



March 23, 2018

Mr. Chris Grossman
Nuclear Material Safety and Safeguards
Division of Decommissioning, Uranium Recovery, and Waste Programs
Materials Decommissioning Branch
U.S. Nuclear Regulatory Commission
11545 Rockville Pike, MS T8-F05
Rockville, MD 20852

**SUBJECT: SITE SUMMARY REPORT FOR THE ASTRO INSTRUMENT INC.
PROPERTY AT 11496 PORTLANCE AVENUE IN DETROIT,
MICHIGAN
CONTRACT NO. NRC-HQ-50-17-A-0001; DCN 5307-TR-02-1**

Dear Mr. Grossman:

Oak Ridge Associated Universities (ORAU) is pleased to provide the attached site summary report for the Astro Instrument Inc. property at 11496 Portlance Avenue, Detroit, Michigan. NRC's comments on the draft report have been incorporated into this final version.

Please feel free to contact me at 865.574.0685 or Erika Bailey at 865.576.6659 if you have any questions.

Sincerely,

David A. King, CHP, PMP
Sr. Health Physicist/Project Manager
ORAU

DAK:lw

Attachment

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Astro Instrument Inc.: Site Summary

**Prepared by
Oak Ridge Associated Universities
Under NRC Contract Number HQ-50-17-A-0001**

March 23, 2018

**Prepared for
U.S. Nuclear Regulatory Commission**

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Astro Instrument Inc.: Site Summary

The following information was extracted from public records.

Address

Address 1: 11496 Portlance, Detroit, Michigan

Address 2: 11496 Portlance Avenue, Detroit, Michigan

Address 1 is noted in letters from the State of Michigan (NRC 2017). The street name was changed at some undetermined date from Portlance to Portlance Avenue.

Site Description/History

Multiple websites describe Astro Instrument Inc. (Astro) as an electrical repair shop (Michigan Business Directory 2017; Free Business Catalog 2017). The Aviation Maintenance Magazine still has a listing for Astro Instruments in its maintenance directory (Aviation Maintenance Magazine 2017). A 1992 survey by the State of Michigan identified several radioactive instruments and items assumed to contain radium since the items were aviation instruments. The items may have been shipped to an overseas company (NRC 2017).

The brick and block structure located at 11496 Portlance Avenue is approximately 1,800 square feet, and is shown in Figures 1 and 2. A review of available Google Earth images dating back to 2002, shown in Figure 3, indicates that the site and building do not appear to have undergone any significant configuration changes in the last 15 years.

The Wayne County Register of Deeds database confirmed that 11496 Portlance Avenue was once occupied by Astro. At that time, the property was owned by Richard W. Tuscany. The database also showed that Tuscany sold the property in January 2007 to the following groups: Aladdin Realty & Investment Inc. DBA, Allied Realty & Investment, and CP Investments LLC (Wayne County 2017a). According to a representative from the Michigan Department of Licensing and Regulatory Affairs (LARA), Astro was registered in Michigan from April 1970 until July 2009, when it was dissolved by the state for not submitting its annual report (ORAU 2017). The Wayne County Treasurer's database shows that Diva Dolls Salon occupied the building at some time, but no dates are provided (Wayne County 2017b). Manta.com indicated that Make It Happen Martial Arts established a business at this location in 2010 (Manta 2017)—the facility was occupied by Make It Happen Martial Arts until at least 2013. Note that the image capture in Figure 1 was taken in 2013 (Google Earth 2017). The property was on the 2017 foreclosure listings sent out by the Wayne County Treasurer as a property subject to tax foreclosure, and the owner/interested party listed in this document is Kawan Adams (Sabree 2016).



