Report REVIEW COMMENTS				
DATE: 30 October 2009 REVIEWER: Lisa Geist, EN-EE				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** A – Comment Accepted W – Comment Withdrawn N - Noted	**Contractor Response**
8.	App A, Section 1.5.2, 4th para	Typo. Burning of lead based materials <u>is</u> not allowed…	A	Corrected
9.	App A, Section 2.3	What does "second layer" mean in the context of asbestos surveying?	A	Deleted
10.	App A, Section 3.1.2	Typo. The building <u>is</u> unstable…	A	Corrected
11.	App A, Section 3.1.3	Typo. The area is separated into a living <u>area</u> with kitchen…	A	Corrected
12.	App A, Section 3.1.8	What is GWB?	A	Gypsum Wall Board added in paragraph
13.	App A, Section 3.2	Typo. A total of 30 different suspect materials from the interior and exterior of <u>the</u> buildings were sampled…	A	Corrected
14.	App A, Section 3.2	This section is hard to follow and seems contradictory. Clarify that "preliminary" or "initial" laboratory results identified 9 samples with asbestos. However, these items were later confirmed to contain less than 1% ACM. What about the transite pipe identified in the debris pile between house 4 and 5? 4th paragraph – seems inaccurate to state <u>all</u> samples were less than 1% asbestos when 1 of them wasn't even analyzed.		Corrected to read: Initial laboratory results identified nine samples of asbestos containing materials (ACM) with greater than one percent (>1%) asbestos. However these items were later confirmed to contain less than 1% ACM. Presumed Asbestos Containing Materials (PACM) that were not accessible / or sampled during the HMBS are; Air-O-Cell pipe insulation, hose, wiring, transite piping, and vent stack material. Each material is assumed to contain asbestos until it can be sampled to verify the presence of asbestos. Review of the Point Counting results identified all eight samples to be less than 1% asbestos. The ceiling tile mastic sample has insufficient material to complete the test.
15.	App A, General, Figures	Not-to-scale. Why is garage door included in the legend? Label the road, stream, and bay. Why is title included twice?	A	Corrected

PROJECT: Native Village of Savoonga NALEMP DOCUMENT: Native Village of Northeast Cape, Site Investigation Report REVIEW COMMENTS				
DATE: 30 October 2009 REVIEWER: Lisa Geist, EN-EE				
Item No.	**Location (page, par., sen.)**	**COMMENTS**	**Review** A – Comment Accepted W – Comment Withdrawn N - Noted	**Contractor Response**
16.	App A, Section 4.2.1	Typo. The ACM identified is or isn't damaged?	A	Corrected to say the ACM identified is in a damaged condition.
17.				

APPENDIX B

Satori Post Project Report

NATIVE VILLAGE OF NORTHEAST CAPE
"NORTHEAST CAPE FISH CAMP" HAZARDOUS MATERIALS BUILDING SURVEY

*POST PROJECT REPORT *

ST. LAWRENCE ISLAND, ALASKA

PREPARED FOR:

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AUGUST 2009

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ACRONYM LIST

ACM	Asbestos Containing Materials
AHERA	Asbestos Hazard Emergency Response Act
ASHARA	Asbestos School Hazard Abatement Reauthorization Act
CAB	Cement Asbestos Board
CFR	Code of Federal Regulations
COC	Chain of Custody
DSO	Disposal Site Operator
EPA	Environmental Protection Agency
GWB	Gypsum Wall Board
HAZWOPER	Hazardous Waste Operations and Emergency Response
HBMS	Hazardous Building Materials Survey
HUD	Housing and Urban Development
L/min	Liters per minute
LBP	Lead-Based Paint
LBPPA	Lead-Based Paint Prevention Act
mg/cm^2	milligrams per square centimeter
mg/L	Milligrams per Liter
MPCA	Minnesota Pollution Control Agency
NELAP	National Environmental Laboratory Accreditation Plan
NESHAP	National Emissions and Standards for Hazardous Air Pollutants
NVNC	Native Village of Northeast Cape
OSHA	Occupational Safety and Health Administration
PLM	Polarized Light Microscopy
PPE	Personal Protective Equipment
ppm	Parts Per Million
RACM	Regulated Asbestos Containing Material
RCRA	Resource Conservation Recovery Act
TCLP	Toxic Characteristic Leachate Procedure
TSCA	Toxic Substance Control Act
µm/L	Micrograms per Liter

1.0 EXECUTIVE SUMMARY

Satori Group, Inc. was contracted to conduct a Hazardous Building Materials Survey (HBMS) for the Native Village of Northeast Cape (NVNC) and associated buildings located at the Northeast Cape of St. Lawrence Island, Alaska. The survey efforts focused on identifying the existence and quantity of asbestos containing material (ACM), and lead-based paint (LBP). The information obtained may be used to guide future renovations, general operations, maintenance, or demolition of these buildings.

Inspection and sampling of the NVNC site found asbestos is present at concentrations greater than one percent (>1%) in the interior building components including Cement Asbestos Board (CAB).

Inspection and sampling of the NVNC site found lead based paint (LBP) is present at positive concentrations greater than one milligram/square centimeter (>1 mg/cm^2). LBP was found at various locations throughout the structures including the exterior, and interior window trim, exterior walls, doors, and various miscellaneous items around the area.

1.1 Introduction

Bristol Environmental Remediation Services, LLC (herein Bristol) subcontracted Satori Group, Inc., (herein Satori) to conduct an HBMS at the Native Village of Northeast Cape Site located at the Northeast Cape of St. Lawrence Island, Alaska. The primary objective of this HBMS survey is to identify and quantify the hazardous building materials that are present throughout the specified area that may adversely affect the inhabitants of the buildings or may cause an environmental hazard during demolition or renovation of the structures. The second objective is to identify and quantify all hazardous materials found and to recommend possible actions required for removal of any hazardous materials prior to demolition or renovation activities.

1.2 Location and Usage

The Native Village of Northeast Cape Site is located on St. Lawrence Island located in the Northwest Bering Sea, approximately 135 air miles southwest of Nome, Alaska The NVNC site is northeast of the two native villages of Savoonga and Gambell.

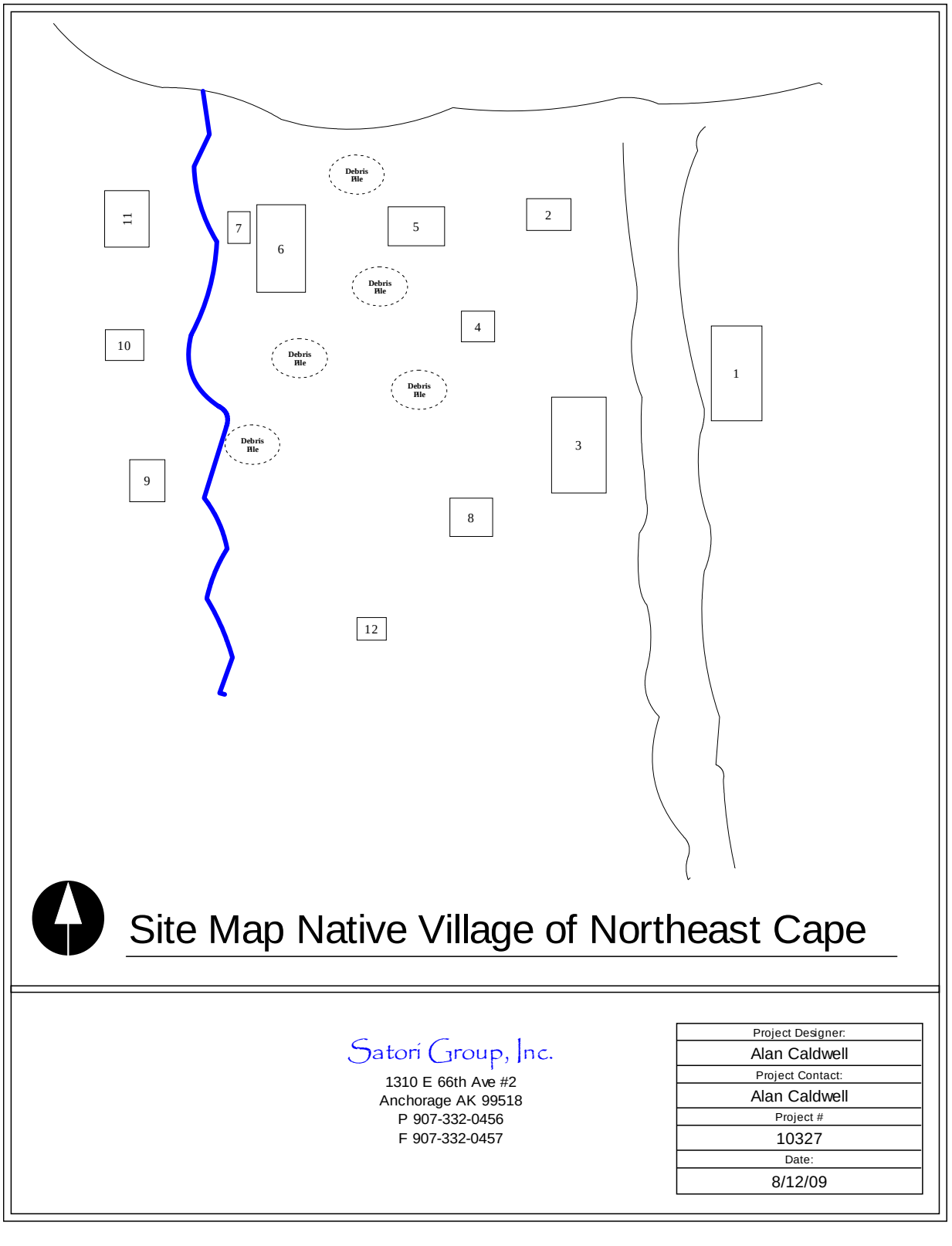
The NVNC site is primarily used as a fishing and hunting camp for full time residents of the island. Many of the structures located in the area have collapsed or been severely degraded due to extreme weather and lack of building maintenance.

There are many buildings located at the NVNC site. Twelve buildings were surveyed for hazardous materials. These buildings were selected because they were structurally sound and able to support personnel inside safely for survey

purposes. Other structures that had collapsed were visually surveyed, but not extensively sampled due to safety concerns for personnel.

Figure 1.1-1 illustrates the locations of the buildings for the NCNV site.

FIGURE 1.1-1 NATIVE VILLAGE NORTHEAST CAPE SITE MAP



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Project Designer:
Alan Caldwell
Project Contact:
Alan Caldwell
Project #
10327
Date:
8/12/09

1.3 Project Management and Quality Control

Mr. Alan Caldwell conducted the HBMS asbestos and lead survey for Satori Group. Mr. Caldwell is a certified Asbestos Hazard Emergency Re-Authorization Act (AHERA) inspector in accordance with 40 CFR 763, and as an EPA certified Lead Based Paint Risk Assessor in accordance with 40 CFR 745. Mr. Caldwell collected suspect asbestos containing materials for analysis, cataloged samples for Chain-of-Custody records, created diagrams of asbestos and LBP sample locations.

1.4 Regulatory Requirements for Hazardous Building Material Surveys

The HBMS projects have the potential for disturbance of regulated hazardous materials including asbestos, and lead. All disturbances during sampling were done using hand tools to minimize the potential for any airborne hazards. When possible, repairs were done to areas disturbed, to mitigate any further spread of contamination if it existed. After disturbances were complete, the area was cleaned to ensure exposures to potentially hazardous materials were minimized.

1.5 Hazardous Materials Overview

1.5.1 Asbestos Containing Materials

Asbestos is a naturally occurring mineral found in chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite. Asbestos is divided into two mineral groups - serpentine and amphibole. The division between the two types of asbestos is based upon the crystalline structure. Serpentines have sheet or layered structure where amphiboles have a chain-like structure. As the only member of the serpentine group, chrysotile is the most common type of asbestos found in buildings. Also known as “white asbestos”, chrysotile makes up approximately 90%-95% of all asbestos contained in buildings in the United States.

Asbestos is often referred to as “friable” or “non-friable” for classification purposes. Friable asbestos is defined as “crumbled or reduced to powder by hand pressure”. Asbestos which is friable or has become friable has a greater likelihood of releasing asbestos fibers into the air.

The Asbestos Hazard Emergency Response Act (AHERA) was promulgated in 1986. AHERA mandated that the Environmental Protection Agency (EPA) develop regulations for addressing asbestos in schools. The mandatory AHERA inspector requirement was implemented for any person who performs inspections for Asbestos Containing Material (ACM) on public and commercial buildings; however it failed to include residential apartments or detached single family homes. The Asbestos School Hazard Abatement Reauthorization Act (ASHARA), enacted in 1990 and implemented in 1994, governs the training that asbestos workers, inspectors, supervisors, plan management writers, and

abatement designers must receive to become accredited. AHERA instituted the training requirement for any person who inspects for ACM following a recommendation by ASHARA.

Asbestos in buildings does not mean an endangerment to workers or occupants unless the condition of the asbestos is damaged or will become damaged or friable due to human or environmental influences.

1.5.2 Lead-Containing Materials

Lead is a heavy, soft, easily worked, silver-bluish metal that is mined out of the earth. Lead has been used for many different applications throughout the centuries. It has been used in pipes, lining for storage vessels, glazing in pottery, added to paint, (lead-based paint, "LBP"), roofing, electrical conduits and combined with other metals.

Lead is added to paint for three main reasons: (1) pigment, (2) added durability and corrosion control, and (3) as a drying agent. The use of LBP declined due to the introduction of latex and titanium oxide paints. In 1971 Congress made the Lead-based Paint Poisoning Prevention Act (LBPPPA) which gave a limit to the amount of lead paint could contain. Later, Congress passed legislation to reduce lead-based paint hazards called the Residential Lead Hazard Reduction Act (Title X). The Housing and Urban Development (HUD) agency next created the Guidelines for the Evaluation and Control of Lead-based Paint Hazards in Housing based on the requirements set forth in Section 402 of Title X. The development of Title X was largely to support reduction of LBP hazards in housing, especially target housing where a potential for childhood lead poisoning exists. The Title X Guidelines use a Federal limit for lead in paint as 1.0 mg/cm^2 or more than 0.5% by weight.

Section 402 of the Toxic Substance Control Act (TSCA) details the requirements and certifications needed to conduct lead-based paint inspections, risk assessments, designers, supervisors, and abatement workers. The Occupational Safety and Health Administration (OSHA) regulates the amount of exposure to lead during disturbance activities as defined in 29 CFR 1926.62.

All construction work activities where employees may be exposed to lead are regulated by Federal OSHA under 29 CFR 1926.62. There are no regulation requirements to remove lead paint from buildings prior to demolition. However, OSHA worker protection requirements must be adhered to by employers and employees when any lead-based materials are disturbed. Burning of lead based materials in not allowed because lead-based fumes are hazardous.

Possible lead containing materials must be tested using the Toxic Characteristic Leachate Procedure (TCLP) determination (exceeding 5.0 milligrams per Liter) for whether the material should be treated as hazardous waste. The EPA and disposal site operator (DSO) regulate the disposal of lead containing building

materials. Lead-based hazardous wastes must be disposed in proper containers with disposal permits and wastes manifests.

2.0 FIELD METHODS

2.1 Visual Inspection and Survey

2.1.1 Pre-Sampling Activities

Satori field personnel conducted a thorough visual inspection prior to conducting any sampling activity. The HBMS inspection included review of on-site, as-built specifications and drawings, review of previous asbestos and LBP survey reports, interior and exterior visual inspections of each building for construction materials and structural information, and a completed survey tape measurement and hazardous materials inventory of each room.

Digital pictures were taken of the interior and exterior of each building. Detailed floor plans were composed to identify sample locations for asbestos and lead. Section 3 contains sample locations for each building.

2.1.2 Interior Building Inspections

Interior visual inspections identified the type of substrate materials used in construction or renovation for the walls, ceiling, and floors. Interior inspection survey measurements were taken with a 100 ft. tape measure and noting the room width, length, and ceiling height.

