

October 27, 2022

Randy Whitcher NYS Canal Corporation Headquarters 30 South Pearl Street, 5th Floor Albany, NY 12207

Subject: Vessel Inspection Inventory Report (Utica, Gradall 2)

Dear Mr. Whitcher,

Parsons Engineering of New York, Inc. (Parsons) is pleased to submit this Vessel Inspection Inventory Report for Gradall 2 located in Utica yard. This final version includes the signed certification page and has removed "Draft" from the footers.

Sincerely,

Heathungedin

Heather Budzich, P.E. Project Manager

Enclosed: Vessel Inspection Inventory Report

CC via email: John Joyce (NYS CC) Tom Mackowiak, Green2Green

DELIVERING A BETTER WORLD

VESSEL INSPECTION INVENTORY REPORT UTICA, GRADALL 2



Prepared For:

New York State Canal Corporation 30 South Pearl St. Albany, NY 12207

Prepared By:



301 Plainfield Road, Suite 350 Syracuse, New York 13212

OCTOBER 2022



CERTIFICATION PAGE

I, John Plante, NYSDOL Certified Asbestos Building Inspector - Certification #09-08958 & EPA Certified Lead Risk Assessor completed the hazardous materials inspection of Gradall 2 in Utica, NY on September 19, 2022. Inspector certifications & licenses are included in **Attachment A**. The information documented here in represents information collected during the assessment of accessible vessel materials including analytical results of related vessel materials.

<u>10-27-2022</u> Date

John Plante

John Plante // NYSDOL Certified Asbestos Building Inspector (Certification #09-08958) & EPA Certified Lead Risk Assessor



<u>Page</u>

TABLE OF CONTENTS

1
1
2
2
2
3
5
6

LIST OF TABLES

Table 1 – Universal Waste Survey Results
Table 2 – Asbestos Containing Material Survey Results
Table 3 - Lead-Based Paint XRF Analyzer Positive Results
Table 4 – Lead-Based Paint Confirmation Sample Results
Table 5 - Suspected PCB Containing Material Sample Results
Table 6 – Paint Colors of Concern for PCBs

LIST OF ATTACHMENTS

- Attachment A Asbestos and Lead Inspector Certifications and Licenses
- Attachment B Photolog of Vessel
- Attachment C Vessel Blueprints
- Attachment D Chain of Custody and Analytical Data
- Attachment E XRF Analyzer Data



LIST OF ACRONYMS

<u>Acronym</u>	Definition
ACM	asbestos containing material
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
ft	feet
GMR	Gravimetric Matrix Reduction
HUD	Housing and Urban Development
ICR	Industrial Code Rule
LBP	lead-based paint
mg/cm ²	milligrams per square centimeter
NIST	National Institute of Standards and Technology
NOB	non-friable organically bound
NYSCC	New York State Canal Corporation
NYSDOH	New York State Department of Health
NYSDOL	New York State Department of Labor
OSHA	Occupational Safety and Health Administration
PACM	Presumed Asbestos Containing Materials
PCB	Polychlorinated biphenyl
PLM	Polarized Light Microscopy
ppm	Parts per million
TEM	Transmission Electron Microscopy
TSCA	Toxic Substances Control Act
XRF	X-Ray Fluorescence

1.0 PROJECT OBJECTIVES AND BACKGROUND

Parsons was retained by the New York State Canal Corporation (NYSCC) to complete a hazardous waste assessment for several vessels/ships located within the NYSCC jurisdiction. The vessels, intended for auction or donation to local communities, may contain hazardous waste and other regulated wastes that may pose a threat to health, safety, or the environment if left unidentified. The purpose of the vessel inspection/survey was:

- To identify the type(s) of waste (hazardous wastes, petroleum wastes, and other regulated wastes)
- Estimate the quantity of each waste identified per vessel, and
- Document the inventory findings in a report.

The vessel hazardous waste assessment (inspection) consisted of, at a minimum, analysis for lead-based paint (LBP) and polychlorinated biphenyls (PCBs); a survey for asbestos containing material (ACM); identification of universal waste materials such as batteries, thermostats and other mercury containing equipment; regulated wastes including petroleum products; and biological hazards.