Figure 1. 2013 Street View of 11496 Portlance Avenue, Detroit, Michigan from September 2013 (Google Earth Pro 2017)

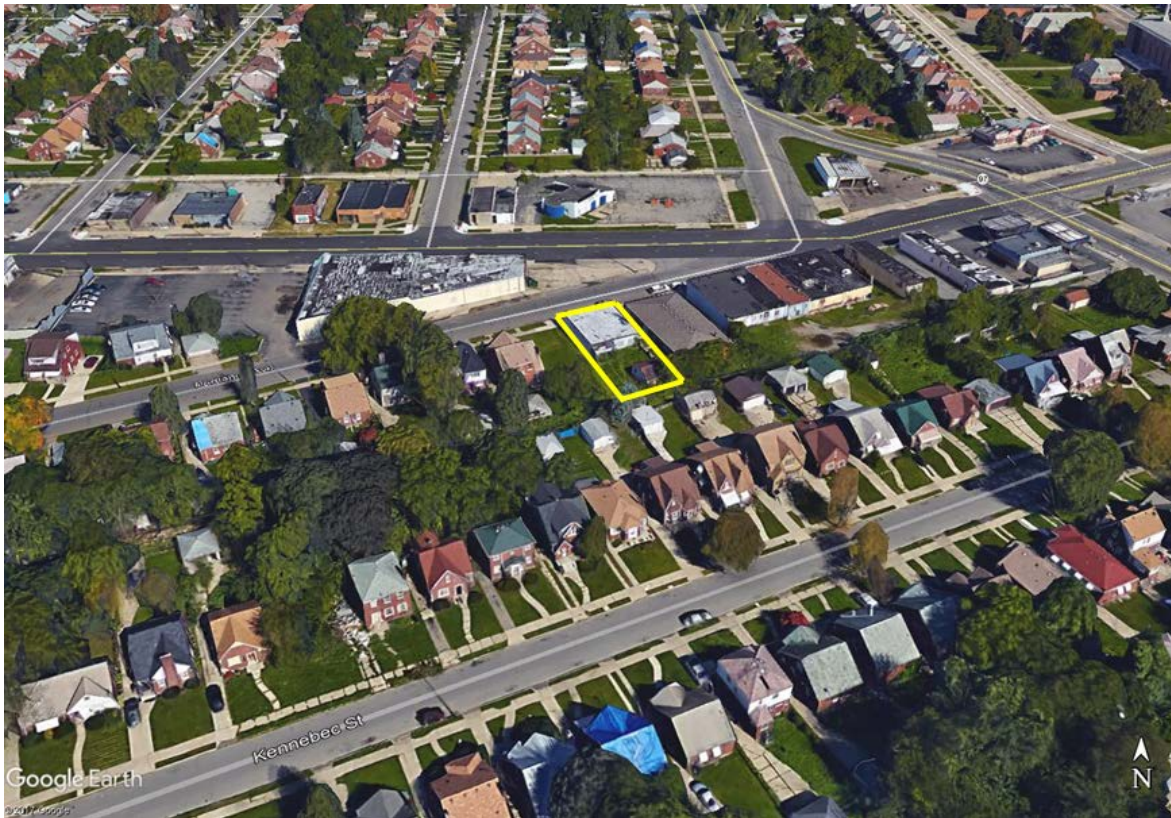


Figure 2. Location of the 11496 Portlance Avenue Property in Detroit, Michigan (Google Earth Pro 2017)



Figure 3. Aerial View of the Portlance Avenue Property in Detroit, Michigan Site from March 2002 (Google Earth Pro 2017)

Information Regarding Radium Sources/Contamination at the Site

The State of Michigan conducted a survey of the facility in 1992 (NRC 2017). It is not known if this survey was restricted to the building interior, or if it included outside areas. Nor is it known if this was strictly a gamma survey, or whether it included an evaluation of potential alpha and/or beta contamination. The State's report indicated that Astro "had many radioactive instruments, many faces, and various pointers" and that they employed a "microR/hr meter." The latter would not have enabled Astro to identify alpha/beta-contaminated surfaces.

Facility personnel stated that they had been contacted by a broker for surplus aircraft parts, and it was likely that many of their radioactive parts would be sold/shipped overseas (NRC 2017). It is possible that Astro could have received other radioactive instruments that may have contained radium since the 1992 survey.