2.1.3 Exterior Building Inspections

Exterior visual inspection identified the type of building construction materials used for siding, foundation supports, window and door trim, flashing, and roofing.

2.2 Sampling Procedures

Sampling was initiated only after completing the interior and exterior visual inspection survey for the building. The purpose of the asbestos and lead survey sampling was to identify, describe, and quantify suspect asbestos by bulk sampling and analysis, and identify lead containing materials by Niton XRF sampling.

2.3 Asbestos Sampling

Each bulk asbestos sample collected included the location (building / room / functional space), interior or exterior, composition or substrate description, matrix, extent and cause of deterioration.

Field data noted for each sample included the building location, date, sampler, sample number, building floor, room, structural parameter sampled (door, wall, ceiling, trim, exterior siding, foundation support, etc.), sample color, second layer,

sample condition, evidence of deterioration/percent/suspected cause, and other pertinent sample notes

2.4 Lead Survey Sampling

The Niton XL Spectrum Analyzer used for this survey irradiates the paint on a given surface causing the lead in the paint, if present, to emit a characteristic frequency of X-ray radiation. The instrument identifies and counts these x-rays to determine a lead concentration. The intensity of this radiation is measured by the detector and is related to the amount of lead in the paint. The lead concentration results are reported in milligrams per square centimeter (mg/cm^2).

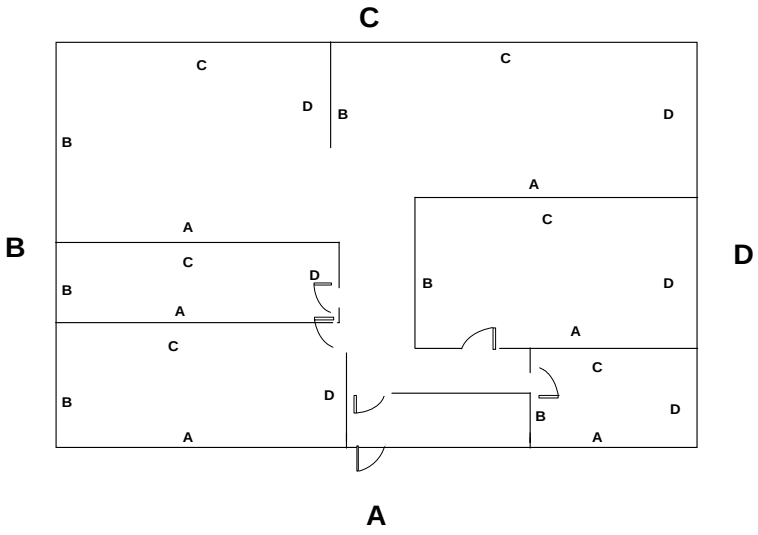
Measurements were taken at point's representative of all paint and varnished surfaces in the areas inspected. In order to obtain a reading, the XRF analyzer is placed with the face of the instrument flush against the surface to be tested. It is then held in place for the duration of the sample, taking approximately 20 source seconds or until the measurement has reached an acceptable range of accuracy as determined by the inspector.

Interior and exterior locations were sampled for lead-based paint. All inspections were conducted in accordance with the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.*

Field data noted for each sample included the building location, date, sampler, sample number, building floor, room, structural parameter sampled (door, wall, ceiling, trim, exterior siding, foundation support, etc.), paint color, second paint layer, condition, evidence of deterioration/percent/suspected cause, and other pertinent sample notes.

During testing, protocol for conducting LBP inspections has the inspector labeling each exterior wall with a letter designator starting with A on the address side of the building and continuing on in a clockwise motion with B, C, and D. The interior walls are again labeled in the same manner for ease of identification during report writing. A small diagram detailing the inspection protocol is included below.

Figure 2.4-1 LBP Inspection Protocol Diagram



2.5 Laboratory Analysis

2.5.1 Asbestos Analysis

Satori utilized LA Testing, located in Los Angeles, California for asbestos sample analysis. LA Testing holds a current NVLAP accreditation for all appropriate fields-of-testing.

All samples were shipped via FedEx to LA Testing. Samples were packed with bubble wrap and shipped in specifically designated containers to minimize disturbance or damage of samples.

Chain-of-custody (COC) documents accompanied all shipments to LA. Testing and required a signature from the laboratory upon receipt. The COC documents are located in Appendix C Chain-of-Custody Records.

All asbestos bulk samples were analyzed using Polarized Light Microscopy (PLM) EPA 600/R-93/116 Method. Samples with a result of 5% asbestos or less were reanalyzed using the EPA 400 Point Counting method for enhanced accuracy. The LA Testing bulk asbestos sample results are located in Appendix B.

3.0 RESULTS OF SAMPLE ANALYSIS PER BUILDING

3.1 Description of Buildings

The NVNC area contained buildings still in use by the inhabitants of the island. Some buildings were structurally sound while other buildings had been destroyed due to weather and lack of maintenance. Many of these collapsed building were

not fully surveyed due to structural instability and potential safety issues for the survey crew. The following information pertains to each individual building that was surveyed for the HBMS.

3.1.1 Building #1

This fishing / hunting house is constructed entirely out of wood. The dimensions of the building are 28' X 17'. All interior walls and ceilings were made from 4 X 8 plywood sheets. Fiberglass insulation was found in the walls and in the attic space above the ceiling. All the floors were uncovered wood as well. There was no exterior siding on the house. The house was separated into one living area with a separate storage / bathroom area. Multiple paint colors were observed on the interior of the house. A small wood stove with a metal stack is present inside the common room. The vent flashing should be presumed to contain lead. No electricity was found for the house.

3.1.2 Building #2

This building is constructed of wood siding and with an exposed wood roof. The dimensions of the building are 29' X 16'. The building unstable due to age and lack of maintenance. The back half of the building has collapsed. The interior walls were constructed from wood with visible gypsum wall board mixed in with the debris. There were visible 9 X 9 tiles of various colors broken up around the site inside and outside. Air-O-Cell pipe insulation was visible from the entrance of the building. CAB found on some interior walls. Building debris was scattered around the building including a Presumed Asbestos Containing Material (PACM) hose.

3.1.3 Building #3

This house is constructed of 4 X 8 sheets of plywood for all the walls and floors. The roof is also wood with roofing shingles attached. The dimensions of the building are 35' X 18'. There is no exterior siding on the building. All the interior floors are covered with different varieties of sheet vinyl. The area is separated into a living are with kitchen and storage area. All the walls were covered in 1/8 inch wood sheeting of various colors. A small wood stove with a metal stack is present inside this structure. The vent flashing should be presumed to contain lead. Electrical power is provided by generators. 9 X 9 tiles of various colors were found around the house.

3.1.4 Building #4

This shack is an 8 X 12 wood structure with debris on the inside from the building. Vinyl sheeting was found outside the building. Various debris piles surround the building. These piles are mainly comprised of wood and metal items from inside the building. Visible wiring observed inside the building should be considered PACM.

A large transite pipe was found lying in a debris pile between Building #4 and #5. The diameter is approximately 6", with length of 8' long. This transite pipe should be considered ACM.

3.1.5 Building #5

This building is constructed of wood and is approximately 22' X 12' in size. All sides and floors are constructed of wood. The roof is wood with a silver paper in some areas. There is visible red tile scattered around the entire building area. Fiberglass insulation was found on the inside of the building in an attic area.

3.1.6 Building #6

The building is a wood structure with thin metal roofing and black paper adhered to the wood siding on the outside. Various colors of paint were used on the interior of the buildings. The ceiling was made of wood 4 X 8 sheets of plywood with visible fiberglass insulation above. Some of the floors were covered in vinyl. The dimensions for the building are 23' X 17'. A small wood stove was used to heat the building when used. The stack for the wood stove was metal. The vent stack on the roof should be presumed to contain lead in the flashing.

3.1.7 Building #7

This 8' X 12' shack was constructed with wood. The interior floor was made from wood as well. No suspect materials found inside or outside the building.

3.1.8 Building #8

The building walls, roof, and ceiling are constructed from wood. The dimensions for the building are 30' X 18'. Some walls on the interior were GWB. Visible pieces of red and black 9 X 9 tiles are spread throughout the interior. One square inch ceiling tiles with mastic are also found on the interior. Wiring for the building is assumed PACM. Various paint colors visible along walls and window trim. The interior contains large amounts of building debris.

3.1.9 Building #9

This building has collapsed and therefore unsafe to enter fully for the survey. The roof is constructed of metal pan decking with all visible walls and floors made from wood. The dimensions for the building are 20' X 14'. Black tile was found around the building area. White 12 X 12 tiles were also observed around the building.

3.1.10 Building #10

This building was partially destroyed by weather. The dimensions for the building are 16' X 14'. The roof was constructed of thin metal panels with wood siding and wood floor. No insulation was visible from the exterior. Large amounts of debris were around the building. The interior contained large amounts of debris as well.

3.1.11 Building #11

This building had wood walls and floors. The roof was wood with a thin metal covering it. Two small wood stoves are located inside for heating. The associated stacks are metal piping. The dimensions of the building are 25' X 12'. No suspect materials were found at this building. Large amounts of debris are located around the building.

3.1.12 Building #12

This building had wood walls with no ceiling. The dimensions of the building are 8' X 8'. The interior contained no floor. There were no suspect materials at this building.

3.2 Asbestos Results

A total of thirty (30) different suspect materials from the interior and exterior of the all buildings were sampled for asbestos. Laboratory results identified nine samples of asbestos containing materials (ACM) with greater than one percent (>1%) asbestos. Positive samples were from the 9 X 9 tile, CAB siding, roofing paper, and ceiling mastic.

Presumed Asbestos Containing Materials (PACM) that was not accessible during the HMBS are; Air-O-Cell pipe insulation, hose, wiring, and vent stack material. Each material is assumed to contain asbestos until it can be sampled to verify the presence of asbestos.

Satori requested additional analyses of eight samples containing less than 5% asbestos using the EPA 400 Point Count method. This method allows the laboratory to calculate a more quantitative amount of asbestos present in each sample. Sometimes the result from this test will reclassify a material from ACM (>1% asbestos) to a material below the regulated limit of 1% asbestos.

Review of the Point Counting results identified all samples to be less than 1% asbestos. The ceiling tile mastic sample has insufficient material to complete the test.

Asbestos sample results are presented in Appendix A and in Table 3.2-1.

Figure 3.2-1 through Figure 3.2-2 identifies the locations where asbestos bulk samples were taken in the interior and exterior of the buildings.

3.3 LBP Results

A total of 96 interior and exterior components were tested for LBP content at the NVNC. Tests were conducted with the Niton XRF for LBP. Various building materials tested positive for lead. These materials include window trim, walls, ceiling rafters, interior and exterior doors, and miscellaneous debris.

Table 3.3-1 includes all the results for LBP with concentrations greater that 1mg/cm^2 for Lead-Based Paint. . Figures 3.3-1 through 3.3-3 identifies the locations of where Lead Based Paint sample were taken.

Table 3.2-1 Positive Asbestos Containing Materials

Bulk sample #	Room/location	Description of Material	Condition of Material	Friable/Non Friable	LA Testing Results
HOUSE #1					
B0708-01	Exterior	Grey fiber siding	Sig. Damaged	Non Friable	Non Detect
B0708-02	Exterior	Roofing felt	Sig. Damaged	Non Friable	Non Detect
B0708-03	Exterior	White Caulking	Damaged	Non Friable	Non Detect
HOUSE #2					
B0708-04	North east front door	GWB	Sig. Damaged	Non Friable	Non Detect
B0708-05	North east front door	Tile Grey	Sig. Damaged	Friable	<1% Chrysotile
		2nd Layer			**4% Chrysotile**
B0708-06	North east front door	**Tile Red**	Sig. Damaged	**Friable**	**3% Chrysotile**
B0708-07	North east front door	**Tile Black**	Sig. Damaged	**Friable**	**4% Chrysotile**
		2nd Layer			Non Detect
B0708-08	Interior	Piping	Sig. Damaged	Non Friable	Non Detect
B0708-09	North east wall	**CAB Panel**	**Damaged**	**Non Friable**	**10% Chrysotile / 3% Crocidolite**
B0708-10	North east wall	Insulation	Sig. Damaged	Friable	Non Detect
HOUSE #3					
B0708-11	Exterior	Paper siding	Sig. Damaged	Non Friable	Non Detect
B0708-12	Exterior	White Caulking	Sig. Damaged	Non Friable	Non Detect
HOUSE #4					
B0708-13	Interior	Vinyl Grey	Good	Non Friable	Non Detect
B0708-14	North east	Roof vinyl and mastic	Sig. Damaged	Non Friable	Non Detect
		2nd Layer			Non Detect
B0708-15	Exterior	Vinyl Bundles	Good	Non Friable	Non Detect

Table 3.2-1 Positive Asbestos Containing Materials

Bulk sample #	Room/location	Description of Material	Condition of Material	Friable/Non Friable	LA Testing Results
HOUSE #1					
B0708-16	**Exterior**	**Silver roofing paper**	Sig. Damaged	**Friable**	**2% Chrysotile**
B0708-17	House #5	Cloth door frame	Sig. Damaged	Non Friable	Non Detect
HOUSE #6					
B0708-18	Interior	Floor vinyl	Sig. Damaged	Non Friable	Non Detect
B0708-19	North east exterior	Cloth roof wrapping	Sig. Damaged	Non Friable	Non Detect
HOUSE #8					
B0708-20	**Interior**	**Tile Red**	Sig. Damaged	**Friable**	**3% Chrysotile**
B0708-21	Interior	GWB	Sig. Damaged	Non Friable	Non Detect
B0708-22	**Interior south**	**Ceiling tile mastic**	Sig. Damaged	**Friable**	**3% Chrysotile**
2nd Layer					Non Detect
B0708-23	**Interior south**	**Tile Grey**	Sig. Damaged	**Friable**	**4% Chrysotile**
HOUSE #3					
B0708-24	Interior	Vinyl Blue Green	Good	Non Friable	Non Detect
B0708-25	Interior	Vinyl Lt Green / white brick	Good	Non Friable	Non Detect
B0708-26	Interior	Vinyl Red Brick pattern	Good	Non Friable	Non Detect
2nd Layer					Non Detect
HOUSE #9					
B0708-27	Exterior east	White paper siding	Sig. Damaged	Non Friable	Non Detect
B0708-28	Exterior south	**Tile Black**	Sig. Damaged	**Friable**	**3% Chrysotile**
2nd Layer					Non Detect
B0708-29	Exterior west	Tile White	Good	Friable	Non Detect
HOUSE #10					
B0708-30	Exterior east	Black paper siding	Sig. Damaged	Non Friable	Non Detect

Table 3.2-2: 400 Point Count Results

Bulk sample #	Room/location	Description of Material	Condition of Material	Friable/Non Friable	LA Testing Results
B0708-05	North east front door	Tile Grey	Sig. Damaged	Friable	<1% Chrysotile
2nd Layer					0.3% Chrysotile
B0708-06	North east front door	Tile Red	Sig. Damaged	Friable	< 0.1 % Chrysotile
B0708-07	North east front door	Tile Black	Sig. Damaged	Friable	0.3% Chrysotile
B0708-16	Exterior	Silver roofing paper	Sig. Damaged	Friable	0.2% Chrysotile
B0708-20	Interior	Tile Red	Sig. Damaged	Friable	< 0.1 % Chrysotile
B0708-22	Interior south	Ceiling tile mastic	Sig. Damaged	Friable	Insufficient Material
B0708-23	Interior south	Tile Grey	Sig. Damaged	Friable	0.3% Chrysotile
B0708-28	Exterior south	Tile Black	Sig. Damaged	Friable	0.2% Chrysotile