For the inspection, Parsons retained Green2Green, a service-disabled veteran owned business (SDVOB) to complete a survey for ACM, LBP, and PCBs. Parsons was responsible for completing the universal waste survey and the biological hazard assessment.

The contents of this report present the vessel inspection findings for Gradall 2 in Utica, New York.

2.0 VESSEL HAZARDOUS WASTE ASSESSMENT

A vessel hazardous waste assessment for Gradall 2 was completed on September 19, 2022. The remainder of this section documents the general conditions of the vessel and presents the findings of the inspection.

2.1 General Vessel Conditions

At the time of the survey, Gradall 2 was in the water, moored in the canal off Incinerator Road in Utica, New York. The vessel is in good condition despite chipping paint throughout. There are multiple compartments within the vessel, including an engine room, kitchen, office, bathroom, bunk room, and stern storage compartment. The vessel is equipped with a bow mounted gradall which was previously used for canal dredging, as well as three spuds: two on the bow and one on the stern. The vessel does not have its own propulsion system, needing to be escorted by tugboats to mobilize. The vessel's main components remain onboard. Photographs documenting the general condition of the vessel are included in Attachment B.

According to the August 2021 Historic Context for New York State Canal Corporation Vessels to Aid in the Determination of Historic Significance, prepared by the Lake Champlain Maritime Museum, this gradall was built and launched in 1926. Boat dimensions as presented in this historic report are shown below. Additional measurements for specific spaces within the vessel are included on the blueprint drawings in Attachment C.

Boat	Length	Width	Draft
Gradall 2	75 ft	25 ft	3 ft

P:\New York Power Authority\NYSCC_Environmental Services\HW Vessel Assessment\10.0 Technical Categories\Utica\Gradall 2\Report\Final\Utica_Gradall 2.docx 1



2.2 Universal Waste Survey

As part of the universal waste survey, Parsons inspected the vessel for the items listed below.

- Batteries
- Pesticides
- Thermostats and other mercury-containing equipment
- Lamps
- Household hazardous waste
- Refrigerant-containing appliances
- Radioactive materials
- Other major appliances
- Electronic waste
- Tires
- Furniture and mattresses
- Fire suppression systems
- Other regulated waste

The types of waste identified during the inspection, the location within the vessel, and the estimated quantity are included in **Table 1**. It should be noted that while all major universal waste components on the vessel have been categorized in **Table 1**, there are piping systems throughout the engine room used for the transfer of regulated fluids such as oil and fuel. There are filters connected to these systems and it can be assumed that both filters and the pipes themselves may contain regulated fluids.

2.3 Biological Survey

As part of the biological survey, Parsons inspected the vessel for visible signs of mold, wildlife (e.g., nests, droppings, etc.), and plants (e.g., poison ivy). No biological hazards were found on Gradall 2.

2.4 Asbestos Containing Material

An ACM survey of Gradall 2 was completed in compliance with New York State Department of Labor (NYSDOL) Industrial Code Rule (ICR) 56. The ACM survey was completed in readily accessible interior and exterior portions of the vessel by a NYSDOL certified asbestos inspector. A copy of related certifications is included in **Attachment A**.

The vessel was inspected for materials often containing asbestos as listed below.

- Insulating materials (pipe, engine room walls/doors, etc.)
- Pumps (external insulation and internal parts)
- Boilers (external insulation, packing and gaskets)
- Valves associated with vessel's plumbing
- Paneling
- Decking and floor tiles
- Adhesives
- Window caulks and glazing
- Packing and gaskets associated with other equipment



Gray roof sealant, ceiling tiles, newage generator thermal system insulation, and drywall were identified as suspect ACM. Two samples of each material were collected and submitted to EMSL Analytical located in Cinnaminson, New Jersey. Table 2 presents the sample numbers assigned on the chain-of-custody records, a description of the material sampled, the location in the vessel, the estimated quantity of material, and the analytical results.

