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May 6, 2008

Ms. Sheila Gaston
Remediation and Restoration Unit
Federal Facilities Program
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South, B2
Denver, CO 80246-1530

Re: Project Completion Report and Request for No Further Action
Former Lowry Air Force Base
Building 898 - Building Abatement and Demolition

Dear Ms. Gaston:

Lowry Assumption, LLC (LAC) submits the following completion report and NFA request for the former Air Force Building 898 in accordance with Consent Agreement No. 01-08-07-02.

Site Background

Building 898 was constructed in 1942 and used as a dental hygiene clinic (Figure 1). As a result of mercury spills and disposal of amalgams containing mercury within the building, mercury was believed to be present in waste system piping and flooring materials. In 1975, a study was done which indicated that mercury levels in the air within the building were above Occupational Safety and Health Administration Permissible Exposure Limits. The Air Force performed cleaning of the building at that time to reduce exposures. Subsequently, several investigations and surveys of the building were performed to determine the extent of mercury contamination and potential risks to human health. The investigations include:

- Phase 1 Records Search, Engineering Science, 1983 (Lowry_AR_05)
 - *Identified chemicals used at the building and disposal practice of draining waste to the sewer.*
- Environmental Baseline Survey, Halliburton, 1993 (Lowry_AR_955)
 - *Documented hazardous waste storage at the building and removal.*
- Facility Assessment, Parsons, 1996 (Lowry_AR_477)
 - *Listed Building 898 as a potential solid waste management unit because of the report of miscellaneous glass containers discovered in the crawlspace that were later removed by Air Force.*

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- Phase II Environmental Baseline Survey, Versar, 1996(Lowry_AR_599)
 - *Visual inspection of property.*
 - Phase III Environmental Baseline Survey, Mercury Survey, Versar, 1999 (Lowry_AR_595)
 - *One of seven buildings investigated in program. Samples collected in 11 of 20 rooms, including sinks and breathing zone sampling. Mercury concentrations exceeded risk-based action levels, precluding unrestricted use, but did not exceed OSHA, NIOSH or ACGIH occupational exposure levels.*
 - Phase III Environmental Baseline Survey, Mercury Survey of Building 898, Versar, 2002 (Lowry_AR_997)
 - *Additional sampling was performed to evaluate whether limited remediation, removal of sinks and piping, would sufficiently reduce vapor allowing unrestricted transfer. Sampling indicated that air concentrations were below occupational exposure limits, but mercury vapors were present in the building above risk based action levels determined by the CDPHE.*
 - Letter Work Plan and Additional Soil Sampling Building 898, LAC, April 3, 2007
 - *Pre-demolition Building Survey*
 - *Pre-demolition Building Abatement*
 - *Building Demolition*
 - *Soil Sampling for Mercury in soils beneath the building*
 - *Sewer Line Inspection and Removal*

The full text of these documents may be reviewed at the following website:

<https://afarpaar.afarpa.pentagon.af.mil/ar/docsearch.aspx>

Mobilization

The Department approved the Letter Work Plan for remedial efforts associated with Building 898 on April 4, 2007. These efforts were concentrated on potential mercury in soils associated with its former use as a dental lab. In preparation for the demolition, an asbestos building survey was performed in April 2007.

LAC's contractor Foothills Environmental performed the pre-demolition sampling survey of asbestos, mercury, lead and other RCRA metals in the structure in April 2007 prior to demolition. The pre-demolition asbestos building inspection was performed in accordance with Colorado Department of Public Health and the Environment Regulation 8. A CDPHE certified Building Inspector completed the survey. Foothills Environmental also collect bulk samples according to the American Society for Testing and Materials (ASTM) Standard E 1908-03 of debris waste that were to be generated from the Building 898 demolition for Toxicity Characteristic Leaching Procedure (TCLP). The samples were tested for Leachable Lead (Pb), Mercury (Hg), and the remaining RCRA metals in order to meet all applicable solid waste regulations and disposal requirements. The metals results did not indicate additional disposal

requirements, and the data are presented in the survey report. The inspection identified several building components that contained asbestos that required abatement. This included an asbestos spill area located in the building crawl space. The building survey also identified various household-type wastes (30 five gallon drums of latex paint and wood stain) in a storage room that required special disposal. The 898 building survey and data are included in the CD supplement to this report in Appendix A.

