

Phase I Environmental Site Assessment

Ainsworth Engineered LLC
Grand Rapids OSB Plant
502 County Road 63
Grand Rapids, MN 55744

Prepared for:

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Project #20-002

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1.0 Executive Summary

This Environmental Site Assessment (ESA) was completed in accordance with the standards of the federal All Appropriate Inquiry Rule (AAI). The ESA focuses on applying good commercial and customary practice to identify recognized environmental conditions with respect to a parcel (or parcels) of commercial real estate. The primary focus is to determine whether any on-site operations, either present or historic, have caused or contributed to releases of hazardous substances or petroleum products to the environment. Additionally, the ESA requires the environmental professional to evaluate business environmental risk associated with the parcel that may ultimately necessitate investigation beyond that identified within the minimum scope of the assessment.

Itasca Economic Development Corporation (IEDC) retained LHB, Inc. to conduct a Property Audit and Feasibility Study for potential redevelopment of Ainsworth's manufacturing facility located in Grand Rapids, Minnesota. Headwaters Environmental, Inc. (Headwaters) is a subcontractor to LHB and is completing the Phase I Environmental Site Assessment as part of the Property Audit and Feasibility Study.

In the process of preparing this ESA, the following steps were taken: a records review from various sources; a site reconnaissance; interviews with persons knowledgeable about the Subject Property; evaluation of the revealed information; and preparation of this report.

1.1 PROPERTY DESCRIPTION

Ainsworth Engineered LLC (Ainsworth) owns an Oriented Strandboard (OSB) manufacturing facility located at 502 County Road 63, Grand Rapids, in Itasca County, Minnesota (the Subject Property). The manufacturing portion of the Subject Property is located in Grand Rapids Township; additional contiguous property is located within the City of Cohasset. A complete property survey of the approximately 223 acre site was completed in conjunction with

Ainsworth's purchase of the Subject Property in September 2004. A 2006 aerial photograph depicting the approximate property boundaries is shown in Figure 1.

The Subject Property consists of a 423,000 square foot manufacturing plant complex with associated offices, parking lots, and log storage areas. Typical of large manufacturing facilities, there are shop areas for heavy equipment maintenance, specialized tool making, equipment knife sharpening, and other equipment maintenance and upkeep. The Subject Property has a dedicated rail spur with both interior and exterior rail loading capabilities. Electrical power is supplied at 115 kV and the site has natural gas supply piping.

Fire hydrants are located throughout the log storage yard as part of the facility's overall fire suppression system. The Subject Property draws fire suppression water from the Mississippi River through a small pump house located on the river's edge. Potable water comes from two private wells and there are three septic systems for waste disposal.

There is a large open area at the southern end of the Subject Property that contains a closed bark landfill.

1.2 PROPERTY HISTORY

The Subject Property was undeveloped agricultural land until it was purchased and developed by the Blandin Wood Products Company in 1972. Blandin upgraded the manufacturing facility in the 1980s and sold the site to Potlatch Corporation in June 1990. Potlatch operated the manufacturing facility until the Subject Property was sold to Ainsworth Lumber Company, Ltd. in September 2004. Ainsworth continued to operate the facility until September 2006, when production operations were indefinitely curtailed. Ainsworth announced the permanent closure of the Subject Property in July 2008.

1.3 PROPERTY OBSERVATIONS

The Subject Property has been cleared of all raw materials and almost all exterior storage. All raw materials have been sold or transferred; the log yards are empty, the production process bins

and storage areas are clear and there is no powder resin or wax at the facility. There is only a small amount of wood bark located next to the empty log ponds. A cleared area to the northwest of the plant had been historically used as an exterior storage for scrap metal and some obsolete equipment. There are very few items in this location and none had any lubricants or other possible liquid contaminants in them. What little equipment remaining at the Subject Property is stored inside the buildings.

Petroleum products are present at the Subject Property in various operational and storage tanks. The press heating system has the most oil, containing over 10,000 gallons of thermal oil. There remain several smaller storage tanks and hydraulic systems containing between 50 and 150 gallons of oil. All systems are inside buildings or have adequate secondary containment capacity to contain a spill.

The closed bark landfill was closed and capped in 1988 before Potlatch Corporation purchased the Subject Property. The vegetated cover remains intact and this portion of the site has not been used for any manufacturing purpose.