Sample No.	Description	Sample Location	Estimated Quantity	Asbestos % and Type
1A-B	Gray roof sealant	Entire roof	~756 square feet (ft²)	8.2% Chrysotile
2A-B-C	Ceiling tiles	Above shower	200 square feet (ft ²)	None detected
ЗА-В	Newage generator thermal system insulation	Engine room above newage generator	8 linear ft	None detected
4A-B-C	Drywall	Multiple walls in kitchen area	150 square feet (ft ²)	None detected

Table 2: Asbestos Containing Material Survey Results

Sample 3A-B and 4A-B-C were analyzed as friable asbestos by New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) Method 198.1 (Polarized Light Microscopy, PLM). Samples 1A-B and 2A-B-C were analyzed initially by NYSDOH ELAP Method 198.6 (Gravimetric Matrix Reduction, GMR PLM) as a non-friable organically bound (NOB) material. Each of these samples were subsequently analyzed by Method 198.4 (Transmission Electron Microscopy, TEM) for confirmation to evaluate if the material can be considered or treated as non-asbestos containing in New York State. The NYSDOL defines an ACM as any material containing greater than one percent asbestos. Sample 1A-B (gray roof sealant) was the only sampled material that met criteria for ACM. A copy of the results and chain-of-custody record are included in Attachment D.

If other suspect vessel materials are identified during the transfer of the vessel between the NYSCC and some outside entity, the materials shall be Presumed Asbestos Containing Materials (PACM) until examination by an appropriately trained & certified individual and laboratory analysis prove otherwise.

2.5 Lead-Based Paint

Painted components of the vessel were evaluated for the presence of LBP using X-Ray Fluorescence (XRF) testing procedures. XRF analyzation is accepted by the Environmental Protection Agency (EPA) as a reliable tool to obtain immediate, accurate results in identifying LBP or coatings. Various substrates were taken into consideration while using XRF technology to detect LBP & coatings. The calibration of the XRF instrument was validated using a National Institute of Standards and Technology (NIST) paint film nearest 1.0 milligrams per square centimeter (mg/cm²) for XRF test methods of Pb (lead) in paint or coatings on building surfaces.

Lead based paint is defined by the EPA as paint or other surface coatings that contain lead equal to or greater than 1.0 mg/cm². Surface coatings can include paint, shellac, varnish, or any other coating, including wallpaper that covers painted surfaces. The intent of the inspection was to identify potential components painted or coated with lead-based material greater than the legal regulatory limit (1.0 mg/cm²). Table 3 identifies the vessel components found to contain LBP above this limit as detected by the XRF analyzer.

P:\New York Power Authority\NYSCC_Environmental Services\HW Vessel Assessment\10.0 Technical Categories\Utica\Gradall 2\Report\Final\Utica_Gradall 2.docx 3



Boat	Reading	Component	Substrate	Color	Condition	Note	LBP (Positive or Negative)
Gradall 2	S-1	roof	steel	silver	poor	silver roof sealant	positive
Gradall 2	S-3	gradall	steel	yellow	poor	bow mounted gradall	positive
Gradall 2	S-4	spud housing	steel	blue	poor	starboard bow	positive
Gradall 2	S-5	wall	steel	blue	poor	front exterior wall	positive
Gradall 2	S-8	window	wood	yellow	poor	starboard exterior window frame	positive
Gradall 2	S-9	railing	steel	yellow	poor	starboard exterior railing	positive
Gradall 2	S-11	window	steel	yellow	poor	rear of vessel exterior above window	positive
Gradall 2	S-14	rear deck ceiling	steel	blue	poor	rear deck overhang ceiling	positive
Gradall 2	S-17	support beam	steel	red	poor	rear of engine room cross beam	positive
Gradall 2	S-18	deck	steel	red	poor	rear of engine room deck	positive
Gradall 2	S-19	support beam	steel	orange	poor	rear of engine room hull structure beam	positive
Gradall 2	S-20	chimney	steel	silver	poor	engine room oil furnace chimney	positive
Gradall 2	S-21	wall	steel	white	poor	engine room starboard interior wall	positive
Gradall 2	S-22	wall	steel	gray	poor	engine room starboard interior lower wall	positive
Gradall 2	S-23	stairs	steel	red	poor	engine room staircase	positive
Gradall 2	S-24	support beam	steel	orange	poor	forward of engine room hull structure beam	positive
Gradall 2	S-25	support beam	steel	orange	poor	forward of engine room hull structure beam	positive