All household hazardous waste were collected, properly packaged, manifested, and disposed of by Nevco Services, Inc. prior to performing abatement. Nevco Services, Inc. also collected, manifested, and disposed of three sink traps from the building as mercury containing material prior to performing the abatement activities. Manifests for the household hazardous waste, mercury containing p-traps, and ACM are presented in the CD supplement to this report in Appendix E.

Abatement and Demolition

The abatement of the building was delayed for approximately 5 months due to nesting kestrels in the building. LAC's contractor Hudspeth and Associates, Inc (H&A) performed abatement of the building from August 9 through August 15, 2007 (CDPHE Record Number 57779; Permit #07DE3920D- presented in the CD supplement to this report in Appendix B). The abatement was conducted in multiple secondary enclosures and one full enclosure. A variance was reviewed and granted by CDPHE on March 07, 2007 from the requirements in Section III.N.1a-c of Regulation 8 regarding the crawl space abatement activities. The air was monitored for mercury during the abatement in the crawl space using a Jerome Mercury Vapor Analyzer. No soil staining was observed and no vapors were detected. All ACM were properly removed throughout the building, including the crawl space, and placed in a lined 40 cubic yard (CY) roll-off. All ACM waste was manifested as friable ACM disposed at Waste Management Denver and Arapahoe Disposal Site (DADS). Manifests are presented in the CD supplement to this report in Appendix E

Upon removal of all ACM, the third party air monitoring (AMS) Foothill Environmental performed a clearance of the structure and the crawl space by visual and analytical means. Air monitoring and clearance data are presented in the Asbestos Abatement Report in the CD supplement to this report in Appendix C.

Upon clearance by the third party AMS and receipt of demolition approval from CDPHE on August 24, 2007 (CDPHE Record Number 58148; Notice Number 07DE3920D and the City of Aurora Demo Permit 2007-197341-000-00CT, included in the CD supplement to this report in Appendix B), LAC's contractor H&A mobilized to the site. Demolition was performed on August 28 through August 30, 2007 with all demolition debris hauled to DADS for disposal. Manifests are presented in the CD supplement to this report in Appendix E.

On August 30, 2007, the demolition contractor was removing the final pieces of demolition debris from the former building when an unknown asbestos discovery was made by CDPHE inspectors. The contractor moved a piece of the concrete footer from the southwest corner of the building, which broke open, exposing a pipe that was wrapped in aircell insulation. The pipe was less than two feet long, encased within the footer, and not visible from within the crawlspace or from outside of the building. Additional pieces of ACM were observed by CDPHE inspectors on the surface of the former crawl space. There was no historic information reviewed by LAC prior to the demolition to indicate that this pipe existed as it was encapsulated within the concrete footer.

Once notified of the ACM at this location LAC took the following steps in accordance with the Consent Agreement and CCR section 5.5.3 Response for Unplanned Asbestos Discovery:

A. IMMEDIATE ACTIONS:

- (1) Stopped all soil-disturbing activities;
- (2) Erected fencing with windscreen to restrict access; and
- (3) Wetted the surface and covered the crawlspace area with plastic to prevent any release.

Release to the environment was minimized, as these actions occurred within one (1) hour of the discovery by the Department's inspectors.

B. 24-HOUR NOTIFICATION REQUIREMENTS:

The Department was at the site at the time of the discovery. As stated above, LAC met with the Department on August 30, 2007 and August 31, 2007 to discuss the situation at the site. In addition, LAC notified the City of Aurora, the Community Garden (Aurora Parks), and the Lowry Economic Redevelopment Authority (the property owner) of the discovery.

Soil Sampling

LAC collected samples of the soil beneath the building for mercury in accordance with the work plan.

LAC collected approximately eight (8) discrete surface soil samples (0-6 inches) beneath the building. The sample locations are identified in Figure 1.

- Visual observations were made during the removals of the piping and flooring materials looking for any staining or evidence of spills;
- A real-time mercury vapor monitor was used during the removals to identify areas with the potential for mercury contamination with no detections of mercury vapor within the building or the crawl space;

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- No visual observations of mercury were observed within the crawl space soils therefore the eight samples were collected in the vicinity of the former sinks or drain piping hanging from the floor joists.