1.4 REGULATORY INFORMATION

Publicly available databases from the federal government, Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Health (MDH) were reviewed, revealing historical environmental information regarding the Subject Property. As a manufacturing site for the past thirty seven years, the Subject Property has historical environmental records regarding waste disposal, petroleum and process water spills, regulatory inspections and permits. State and local officials were interviewed as part of this ESA.

Additional information regarding this topic can be found in Section 5.0 – Records Review.

1.5 RECOGNIZED ENVIRONMENTAL CONDITIONS

Based on the revealed information, there are two current recognized environmental conditions at the Subject Property:

- Standing oil in the concrete containment area under the press hydraulic system is indicative of a material threat of a petroleum release into the ground,
- Standing oil and water are present in the mobile equipment shop floor drain sump. This space is unheated and a frozen sump could crack and release petroleum products into the ground.

There are three historical recognized conditions at the Subject Property:

- The former wood waste disposal site located southwest of the manufacturing facility, has a detailed history with the MPCA. It had impacted groundwater quality due to phenol concentrations but these concentrations attenuated over time and returned to acceptable levels. Any prospective use changes for this area must be preapproved by the Minnesota Pollution Control Agency.
- The existing aboveground storage tank and pump associated with mobile equipment refueling. Refueling occurred on unpaved surfaces, there have been past spills inside the secondary containment area and having an uncoated steel containment in direct contact with unpaved soil are all conditions indicative of a material threat of petroleum releases into the ground from this activity.
- The presence of dried caustic soda and wood dust inside that specific secondary containment area indicated product remained in the containment long enough for the water to evaporate from the solution. This is a condition indicative of a material threat of a hazardous substance release into the soil or groundwater.

The following were evaluated as determined to not be considered as recognized environmental conditions:

- The past use of the Subject Property as agricultural land,
- The current use of the Subject Property as a closed OSB mill,
- Documented log pond process water spills were determined not to have presented a material risk of harm to public health or the environment, largely due to the manner in which site personnel responded to the spills,
- The presence of above ground storage tanks at the Subject Property,

- The past presence of an underground diesel fuel storage tank at the Subject Property, and
- The presence of on site potable water and groundwater monitoring wells at the Subject Property.

2.0 Purpose and Scope

2.1 PURPOSE

This report was prepared to assist the IEDC in making a reasonable assessment of business related environmental risk with respect to recognized environmental conditions at the Subject Property at the present time. Additional client-stated reasons for performing the investigation may be identified in Section 4.6.

2.2 SCOPE

This assessment scope was defined by the Itasca Economic Development Corporation in an April 17, 2009 Request for Proposal (RFP) titled Property Audit and Feasibility Study Services for Itasca Eco Industrial Park. Section 3.1.b.i.1. of the RFP stated:

1. Phase I Environmental Site Assessment
 - a. Purpose is to identify any recognized environmental conditions (RECs), including the presence or likely presence of hazardous substances or petroleum products
 - b. Assessment includes:
 - i. Site history (prior uses of the land and surrounding parcels)
 - ii. Review of area geology and hydrogeology
 - iii. Review of available governmental and regulatory documents
 - iv. Status of existing environmental permits

The report conforms to the format of the US EPA's All Appropriate Inquiry (AAI) rule found in 40 CFR Part 312 which became effective on November 1, 2006. Data gaps and any deviations from the standard AAI rule report requirements are discussed in further detail in Section 10. The following table summarized the required components of an AAI conforming environmental site assessment and where this report aligns to these components.

AAI Component	Report Conforms	Comment
Inquiry by “Environmental Professional” (EP)	Yes	Section 14
Visual inspections of subject property *	Yes	Section 6
Interviews with owners and government officials *	Yes	Section 7
Review of historical sources	Yes	Section 5.3
Review of government records *	Yes	Section 5.1
Search for environmental clean-up liens *	Yes	Section 4.2
Consider “specialized knowledge”	Yes	Section 4.3
Consider relationship of purchase price to fair market value, if not contaminated	No	Section 4.4
Consider “commonly known” information	Yes	Section 6
Consider “degree of obviousness of contamination”	Yes	Section 6
Declaration and signature by EP *	Yes	Section 13

* These components have a shelf life of 180 days prior to acquisition date. Other components are valid for up to one year.