Table 3.3-1 Positive LBP results for Native Village of Northeast Cape Site

No	Side	Location	Substrate	Structure type	1st layer Color	2nd Layer color	Cond.	Test Result	Pb mg/cm²	Pb Error mg/cm²
1		**Calibration**						**POS**	**1.12**	**0.13**
2		**Calibration**						**POS**	**1.93**	**0.4**
3		**Calibration**						**POS**	**3.5**	**0.38**
Building #1										
4	A	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.01	0.14
5	B	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0	0.09
6	C	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0	0.01
7	D	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.02	0.2
8	D	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.01	0.14
9	D	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0	0.08
10	A	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.02	0.04
11	Ceiling	Building#1	Wood	Ceiling	Green	N/A	Damaged	NEG	0	0.04
12	C	Building#1	Wood	Window Trim	Blue	N/A	Damaged	NEG	0.04	0.04
13	**B Side**	**Interior door**	**Wood**	**Door**	**Grey**	**N/A**	**Damaged**	**POS**	**1.6**	**0.2**
14	B	Building#1	Wood	Wall Above Door	Green	N/A	Damaged	NEG	0.01	0.07
15	B	Building#1	Wood	Door Frame	Green	N/A	Damaged	NEG	0	0.06
16	A	Building#1	Wood	Exterior Door	Black	N/A	Damaged	NEG	0	0.12
Building #2										
17	A	Building#2	Wood	Door Frame	Red	N/A	Damaged	NEG	0.03	0.18
18	A	Building#2	GWB	Wall	White	N/A	Damaged	NEG	0.01	0.17
19	A	Building#2	Wood	Ceiling	White	N/A	Damaged	NEG	0	0.1

Table 3.3-1 Positive LBP results for Native Village of Northeast Cape Site

No	Side	Location	Substrate	Structure type	1st layer Color	2nd Layer color	Cond.	Test Result	Pb mg/cm²	Pb Error mg/cm²
Building #3										
20	C	Building#3	Wood	Front Door		N/A	Damaged	NEG	0.03	0.01
21	**D**	**Building#3**	**Wood**	**Window Trim**	**Yellow**	**N/A**	**Damaged**	**POS**	**2.1**	**0.09**
22	**D**	**Building#3**	**Wood**	**Window Trim**	**White**	**N/A**	**Damaged**	**POS**	**5.27**	**2.11**
23	D	Building#3	Wood	Window Trim	Green	N/A	Damaged	NEG	0.09	0.15
24	**A**	**Building#3**	**Wood**	**Window Trim**	**Blue**	**N/A**	**Damaged**	**POS**	**1.5**	**0.21**
25	**B**	**Building#3**	**Wood**	**Fascia**	**Blue**	**N/A**	**Damaged**	**POS**	**2.4**	**0.32**
Building #4										
26	C	Building#4	Wood	Door Frame	Green	N/A	Damaged	NEG	0.01	0.1
27	D	Building#4	Wood	White Exterior Wall	White	N/A	Damaged	NEG	0.03	0.1
28	C	Building#4	Wood	Interior Wall	White	N/A	Damaged	NEG	0.03	0.16
29	**B**	**Building#4**	**Wood**	**Exterior Door**	**Blue**	**N/A**	**Damaged**	**POS**	**4.93**	**1.77**
Building #5										
30	D	Building#5	Wood	Wall	Blue	N/A	Damaged	NEG	0.02	0.01
31	C	Building#5	Wood	Wall	Blue	N/A	Damaged	NEG	0.03	0.02
32	B	Building#5	Wood	Wall	Blue	N/A	Damaged	NEG	0	0.01
33	A	Building#5	Wood	Window Trim	Red	N/A	Damaged	NEG	0.22	0.25
34	Floor	Building#5	Wood	Floor	Red	N/A	Damaged	NEG	0.01	0.16
35	Floor	Building#5	Wood	Floor	Red	N/A	Damaged	NEG	0.08	0.22
36	**Outside**	**Building#5**	**Wood**	**Board out side**	**Yellow**	**N/A**	**Damaged**	**POS**	**2.3**	**0.07**

Table 3.3-1 Positive LBP results for Native Village of Northeast Cape Site

No	Side	Location	Substrate	Structure type	1st layer Color	2nd Layer color	Cond.	Test Result	Pb mg/cm²	Pb Error mg/cm²
Building #6										
37	C	Building#6	Wood	Wall	Blue	N/A	Damaged	NEG	0.01	0.18
38	D	Building#6	Wood	Wall	Blue	Yellow	Damaged	NEG	0.56	0.2
39	A	Building#6	Wood	Wall	Blue	Yellow	Damaged	NEG	0.023	0.06
40	**A**	**Building#6**	**Wood**	**Wall**	**Yellow**	**N/A**	**Damaged**	**POS**	**1.6**	**0.21**
41	B	Building#6	Wood	Wall	Blue	N/A	Damaged	NEG	0.1	0.22
42	**B**	**Building#6**	**Wood**	**Wall**	**Yellow**	**N/A**	**Damaged**	**POS**	**2.3**	**0.08**
43	**Ceiling**	**Building#6**	**Wood**	**Ceiling**	**Yellow**	**N/A**	**Damaged**	**POS**	**1.9**	**0.29**
44	D	Building#6	Wood	Door	Grey	N/A	Damaged	NEG	0.02	0.01
45	D	Building#6	Wood	Door	Green	N/A	Damaged	NEG	0.03	0.09
46	A	Building#6	Wood	Wall	Black	N/A	Damaged	NEG	0.21	0.06
47	D	Building#6	Wood	Wall	Black	N/A	Damaged	NEG	0.1	0.04
48	C	Building#6	Wood	Window Trim	Green	N/A	Damaged	NEG	0.04	0.13
Building #7										
49	**Ceiling**	**Building#7**	**Wood**	**Ceiling**	**Lt Blue**	**N/A**	**Damaged**	**POS**	**2.95**	**0.65**
50	**D**	**Building#7**	**Wood**	**Door**	**Lt Blue**	**N/A**	**Damaged**	**POS**	**2.51**	**0.64**
51	**D**	**Building#7**	**Wood**	**Paint on lid**	**Lt Blue**	**N/A**	**Damaged**	**POS**	**0.1**	**0.07**
52	D	Building#7	Wood	Door	Black	N/A	Damaged	NEG	0	0.09
Building #8										
53	**A**	**Building#8**	**Wood**	**Window Trim**	**Blue**	**N/A**	**Damaged**	**POS**	**2.81**	**0.76**
54	A	Building#8	GWB	Wall	Blue	N/A	Damaged	NEG	0.2	0.24
55	**C**	**Building#8**	**Wood**	**Window Trim**	**Blue**	**N/A**	**Damaged**	**POS**	**1.6**	**0.17**
56	B	Building#8	GWB	Wall	Blue	N/A	Damaged	NEG	0.39	0.2
57	B	Building#8	GWB	Wall	White	N/A	Damaged	NEG	0.14	0.15
58	D	Building#8	Wood	Door Trim	Blue	N/A	Damaged	NEG	0.01	0.2
59	B	Building#8	Wood	Door	Grey	N/A	Damaged	NEG	0.01	0.01

Table 3.3-1 Positive LBP results for Native Village of Northeast Cape Site

No	Side	Location	Substrate	Structure type	1st layer Color	2nd Layer color	Cond.	Test Result	Pb mg/cm²	Pb Error mg/cm²
Building #3										
60	**C**	**Building#3**	**Wood**	**Wall**	**White**	**N/A**	**Damaged**	**POS**	**5.1**	**1.62**
61	**C**	**Building#3**	**Wood**	**Window Trim**	**Yellow**	**N/A**	**Damaged**	**POS**	**5.8**	**2.18**
62	A	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.07	0.19
63	C	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.2	0.02
64	A	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.24	0.9
65	C	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.19	0.2
66	C	Building#3	Wood	Window Trim	Yellow	N/A	Damaged	NEG	0.23	0.01
67	**C**	**Building#3**	**Wood**	**Window Trim**	**Grey**	**N/A**	**Damaged**	**POS**	**5.1**	**1.82**
68	D	Building#3	Wood	Window Trim	Green	N/A	Damaged	NEG	0.21	0.11
69	Ceiling	Building#3	Wood	Ceiling	Green	N/A	Damaged	NEG	0.21	0.31
70	A	Building#3	Wood	Window Trim	Green	N/A	Damaged	NEG	0.23	0.15
71	C	Building#3	Wood	Wall Panels	Pink	N/A	Damaged	NEG	0.24	0.14
Building #9										
72	C	Building#9	Wood	Door	White	N/A	Damaged	NEG	0.08	0.14
73	Ceiling	Building#9	Wood	Ceiling	White	N/A	Damaged	NEG	0.01	0.16
74	A	Building#9	Wood	Wall	Blue	N/A	Damaged	NEG	0.12	0.12
75	D	Building#9	Wood	Door Frame	Black	N/A	Damaged	NEG	0.03	0.01
76	D	Building#9	Wood	Door Frame	Green	N/A	Damaged	NEG	0.07	0.23
77	A	Building#9	Wood	Pandecking	Blue	N/A	Damaged	NEG	0.08	0.43
78	Outside	Building#9	Wood	Outside Wood	Yellow	N/A	Damaged	NEG	0.12	0.42
79	Outside	Building#9	Wood	Panel	Brown	N/A	Damaged	NEG	0.13	0.24
Building #10										
80	C	Building#10	Wood	Wall	Brown	N/A	Damaged	NEG	0.03	0.07
81	Ceiling	Building#10	Wood	Ceiling	Blue	N/A	Damaged	NEG	0.01	0.03
82	D	Building#10	Wood	Door Trim	Yellow	N/A	Damaged	NEG	0.08	0.18
83	Floor	Building#10	Wood	Floor	Orange	N/A	Damaged	NEG	0.02	0.1

Table 3.3-1 Positive LBP results for Native Village of Northeast Cape Site

No	Side	Location	Substrate	Structure type	1st layer Color	2nd Layer color	Cond.	Test Result	Pb mg/cm²	Pb Error mg/cm²
Building #11										
84	A	Building#11	Wood	Wall	Blue	N/A	Damaged	NEG	0.05	0.11
85	C	Building#11	Wood	Wall	Blue	N/A	Damaged	NEG	0.01	0.02
86	Ceiling	Building#11	Wood	Ceiling	Green	N/A	Damaged	NEG	0.14	0.01
87	A	Building#11	Wood	Window Trim	Green	N/A	Damaged	NEG	0.11	0.14
88	A	Building#11	Wood	Window Trim	White	N/A	Damaged	NEG	0.01	0.17
89	C	Building#11	Wood	Window Trim	Green	N/A	Damaged	NEG	0	0.08
90	B	Building#11	Wood	Door	White	N/A	Damaged	NEG	0.02	0.14
91	B	Building#11	Wood	Door	White	N/A	Damaged	NEG	0	0.01
92	A	Building#11	Wood	Exterior Door	White	N/A	Damaged	NEG	0.03	0.01
93	**D**	**Building#11**	**Wood**	**Door on Ground**	**White**	**N/A**	**Damaged**	**POS**	**3.92**	**0.04**
94	**D**	**Building#11**	**Wood**	**Window Trim**	**White**	**N/A**	**Damaged**	**POS**	**1.6**	**0.08**
95	A	Building#11	Wood	Wall		N/A	Damaged	NEG	0.02	0.2
96	A	Building#11	Wood	Wall		N/A	Damaged	NEG	0.16	0.11
97	Outside	Building#11	Wood	Wood outside	Blue	N/A	Damaged	NEG	0.19	0.13
Building #12										
98	**D**	**Building#12**	**Wood**	**Wall**	**Blue**	**N/A**	**Damaged**	**POS**	**1.35**	**0.25**
99	C	Building#12	Wood	Wall	Black	N/A	Damaged	NEG	0.16	0.39
100		**Calibration**						**POS**	**1.16**	**0.18**
101		**Calibration**						**POS**	**1.87**	**0.01**
102		**Calibration**						**POS**	**3.6**	**0.023**