Table 3: Lead-Based Paint XRF Analyzer Positive Results

*Condition refers to paint quality at time of inspection

*Reading - Refer to vessel blueprint

*mg/cm² = milligrams/ centimeter squared

*LBP positive = greater than 1.0mg/cm^2 , LBP negative = less than 1.0 mg/cm^2

Lead was also detected at low concentrations (less than 1.0 mg/cm²) in several other components evaluated. Contractors interested in restoring the vessel should be informed of the presence of lead-containing paint for Occupational Safety and Health Administration (OSHA) compliance considerations and proper disposal. A complete list of calibrations, materials, and components evaluated during the inspection are included in Attachment E.

Two paint chip samples were collected to confirm the positive results of the XRF analyzer. The paint chip samples were collected using a pre-made template with a surface area of 25 square centimeters (cm²). The paint chip samples were collected from the painted surface represented by shots S-1 for sample LBP-1, and S-5 for sample LBP-2 (see Table 3). The paint chip sample was submitted to EMSL Analytical located in Cinnaminson, New Jersey. The paint chip sample name, sample location, and lead concentration detected are shown in Table 4. A copy of the results and chain-of-custody record are included in Attachment D.

Sample			
No.	Description	Sample Location	Lead Content
		Entire roof of	
LBP-1	Gray roof	vessel	0.033 mg/cm ²
LBP-2	Blue wall	Exterior front	<0.018 mg/cm ²

Table 4: L	Lead-Based	Paint	Confirmation	Sample	Results
------------	------------	-------	--------------	--------	---------

While the analytical results for samples collected on September 19, 2022 were below the legal regulatory limit of 1.0 mg/cm² despite the XRF results showing a value above 1.0 mg/cm², all XRF positive results should be assumed to be LBP. Due to the age of the vessel, it has likely been painted many times, resulting in a variance in lead content across any given surface

P:\New York Power Authority\NYSCC_Environmental Services\HW Vessel Assessment\10.0 Technical Categories\Utica\Gradall 2\Report\Final\Utica_Gradall 2.docx 4

2.6 Polychlorinated Biphenyls

The PCB survey was completed based on visual inspection during a walkthrough of the vessel. The inspectors were looking for any items likely to be found on a vessel and potentially containing PCBs (e.g., electrical transformers, oil filled capacitors, cables, gaskets, caulk, other electrical equipment, staining/spills around equipment in the engine room, etc.). Vessel materials containing 50 parts per million (ppm) of PCB's or greater are regulated for disposal in compliance with the Toxic Substances Control Act (TSCA).

Newage generator thermal system insulation (PCB-1) and grease below the newage generator (PCB-2) were identified as suspect for PCB contamination on Gradall 2. A sample was collected from each location, identified by reference letters M and Z, respectively in Attachment C. Sample IDs, descriptions, locations, and PCB analysis results are shown in Table 5. A copy of the results and chain of custody record are included in Attachment D.

Sample		Sample	
No.	Description	Location	PCB Analysis Results
	Newage generator thermal		
PCB-1	system insulation	Engine room	None detected
	Grease below newage		
PCB-2	generator	Engine room	None detected

Table 5: Suspected PCB Containing Material Sample Results

PCBs were not detected in either of the materials sampled on Gradall 2.

Historically, PCBs have been identified within certain older interior and exterior paint colors on NYSCC owned vessels. Paint samples were not collected for analysis of PCBs as part of this scope of work; however, based on information available to the NYSCC at the time this report was prepared, paints of most concern with concentrations ranging from greater than 1 ppm to less than 10 ppm can be found in Table 6 below. Paint colors detected in Gradall 2 with the potential for elevated levels of PCBs include the blue and yellow exterior paint and gray, white, and red interior paint.