2.3 SIGNIFICANT ASSUMPTIONS

I have assumed that the user has provided accurate information that will assist me in determining appropriate inquiry, including but not limited to actual knowledge, previously prepared reports, and title review information. In addition, I assumed that for the purposes of the site reconnaissance, adequate information has been provided to accurately establish the physical boundaries of the parcel of real property.

2.4 LIMITATIONS AND EXCEPTIONS

The results of this study performed by myself are based on the scope of work defined in Section 2.2, subject to any project-specific limitations or project-specific additional non-scope considerations described herein. As in the case with any investigation of finite scope, this review is intended to reduce, but cannot eliminate, the uncertainty regarding the potential for recognized environmental conditions in connection with a Subject Property. Therefore, the possibility of the

presence of some localized substances that may be classified as hazardous cannot be ruled out completely. However, it is my opinion that the conditions observed at the Subject Property are representative of existing conditions at the time of the site reconnaissance.

2.5 SPECIAL TERMS AND CONDITIONS

The purpose of this report is to aid in the environmental assessment of the Subject Property and not to evaluate the structural condition of the buildings or other features of the Subject Property. Except as identified in Section 2.3 and 2.4, or as described in Section 10, no intentional deviations from the AAI rule protocols were made in preparing this report.

I have performed my work in a manner consistent with the care and skill ordinarily exercised by members of the environmental profession under similar budget and time constraints. This report is not intended nor is it able to provide a completely comprehensive review of present or past site environmental conditions. The conclusions contained in this report represent my professional opinions. These opinions were arrived at in accordance with currently accepted environmental practices at this time and location. Headwaters Environmental, Inc. does not offer any form of warranty or guarantee that the Subject Property contains no hazardous substances, pollutants or contaminants beyond those observed during the course of this assessment.

I assume no responsibility for the accuracy of information that was obtained from other sources, including, without limitation, regulatory and government agencies, persons knowledgeable about the Subject Property, and vendors of public practice.

2.6 USER RELIANCE

This report has been prepared solely for the information and use of IEDC (the User). Others wishing to rely on the findings of this report not having a contractual relationship with Headwaters do so without permission and at their own risk. My professional recommendations made to the User are exclusive to that party's disclosed intended or proposed consideration with respect to the Subject Property.

3.0 Site Description

3.1 LOCATION

The Subject Property is located at 502 County Road 63, Grand Rapids, Minnesota, in Itasca County. The plant portion of the Subject Property is in Section 19, Township 55 North, Range 25 West. Additional contiguous property is located in Section 24, Township 55 North, Range 26 West.

The Subject Property was surveyed as part of the sale from Potlatch Corporation to Ainsworth Engineered LLC in September 2004. There have been no known property transactions at the Subject Property between September 2004 and December 2008. This document does not incorporate the lengthy legal descriptions of the parcels that comprise the Subject Property.

The Subject Property location including property boundary outlines is shown in Figure 1.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The Subject Property is located in an industrial area west of the City of Grand Rapids, across the Mississippi River from the main thoroughfare (US Highway 2) through the city. The developed portion of the property falls within the City of Grand Rapids zoning jurisdiction and is currently zoned “Industrial.” The undeveloped western portion of the Subject Property is within the Cohasset city limits and is zoned “Rural Industrial”.

3.3 CURRENT USE

The Subject Property contains a large manufacturing facility for the production of oriented strand board (OSB) products. Production operations ceased in September 2006 and there has been no manufacturing or other activity since that time.

3.4 STRUCTURES, ROADS, OTHER IMPROVEMENTS

Roads in the vicinity of the Subject Property are well-maintained county highways. These roads are paved, and suitable for truck traffic. There is a railroad spur and high voltage electrical line that enters the Subject Property from the north parallel to the main truck entrance to the Subject Property.

3.5 CURRENT USE OF ADJOINING PROPERTIES

UPM Blandin Paper Company owns almost all adjoining property at this site, these holdings are largely undeveloped. There are only two areas where other landowners are adjacent to the subject property, across County Road 63 to the north and at the southern edge of the Subject Property, primarily across County Road 76. The following list depicts the adjacent and second ownership tier at the Subject Property.