Figure 3.2-1 Native Village of Northeast Cape Asbestos Sample Locations Part 1

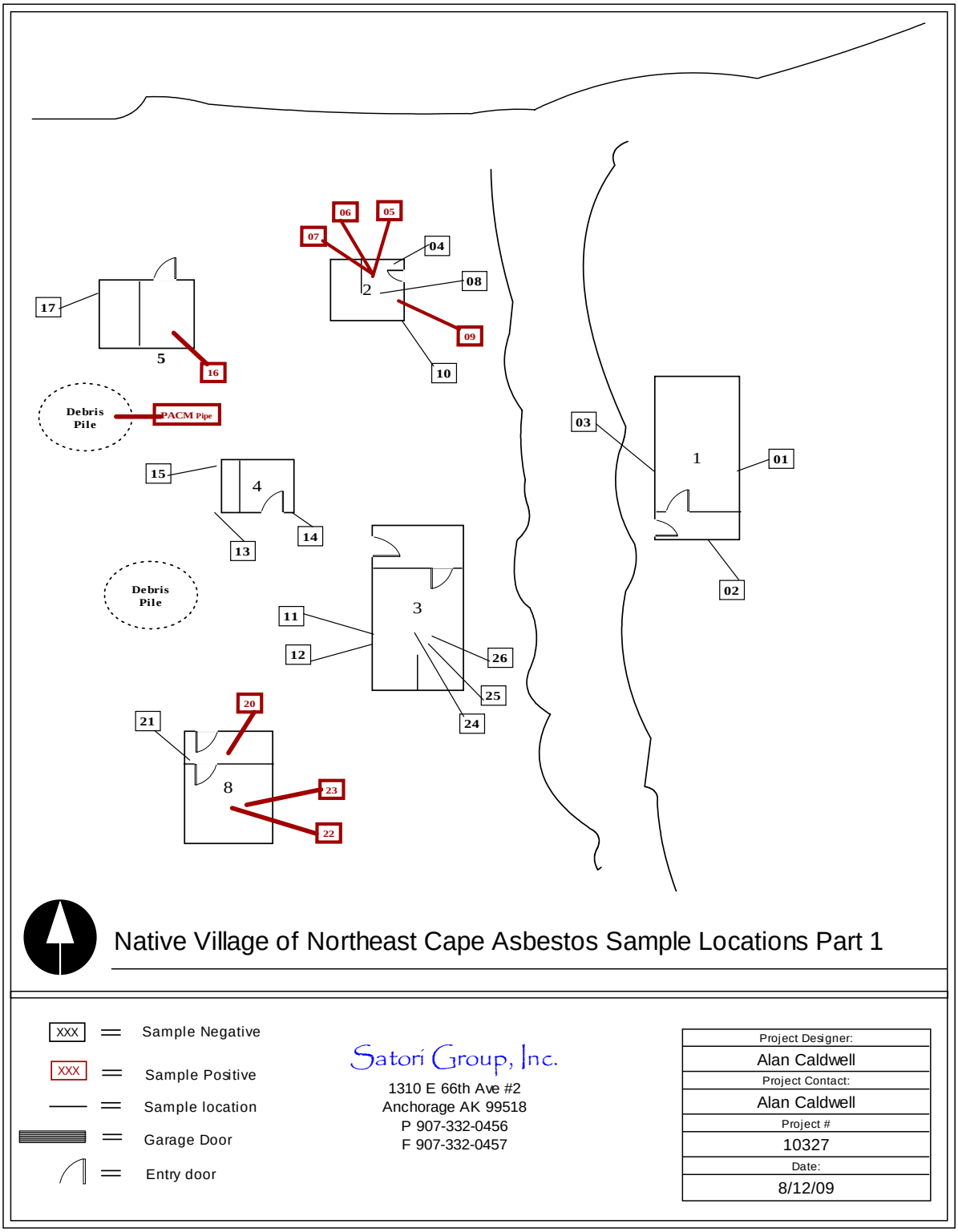


Figure 3.2-2 Native Village of Northeast Cape Asbestos Sample Locations Part 2

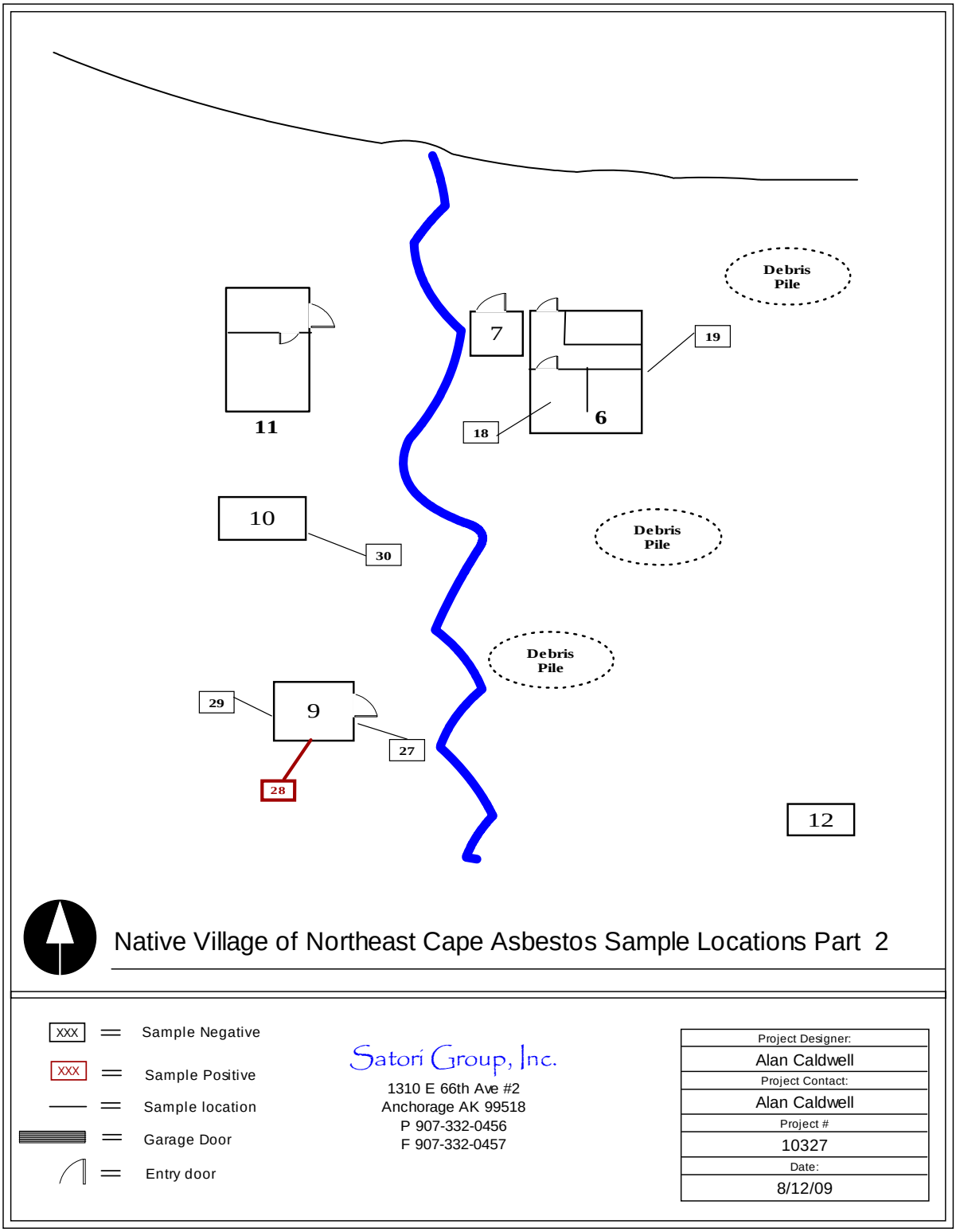


Figure 3.3-1 Native Village of Northeast Cape LBP Sample Locations Part 1

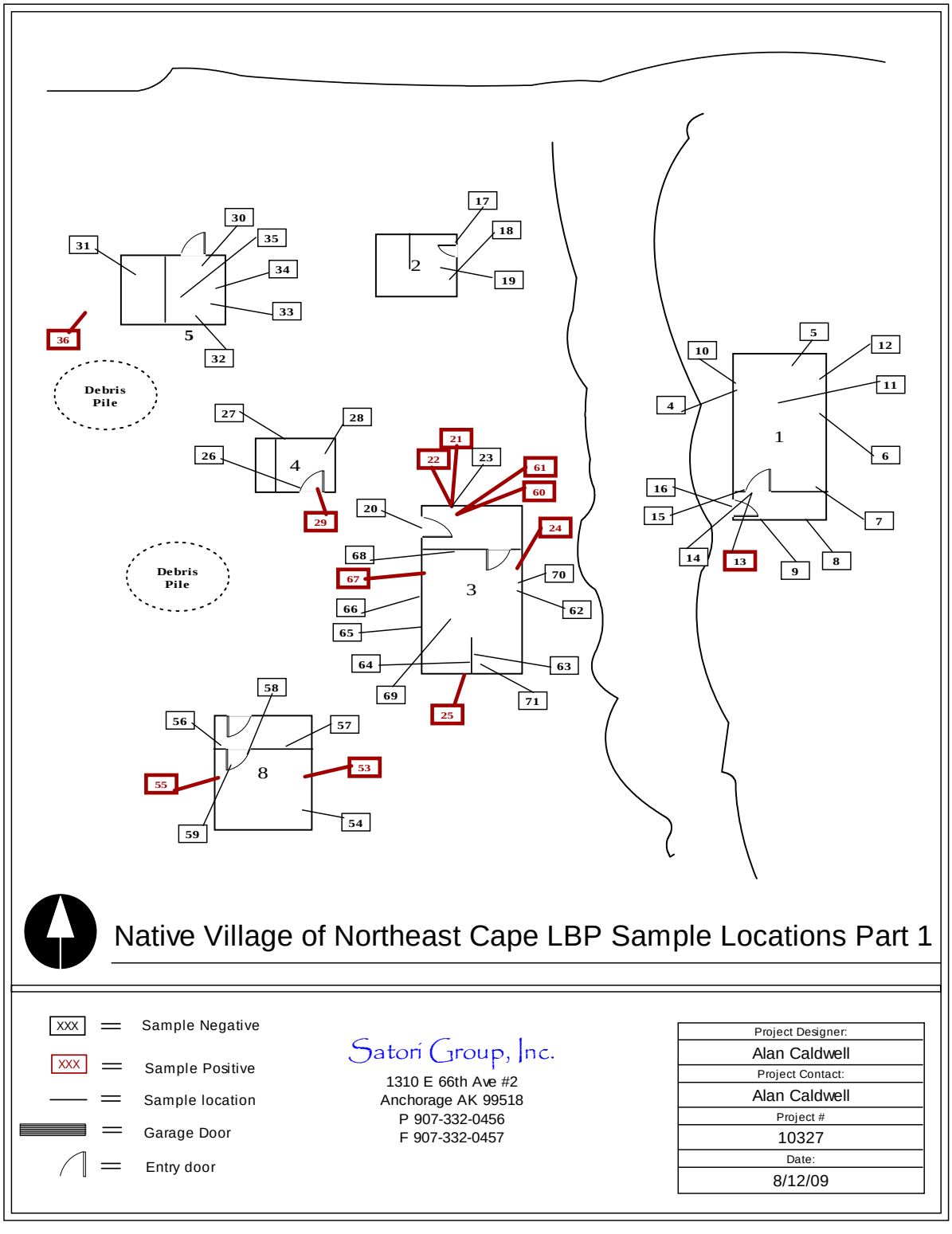
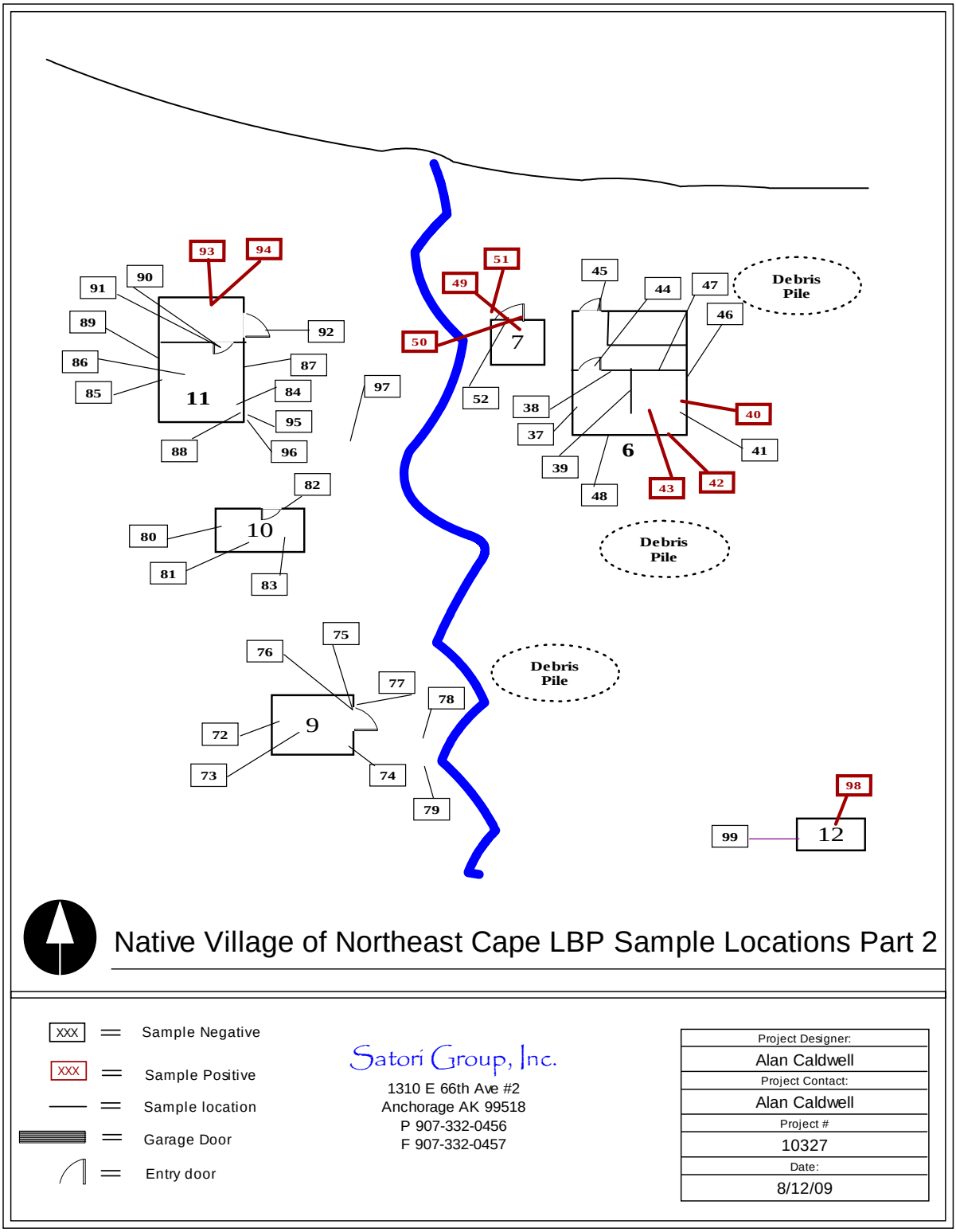


Figure 3.3-2 Native Village of Northeast Cape LBP Sample Locations Part 2



4.0 QUANTITY ESTIMATION

Table 4.0-1 below quantifies the total amounts of ACM which was identified during the survey at the NVNC Site.

Table 4.0-1 Total Quantity Estimation of Hazardous Materials

HAZARDOUS MATERIAL	EPA CATEGORY / REG CONDITION	REGULATED MINIMUM CONTENT %	TOTAL QUANTITY
ACM CAB	Cat II Non-Friable / Good	>1% Asbestos	100 SF
ACM Transite Pipe	Cat II Non-Friable / Good	>1% Asbestos	8 LF
PACM Air-ocell pipe insulation	RACM / Good	>1% Asbestos	Unknown
PACM wiring	Cat II Non Friable / Good	>1% Asbestos	Unknown
PACM vent stack	RACM / Good	>1% Asbestos	Unknown
PACM hose	Cat II non Friable / Good	>1% Asbestos	Unknown

ACM – Asbestos Containing Material
PACM – Possible Asbestos Containing Material
RACM – Regulated Asbestos Containing Material

4.1 Asbestos Regulatory Overview

The EPA has classified friable, finely divided, and powdered wastes containing greater than one percent (>1.0%) asbestos as hazardous waste. A "friable" waste is one which can be reduced to a powder or dust under hand pressure when dry.

The EPA revised the asbestos NESHAP regulations on November 20, 1990 (see 40 CFR Part 61 Subpart M). Although the NESHAP has not been revised to change its applicability to friable and non-friable ACM, non-friable asbestos materials are now classified as either Category I or Category II material. Category I material is defined as asbestos-containing resilient floor covering, asphalt roofing products, packings and gaskets. Category II material is defined as all remaining types of non-friable ACM not included in Category I that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable asbestos-cement products such as transite are an example of Category II material.

NESHAP specifies that Category I asbestos-containing materials which are not in poor condition and not friable prior to demolition do not have to be removed, except where demolition will be by intentional burning. However, Category II materials that have a high probability of being crumbled, pulverized, or reduced to powder during demolition must be removed before demolition begins.

4.2 Pre-Demolition Recommendations

4.2.1 Pre-Demolition Recommendations for Asbestos Containing Materials

The ACM identified is in damaged. Due to the remote nature of the NVNC and the usage of this site; the asbestos present does not represent a health hazard if left undisturbed.

Although the material is damaged, removal methods should avoid sanding, abrading, grinding or other method that further breaks, crumbles or disintegrates the ACM.

All Category I Non Friable materials and Category II materials defined under 40 CFR Part 61, Subpart M. are generally considered a Class II abatement task as specified in 29 CFR 1926.1101.

If future renovation or / demolition activities require removing or disturbing asbestos containing material, trained asbestos abatement workers in accordance with Alaska Administrative Code 8 AAC 61.600-720 must be used to abate the material and employ the worker protection as specified in 29 CFR 1926.1101 should be employed.

All PACM should be treated as ACM unless sampled and sent to a certified laboratory for PLM analysis to confirm the presence of asbestos in the material.

4.2.2 Pre-Demolition Recommendations for Lead Containing Materials

The LBP may be left in place as it is unlikely to present an immediate health hazard. If renovation or / demolition activities requires disturbing LBP materials, workers should adhere to 29 CFR 1926.62 and refrain from sanding, abrasive blasting, grinding, or torch cutting LBP materials without proper worker protection.

Lead painted materials are unlikely to pose a disposal concern due to the low LBP concentrations observed compared to the mass of the materials. A representative TCLP composite of the total waste stream should be completed for hazardous waste characterization prior to disposal. Typically, unless a landfill has a specific exemption, LBP materials with <5.0 µg/L may be disposed of as general construction debris.

5.0 SUMMARY

This report presents the Native Village of Northeast Cape Site Hazardous Building Material Survey (HBMS) completed by Satori Group, Inc. The survey contains contract and introductory information, regulatory framework for

hazardous building materials, sampling methods and results, waste stream development, quantity estimation, and demolition/removal regulatory requirements.

The HBMS identified asbestos containing building materials including 100 ft^2 of CAB, and 8 LF of Transite piping. PACM materials not sampled include: Air-ocell pipe insulations, hose material, vent stack materials and electrical wiring. All PACM materials should be sampled to verify the presence of asbestos.

The lead based paint materials found were located on various buildings including door framing, window trim, roof fascia, and scattered debris around the site.

5.1 Limitations

This HBMS has been prepared for the exclusive use of Bristol Engineering at this specific location. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Satori Group, Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This report is based upon and conducted in accordance with HUD Guidelines and EPA rules in effect at the time of this inspection. Satori has no duty to update this report based on subsequent regulatory changes.

The scope of work for the Hazardous Building Materials Survey for NVNC Site did not include actual sampling of the items that were not building materials such as drums located at the site, transformers, and other potentially hazardous materials stored at the site.

Satori is not responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared. Areas not accessible at the time of the inspection are excluded from this report. Satori also notes that the facts and conditions referenced in this report may change over time, and that the conclusions set forth here are applicable to the facts and conditions as described only at the time of this report. We believe that the conditions stated here are factual, but no guarantee is made or implied.

