**AFFIDAVIT OF FRANK W. RING**

STATE OF MICHIGAN )
) SS
COUNTY OF WAYNE )

Frank W. Ring, being under oath, deposes and says:

1. I am the managing member of CJF Associates, LLC, an environmental consulting firm located in St. Clair Shores, Michigan. I am personally familiar with the matters set forth in this Affidavit and if called upon, I am competent to testify regarding the matters set forth in this Affidavit.

2. I am a registered professional engineer in the State of Michigan and my educational background includes a Masters of Engineering Degree from the University of Wisconsin. I have extensive experience in scrap metal processing facilities and have managed the environmental projects at over 50 scrap metal operations in Michigan, Ohio, Illinois, Indiana, Minnesota, Tennessee, South Carolina, North Carolina, and numerous other States. I have served as Project Manager for various environmental investigations, remediation, and redevelopment of numerous scrap metal processing yards. My experience also includes review of stormwater and process discharge control systems, design of pollution controls for scrap automobile processing facilities and review of the design and construction of improved surfacing around existing and new scrap processing equipment. A more complete description of my experience is attached as Exhibit 1 to this Affidavit.

3. At the request of Livingston County Catholic Charities and Matem, LLC, I reviewed the plans prepared by GMBae Architecture + Engineering for Padnos Iron & Metal Company for the proposed metal shredding operation in Howell (the "Plans"), which was attached to the joint motion of Padnos and the City of Howell to dismiss the appeal in this matter. The

Plans are not dated. I understand that the Plans were submitted to demonstrate that Padnos would fully comply with the City's Zoning Ordinance requirements that the metal processing operation be fully enclosed in a building and that the areas for storage of materials and equipment and for vehicle drives be paved. As explained below, the Plans do not comply with the City's Ordinance which requires that the metal shredding operation be located in a fully enclosed building.

4. There are two critical deficiencies in the Plans regarding the proposed enclosure. The metal shredding and processing operation is not located within a fully enclosed building. There is no roof on the proposed structure around the hammer mill portion of the shredder. The enclosure shown in the Plans is open at the top and simply covered with mesh or grating and remains open to the environment and the elements. While this "partial" enclosure may provide a partial noise and visual barrier around the hammermill, the loudest part of the shredder, the benefits that would be gained from a complete enclosure as required by the City's Zoning Ordinance, including all of the benefits to the environment and surrounding community (noise mitigation, containment of air emissions, reduced impact to stormwater, etc.), will be lost based on the current proposed design of the "partial" enclosure.

5. The environmental and community benefits of a fully enclosed shredder, including a roof, allow better control of air emissions and less contact of storm water with industrial shredder operations. With an open roof fugitive air emissions (dust, particulate, lead, cadmium, VOCs, etc.) are allowed to escape through the open roof and will end up migrating off-site. Some of these contaminants will be captured within air pollution control equipment placed directly on the shredder, however, a significant amount of contaminants will also be drawn up with the warm air currents, created by the steam from the hammermill, and pass through the open enclosure and eventually off-Site. Additionally, with an open enclosure as proposed by Padnos rainwater will

come into direct contact with the shredder, and all of the dirt, dust, metal, lead, PCBs, PFAs, cadmium, oil, etc, from the material processed by the shredder. This contaminated water will be washed away with the rainwater or stormwater and possibly flow into the nearby wetland and eventually into the local groundwater. Some of these contaminants will be removed by the stormwater treatment system proposed by Padnos, but all of them will not be removed. The best way to keep these contaminants out of the local wetlands, surface waters, and groundwater is to stop the rain water from contacting them in the first place, by completely enclosing the shredder, including with a roof. Also, while noise may be partially reduced, the noise would be mitigated further by a fully enclosed building.

6. The City's requirement that the metal shredding operation be fully enclosed in a building applies to all industrial, processing operations and, with respect to metal shredders, reflects the trend in the industry and best practice. I have attached as Exhibit 2 various aerial photographs of metal shredding operations that are fully enclosed in a building with a roof. Some of these are older shredders that did not originally have a roof but where a roof was recently installed as depicted in before and after photographs attached. The photographs depict the following:

7. Photograph #1 – SA Recycling in Anaheim, California – Complete enclosure including a roof over hammermill and the other processing and air pollution control equipment;

8. Photograph #2 – EMR Northern Metals in Minneapolis, Minnesota – Complete enclosure of shredder including hammermill and downstream portion of shredder;

9. Photograph #3 – EMR Northern Metals in Becker, Minnesota – Complete enclosure of shredder including hammermill and downstream portion of shredder;

10. Photograph #4 – Schnitzer Steel Industries in Oakland, California – Aerial

photograph from 2015 prior to complete enclosure of the shredder;

11. Photograph #5 – Schnitzer Steel Industries in Oakland, California – More recent Aerial photograph (likely 2019) after complete enclosure of the shredder including a roof;

12. Photograph #6 – General Iron Industries in Chicago, Illinois – Aerial photograph from March 2012 prior to complete enclosure of the shredder;

13. Photograph #7 – General Iron Industries in Chicago, Illinois – Aerial photograph from May 2019 after complete enclosure of the shredder including a roof;

14. Photograph #8 – Sims Metal Management in Redwood City, California - Aerial photograph from February 2014 prior to complete enclosure of the shredder; and

15. Photograph #9 – Sims Metal Management in Redwood City, California – Aerial photograph from May 2018 after enclosure of the shredder including a roof.