- North - County Road 63, light commercial properties.
- Northeast - Undeveloped UPM land, recreational boat landing, Mississippi River
- East - Undeveloped UPM land, Minnesota Historical Society Forest Interpretive Center
- South - Undeveloped UPM land, rural residential lots
- Southwest - County Road 76, Residential property adjacent to Pokegama Lake
- West - Undeveloped UPM land, Itasca County vehicle maintenance garage.

4.0 User Provided Information

The project scope did not restrict involvement of the Subject Property owner's current or former employees. The information provided in this section was taken from two sources; the one former Ainsworth employee that remains working at the Subject Property as a property manager and myself. I was the Environmental Manager for Ainsworth Engineered LLC from September 2004 through August 2008 and previously was the Environmental Manager for Potlatch Corporation, Minnesota Wood Products Division from March 1996 through September 2004. In those capacities, I have detailed knowledge of the subject property environmental conditions for the past 12 years.

4.1 TITLE RECORD INFORMATION

I reviewed the warranty deed (document #A000577773) and related attachments filed at the Itasca County Courthouse when the Subject property was purchased by Ainsworth in September 2004. The documents contained references to various road, electrical, rail and water flowage easements throughout the Subject Property.

4.2 ENVIRONMENTAL LIENS OR ACTIVITY USE LIMITATIONS

The property deed review discussed above in Section 4.1 did not include any reference to environmental liens or activity use limitations (AUL) such as environmental restrictive covenants at the Subject Property. The southern portion of the Subject Property contains a closed wood bark disposal site. Any development or other use of this portion of the Subject Property will require prior approval of the Minnesota Pollution Control Agency. Minnesota Rules 7035.26545 subpart 2 states:

The landowner must not allow post closure use of the facility property to disturb the integrity of final covers, liners, or any other components of any containment system, or the function of the facility's monitoring system, unless the

commissioner determines that the disturbance is necessary to the proposed use of the property and will not cause a violation of the standards outlined in parts 7035.2565 and 7035.2815, subpart 4.

The Client (IEDC) did not provide any additional information or records regarding this topic.

4.3 SPECIALIZED KNOWLEDGE

4.3.1 Environmental Site Assessment – May 1990

Barr Engineering conducted an Environmental Assessment of the Subject Property in May 1990 (reference A). It is unclear if Blandin Wood Products Company (owner) or Potlatch Corporation (prospective buyer) commissioned the report. As there is no indication of who the “authorized user” is for this report, only the Appendices were used to clarify historical conditions that could not be verified by any other means.

4.3.2 Phase 1 Environmental Site Assessment – August 2004

The previous owner (Potlatch Corporation) retained Wenck Associates, Inc. to complete a Phase 1 Environmental Site Assessment in 2004 prior to the Subject Property sale to Ainsworth (reference B). That report would document all conditions prior to 2004, but it is unclear if Ainsworth was ever an authorized user of the 2004 Wenck report. Such authorization would have been included in the terms for the property sale, as the report itself only listed Potlatch Corporation as an authorized user.

4.3.3 Internal Environmental Audit - December 2005

The owner provided a copy of an internal facility wide environmental audit conducted in December 2005 and updated in March 2006 (reference C). The findings in this audit were used as a source for follow-up during the site reconnaissance described in Section 6 of this report.

4.3.4 Internal Environmental Site Assessment – January 2009

Ainsworth Lumber Company, Ltd. retained Headwaters Environmental, Inc. to complete an abbreviated Phase 1 Environmental Site Assessment in 2009 for their internal use (reference D). The information in that assessment was used as a resource for this more detailed assessment.

4.4 VALUATION REDUCTION FOR ENVIRONMENTAL REASONS

A property valuation analysis is being completed by other companies as Section 3.2 of the Itasca Economic Development Corporation Request for Proposal (RFP) titled Property Audit and Feasibility Study Services for Itasca Eco Industrial Park.

4.5 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

Ainsworth Lumber Company, Ltd. purchased the Subject Property from Potlatch Corporation on September 22, 2004. Ainsworth has owned and operated the site since that time.

4.6 REASON FOR CONDUCTING SITE ASSESSMENT

This site assessment was conducted as a component of due diligence activities to determine whether “recognized environmental conditions” affect the Subject Property. This term is defined in the ASTM Standard (E1527-05) as:

The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures, on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

5.0 Records Review

Public records review is a requirement for an environmental site assessment to meet the AAI rule. Local and tribal government records searches are mandatory, as are requirements to include reviews of institutional and engineering control systems.