APPENDIX A: ASBESTOS BULK SAMPLE LOCATION AND RESULTS

Bulk sample #	Room/location	Description of Material	Condition of Material	Friable/Non Friable	LA Testing Results
			HOUSE #1		
B0708-01	Exterior	Grey fiber siding	Sig. Damaged	Non Friable	Non Detect
B0708-02	Exterior	Roofing felt	Sig. Damaged	Non Friable	Non Detect
B0708-03	Exterior	White Caulking	Damaged	Non Friable	Non Detect
			HOUSE #2		
B0708-04	North east front door	GWB	Sig. Damaged	Non Friable	Non Detect
B0708-05	North east front door	Tile Grey	Sig. Damaged	Friable	<1% Chrysotile
		2nd Layer			**4% Chrysotile**
B0708-06	North east front door	**Tile Red**	Sig. Damaged	**Friable**	**3% Chrysotile**
B0708-07	North east front door	**Tile Black**	Sig. Damaged	**Friable**	**4% Chrysotile**
		2nd Layer			Non Detect
B0708-08	Interior	Piping	Sig. Damaged	Non Friable	Non Detect
B0708-09	North east wall	**CAB Panel**	**Damaged**	**Non Friable**	**10% Chrysotile / 3% Crocidolite**
B0708-10	North east wall	Insulation	Sig. Damaged	Friable	Non Detect
			HOUSE #3		
B0708-11	Exterior	Paper siding	Sig. Damaged	Non Friable	Non Detect
B0708-12	Exterior	White Caulking	Sig. Damaged	Non Friable	Non Detect
			HOUSE #4		
B0708-13	Interior	Vinyl Grey	Good	Non Friable	Non Detect
B0708-14	North east	Roof vinyl and mastic	Sig. Damaged	Non Friable	Non Detect
		2nd Layer			Non Detect
B0708-15	Exterior	Vinyl Bundles	Good	Non Friable	Non Detect
			HOUSE #5		
B0708-16	**Exterior**	**Silver roofing paper**	Sig. Damaged	**Friable**	**2% Chrysotile**
B0708-17	House #5	Cloth door frame	Sig. Damaged	Non Friable	Non Detect
			HOUSE #6		
B0708-18	Interior	Floor vinyl	Sig. Damaged	Non Friable	Non Detect
B0708-19	North east exterior	Cloth roof wrapping	Sig. Damaged	Non Friable	Non Detect
			HOUSE #8		
B0708-20	**Interior**	**Tile Red**	Sig. Damaged	**Friable**	**3% Chrysotile**
B0708-21	Interior	GWB	Sig. Damaged	Non Friable	Non Detect
B0708-22	**Interior south**	**Ceiling tile mastic**	Sig. Damaged	**Friable**	**3% Chrysotile**
		2nd Layer			Non Detect
B0708-23	**Interior south**	**Tile Grey**	Sig. Damaged	**Friable**	**4% Chrysotile**

HOUSE #3					
B0708-24	Interior	Vinyl Blue Green	Good	Non Friable	Non Detect
B0708-25	Interior	Vinyl Lt Green / white brick	Good	Non Friable	Non Detect
B0708-26	Interior	Vinyl Red Brick pattern	Good	Non Friable	Non Detect
2nd Layer					Non Detect
HOUSE #9					
B0708-27	Exterior east	White paper siding	Sig. Damaged	Non Friable	Non Detect
B0708-28	Exterior south	**Tile Black**	Sig. Damaged	**Friable**	**3% Chrysotile**
2nd Layer					Non Detect
B0708-29	Exterior west	Tile White	Good	Friable	Non Detect
HOUSE #10					
B0708-30	Exterior east	Black paper siding	Sig. Damaged	Non Friable	Non Detect

EPA 400 Point Count Results

Bulk sample #	Room/location	Description of Material	Condition of Material	Friable/Non Friable	LA Testing Results
B0708-05	North east front door	Tile Grey	Sig. Damaged	Friable	<1% Chrysotile
2nd Layer					0.3% Chrysotile
B0708-06	North east front door	Tile Red	Sig. Damaged	Friable	< 0.1 % Chrysotile
B0708-07	North east front door	Tile Black	Sig. Damaged	Friable	0.3% Chrysotile
B0708-16	Exterior	Silver roofing paper	Sig. Damaged	Friable	0.2% Chrysotile
B0708-20	Interior	Tile Red	Sig. Damaged	Friable	< 0.1 % Chrysotile
B0708-22	Interior south	Ceiling tile mastic	Sig. Damaged	Friable	Insufficient Material
B0708-23	Interior south	Tile Grey	Sig. Damaged	Friable	0.3% Chrysotile
B0708-28	Exterior south	Tile Black	Sig. Damaged	Friable	0.2% Chrysotile

APPENDIX B: LA TESTING LABORATORY RESULTS - ASBESTOS

LA Testing
159 Pasadena Avenue, South Pasadena, CA 91030
Phone: (323) 254-9960 Fax: (323) 254-9982 Email: pasadenalab@latesting.com

Attn: **Alan Caldwell**
Satori Group Inc.
1310 East 66th Avenue
Suite #2
Anchorage, AK 99518

Fax: (907) 332-0457 Phone: (907) 332-0456

Project: **NE Cape Building Inspection**

Customer ID: 32EHS30
Customer PO:
Received: 07/15/09 9:00 AM
LA Testing Order: 320907277

LA Testing Proj:
Analysis Date: 7/15/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**% Non-Fibrous**	**% Type**
B0708-01 *320907277-0001*	Grey fiber siding	Brown/Gray Fibrous Homogeneous	80%	Cellulose	20% Non-fibrous (other)	**None Detected**
B0708-02 *320907277-0002*	Roofing felt	Black Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
B0708-03 *320907277-0003*	White caulking	White/Black Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
B0708-04 *320907277-0004*	GWB	White Fibrous Heterogeneous	2%	Cellulose	98% Non-fibrous (other)	**None Detected**
B0708-05-Floor Tile *320907277-0005*	Tile grey	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**<1% Chrysotile**
B0708-05-Mastic *320907277-0005A*	Tile grey	Black Non-Fibrous Homogeneous			96% Non-fibrous (other)	**4% Chrysotile**
B0708-06 *320907277-0006*	Tile red	Red Non-Fibrous Homogeneous			97% Non-fibrous (other)	**3% Chrysotile**

Analyst(s)

Rafik Vartanian, Ph.D (37)

Derrick Tanner, Laboratory Manager
or other approved signatory

LA Testing
159 Pasadena Avenue, South Pasadena, CA 91030
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Project: **NE Cape Building Inspection**

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LA Testing Order: 320907277

LA Testing Proj:
Analysis Date: 7/15/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
B0708-07-Floor Tile *320907277-0007*	Tile black	Black Non-Fibrous Homogeneous			96% Non-fibrous (other)	**4% Chrysotile**
B0708-07-Mastic *320907277-0007A*	Tile black	Black Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
B0708-08 *320907277-0008*	Piping	Tan Fibrous Homogeneous	60%	Cellulose	40% Non-fibrous (other)	**None Detected**
B0708-09 *320907277-0009*	CAB panel	Gray Fibrous Heterogeneous			87% Non-fibrous (other)	**10% Chrysotile** **3% Crocidolite**
B0708-10 *320907277-0010*	Insulation	Brown Fibrous Homogeneous	70%	Cellulose	30% Non-fibrous (other)	**None Detected**
B0708-11 *320907277-0011*	Paper siding	Black Fibrous Homogeneous	40%	Cellulose	60% Non-fibrous (other)	**None Detected**
B0708-12 *320907277-0012*	White caulking	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**

Analyst(s)

Rafik Vartanian, Ph.D (37)

Derrick Tanner, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of LA Testing. LA Testing's liability is limited to the cost of analysis. LA Testingbears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by LA Testing South Pasadena 159 Pasadena Avenue, South Pasadena CA NVLAP Lab Code 200232-0, AIHA IHLAP 102814, CA ELAP 2283

LA Testing
159 Pasadena Avenue, South Pasadena, CA 91030
Phone: (323) 254-9960 Fax: (323) 254-9982 Email: pasadenalab@latesting.com

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Satori Group Inc.
1310 East 66th Avenue
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Anchorage, AK 99518

Fax: (907) 332-0457 Phone: (907) 332-0456
Project: **NE Cape Building Inspection**

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Received: 07/15/09 9:00 AM
LA Testing Order: 320907277

LA Testing Proj:
Analysis Date: 7/15/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
B0708-13 *320907277-0013*	Vinyl grey	Gray Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
B0708-14-Roof Vinyl *320907277-0014*	Roof vinyl and mastic	Gray Non-Fibrous Homogeneous	5%	Cellulose	95% Non-fibrous (other)	**None Detected**
B0708-14-Mastic *320907277-0014A*	Roof vinyl and mastic	Black Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**
B0708-15 *320907277-0015*	Vinyl bundles	Brown Fibrous Heterogeneous	10%	Cellulose	90% Non-fibrous (other)	**None Detected**
B0708-16 *320907277-0016*	Silver roofing paper	Black/Silver Fibrous Heterogeneous	50%	Cellulose	48% Non-fibrous (other)	**2% Chrysotile**
B0708-17 *320907277-0017*	Cloth door frame	Gray/Black Fibrous Heterogeneous	15% 30%	Cellulose Synthetic	55% Non-fibrous (other)	**None Detected**
B0708-18 *320907277-0018*	Floor vinyl	Brown Fibrous Heterogeneous	10%	Cellulose	90% Non-fibrous (other)	**None Detected**

Analyst(s)

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LA Testing Proj:
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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**% Non-Fibrous**	**% Type**
B0708-19 *320907277-0019*	Cloth r oof wrapping	Gray Fibrous Homogeneous	60%	Cellulose	40% Non-fibrous (other)	**None Detected**
B0708-20 *320907277-0020*	Tile red	Red Non-Fibrous Homogeneous			97% Non-fibrous (other)	**3% Chrysotile**
B0708-21 *320907277-0021*	GWB	Brown/White Fibrous Heterogeneous	10%	Cellulose	90% Non-fibrous (other)	**None Detected**
B0708-22-Joint Compound *320907277-0022*	Ceiling tile mastic	White Non-Fibrous Homogeneous			97% Non-fibrous (other)	**3% Chrysotile**
B0708-22-Mastic *320907277-0022A*	Ceiling tile mastic	Brown Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**
B0708-22-Insulation *320907277-0022B*	Ceiling tile mastic	Yellow Fibrous Homogeneous	80%	Glass	20% Non-fibrous (other)	**None Detected**
B0708-23 *320907277-0023*	Tile grey	Gray Non-Fibrous Homogeneous			96% Non-fibrous (other)	**4% Chrysotile**

Analyst(s)

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Project: **NE Cape Building Inspection**

Customer ID: 32EHS30
Customer PO:
Received: 07/15/09 9:00 AM
LA Testing Order: 320907277

LA Testing Proj:
Analysis Date: 7/15/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**% Non-Fibrous**	**% Type**
B0708-24 *320907277-0024*	Vinyl blue green	Gray/Blue/Green Fibrous Homogeneous	40%	Cellulose	60% Non-fibrous (other)	**None Detected**
B0708-25 *320907277-0025*	Vinyl lt green/white brick	Tan/Green Non-Fibrous Homogeneous	30%	Cellulose	70% Non-fibrous (other)	**None Detected**
B0708-26-Linoleum *320907277-0026*	Vinyl red brick pattern	Tan/Red/Green Fibrous Heterogeneous	35%	Cellulose	65% Non-fibrous (other)	**None Detected**
B0708-26-Mastic *320907277-0026A*	Vinyl red brick pattern	Yellow Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**
B0708-27 *320907277-0027*	White paper siding	Brown/White/Black Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other)	**None Detected**
B0708-28-Floor Tile *320907277-0028*	Tile black	Black Non-Fibrous Homogeneous			97% Non-fibrous (other)	**3% Chrysotile**
B0708-28-Mastic *320907277-0028A*	Tile black	Black Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**

Analyst(s)

Rafik Vartanian, Ph.D (37)

Derrick Tanner, Laboratory Manager
or other approved signatory

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1310 East 66th Avenue
Suite #2
Anchorage, AK 99518

Fax: (907) 332-0457 Phone: (907) 332-0456

Project: **NE Cape Building Inspection**

Customer ID: 32EHS30
Customer PO:
Received: 07/15/09 9:00 AM
LA Testing Order: 320907277

LA Testing Proj:
Analysis Date: 7/15/2009

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**% Non-Fibrous**	**% Type**
B0708-29 *320907277-0029*	Tile white	Tan/Green Non-Fibrous Heterogeneous			100% Non-fibrous (other)	**None Detected**
B0708-30 *320907277-0030*	Black paper siding	Brown/Black Fibrous Heterogeneous	60%	Cellulose	40% Non-fibrous (other)	**None Detected**

Analyst(s)

Rafik Vartanian, Ph.D (37)

Derrick Tanner, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of LA Testing. LA Testing's liability is limited to the cost of analysis. LA Testingbears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by LA Testing South Pasadena 159 Pasadena Avenue, South Pasadena CA NVLAP Lab Code 200232-0, AIHA IHLAP 102814, CA ELAP 2283

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LA Testing
159 Pasadena Avenue, South Pasadena, CA 91030
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Attn: **Alan Caldwell**
Satori Group Inc.
1310 East 66th Avenue
Suite #2
Anchorage, AK 99518

Fax: (907) 332-0457 Phone: (907) 332-0456

Project: **Ref: 320907277 / NE Cape Building Inspection**

Customer ID: 32EHS30
Customer PO:
Received: 08/11/09 12:53 PM
LA Testing Order: 320908507

LA Testing Proj:
Analysis Date: 8/14/2009

Polarized Light Microscopy (PLM) - Point Count Performed by EPA 600/R-93/116 Method with Gravimetric Reduction and 1000 Point Count

SAMPLE ID	DESCRIPTION	APPEARANCE	(%) Matrix Organic	Acid	ASBESTOS %	TYPES	NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS
B0708-005-Mastic *320908507-0001*	Tile Grey	White Non-Fibrous Homogeneous	50.2	22.0	0.3	Chrysotile		27.5 Non-fibrous (other)
B0708-06 *320908507-0002*	Tile Red	Red Non-Fibrous Homogeneous	21.3	64.5	<0.1	Chrysotile		14.1 Non-fibrous (other)
B0708-07-Floor Tile *320908507-0003*	Tile black	Black Non-Fibrous Homogeneous	26.6	39.6	0.3	Chrysotile		33.5 Non-fibrous (other)
B0708-16 *320908507-0004*	Silver roofing paper	Silver Non-Fibrous Heterogeneous	56.1	14.6	0.2	Chrysotile		29.1 Non-fibrous (other)
B0708-20 *320908507-0005*	Tile red	Red Non-Fibrous Homogeneous	48.0	39.7	<0.1	Chrysotile		12.1 Non-fibrous (other)
B0708-22-Joint Compound *320908507-0006* Insufficient Material	Ceiling tile mastic	**Insufficient Material**						
B0708-23 *320908507-0007*	Tile grey	Gray Non-Fibrous Homogeneous	23.7	50.1	0.3	Chrysotile		25.9 Non-fibrous (other)

Analyst(s)
Rafik Vartanian, Ph.D (7)

Derrick Tanner, Laboratory Manager
or other approved signatory

LA Testing
159 Pasadena Avenue, South Pasadena, CA 91030
Phone: (323) 254-9960 Fax: (323) 254-9982 Email: pasadenalab@latesting.com

Attn: **Alan Caldwell**
Satori Group Inc.
1310 East 66th Avenue
Suite #2
Anchorage, AK 99518

Fax: (907) 332-0457 Phone: (907) 332-0456

Project: **Ref: 320907277 / NE Cape Building Inspection**

Customer ID: 32EHS30
Customer PO:
Received: 08/11/09 12:53 PM
LA Testing Order: 320908507

LA Testing Proj:
Analysis Date: 8/14/2009

Polarized Light Microscopy (PLM) - Point Count Performed by EPA 600/R-93/116 Method with Gravimetric Reduction and 1000 Point Count

SAMPLE ID	DESCRIPTION	APPEARANCE	(%) Matrix Organic	Acid	ASBESTOS %	TYPES	NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS
B0708-28-Floor Tile *320908507-0008*	Tile black	Black Non-Fibrous Heterogeneous	15.5	70.1	0.2	Chrysotile		14.2 Non-fibrous (other)

Analyst(s)
Rafik Vartanian, Ph.D (7)

Derrick Tanner, Laboratory Manager
or other approved signatory

Disclaimers: Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. LA Testing suggests that samples reported as <0.1% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by LA Testing. This report must not be used to claim product endorsement by NVLAP or any agency of the United States Government. LA Testing bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results whin requested to separate layer samples. LA Testing liability is limited to the cost of sample analysis. Samples received in good condition unless otherwise noted.