Summary of Current Radium Levels:

As of August 2017, it is not known if radium sources and/or radium contamination are present at the site.

Location and Population Near the Site

The site at 11496 Portlance Avenue is located in the city of Detroit in Wayne County, Michigan. According to the 2010 U.S. Census, the population of Detroit was 713,777; the 2016 population estimate for the city was 672,795 (United States Census Bureau 2017). Figure 2 shows the location of the facility within the local community.

Current State/other Federal Involvement

After the State of Michigan's survey in 1992, Astro informed the State that it intended to sell radioactive parts that are assumed to contain radium to buyers overseas (NRC 2017), though records of the transaction could not be obtained. An extensive internet search of public records did not reveal any other information about state or federal involvement at the site.

Current Access and Activities at the Site

The site is currently listed by the Wayne County Treasurer as a foreclosed property (Wayne County 2017b), though the property may be generally accessible even if it is vacated.

Existing Engineering and Administrative Controls

No information about engineering or administrative controls could be identified.

Prioritization Ranking

NRC assigns a prioritization ranking for each site based on two factors. The first factor relates to whether or not the historical record confirms the presence of radium and there is no documentation that the radium contamination was previously remediated. The second factor considers the potential for human exposure. Based on these factors, the site is assigned Tier 1, 2, 3, or 4 using the following criteria:

- Tier 1 = the historical record confirms the presence of radium, the building or adjacent lands are occupied or frequented by visitors, and site access is not controlled.
- Tier 2 = the historical record confirms the presence of radium, the building or adjacent lands are not occupied or frequented by visitors, and site access is weakly controlled.
- Tier 3 = the historical record confirms the presence of radium, the building or adjacent lands are not occupied or frequented by visitors, and site access is strongly controlled.
- Tier 4 = the presence of radium is suspected but not confirmed by the historical record.

Radioactive items assumed to contain radium are confirmed to have been present at the site based on radiological survey data from 1992. The site seems to be unoccupied and has no known access controls, classifying it as Tier 2.

References

Aviation Maintenance Magazine 2017. Maintenance, Repair & Overhaul Directory, Astro Instrument Company,
http://directorypub.com/SRCH/compdetail.php?aid=0014980&pub_id=6000029, accessed August 29.

Free Business Catalog 2017. <https://mi.freebusinesscatalog.us/company/astro-instrument-inc.html>, accessed August 29.

Google Earth Pro 2017. Accessed August 29.

Manta 2017. <https://www.manta.com/c/mrs3rc6/make-it-happen-martial-arts>, accessed August 29.

Michigan Business Directory 2017. http://www.michigan-webbusiness.com/company-astroinstrumentinc_307275, accessed August 29.

NRC 2017. *Letters from the State of Michigan re: Non-Military Radium Program*, prepared by the State of Michigan under Cooperative Agreement with the Nuclear Regulatory Commission, Regional Offices and the Office of Nuclear Materials Safety and Safeguards, July 7. (Agencywide Documents Access and Management System [ADAMS] Accession No. ML16288A777).

ORAU 2017. Notes on personal communication between Andrew Owens (ORAU) and the Michigan Department of Licensing and Regulatory Affairs, Corporate Division 517-241-6470, phone conversation, August 15.

Sabree 2016. "2017 Notice of Forfeited Property Subject to Foreclosure" Available at <http://www.waynecounty.com/documents/exec/treasurer/2017ForeclosureListing.pdf#toolbar=1&view=FitH>, accessed August 29, 2017.

United States Census Bureau 2017.
<https://www.census.gov/quickfacts/fact/table/detroitcitymichigan/PST045216>, accessed August 15.

Wayne County 2017a. Register of Deeds,
<https://www.waynecountylandrecords.com/recorder/eagleweb/viewDoc.jsp?node=DOCCL-27085101>, accessed August 29.

Wayne County 2017b. Wayne County Treasurer, Property Tax Listing System,
http://www.waynecounty.com/treasurer/treasurer_payonline.htm, accessed August 29.