5.1 REGULATORY RECORDS REVIEW

I requested and reviewed a file search of federal and state databases through Environmental Data Resources, Inc. (EDR) for the Subject Property. That search outlined historical spill events, the solid waste facility permit SW -853, storage tank information, environmental permit data, environmental reports and water wells near the Subject Property. This report is included in Appendix A. The Executive Summary lists all seventy-two (72) searched databases, along with the fifteen (15) that included some reference relating to the Subject Property.

There have been external regulatory inspections at the Subject Property while under Potlatch's ownership that are referenced in three of the fifteen databases. Two databases (FTTS, HIST FTTS) simply indicated that the facility has been subject to Toxic Substance Control Act (TSCA) inspections and was visited on February 18, 1993 and February 27, 2002. A third database (RCRA-CESQG) referenced a facility wide multimedia inspection conducted by the Minnesota Pollution Control Agency (MPCA) on May 21, 1998. I participated in that compliance inspection conducted by several members of the MPCA's Duluth Regional Office. My inspection outbrief summary (reference E) indicate that the inspection covered storage tanks, solid waste, hazardous waste, air quality and stormwater. The summary indicated that the plant had minor discrepancies with adequately documenting hazardous waste storage area inspections and made recommendations on container labeling.

The closed bark disposal area (MPCA permit #SW 853) is referenced two searched databases (SWF/LF, MN LS). Additional information regarding this portion of the Subject Property is given in Section 5.1.1.1 of this report.

The EDR report made reference to the Subject Property as being listed in the federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). The entry referred to a discovery date of January 1, 1980 when the site was owned by the Blandin Wood Products Company. The entry also showed the “preliminary assessment” and “archive site” date as April 1, 1983. The EDR report entry also stated that this site is not on the National Priority List and gives a status of “no further remediation action planned” (NFRAP).

Further investigation and review of the Subject Property’s 1990 site assessment appendix (reference A) indicate that this CERCLIS site is actually the closed bark disposal area. The site was placed on the CERCLIS list by the United States Environmental Protection Agency (EPA) as a result of the owner’s notification to the EPA that the facility was a hazardous waste generator and that groundwater quality data at the bark disposal site indicated elevated phenol levels. An EPA contractor completed a preliminary assessment of the disposal area on April 17, 1983. Further discussion on this site is included in Section 5.1.1.1.

Five of the fifteen databases (ERNS, TRIS, TIER 2, AIRS, FINDS) simply referred to required environmental reports under various federal programs or a cross reference to other regulatory databases. Another (PADS) refers only that Blandin at one time may have had PCB containing equipment.

The final three databases (UST, AST, SPILLS) relating to the Subject Property all relate to storage tanks and liquid spills. The report indicates that there was one 6600-gallon underground storage tank (UST) for diesel fuel at the Subject Property. This tank was reportedly installed in 1972 and removed in May of 1990 while the Subject Property was owned and operated by Blandin Paper Company. The AST database is further discussed below in Section 5.1.1.1.

The EDR report lists thirty-six spill events from June 1995 through May 2006. Twenty-seven of these reports were for process water from the log conditioning system (“pond water”) and nine refer to petroleum releases. The pond water spills averaged 400 gallons per event and occurred from either overflowing a log-conditioning pond or from equipment failure in the wet electrostatic precipitators (WESP), events were evenly distributed between both causes. The nine petroleum related spills averaged 28 gallons each and were caused by hydraulic hose failures on logyard mobile equipment. The data indicates that all petroleum spills were cleaned up and no further remediation action was required.

The EDR report also includes partial information from federal or state databases on eighty-two water wells within one mile of the center of the Subject Property. Only one of these entries (Well#304030) was reported to be located in an undeveloped portion of the Subject Property, others are off-site. The two potable water wells that actually are located at the Subject Property are not included in the EDR report. Additional detail on these wells is given in Section 5.1.1.2.

5.1.1 State Government Records

In addition to the detailed review that is included in the EDR report of Appendix A, I reviewed three state regulatory agency web sites and their associated on-line files and databases for publically available information regarding the Subject Property. The project scope also required a review of regulatory permits in effect for this site.