Samples analyzed by LA Testing South Pasadena 159 Pasadena Avenue, South Pasadena CA

THIS IS THE LAST PAGE OF THE REPORT.

APPENDIX C: CHAIN-OF-CUSTODY RECORDS

320907277

Chain of Custody

Asbestos Lab Services

LA Testing
159 Pasadena Avenue
South Pasadena,
CA 91030

Phone: 1-800-303-0047
Fax: 323-254-9982
http://www.latesting.com

Please print all information legibly.

Company:	Satori Group, Inc.	***Bill To:***	Jill Lucas
Address1:	1310 E 66th Ave. #2	*Address1:*	1310 E 66th Ave #2
Address2:		*Address2:*	
City, State:	Anchorage, AK	*City, State:*	Anchorage, AK
Zip/Post Code:	99518	*Zip/Post Code:*	99518
Country:	United States	*Country:*	United States
Contact Name:	Alan Caldwell	***Attn:***	Jill Lucas
Phone:	907-332-0456	*Phone:*	907-332-0456
Fax:	907-332-0457	*Fax:*	907-332-0457
Email:	acaldwell@gosatori.com	*Email:*	acaldwell@gosatori.com
LA Testing Rep:		***P.O. Number:***	
Project Name/Number:	NE CAPE Building Inspection		

MATRIX			TURNAROUND			
☐ Air	☐ Soil	☐ Micro-Vac	☐ 3 Hours	☐ 6 Hours	☐ Same Day or 12 Hours*	☒ 24 Hours (1 day)
☒ Bulk	☐ Drinking Water		☐ 48 Hours (2 days)	☐ 72 Hours (3 days)	☐ 96 Hours (4 days)	☐ 120 Hours (5 days)
☐ Wipe	☐ Wastewater		☐ 144+ hours (6-10 days)			

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.

***12 hours (must arrive by 11:00a.m. Mon -Fri.), Please Refer to Price Quote**

PCM - Air
- ☐ NIOSH 7400(A) Issue 2: August 1994
- ☐ OSHA w/TWA
- ☐ Other:

PLM - Bulk
- ☒ EPA 600/R-93/116
- ☐ EPA Point Count
- ☐ NY Stratified Point Count
- ☐ PLM NOB (Gravimetric) NYS 198.1
- ☐ NIOSH 9002:
- ☐ LA Testing Standard Addition:

SEM Air or Bulk
- ☐ Qualitative
- ☐ Quantitative

TEM Air
- ☐ AHERA 40 CFR, Part 763 Subpart E
- ☐ NIOSH 7402
- ☐ EPA Level II

TEM BULK
- ☐ Drop Mount (Qualitative)
- ☐ Chatfield SOP - 1988-02
- ☐ TEM NOB (Gravimetric) NYS 198.4
- ☐ LA Testing Standard Addition:

PLM Soil
- ☐ EPA Protocol Qualitative
- ☐ EPA Protocol Quantitative
- ☐ LA Testing MSD 9000 Method fibers/gram

TEM WATER
- ☐ EPA 100.1
- ☐ EPA 100.2
- ☐ NYS 198.2

TEM Microvac/Wipe
- ☐ ASTM D 5755-95 (quantative method)
- ☐ Wipe Qualitative

XRD
- ☐ Asbestos
- ☐ Silica NIOSH 7500

OTHER
- ☐

^ If no box is checked, non-ASTM is assumed

Chain of Custody

Lead Lab Services

LA Testing
159 Pasadena Avenue
South Pasadena,
CA 91030

Phone: 1-800-303-0047
Fax: 323-254-9982
http://www.latesting.com

Please print all information legibly.

SAMPLE #	LOCATION	Air Volume, L Area, in^2	LAB #

SEE ATTACHED

@Relinquished By: (Person) [signature] **Date:** 7/13/09

Received at LA Testing by: [signature] **Date:** 7/15/09 FE . 900am

Received at LA Testing by: ______ **Date:** ______

Note: Please duplicate this form and use additional sheets if necessary.

320907277

B0708-01	Grey fiber siding
B0708-02	Roofing felt
B0708-03	White Caulking
B0708-04	GWB
B0708-05	Tile Grey
B0708-06	Tile Red
B0708-07	Tile Black
B0708-08	Piping
B0708-09	CAB Panel
B0708-10	Insulation
B0708-11	Paper siding
B0708-12	White Caulking
B0708-13	Vinyl Grey
B0708-14	Roof vinyl and mastic
B0708-15	Vinyl Bundles
B0708-16	Silver roofing paper
B0708-17	Cloth door frame
B0708-18	Floor vinyl
B0708-19	Cloth roof wrapping
B0708-20	Tile Red
B0708-21	GWB
B0708-22	Ceiling tile mastic
B0708-23	Tile Grey
B0708-24	Vinyl Blue Green
B0708-25	Vinyl Lt Green / white brick
B0708-26	Vinyl Red Brick pattern
B0708-27	White paper siding
B0708-28	Tile Black
B0708-29	Tile White
B0708-30	Black paper siding
B0708-31	
B0708-32	
B0708-33	
B0708-34	
B0708-35	
B0708-36	

APPENDIX D: NITON XRF RESULTS

Satori Group, Inc.

XRF LBP Sample Results

Serial #XL309-U3815NR8505
Serial #XL309-U3815NR4345
PAINT
Header: Northeast Cape Native Village
Site: Northeast Cape Native Village

Date: 7/8/2009
Ranges (NEG<INC<POS): Device PCS
Inspector: Alan Caldwell
EPA # AK-R-8196-2

No	Side	Location	Substrate	Structure type	1st layer Color	2nd Layer color	Cond.	Test Result	Pb mg/cm²	Pb Error mg/cm²
1		Calibration						POS	1.12	0.13
2		Calibration						POS	1.93	0.4
3		Calibration						POS	3.5	0.38
Building #1										
4	A	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.01	0.14
5	B	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0	0.09
6	C	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0	0.01
7	D	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.02	0.2
8	D	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.01	0.14
9	D	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0	0.08
10	A	Building#1	Wood	Wall	Green	N/A	Damaged	NEG	0.02	0.04
11	Ceiling	Building#1	Wood	Ceiling	Green	N/A	Damaged	NEG	0	0.04
12	C	Building#1	Wood	Window Trim	Blue	N/A	Damaged	NEG	0.04	0.04
13	B	Interior door	Wood	Door	Grey	N/A	Damaged	POS	1.6	0.2
14	B	Building#1	Wood	Wall Above Door	Green	N/A	Damaged	NEG	0.01	0.07
15	B	Building#1	Wood	Door Frame	Green	N/A	Damaged	NEG	0	0.06
16	A	Building#1	Wood	Exterior Door	Black	N/A	Damaged	NEG	0	0.12
Building #2										
17	A	Building#2	Wood	Door Frame	Red	N/A	Damaged	NEG	0.03	0.18
18	A	Building#2	GWB	Wall	White	N/A	Damaged	NEG	0.01	0.17
19	A	Building#2	Wood	Ceiling	White	N/A	Damaged	NEG	0	0.1

Building #3										
20	C	Exterior Building#3	Wood	Front Door		N/A	Damaged	NEG	0.03	0.01
21	**D**	**Exterior Building#3**	**Wood**	**Window Trim**	**Yellow**	**N/A**	**Damaged**	**POS**	**2.1**	**0.09**
22	**D**	**Exterior Building#3**	**Wood**	**Window Trim**	**White**	**N/A**	**Damaged**	**POS**	**5.27**	**2.11**
23	D	Exterior Building#3	Wood	Window Trim	Green	N/A	Damaged	NEG	0.09	0.15
24	**A**	**Exterior Building#3**	**Wood**	**Window Trim**	**Blue**	**N/A**	**Damaged**	**POS**	**1.5**	**0.21**
25	**B**	**Exterior Building#3**	**Wood**	**Fascia**	**Blue**	**N/A**	**Damaged**	**POS**	**2.4**	**0.32**
Building #4										
26	C	Building#4	Wood	Door Frame	Green	N/A	Damaged	NEG	0.01	0.1
27	D	Building#4	Wood	White Exterior Wall	White	N/A	Damaged	NEG	0.03	0.1
28	C	Building#4	Wood	Interior Wall	White	N/A	Damaged	NEG	0.03	0.16
29	**B**	**Building#4**	**Wood**	**Exterior Door**	**Blue**	**N/A**	**Damaged**	**POS**	**4.93**	**1.77**
Building #5										
30	D	Building#5	Wood	Wall	Blue	N/A	Damaged	NEG	0.02	0.01
31	C	Building#5	Wood	Wall	Blue	N/A	Damaged	NEG	0.03	0.02
32	B	Building#5	Wood	Wall	Blue	N/A	Damaged	NEG	0	0.01
33	A	Building#5	Wood	Window Trim	Red	N/A	Damaged	NEG	0.22	0.25
34	Floor	Building#5	Wood	Floor	Red	N/A	Damaged	NEG	0.01	0.16
35	Floor	Building#5	Wood	Floor	Red	N/A	Damaged	NEG	0.08	0.22
36	**Outside**	**Building#5**	**Wood**	**Board out side**	**Yellow**	**N/A**	**Damaged**	**POS**	**2.3**	**0.07**
Building #6										
37	C	Building#6	Wood	Wall	Blue	N/A	Damaged	NEG	0.01	0.18
38	D	Building#6	Wood	Wall	Blue	Yellow	Damaged	NEG	0.56	0.2
39	A	Building#6	Wood	Wall	Blue	Yellow	Damaged	NEG	0.023	0.06
40	**A**	**Building#6**	**Wood**	**Wall**	**Yellow**	**N/A**	**Damaged**	**POS**	**1.6**	**0.21**
41	B	Building#6	Wood	Wall	Blue	N/A	Damaged	NEG	0.1	0.22
42	**B**	**Building#6**	**Wood**	**Wall**	**Yellow**	**N/A**	**Damaged**	**POS**	**2.3**	**0.08**
43	**Ceiling**	**Building#6**	**Wood**	**Ceiling**	**Yellow**	**N/A**	**Damaged**	**POS**	**1.9**	**0.29**
44	D	Building#6	Wood	Door	Grey	N/A	Damaged	NEG	0.02	0.01
45	D	Building#6	Wood	Door	Green	N/A	Damaged	NEG	0.03	0.09
46	A	Building#6	Wood	Wall	Black	N/A	Damaged	NEG	0.21	0.06
47	D	Building#6	Wood	Wall	Black	N/A	Damaged	NEG	0.1	0.04
48	C	Building#6	Wood	Window Trim	Green	N/A	Damaged	NEG	0.04	0.13
Building #7										
49	**Ceiling**	**Building#7**	**Wood**	**Ceiling**	**Lt Blue**	**N/A**	**Damaged**	**POS**	**2.95**	**0.65**
50	**D**	**Building#7**	**Wood**	**Door**	**Lt Blue**	**N/A**	**Damaged**	**POS**	**2.51**	**0.64**
51	**D**	**Building#7**	**Wood**	**Paint on lid**	**Lt Blue**	**N/A**	**Damaged**	**POS**	**0.1**	**0.07**

52	D	Building#7	Wood	Door	Black	N/A	Damaged	NEG	0	0.09
Building #8										
53	**A**	**Building#8**	**Wood**	**Window Trim**	**Blue**	**N/A**	**Damaged**	**POS**	**2.81**	**0.76**
54	A	Building#8	GWB	Wall	Blue	N/A	Damaged	NEG	0.2	0.24
55	**C**	**Building#8**	**Wood**	**Window Trim**	**Blue**	**N/A**	**Damaged**	**POS**	**1.6**	**0.17**
56	B	Building#8	GWB	Wall	Blue	N/A	Damaged	NEG	0.39	0.2
57	B	Building#8	GWB	Wall	White	N/A	Damaged	NEG	0.14	0.15
58	D	Building#8	Wood	Door Trim	Blue	N/A	Damaged	NEG	0.01	0.2
59	B	Building#8	Wood	Door	Grey	N/A	Damaged	NEG	0.01	0.01
Building #3										
60	**C**	**Building#3**	**Wood**	**Wall**	**White**	**N/A**	**Damaged**	**POS**	**5.1**	**1.62**
61	**C**	**Building#3**	**Wood**	**Window Trim**	**Yellow**	**N/A**	**Damaged**	**POS**	**5.8**	**2.18**
62	A	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.07	0.19
63	C	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.2	0.02
64	A	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.24	0.9
65	C	Building#3	Wood	Wall	Green	N/A	Damaged	NEG	0.19	0.2
66	C	Building#3	Wood	Window Trim	Yellow	N/A	Damaged	NEG	0.23	0.01
67	**C**	**Building#3**	**Wood**	**Window Trim**	**Grey**	**N/A**	**Damaged**	**POS**	**5.1**	**1.82**
68	D	Building#3	Wood	Window Trim	Green	N/A	Damaged	NEG	0.21	0.11
69	Ceiling	Building#3	Wood	Ceiling	Green	N/A	Damaged	NEG	0.21	0.31
70	A	Building#3	Wood	Window Trim	Green	N/A	Damaged	NEG	0.23	0.15
71	C	Building#3	Wood	Wall Panels	Pink	N/A	Damaged	NEG	0.24	0.14
Building #9										
72	C	Building#9	Wood	Door	White	N/A	Damaged	NEG	0.08	0.14
73	Ceiling	Building#9	Wood	Ceiling	White	N/A	Damaged	NEG	0.01	0.16
74	A	Building#9	Wood	Wall	Blue	N/A	Damaged	NEG	0.12	0.12
75	D	Building#9	Wood	Door Frame	Black	N/A	Damaged	NEG	0.03	0.01
76	D	Building#9	Wood	Door Frame	Green	N/A	Damaged	NEG	0.07	0.23
77	A	Building#9	Wood	Pandecking	Blue	N/A	Damaged	NEG	0.08	0.43
78	Outside	Building#9	Wood	Outside Wood	Yellow	N/A	Damaged	NEG	0.12	0.42
79	Outside	Building#9	Wood	Panel	Brown	N/A	Damaged	NEG	0.13	0.24
Building #10										
80	C	Building#10	Wood	Wall	Brown	N/A	Damaged	NEG	0.03	0.07
81	Ceiling	Building#10	Wood	Ceiling	Blue	N/A	Damaged	NEG	0.01	0.03
82	D	Building#10	Wood	Door Trim	Yellow	N/A	Damaged	NEG	0.08	0.18
83	Floor	Building#10	Wood	Floor	Orange	N/A	Damaged	NEG	0.02	0.1
Building #11										