Table 6: Paint Colors of Concern for PCBs

PCB Paint > 1 ppm and < 10 ppm			
Location			
Interior			
Exterior			
Interior			
Interior			
Exterior			
Exterior			
Exterior			

Note: Paint colors shown in **bold green** were present on the vessel inspected.

Based on information provided by the NYSCC, lead is always present in older paints when PCBs are found. The PCB contents of these paints is not the driver for regulatory consideration, handling, and disposal; however, the lead concentrations associated with these paints do require proper regulatory considerations, handling, and disposal. Refer to Table 3 for painted surfaces exceeding 1 mg/cm² and Attachment E for complete XRF results.

3.0 DISCLAIMER

This hazardous materials assessment report is based upon findings of a physical inspection, onsite assessor implemented testing, and laboratory analysis. Findings are current and accurate as of the date and time they were found, but do not reflect expected or predicted change in conditions. This report reflects only those areas physically inspected and sampled. Green2Green Consulting LLC and Parsons are not responsible or liable for the non-discovery of suspect materials not identified within the Subject Property which may occur or may become evident after the initial inspection and testing date. Green2Green Consulting LLC and Parsons makes no warranty, expressed, or implied as to the fitness for use of condition of the systems or components inspected.

The LBP inspection was conducted in accordance with accepted environmental inspection practices for this region to include federal, state, and local regulations. However, it should be noted that the inspection was not conducted in accordance with the U.S. Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing as published in October 1997 as the vessel does not currently meet HUD criteria. The data derived from representative "shots" of any given homogeneous material represent conditions that apply only at that location. Testing protocol and methodology requires that sample data be used to draw conclusions about the entire homogeneous area, but such conclusions may not necessarily apply to the general site as a whole.