5.1.1.1 Minnesota Pollution Control Agency

MPCA regulates air emissions, solid waste landfills, hazardous waste disposal, stormwater discharges and storage tank registrations.

Air Emissions Permit

The MPCA issued the Subject Property AQD Permit #06100010 on December 3, 2001 and amended it four times. The permit was set to expire on December 3, 2006 and required the facility to submit a permit reissuance application at least 180 days before the expiration date in

order for the facility's existing permit to remain in effect until the renewal is approved or denied according to Minnesota Rules 7007.0400 Subp 2. The reissuance application was submitted on June 1, 2006 but has not been assigned to a permit engineer as of this report. Therefore, the existing air permit remains valid for the Subject Property.

The Subject Property was required to request an air permit amendment to extend the compliance deadline for the Plywood & Composite Wood Products National Emissions Standard for Hazardous Air Pollutants (PCWP NESHAP) until October 2008 when it was operating as an OSB manufacturing site. The initial extension was granted, but a second extension request was submitted on June 17, 2008 to extend the compliance deadline to October 1, 2009. There has been no MPCA response to the second extension request.

Solid Waste Landfill

A current search of the MPCA web site referred to the bark landfill as a previously permitted solid waste site. The landfill was managed under a MPCA / Blandin Stipulation Agreement signed on September 26, 1979, amended on June 24, 1980, again on August 31, 1983 and finally September 4, 1987. As discussed above in Section 5.1, the bark disposal area was listed as a CERCLIS site within EPA and MPCA records. The MPCA's interpretation of that April 1983 EPA assessment and their understanding that this disposal area was having material reclaimed for fuel use resulted in the MPCA decision of "no priority for a site inspection." The MPCA also indicated in a March 31, 1987 letter that the Agency is "...required to carry the site assessment program through at least the Hazard Ranking System scoring stage." There is no record that the site was ever scored, reflecting that the MPCA never considered this site to be a priority. The CERCLIS relevant letters are included in Appendix B.

The site was capped and closed in November 1987 but follow on groundwater quality monitoring was required for five years until 1992. Facility environmental files include correspondence regarding this landfill and include data from 1979 through 1997, spanning facility ownership from Blandin Wood Products Company to Potlatch Corporation.

Potlatch purchased the Subject Property in June 1990 and assumed the water monitoring requirements through 1992. Final potable water monitoring for possible landfill contamination occurred between January 1997 and April 1997. Correspondence between Potlatch and the MPCA from 1993 through 1997 discussed soil cover stability and water monitoring requirements. The last internal Potlatch memo dated August 28, 1997 documented a MPCA site visit made that same day. MPCA recommended that Potlatch submit a letter requesting to close the remaining monitoring wells but there is no record that such a letter was ever submitted. These wells are further discussed in Section 6.1.9.

Hazardous Waste License

The Subject Property has been issued Hazardous Waste Generator ID # MND058318668 and historically been classified as a “Very Small Quantity Generator” under MPCA regulations. As the facility’s hazardous waste generation rates have decreased to less than 100 pounds per year, the Subject Property was reclassified by the MPCA on April 5, 2008 as a “Minimal Quantity Generator” of hazardous waste. In this category, the Subject Property is no longer required to submit an annual hazardous waste license renewal application but still must manage any hazardous waste properly. The Subject Property retains a valid hazardous waste generator status.

General Stormwater Permit

The MPCA General Stormwater Permit for Industrial Activity (MNG 611000) is applicable to the Subject Property as it is in a listed category requiring permit coverage. The general permit expired on October 31, 2002 but section III.E of that permit stated that *“In order to receive authorization to discharge storm water beyond the expiration date, the Permittee shall reapply to the Agency no later than 180 days prior to expiration.”* Potlatch submitted the permit reapplication in April 2002 thus permit coverage remains in effect.

Storage Tanks

The Minnesota Pollution Control Agency maintains a publicly searchable database for storage tank registrations as well as petroleum spill sites. The Grand Rapids OSB facility is listed as tank site #51048 and a summary of the search results is given in Appendix C. The database shows that

there are currently 24 registered tanks at the Grand Rapids facility. The data base status for 23 tanks is inaccurate, as all the tanks are now inactive and those with capacities less than 500 gallons should be removed from the state’s registry. Several tanks on the registry have been removed from the Subject Property as part of the facility closure. This is an administrative matter and does not materially affect the facility. The underground storage tank referred to in the EDR report in Section 5.1 does not appear on the MPCA registry. This facility did not appear on the MPCA public database search results for petroleum leak sites.