84	A	Building#11	Wood	Wall	Blue	N/A	Damaged	NEG	0.05	0.11
85	C	Building#11	Wood	Wall	Blue	N/A	Damaged	NEG	0.01	0.02
86	Ceiling	Building#11	Wood	Ceiling	Green	N/A	Damaged	NEG	0.14	0.01
87	A	Building#11	Wood	Window Trim	Green	N/A	Damaged	NEG	0.11	0.14
88	A	Building#11	Wood	Window Trim	White	N/A	Damaged	NEG	0.01	0.17
89	C	Building#11	Wood	Window Trim	Green	N/A	Damaged	NEG	0	0.08
90	B	Building#11	Wood	Door	White	N/A	Damaged	NEG	0.02	0.14
91	B	Building#11	Wood	Door	White	N/A	Damaged	NEG	0	0.01
92	A	Building#11	Wood	Exterior Door	White	N/A	Damaged	NEG	0.03	0.01
93	**D**	**Building#11**	**Wood**	**Door on Ground**	**White**	**N/A**	**Damaged**	**POS**	**3.92**	**0.04**
94	**D**	**Building#11**	**Wood**	**Window Trim**	**White**	**N/A**	**Damaged**	**POS**	**1.6**	**0.08**
95	A	Building#11	Wood	Wall		N/A	Damaged	NEG	0.02	0.2
96	A	Building#11	Wood	Wall		N/A	Damaged	NEG	0.16	0.11
97	Outside	Building#11	Wood	Wood outside	Blue	N/A	Damaged	NEG	0.19	0.13
Building #12										
98	**D**	**Building#12**	**Wood**	**Wall**	**Blue**	**N/A**	**Damaged**	**POS**	**1.35**	**0.25**
99	C	Building#12	Wood	Wall	Black	N/A	Damaged	NEG	0.16	0.39
100		**Calibration**						**POS**	**1.16**	**0.18**
101		**Calibration**						**POS**	**1.87**	**0.01**
102		**Calibration**						**POS**	**3.6**	**0.023**

APPENDIX E: BUILDING INSPECTOR CERTIFICATES

United States Environmental Protection Agency

This is to certify that

Alan Michael Caldwell

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402(a)(1), and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as a:

Risk Assessor

In the Jurisdiction of:

Alaska

This certification is valid from the date of issuance and expires December 22, 2011

AK-R-8196-2
Certification #

December 19, 2008
Issued On

Christina Colt

Christina Colt, Unit Manager, Solid Waste and Toxics
Office of Air, Waste and Toxics

Alaska
RISK ASSESSOR

Certified Lead-Based
Paint Professional

Certification No. AK-R-8196-2

Date of Birth	Expiration Date
03/21/1973	12/22/2011

Address
7713 Dover Ave.
Anchorage, AK 99504

Badge Holder's Name
Alan Michael Caldwell

Badge Holder's Signature

If found, drop in any mailbox
Postmaster: Please return to:

US EPA
1200 Pennsylvania Ave, NW
(MC-74040T)
Washington, DC 20460
or call 1-800-424-LEAD

CERTIFICATE OF TRAINING

THIS IS TO CERTIFY THAT

ALAN CALDWELL

Has Successfully Completed and passed
the required testing for the

EPA/AHERA Building Inspector Refresher

To comply with the training requirements of

This course was accredited by the Wisconsin Department of Health and Family Services and is in compliance with TSCA Title II and Wisconsin Ch. HFS 159 Wis. Adm. Code

Class date: 04/29/09

Satori Group, Inc
1310 E 66th Ave #2
Anchorage AK 99518
907-332-0456

Derek Lucas

Derek Lucas, Training Instructor

04/29/10
Expiration Date

Cert No: BI 4-09-108

APPENDIX F: PHOTOGRAPHS

Red 9 X 9 Tile

Building #1

Building #3

Transite pipe

LBP on roof fascia board Building #3

Debris piles

LBP on walls Building #6

Exterior Building #6

Building #10

Building #8

Various debris piles

Red 9X 9 tiles on ground

Exterior Door Cloth Building #2
Green LBP door frame

APPENDIX C

Photograph Log

Photograph #1: Structure #1 Exterior **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #2: Structure #1 Interior Door with Green LBP **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #3: Structure #1 Exterior **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #4: NVNC Debris Pile with 6" ACM Transite Pipe **Date: July 9, 2009**
Direction: West **Photographer: T. Ellingboe**

Photograph #5: Structure #2 Interior **Date: July 8, 2009**
Direction: West **Photographer: T. Ellingboe**

Photograph #6: Structure #2 Exterior **Date: July 8, 2009**
Direction: West **Photographer: T. Ellingboe**

Photograph #7: 9” x 9” ACM Tile Outside Structure #3 **Date: July 8, 2009**
Direction: N/A **Photographer: T. Ellingboe**

Photograph #8: Structure #3 Exterior **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #9: Broken 9” x 9” ACM Tile Outside Structure #3 **Date: July 8, 2009**
Direction: N/A **Photographer: T. Ellingboe**

Photograph #10: Intact 9” x 9” ACM Tile Outside Structure #3 **Date: July 8, 2009**
Direction: N/A **Photographer: T. Ellingboe**

Photograph #11: Structure #3 Window Trim with LBP **Date: July 8, 2009**
Direction: South **Photographer: T. Ellingboe**

Photograph #12: Structure #3 Green Window Trim with LBP **Date: July 8, 2009**
Direction: West **Photographer: T. Ellingboe**

Photograph #13: Structure #3 Green Fascia with LBP **Date: July 8, 2009**
Direction: Unknown **Photographer: T. Ellingboe**

Photograph #14: Structure #4 and Debris Pile **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #15: Structure #4 Exterior Door with LBP **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #16: Structure #4 Green Door Frame with LBP **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #17: Structure #5 ACM Suspect Broken Tile **Date: July 8, 2009**
Direction: South **Photographer: T. Ellingboe**

Photograph #18: Structure #6 Interior with Yellow LBP **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #19: Structure #5 Exterior 4" x 4" Post with Yellow LBP **Date: July 8, 2009**
Direction: South **Photographer: T. Ellingboe**

Photograph #20: Structure #6 Interior with LBP **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #21: Structure #7 Interior Roof Joist with LBP **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #22: Structure #7 Interior Door with Light Blue LBP **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #23: Structure #7 Exterior **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #24: Structure #8 Exterior **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #25: Structure #8 ACM Tile Near North Entry Door **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #26: Structure #8 Interior Ceiling **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #27: NVNC Debris Piles Looking North from Structure #8 Date: July 8, 2009
Direction: North Photographer: T. Ellingboe

Photograph #28: NVNC Debris Piles Looking North from Structure #8 Date: July 8, 2009
Direction: North Photographer: T. Ellingboe

Photograph #29: Structure #8 Blue Paint on Window Frame with LBP Date: July 8, 2009
Direction: East Photographer: T. Ellingboe

Photograph #30: Structure #8 Blue Paint on Window Frame with LBP Date: July 8, 2009
Direction: West Photographer: T. Ellingboe

Photograph #31: Structure #3 Interior with Yellow Paint with LBP Date: July 8, 2009
Direction: North Photographer: T. Ellingboe

Photograph #32: Structure #3 Green Paint on Window Frame with LBP Date: July 8, 2009
Direction: West Photographer: T. Ellingboe

Photograph #33: Structure #9 Exterior **Date: July 8, 2009**
Direction: West **Photographer: T. Ellingboe**

Photograph #34: Structure #9 Exterior with Suspect ACM White Tile **Date: July 8, 2009**
Direction: Southeast **Photographer: T. Ellingboe**

Photograph #35: Structure #10 Exterior **Date: July 8, 2009**
Direction: North **Photographer: T. Ellingboe**

Photograph #36: Structure #11 Exterior **Date: July 8, 2009**
Direction: West **Photographer: T. Ellingboe**

Photograph #37: Structure #11 Interior Door Laying on Ground with LBP Date: July 8, 2009
Direction: Northeast Photographer: T. Ellingboe

Photograph #38: Structure #11 Interior Window on Floor with White LBP Date: July 8, 2009
Direction: North Photographer: T. Ellingboe

Photograph #39: Structure #11 Exterior Lumber Pile with LBP **Date: July 8, 2009**
Direction: West **Photographer: T. Ellingboe**

Photograph #40: NVNC Site Debris Piles **Date: July 8, 2009**
Direction: South **Photographer: T. Ellingboe**

Photograph #41: NVNC Debris Pile **Date: July 8, 2009**
Direction: South **Photographer: T. Ellingboe**

Photograph #42: NVNC Site Debris Piles **Date: July 8, 2009**
Direction: Northeast **Photographer: T. Ellingboe**

Photograph #43: NVNC Debris Pile/Former Structure Foundation Date: July 8, 2009
Direction: North Photographer: T. Ellingboe

Photograph #44: NVNC Site Debris Piles/Former Structure Foundations Date: July 8, 2009
Direction: Northeast Photographer: T. Ellingboe

Photograph #45: NVNC Debris Piles **Date: July 8, 2009**
Direction: South **Photographer: T. Ellingboe**

Photograph #46: NVNC Site Debris Piles **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #47: NVNC Debris Piles **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #48: NVNC Site Debris Piles/Former Structure Foundations **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #49: Structure #12 Exterior **Date: July 8, 2009**
Direction: East **Photographer: T. Ellingboe**

Photograph #50: Structure #12 Interior with Blue LBP **Date: July 8, 2009**
Direction: South **Photographer: T. Ellingboe**

APPENDIX D

Field Notebook

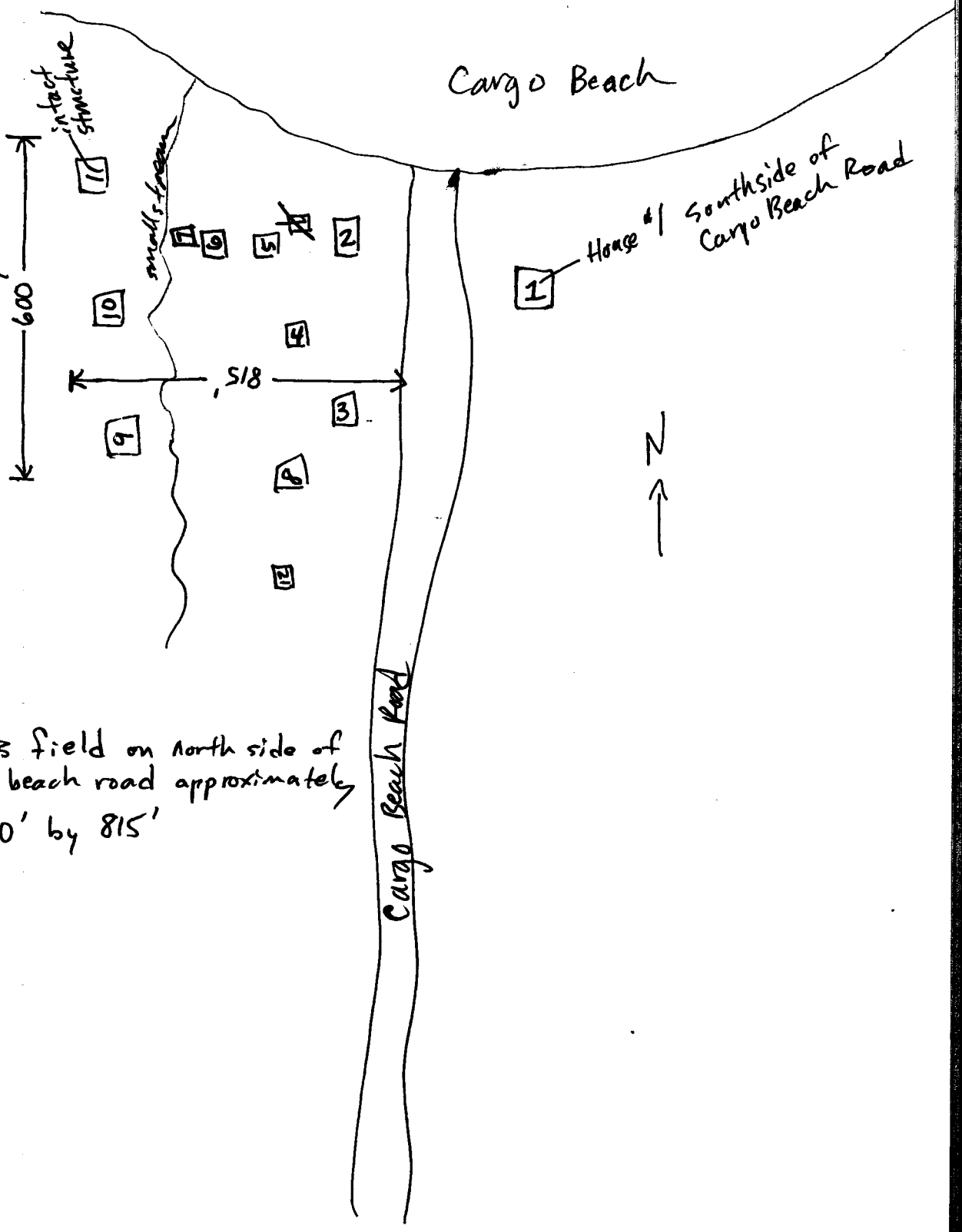
Savoonga NALEMP
Job # 49029
Bristol Environmental Remediation Services
Project Manager: Tyler Ellingboe
Site Location: Native Village of Northeast Cape

July 8, 2009
0630 - 0645 Safety Meeting
Weather overcast slight wind

0700 - Satori Group building inspector could not fly into site last night due to high winds. Should arrive sometime this morning No contact yet with Fritz with NVS.

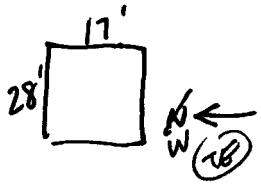
1015 - Alan Caldwell with Satori Group arrived at site via Bering Air. Orientation with Chuck. No contact yet with Fritz.

1245 - Arrive at NVNC site with Alan Caldwell, Scott Schultz (Emerald Alaska). We will start inspection without Fritz.



Debris field on north side of cargo beach road approximately 600' by 815'

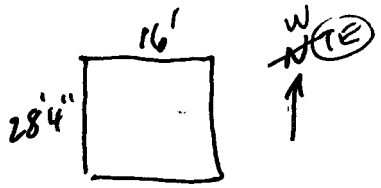
1313 - House #1



Photograph 1, 2, 3
Photograph 2 - interior door with green paint - tested positive for lead based paint

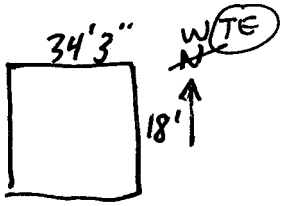
GPS Waypoint #30
Photo 1 facing ~~east~~ north (TE) - exterior
Photo 2 facing ~~south~~ east (TE)
Photo 3 facing ~~south~~ east (TE) - exterior

1330 - House #2



GPS Waypoint #31 (TE)
Photo #4 - Transite (ACB) wallboard on interior facing SE
Photo #5 - House #2 interior, poor condition facing NW (TE)
Photo #6 - facing ~~north~~ west (TE) - building exterior
No lead-based paint found / Suspect ACM tile friable pieces found

1345 - House #3



GPS Waypoint #32
9" x 9" tile suspect for ACM
Photo #7 - photo of ACM suspect tile
Photo #8 - facing ~~south~~ east (TE) exterior of building

1346 - House #3

9"x9" tiles found outside on ground on ~~northside~~ west (TE)

of structure tiles are red, black, and some are gray

Photos 9, 10, #11 photos of broken ACM suspect tile

Photo 12 - Lead acid batteries / propane tank facing ~~south~~ east (TE)

Photo 13 - Propane tank facing ~~south~~ east (TE)

Propane tanks appear to be empty in fair condition

Tanks would require caps and plugs prior to shipment

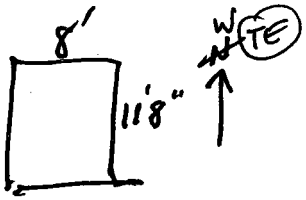
Lead found in window trim (yellow), fascia board

Photo 14 facing ~~west~~ south (TE) yellow & white trim

Photo 15 facing ~~south~~ west (TE) green window trim

Photo 16 fascia (green)

1400 - Structure #4 (shack)



GPS Waypoint #33

Photo #17 facing ~~east~~ north (TE) shack & debris pile

Photo #18 facing ~~south~~ east (TE) suspect rubber matting

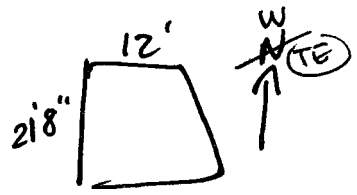
Photo #19 facing ~~south~~ east (TE) potential con/htw

Photo #20 - facing ~~east~~ north (TE) green paint on door frame.
- lead based paint detected