16. The second significant deficiency is that the Plans are vague in depicting what portions of the processing operation are included in the partial enclosure. Only the hammermill is depicted as being partially enclosed, although it is open to the sky. It does not appear that there is room in the partial enclosure for other parts of the shredder processing equipment, such as the separating/sorting/processing systems after the hammermill (downstream). It is important that the entire process, or as much as possible, be enclosed as depicted in the facilities shown in photographs #2 and #3 attached to this Affidavit, for the same reasons as enclosing the hammermill--to better control noise, dust, odor and pollution, and to screen the operation from neighboring properties. This is even more important when the shredder is located in close proximity to other non-industrial use properties, including residential and general business uses.

17. As to the requirement of paved surfaces, the Plans do show that concrete surfacing is located beneath the shredder and additional paving has been added around the shredder and for

roadways. The type and details for the concrete have not been specified and the other areas of paving are only identified as "pave surface". In order to confirm that the Plans comply with the Ordinance standards and will withstand the rigors of the shredder operations, the details of these specifics should be provided in the Plans. These details would typically be required for any site or engineering plans.

FURTHER, AFFIANT SAYETH NOT

Frank W. Ring

Subscribed and sworn to before me this 3rd day of March, 2021.

Laura Tumbarello

Notary Public, Laura Tumbarello

Macomb County, MI

My commission expires: January 3, 2023

Acting in Wayne County, MI

LAURA TUMBARELLO
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF MACOMB
My Commission Expires January 3, 2023
Acting in the County of Wayne

# EXHIBIT 1

# FRANK W. RING, P.E.

## EDUCATION

MS CEE Masters of Engineering, Civil/Environmental Engineering, University of Wisconsin, 1993
BS ME Bachelors of Science, Mechanical Engineering, Michigan State University, 1988
Continuing Education: 40-hour OSHA Personal Protection and Safety Training (as per CFR 1910-120), May 1993 (hazardous waste site safety training)
8-hour OSHA Personal Protection and Safety Training annual update (as per CFR 1910-120), October 2009

## EMPLOYMENT

2010-Present Senior Engineer, CJF Associates
2007-2010 Environmental Manager, OmniSource Corporation
2005-2007 Project Manager, Golder Associates
2002-2005 Principal, CEG Associates
1993-2002 Associate, Conestoga-Rovers & Associates

## PROFESSIONAL AFFILIATIONS

Licensed Professional Engineer - State of Michigan
Member - Michigan Association of Environmental Professionals

## RELEVANT EXPERIENCE

- Management of environmental programs for over 50 scrap metal processing facilities through Michigan, Ohio, Indiana, Tennessee, South Carolina, and North Carolina
- Management of Engineering Group including five engineers, Health and Safety Group and Information Systems Group for the CRA Plymouth, Michigan office;
- Simultaneous management of multimillion dollar long term projects and smaller short term projects;
- Develop contract documents and Specifications for remediation and construction projects;
- Development of work plans, quality assurance project plans, sample and analysis plans, and health and safety plans for remedial investigation;
- Development of remedial investigation, feasibility study, extent of contamination study, and engineering evaluation and cost analysis reports;
- Review of environmental risk assessments;
- Contract supervision, tracking, and evaluation;
- Presentation and representation of technical information to clients and representatives of state and federal regulatory agencies;
- Negotiations with U.S. EPA and various state regulatory agencies;
- Extensive field experience including:
  - field supervision of construction and remediation contractors;
  - field supervision of drilling, including environmental, geotechnical, and well installation;
  - soil, sediment, and groundwater sampling methods;
  - land surveying using conventional methods; and

- experience in Level B, C, and D health and safety equipment.