Soil samples were analyzed for total mercury via EPA Method SW-846 7471A. All soil samples were analyzed in an expedited turn around time frame. No soil samples exceeded the mercury action level of 82 mg/kg identified in the *Final Transition Plan II/Soils Management Program* (LAC, November 2006). For disposal purposes, LAC analyzed two samples with detections of mercury for further analysis by Toxicity Characteristic Leaching Procedure analysis for disposal profiling purposes. Neither soil sample exceeded the mercury level identified by Waste Management for profiling waste materials for disposal. Soils later identified for removal for friable asbestos were properly manifested to contain very low levels of mercury within the soils. Analytical results are presented in the CD supplement to this report in Appendix D.

Unplanned Asbestos Discovery – Soil Remediation

A variance to Regulation 8 was reviewed and granted by CDPHE on January 22, 2008 from the requirements in Section III.L, N.1a-c regarding the containment for the abatement activities. LAC's contractor Hudspeth and Associates, Inc. performed abatement of the unplanned asbestos discovery from March 10 through March 14, 2008 (CDPHE Variance approval letter dated January 22, 2008; Permit #07DE4557A). The abatement was conducted in accordance with the variance request and associated work plan in two separate enclosures to address the asbestos containing debris pile and the asbestos containing concrete footer. All ACM were properly removed throughout the enclosures and placed in a lined 40 cubic yard (CY) roll-off. All ACM waste was manifested as friable ACM/mercury containing soil disposed at Waste Management DADS facility. Manifests are presented in the CD supplement to this report in Appendix E.

Upon removal of all ACM, the third party air monitoring Foothill Environmental performed a clearance of the containment structures by visual and analytical means. Air monitoring and clearance data are presented in the Asbestos Abatement Report provided in Attachment C to this report.

ACM Soil Removal

Upon completion of the abatement of the debris pile and the concrete footer LAC's contractor H&A began abatement activity in soils on March 20, 2008 and completed the abatement activity on March 21, 2008. H&A removed 220 CY of soil to a pre-determined depth of twelve inches using an excavator and directly loaded the soil into lined end-dump trucks. Air monitoring was conducted in conjunction with visual observation to evaluate frequency of watering of the soil in order to minimize airborne dust during excavation. Soil was pre-wetted, sprayed during excavation and during loading in order to prevent any and all emissions during abatement activities. All ACM waste was manifested as friable ACM/mercury containing soil and disposed



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at Waste Management DADS facility. Manifests are presented in the CD supplement to this report in Appendix E.

Upon removal of all ACM contaminated soil, the third party air monitoring Foothill Environmental performed a clearance of the excavation area by visual means.

Sanitary Sewer Inspection

The Consent Agreement required that “the drainage system connecting to the first manhole be investigated to determine if there are releases of mercury that require remediation.” In fulfillment of this requirement, LAC exposed the sewer drainage system from the building to the sewer main located within Beeler Street. LAC visually observed the sewer excavation for any indications of contamination using the procedures identified in the *Soils Management Program* and monitored air within the pipe and the excavation using a Jerome Mercury Vapor Analyzer. No soil staining was observed and no vapors were detected. LAC also investigated the sewer piping utilizing a video camera and found the pipe to be in good condition. Once the pipe was fully exposed, LAC further investigated the piping by tapping holes in four locations along the length of the exposed pipe in order to identify possible sediment within the pipe. No sediment was identified within the piping. The sewer pipe was then fully excavated and taken to Waste Management DADS facility as construction debris.

Conclusion and Request for Closure

According to the above documentation, LAC believes all requirements outlined in the Consent Agreement and the November 13, 2002 letter from CDPHE to the Air Force regarding the former Air Force Building 898 have been met. LAC is formally requesting a No Further Action determination for all issues related to the former Air Force Building 898.

If you have any questions regarding this submittal please contact me at (303) 972-6633.

Sincerely,

Lowry Assumption, LLC

A handwritten signature in black ink, appearing to read "J. Yerton", is written over a light blue circular stamp.