TABLE 1: UNIVERSAL WASTE SURVEY RESULTS

Waste Category	Waste Type	Location	Estimated Quantity	Comments
Thermometers	Thermometer	Rear of vessel	1	Contains mercury
Appliances	Microwave	Galley	1	
Appliances	Gas oven	Galley	1	
Appliances	Toaster	Galley	1	
Appliances	Toaster oven	Galley	1	
Refrigerant-containing appliances	Refrigerator	Galley	1	
Lamps	Fluorescent tubes	Engine room, office, kitchen, bunk	16	
PCBs in lighting systems	Ballasts	Engine room, office, kitchen, bunk	16	Ballasts associated with fluorescent
Radioactive materials	Smoke detector	Galley	1	tubes
Mattresses	Twin Mattresses	Bunk room	1	
Furniture	Stool	Engine room and forward of engine	2	one per location
Eurpituro	Office chairs	Callov office	4	
Furfilture Household bazardous waste	Bust cloum		4 2 1 gallon	
Household hazardous waste	Rust-oleuili	Bathroom		
Household hazardous waste	Spic and span	Bathroom	1- 1.00 ID.	
Household hazardous waste	Air freshener	Bathroom	2 - 10 0z.	
Household hazardous waste	Spray nine	shower/ entryway	5 - 32 oz.	
Household hazardous waste	Diesel blue exhaust fluid	Engine room	10 gallons	
Household hazardous waste	Bleach	Bathroom	1 gallon	
Household hazardous waste	Virex II 256 cleaner	Bathroom	1 gallon	
Household hazardous waste	Ammonia	Bathroom	~15 oz.	
Household hazardous waste	Cabot wood finish	Bathroom	1 quart	
Household hazardous waste	Gojo wipes	Engine room	1 - 10.5"x12"	
Household hazardous waste	Purell wipes	Engine room	1 - 270 wipes each	
Household hazardous waste	Caulk	Engine room	1 - 10.1 oz.	
Household hazardous waste	CRC brake cleaner	Engine room	1 - 14 oz.	
Household hazardous waste	CRC heavy duty degreaser	Engine room	1 - 14 oz.	
Household hazardous waste	WD-40	Engine room	2 - 15 oz.	
Household hazardous waste	Grease gun in a can	Engine room	1 - 11 oz.	
Household hazardous waste	Detroit Diesel international compound #2	Engine room	2 pounds	
Household hazardous waste	Never seez regular grade	Engine room	3 - 8 oz.	
Household hazardous waste	Spray paint	Engine room	1 - 20 oz.	
Household hazardous waste	Stihl moto mix	Engine room	1 - 32 oz.	
Household hazardous waste	Benzomatic propane torch	Engine room	2 - 14.1 oz.	
Household hazardous waste	Mobil gear lube	Engine room	3 - 13 oz.	
Household hazardous waste	Mobil grease	Engine room	10 - 13.7 oz.	
Household hazardous waste	Hydraulic fluid	Engine room	~30 gallons	
Household hazardous waste	Mineral spirits	Engine room	~5 gallons	
Regulated fluids	Diesel fuel	Port and starboard tanks, engine room	~2,500 gallons total	2,400 gallons in port and starboard tanks and 100 gallons in engine room tank
Regulated fluids	Anti-freeze	Engine room	5-1/2 gallons	
Regulated fluids	Oil	Engine room, bow deck	~50 gallons	30 gallons used oil, and 20 gallons
Regulated fluids	Gradall assembly	Bow deck	1	unused oil Contains fuel, oil, grease, anti-freeze,
			-	and hydraulic fluids Contains fuel, oil, grease, anti-freeze,
Regulated fluids	SDMO generator	Engine room	1	and hydraulic fluids
Regulated fluids	Newage generator	Engine room	1	and hydraulic fluids
Regulated fluids	Oil furnace	Engine room	1	Contains oil
Regulated fluids	Stihl chainsaw	Engine room	1	Contains fuel and oil
Electronic waste	Oilless air compressor	Engine room	1	
Electronic waste	Electric bit motor	Bow port and starboard	2	
Electronic waste	SDMO control panel	Engine room	1	
Electronic waste	Gauge panel	Engine room	1	
Electronic waste	Electric fan	Bow	1	Behind oil drums in Ref I on blue
Electronic waste		BOW Engine room	1	print
Electronic Waste	Hot water tank			
Electronic waste	Goulds water tank	Engine room	1	
	Motor control have	Engine room		
	Switchboord			
	Switchbodras	Engine room		
	Fuse DOX	Engine room		
Fire suppression equipment	Handheid fire extinguisher	Engine room	1	



ATTACHMENTS

P:\New York Power Authority\NYSCC_Environmental Services\HW Vessel Assessment\10.0 Technical Categories\Utica\Gradall 2\Report\Final\Utica_Gradall 2.docx



ATTACHMENT A - ASBESTOS AND LEAD INSPECTOR CERTIFICATIONS AND LICENSES

P:\New York Power Authority\NYSCC_Environmental Services\HW Vessel Assessment\10.0 Technical Categories\Utica\Gradall 2\Report\Final\Utica_Gradall 2.docx



EEA **ENVIRONMENTAL EDUCATION ASSOCIATES**

888 4 ENV EDU environmentaleducation.com

This certifies that on August 30 - 31, 2022

John Plante ssociates, Inc. 9 Flower (319 Flower Ave. West Watertown, NY 13601

Attended and Successfully Completed the U.S.E.P.A. Accredited

Lead Risk Assessor Initial Certification

Per 40 CFR 745.225 (C) (8)

Interim Certificate Number: LRI-22-083031-05

Course Examination Date: August 31, 2022

Course Completion Date: August 31, 2022

Interim Certificate Expiration Date: March 3, 2023

Andrew McLellan President

aly

Alisa J. Raab Training Coordinator

Headquarters 346 Austin St., Buffalo, NY 14207



ATTACHMENT B – PHOTOLOG OF VESSEL

P:\New York Power Authority\NYSCC_Environmental Services\HW Vessel Assessment\10.0 Technical Categories\Utica\Gradall 2\Report\Final\Utica_Gradall 2.docx





























Description: Forward of engine room











