## PROFILE OF PROFESSIONAL ACTIVITIES

*Phase I Environmental Site Assessment and Compliance Audits*

- Performed/managed in excess of 500 Phase I Environmental Site Assessments and/or Environmental Compliance Audits for the following types of facilities:

  - Commercial properties
  - Vacant properties
  - Multi-tenant properties
  - Scrap metal processing facilities
  - Automotive assembly facilities
  - Metal plating facilities
  - Specialty metal manufacturing facilities
  - Petroleum refineries
  - Chemicals processing facilities
  - Metal working and fabricating facilities
  - Used oil recovery/recycling facility
  - Injection molding facilities
  - Metal stamping facilities
  - Foundries
  - Wood furniture manufacturing facilities
  - Photographic processing facilities
  - Cement plants
  - Electrical substation and utility easements

*Phase II Environmental Site Assessments*

- Performed/managed in excess of 500 Phase II Environmental Site Assessments for similar facilities and properties identified above. Phase II Environmental Site Assessments were conducted to support the development of Baseline Environmental Assessments and/or to confirm or deny the presence of potential contamination identified in the Phase I Environmental Site Assessment.

*Baseline Environmental Assessments (BEA) in the State of Michigan*

- Performed in excess of 50 Category N, D, and/or S BEAs as follows:
  - Category D BEA and Section 7A Compliance Analysis for a commercial laundry facility on the National Priorities List located in Traverse City, Michigan
  - Category D BEA and Section 7A Compliance Analysis for a former solvent recovery facility located in Grand Rapids, Michigan
  - Numerous Category N, D, and S BEAs for scrap metal processing facilities in Detroit, Dearborn, Pontiac, Flint, and Jackson, Michigan
  - Category S BEA for marina in St. Clair Shores, Michigan
  - Numerous Category N and D BEAs for commercial development

*Industrial Facilities*

- Project Coordinator for all aspects of remedial investigations and removal actions at automotive manufacturing and assembly facilities. Specific areas of investigation include historical waste processing and disposal areas, metal plating operations, degreaser operations, fueling operations, USTs, aboveground storage tanks, and RCRA hazardous waste management units.
  - General Motors Corporation Center Point Facility - Pontiac, Michigan
  - General Motors Corporation Truck Product Validation Center - Pontiac, Michigan
  - General Motors Corporation Clark Street Facility - Detroit, Michigan
  - General Motors Corporation Kalamazoo Metal Center - Kalamazoo, Michigan
  - Delphi Engine and Energy Management Systems Plant 2, 4, 6, 8, and 5 - Anderson, Indiana
  - Livonia RCRA Corrective Action

*CERCLA and Michigan Act 451 Part 201*

- Project Coordinator/Engineer responsible for an Extent of Contamination (EOC) Study, Engineering Evaluation and Cost Analysis (EECA), and Removal Action Design Report under an Administrative

Consent Order for an historic industrial landfill listed on CERCLIS and located in Ypsilanti Township, Michigan. Main contaminants include PCBs and inorganic compounds and the selected removal action implemented was excavation and off-site disposal in a local RCRA Subtitle C/TSCA landfill. Site is currently undergoing development as a commercial property.

- Project Coordinator/Engineer responsible for an EOC Study, EECA, and Removal Action Design Report for an historic industrial landfill listed on CERCLIS and located in Pontiac, Michigan. Main contaminants include inorganic and volatile organic compounds and the selected removal action is excavation and off-site disposal in a local RCRA Subtitle D Landfill. Site has been developed as an industrial property.
- Project Coordinator/Engineer responsible for remedial investigations, negotiations with regulatory agencies, and development and implementation of a Generic Residential Removal Action Plan (RAP) for a historic dry cleaner redeveloped into a strip mall. Main contaminants include chlorinated volatile organic compounds in groundwater. The RAP included excavation of heavily impacted soil and the monitoring of groundwater for natural degradation of the contaminants. Groundwater monitoring has been completed and the site has been closed.

- Project Coordinator/Engineer responsible for remedial investigations, negotiations with regulatory agencies, and development and implementation of a Limited Industrial RAP for a radio tower and transmitter. Main contaminants include inorganics in surficial soil. The RAP has been approved by the MDEQ and included excavation of approximately 50 cubic yards of heavily impacted soil and the continued upkeep of existing institutional controls (fence, vegetation, notice of approved environmental remediation, etc.)