Photo #21 - facing ~~south~~ east (TE) exterior door positive for lead

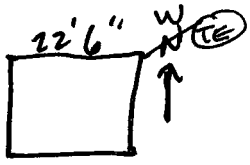
1415 – Debris pile between structure #4 and 5
Transite pipe Photo #22
- 6" diameter × 8' long
GPS Waypoint #34

1418 – Structure #5



GPS Waypoint #35
Photo ~~22~~ 23 TE – facing ~~west~~ south TE broken ACM suspect tiles
Photo ~~23~~ 24 TE – facing ~~west~~ south TE building exterior with suspect roofing mastic TE
Photo ~~24~~ 25 TE – facing ~~southeast~~ northeast TE broken lead acid battery
Photo ~~25~~ 26 TE – 55 gallon drums inside structure, empty facing ~~south~~ east TE
No lead detected on interior walls or floors
Lead detected on yellow painted 6" × 6" beam on ground on ~~eastside~~ northside TE of structure Photo ~~26~~ 27 TE facing ~~west~~ south TE

1440 – Structure #6



GPS Waypoint #36
Photo ~~27~~ 28 TE facing ~~north~~ west TE Con/Htw paint cans, dried out one can intact with product no labeling visible
Photo ~~28~~ 29 TE facing ~~east~~ north TE paint can on book shelf

Structure #6 (continued)

Green, Blue, yellow, light blue paint on interior

Light blue paint positive for lead Photo 29 → 30 (TE)

facing ~~south~~ east (TE)

Photo ~~30~~ 31 (TE) Yellow paint on ~~south~~ east (TE) wall interior positive for lead

Photo ~~31~~ 32 (TE) Yellow paint on ~~west~~ south (TE) wall interior positive for lead

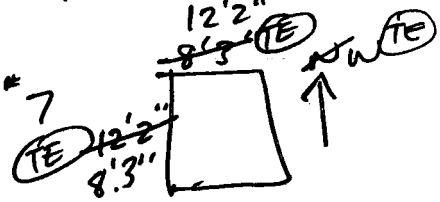
Gray paint on fallen door negative for lead

Exterior black paint negative for lead

Photo ~~32~~ 33 (TE) facing ~~west~~ south structure exterior

Photo ~~33~~ 34 (TE) facing ~~south~~ east (TE), ~~east~~ north (TE) west side of structure ACM suspect floor tile

1500 Structure #7



GPS Waypoint #37

Photo ~~34~~ 35 (TE) facing ~~north~~ (TE) west 1 gallon ORC lube oil USAF

Photo ~~35~~ 36 (TE) facing ~~south~~ (TE) east 20 lb. bag chlorine dishwashing soap

Photo ~~36~~ 37 (TE) green painted roof joist hut for lead (TE) facing ~~south~~ east

Photo ~~37~~ 38 (TE) green/gray interior door on ~~east~~ north side (TE) door positive for lead

Photo ~~38~~ 39 (TE) outside ~~east~~ north (TE) door dried blue paint from rusted 5-gallon paint can positive for lead

Structure #7

Photo ~~36~~ 39 (TE) 40 Structure 7 exterior

1510 Structure #8 GPS Waypoint #38

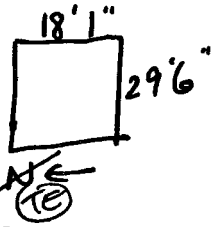


Photo ~~40~~ 41 (TE) facing ~~south~~ east (TE) structure exterior

Photo ~~41~~ 42 (TE) inside ~~eastside~~ northside (TE) entry ACM suspect tile facing ~~south~~ east (TE)

Photo ~~42~~ 43 (TE) inside ~~eastside~~ northside (TE) entry ceiling NEC scavenged plywood

Interior gray, black, gray ACM suspect tile

Photo ~~43~~ 44 (TE) facing ~~east~~ north (TE) from structure 8 } debris piles

Photo ~~44~~ 45 (TE) facing ~~east~~ north (TE) from structure 8 }

Light blue window frames positive for lead on ~~north~~ west (TE) and ~~south~~ east (TE) ends of structure, ~~west~~ south (TE) end of structure

Photo ~~45~~ 46 (TE) facing ~~south~~ east (TE)

Photo ~~46~~ 47 (TE) facing ~~north~~ west (TE)

Photo ~~47~~ 48 (TE) facing ~~west~~ south (TE)

1515 - Eugene Tuolie and wife arrive and we entered Structure #3.

Yellow paint on ~~east~~ north (TE) interior wall positive for lead based paint

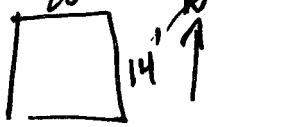
Photo #~~48~~ 49 (TE) facing ~~east~~ north

Suspect ACM vinyl on floor

Green/gray paint on ~~north~~ west (TE) facing window frame positive for lead based paint

Photo #~~49~~ 50 (TE) facing ~~north~~ west (TE) window frame

1552 - Structure #9



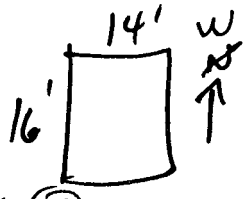
GPS Waypoint #39/40

Photo ~~50~~ 51 (TE) facing ~~north~~ west (TE) exterior structure

Photo ~~51~~ 52 (TE) - Suspicious white tile ACM? facing ~~southwest~~ east (TE)
- ~~north~~ west (TE) side of structure exterior

No lead based paint found at structure

1607 - Structure #10



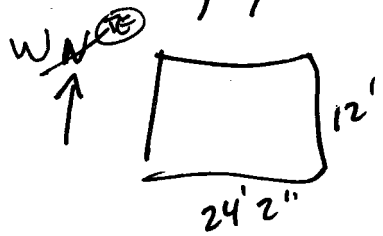
GPS Waypoint #41

Photo ~~52~~ 53 (TE) facing ~~east~~ north (TE) exterior of structure

No lead based paint detected on painted surfaces

1623 Structure #11

Fritz Waghiyi & Merton arrived from Savoonga



GPS Waypoint #42

Photo #~~53~~ 54 (TE) facing ~~north~~ west (TE) exterior of structure

No suspect ACM found in interior

Photo ~~54~~ 55 (TE) facing ~~southeast~~ northeast (TE) door laying along wall

positive for lead

Photo ~~55~~ 56 (TE), facing ~~east~~ north (TE), window white paint positive for lead

window laying against wall

Photo ~~56~~ 57 (TE) facing ~~north~~ west (TE), stacked lumber on ~~south~~ east side (TE)

of structure positive for lead

1638 - Photo ~~57~~ 58 (TE) facing ~~south~~ east (TE) NVNC site and

debris piles

GPS Waypoint #43 ~~Northeast~~ west (TE) corner of NVNC site

and debris field

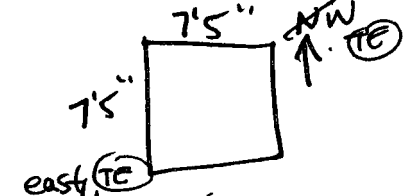
GPS Waypoint #44 ~~North~~ South (TE) ~~west~~ corner

GPS Waypoint #45 Southwest ~~east~~ (TE) corner

GPS Waypoint #46 ~~Southeast~~ (TE) corner

Photos 59-70 TE Random photos of NVNC site and debris piles

1706 - Structure 12 no roof



GPS Waypoint #47

Photo #70 TE facing south exterior

Lead positive on interior blue painted surfaces

Photo #71 TE of south TE wall blue painted panels

Photo #72 TE facing west TE exterior

1800 - Spoke with Fritz Waghiyi and Merton Plan to meet with them at camp at 0700 tomorrow morning to ride 8 miles North along coast to second village camp site

1830 - Alan Caldwell with Satori will need to fly out tomorrow morning at around 0900 in order to leave site. He will not be able to inspect the second fish camp site. After I inspect and photograph site (second fish camp) I will return and inspect NVNC and other sites

of concern with Fritz for inclusion in the SPIP

Thursday, July 9, 2009

0630 - Safety Meeting

0700 - Waiting for Fritz and Merton from NVS to meet us at the man camp for travel to second fish camp site

0730 - Scott Schultz and I travel to NVNC to locate Fritz and Merton. Found them just getting up. They said that they will meet us at the camp in about 45 minutes

0745 - Scott and I arrive at camp (BERS) and begin to wait.

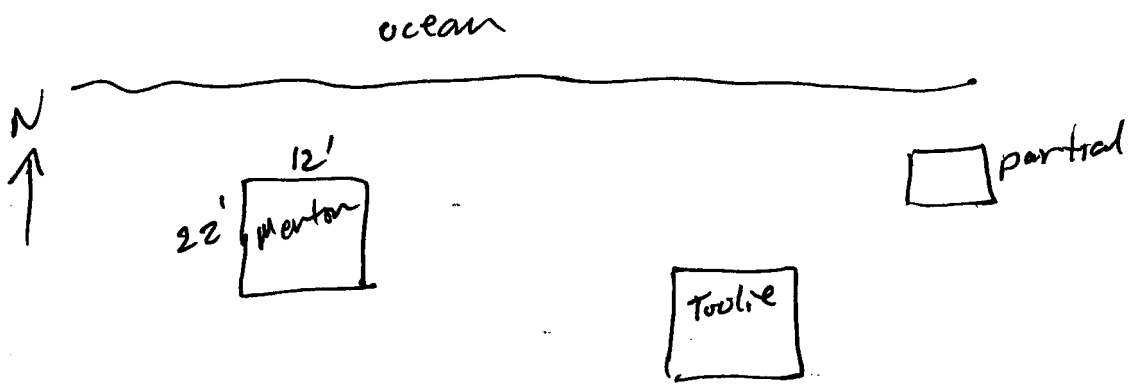
0900 - Scott, Tyler, Fritz, + Merton depart man camp for second fish camp up along north coast

0936 - Arrive at second fish camp

2 cabins and one partial shack

1 cabin owned by Eugene Toolie

1 cabin owned by Merton Miklahook



Merton Cabin GPS Waypoint #48

Photo 1 facing east exterior SFC1

Photo 2 facing north exterior SFC2

Photo 3 facing west exterior SFC3

Photo 4 facing south exterior SFC4

Weathered white paint on exterior

Green/blue paint on interior door suspect. LBP

Photo 5 interior door SFC5

Light green paint above interior door Photo 8 SFC8

Photo 6/7 inside SFC6/SFC7

Photo 9 inside of exterior door green/blue paint SFC9

Eugene Toolres Cabin
GPS Waypoint #49

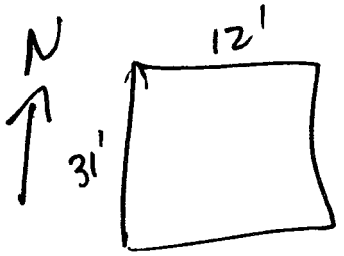


Photo 10	westside of cabin	~~EFSFC10~~
Photo 11	northside of cabin	SFC11
Photo 12	eastside of cabin	SFC12
Photo 13	southside of cabin	SFC13
Photo 14	suspect green/blue paint on exterior door frame	SFC14

Partial shack
GPS Waypoint #50

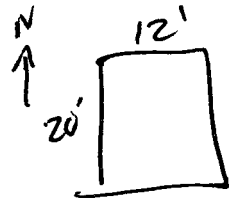


Photo 15	facing south exterior	SFC15
Photo 16	facing west exterior	SFC16
Photo 17	facing north exterior	SFC17
Photo 18	facing east exterior	SFC18

GPS Waypoint #51 NE corner of partial shack
GPS Waypoint #52 SE corner of cabin area / debris piles
GPS Waypoint #53 SW corner of area
GPS Waypoint #54 NW corner of area

Eugene Toolres Cabin Interior

Photo 19 northside entry way window SFC19
20 blue paint on window trim SFC20
Photo 20 (TE) 21 facing south door into living space SFC 21 (TE)
Photo 21 (TE) 22 white paint on walls/ceiling SFC 22 (TE)
Photo 22 (TE) 23 gray paint on closet SFC 23 (TE)
Photo 23 (TE) 24 west facing window gray paint SFC 24 (TE)
Photo 24 (TE) 25 facing north interior door pink paint SFC 25 (TE)

1315 - Arrive back at NVNC to conduct site walk and inspection

1323 - Concrete footings with exposed rebar
Photo # 24 (TE) 74 facing north GPS Waypoint # 55

1328 - Unknown pipe sticking out of ground
Photo # 25 (TE) 75 GPS # 56 facing south

1333 - Debris pile metal roofing + wood debris
Photo 26 (TE) 76 facing south GPS # 57

1335 - Drum with unknown contents
Photo 27 (TE) 77 facing north GPS # 58

Page Accidentally Skipped

1337- Mounded soil with visible burred drums
Photo ~~29~~ 78 (TE) facing NE, Photo ~~30~~ 79 (TE) North, Photo ~~31~~ 80 (TE) North
GPS # 59

1349- Stained soil area GPS # 60
Photo ~~30~~ 81 (TE) facing east

1350- ACM 6" pipe GPS # 61
Photo ~~31~~ 82 (TE) facing NE

1352- Broken military battery GPS # 62
Photo ~~32~~ 83 (TE) facing south
Photo ~~33~~ 84 (TE)

1355- Broken ACM tile on old house foundation
Photo ~~34~~ 85 facing east
GPS # 63

1357- Old stove possibly used to burn used oil
GPS # 64
Photo ~~35~~ 86 (TE) facing west

1358 - possible ACM containing wall board
GPS # 65
Photo # ~~36~~ 87 facing west

1359 - Spoke with Eugene Toolie and he mentioned that he was not aware of any specific burn areas or stained soil areas at NVNC. He did mention that ~~many~~ of the former fish camp families burned used drain oil in ~~there~~ their stoves/heaters

Eugene mentioned that the military used to store/dump used drain oil at a small pond area near the site 7 landfill

1417 - Small drum dump area all rusted out no contents
Photo 88 facing south
GPS # 66

1447 - Site of old "Pump House" concrete pad not present
Eugene says when Nugget Construction demolized pump house they were going to thin spread the soil

Eugene said that soil berm war made instead
Soil berm shows some staining
GPS #67 old pump house site
GPS #68 site of soil berm from pump house site
Photos ~~38~~ 89-92 - ~~41~~ of pump house site, berm, and stained soil

1509 - Eugene Toolre shows us where the initial dump site was prior to the military moving to the Site 7 landfill
GPS Waypoint # 69 / Photos ~~42~~ 93-98 - ~~47~~ Random photos of site
Tires, drums, cable, marston matting, debris
Inside and surrounding small pond
GPS #70 Pond surrounded by debris

1521 - Drum dump site
Drums visible sheen visible in drainage water
Stained soil
Diesel odor detectable
GPS 71 ~~western~~ southern edge
GPS 72 middle edge
GPS 73 ~~eastern~~ northern edge

site located west of large (former) tank storage area

4 random photos
photos ~~48~~ - ~~51~~ 99-102

1528- Drum dump site. Eugene mentioned that this area was used for a drum dump site Eugene estimates 12-15 drums buried were full of used oil or solvent, There used to be 5 gallon cans of tar 50-70, but were picked up and transported to Nome by a family.

site located near main complex off right side of road when going up to main complex

GPS 74 SE edge of area
GPS 75 middle edge of area
GPS 76 NW edge of area

Random photos # ~~52~~ - ~~55~~ 103 - 106

1538- Location of 3 former diesel storage tanks

GPS 77, 78, 79

Photo ~~56~~ 107 Photo, northeast facing of former ~~Photo 57 108~~ fuel storage tank area

1548- Suspect pond with dark stained rocks. Eugene mentions that this is where drain oil used to be dumped/stored.

Located just east and downhill of Site 7 landfill locate

GPS 80 East edge of pond/stained rock area
81 North " "
82 West " "
83 South " "

Photos ~~58, 59, 60~~ 108, 109, 110 random photos

1600 - Site 7 Landfill
- Site 7 landfill was not inspected since Bristol is performing site work there this summer
- ≈200 drums are exposed along outskirts most empty; found 1 with content
- Most test pits along top of landfill show suspected clean fill

1718 - Nalemp inspection complete
No soil samples were ~~obtained~~ collected.