Polychlorinated Biphenyls

The MPCA issued the Blandin Wood Products Company a “Certificate of Exemption for the use, possession, sale, purchase or manufacture of PCB or products containing PCB” on February 8, 1980. Blandin Wood Products also filed a “Notification of PCB Activity with the US EPA on January 24, 1990 and the EPA acknowledged this registration in a letter dated February 26, 1990. Copies of these documents are included in Appendix D.

5.1.1.2 Minnesota Department of Health

Minnesota Department of Health (MDH) maintains records for private wells and various drinking water systems. There is an incomplete MDH well boring record for the primary groundwater well at the Subject Property’s (Well #258211). Initial data entry occurred on 5/6/03 and was updated on 9/26/06. The well was drilled when the initial manufacturing facility was built in 1972. The scale house well (Well #249420) also has a boring record with MDH. The EDR report and MDH web site both refer cite an incomplete well record (Well #304030) located in the undeveloped, wooded portion north of the logyard. Copies of these three boring logs are included in Appendix E. The following table summarizes the potable water sources and uses for the Subject Property.

Table 5.1-1 Potable Water Sources

Location	Source	MDH well #	Uses
Main facility	Groundwater	258211	Potable, some process
Scale House	Groundwater	249420	Potable

5.1.1.3 Minnesota Department of Natural Resources

The Minnesota Department of Natural Resources has issued two water appropriation permits for the Subject Property, one for surface water and a second for groundwater. These permits were transferred from Potlatch to Ainsworth and most recently amended on September 18, 2006. The following Table summarizes the permits' current conditions.

Table 5.1-2 Water Appropriation Permits

Permit #	79-2012	79-2013
Source	Mississippi River	Groundwater
Annual Use (10 ⁶ gal/yr)	25.0*	20.0
Maximum flow rate (GPM)	325	30*
Allowable Uses	Process water Fire system	Process water Potable water

* limiting parameter

5.1.2 Tribal Government Records

The Subject Property is not located on or adjacent to tribal land, thus no tribal government records were independently searched as part of this site assessment. The EDR report did look at several tribal databases as part of that query, however there were no results relating to the Subject Property.

5.1.3 Local Government Records

The manufacturing portion and seventy two percent of the Subject Property is located with Grand Rapids Township. The remaining twenty eight percent of the Subject Property is located within the City of Cohasset. Both local government units are within Itasca County. The Itasca County Environmental Services Department did not have any restrictive covenants or adverse environmental records on file for the Subject Property. A further review with the Itasca County Recorder did not reveal any deed restrictions incorporated into the warranty deed for the Subject Property.

5.2 PHYSICAL SETTING

5.2.1 Topography

The Subject Property topography varies to a small degree and can be summarized as three terraced levels. The upper terrace is the northern central portion of the site where the manufacturing process took place and is generally at an elevation of 1312 feet ASL. The warehouse, shipping area and southern portion of the property is slightly lower, at approximately 1299 feet ASL. The northeast boundary of the Subject Property borders the Mississippi River which maintained at a pool level of approximately 1269 feet ASL.

5.2.2 Geology

According to published resources, surficial geology at the Subject Property consists of Quaternary glacial lake peat deposits underlain by sand and gravel glacial outwash sands (E. L. Oakes and L. E. Bidwell, 1968).

5.2.3 Hydrogeology

Groundwater flow in the surficial aquifer in the area of the Subject Property is presumed to be east toward the Mississippi River. Local conditions may vary due to surface water features, perched groundwater conditions or artificially created drainage systems (E. L. Oakes and L. E. Bidwell, 1968).

5.3 HISTORICAL USE

The AAI rule requires that assessments review and comment on historical use of a property “*from the time the property was first used for residential, agricultural, commercial, industrial, or government purposes.*” The assessment used sources that were reasonably ascertainable and likely to provide useful information to identify prior uses of the property.

5.3.1 Aerial Photographs

Figures 1 through 8 are aerial photographs of the Subject Property and surrounding area from 1939 through 2006.