*Scrap Metal Processing Facilities*

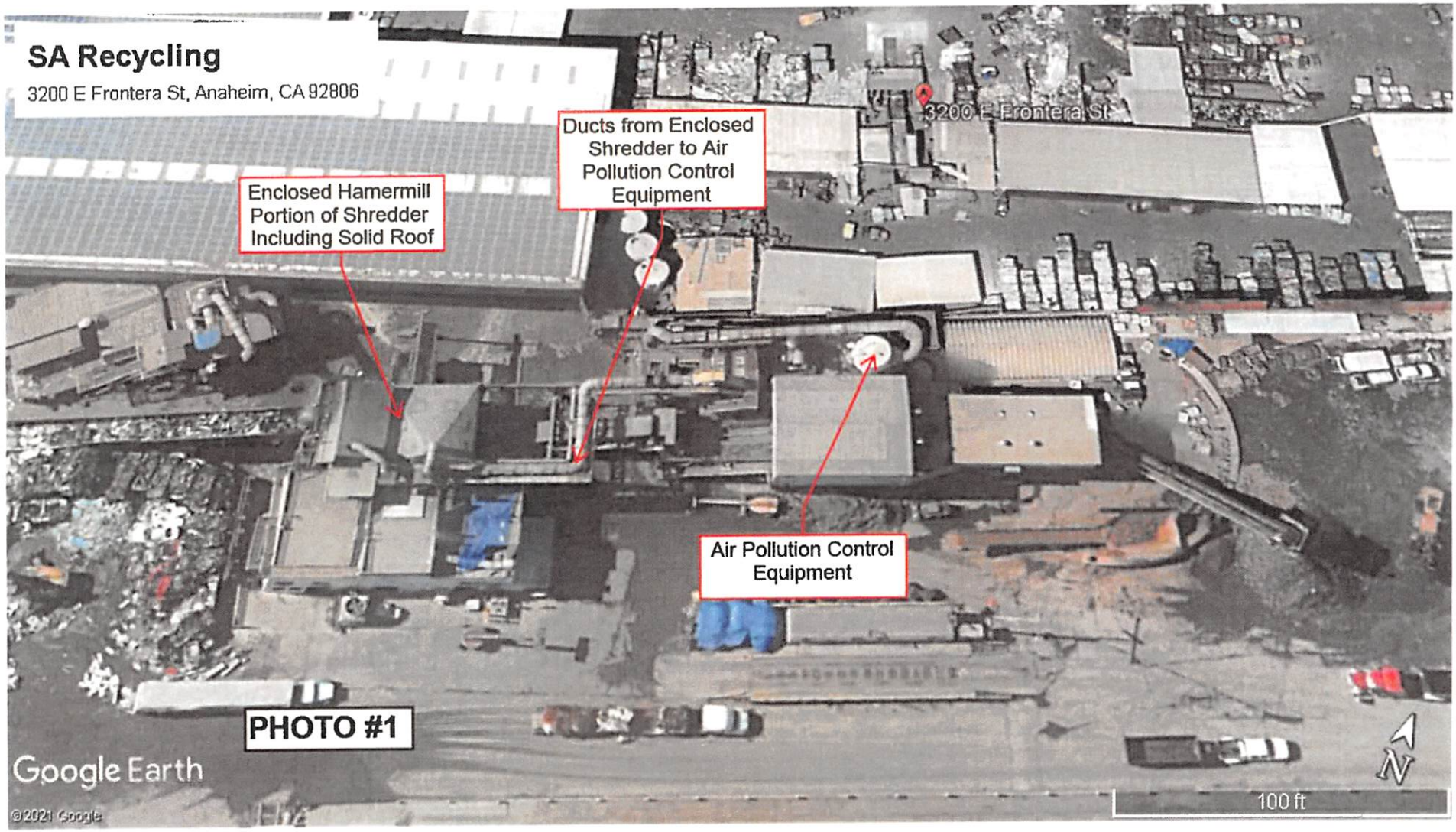
- Project Manager for various environmental investigations, remediations, and redevelopment of numerous scrap metal processing yards as follows:
  - In excess of 50 Phase I Environmental Site Assessments in support of acquisition
  - In excess of 20 subsurface environmental investigations including the collection and analysis of soil, groundwater, oil, sludge, fluff/auto-shredder residue, and ash samples
  - Remediation of PCBs, metals, and polynuclear aromatic hydrocarbons and closure to industrial cleanup standards
  - Assist in negotiations with U.S. EPA regarding Toxic Substance Control Act issues
  - Review of stormwater and process water discharges
  - Design of scrap automobile processing facility
  - Design and construction of improved surfacing around existing equipment

## PUBLICATIONS

*Published Reports:*

- "Characterization of Recyclable Material in State Agency Office Building Waste", with professor R.K. Ham, principle investigator, University of Wisconsin - Madison, Department of Civil and Environmental Engineering, published by State of Wisconsin Division of State Agency Services, 1993.

# EXHIBIT 2


SA Recycling
3200 E Frontera St, Anaheim, CA 92806
3200 E Frontera St
Ducts from Enclosed Shredder to Air Pollution Control Equipment
Enclosed Hamermill Portion of Shredder Including Solid Roof
Air Pollution Control Equipment
PHOTO #1
Google Earth
©2021 Google
N
100 ft


EMR Northern Metals Recycling
2800 N Pacific St, Minneapolis, MN 55411
PHOTO #2
Stacks (Typical) for Air Emissions from Shredder
Enclosed Hamermill Portion of Shredder Including Solid Roof
Enclosed Downstream Portion of Shredder Including Solid Roof
Google Earth
©2021 Google
100 ft