John Yerton
Project Manager



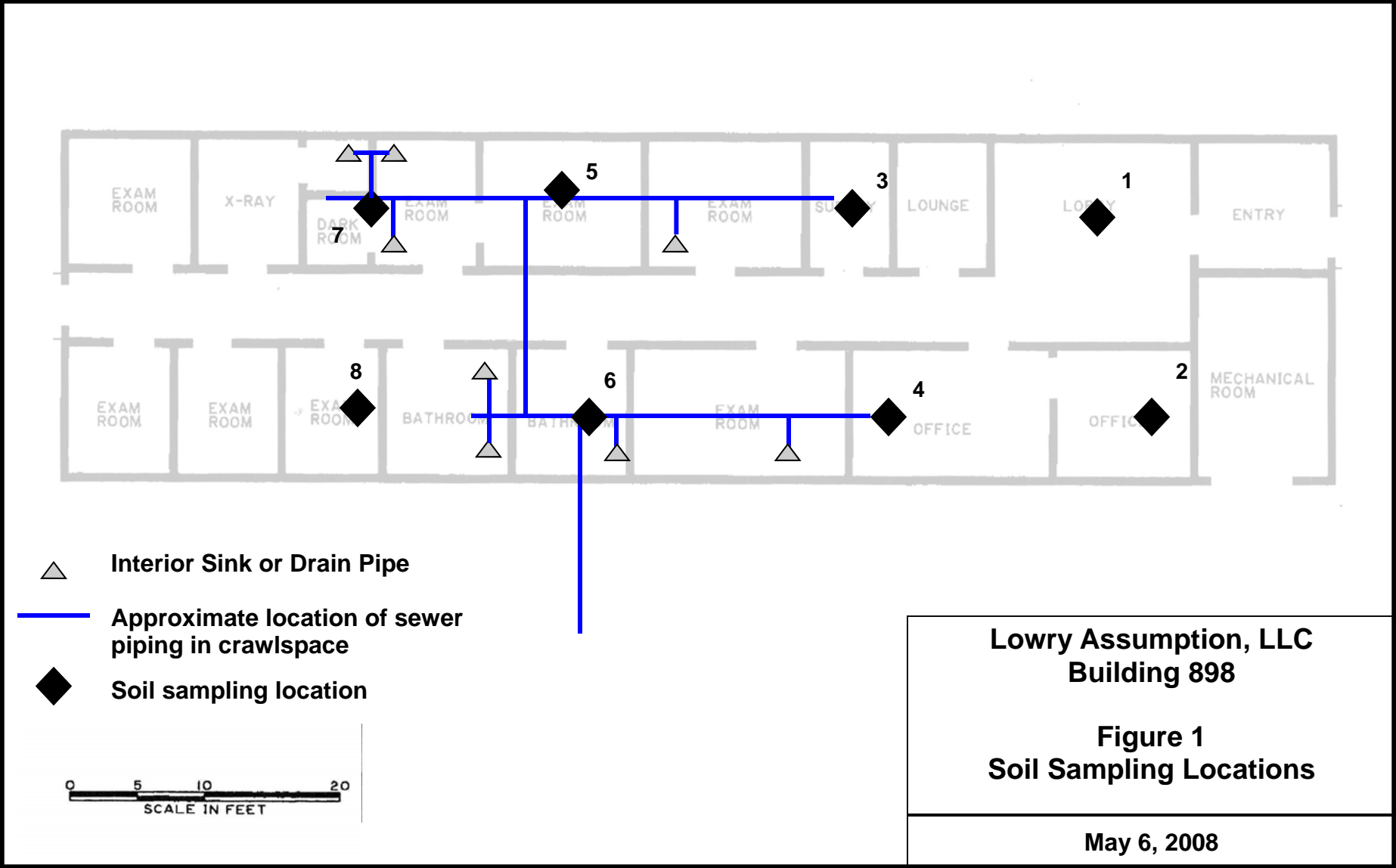
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Appendices CD:

- A – Building 898 Pre-Demolition Building Survey
- B – Permits
- C – Building 898 Abatement Report
- D – Mercury Analytical Results
- E – Manifests

Distribution:

Karen Hancock - Aurora
David Erickson - CCOD
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Stanley Pehl - AFCEE
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Monty Force - LRA
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Joe Aiken - LAC
Elizabeth Sopher - LAC (2)
Lowry Project File



Lowry Assumption, LLC
 Building 898

Figure 1
 Soil Sampling Locations

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DATA CD

APPENDIX A
Building 898 Pre-Demolition Building Survey

APPENDIX B
Permits

APPENDIX C
Building 898 Abatement Report

APPENDIX D
Mercury Sampling Analytical Results

APPENDIX E
Manifests