1939 Photograph

The 1939 photograph (Figure 2) shows portions of the Subject Property as undeveloped and other portions as being in agricultural use. County Road 63 to the north (and the bridge over the river to US Highway 2) is visible at the upper end of the photograph, and County Road 76 is visible at the south end of the Subject Property. There is a small pond, and wetland at the southeast portion of the Subject Property that drains north into the Mississippi River. There is a small surface depression running from the northwest corner of the Subject Property to the southeast that drains the northern portion of the site. Some scattered farmsteads are visible to the east and southeast of the Subject Property.

1947 Photograph

The 1947 photograph (Figure 3) shows the Subject Property essentially as described in the 1939 photograph.

1953 Photograph

The 1953 photograph (Figure 4) shows the Subject Property essentially as described in the 1939 photograph.

1966 Photograph

The 1966 photograph (Figure 5) shows the Subject Property essentially as described in the 1947 photograph. There is some development of a shooting range at the adjoining property to the east.

1975 Photograph

The 1975 photograph (Figure 6) shows the Subject Property with the initial flakeboard manufacturing facility constructed by the Blandin Wood Products Company. There is an engineered pond northeast of the plant and east-northeast of the logyard. The primary entrance road connects the plant site to County Road 63 to the north, and there is a railroad spur that enters the Subject Property parallel to this main entrance. A secondary road from County Road 76 enters from the southwest. The pump house is visible on the bank of the Mississippi River to

the northeast of the manufacturing facility. There appears to be an area of disturbance immediately southwest of the the pump house, but the detail is difficult to discern. There are also two cleared areas flanking the corners of the plant site on the southwest (by the junction of the two entrance roads) and south (near the wetland) that appear to be staging areas from site construction.

1991 Photograph

The 1991 photograph (Figure 7) shows the Subject Property with the expanded OSB mill. There is a new entrance road from County Road 76 at the southwest portion of the Subject Property, just south of the other smaller entrance that was visible in the 1975 photograph. Another diamond shaped clearing (referred to as the oversize log yard) is visible to the west of the manufacturing facility, and the land south of the office area had been cleared (this is the location of the bark landfill SW-853). The former engineered pond near the river has been filled. The logyard area has expanded slightly to the north and there is a disturbed area adjacent just east of the entrance road north of the log storage area. The adjoining property to the northwest now shows backed up surface water beginning to form a pond due to the rail spur and truck entrance road changing the natural surface drainage contours. This area drains north along the railroad spur for a few hundred feet until it meets culverts going under the spur and road and eventually east into the Mississippi River.

2003 Photograph

The 2003 photograph (Figure 8) shows the Subject Property with few changes from the 1991 photograph. A fence encloses most of the property and was installed in 1995. The diamond shaped oversize log yard on the western edge of the Subject Property is partially revegetated, as the west property boundary split this area. The bark landfill (SW 853) south of the offices is clearly identified and the southern property boundary is readily identifiable at the southeastern edge of the Subject Property. Towards the north, a truck turnaround can be seen next to the scale house and a distinct clearing is shown in the northwest corner of the photograph. That clearing is not on the Subject Property.

2006 Photograph

The 2006 photograph (Figure 1) shows the Subject Property including the property boundaries. There are only minor changes from the 2003 photograph. A few truck vans are present in the diamond shaped oversize log yard on the western edge of the Subject Property. Just to the east of the oversize log yard, the photograph shows a darker area where removed pond soil was placed pending off site disposal. Logs are present in a newly created logyard (“E” yard) located to the south of the manufacturing facility along the entrance road. The secondary entrance road described in the 1975 photograph and still visible in the 2003 photograph is completely grown over.

5.3.2 City Directories

I reviewed two City directories as part of this project. The 1998 directory (Figure 9) shows Potlatch Corporation occupying the Subject Property. The 2001 city directory (Figure 10) lists Potlatch, Crescent Electric and Warner Industrial at the Subject Property. Crescent and Warner were suppliers that were tenants of Potlatch’s at the Subject property for two or three years from 2000 to approximately 2003. There were no other owners or tenants at the Subject Property from September 2004 to December 2008.

The EDR Report (Appendix A) also included a city directory search. That review looked at 1996 and 2000 Polk City Directories. The 2000 directory listed Potlatch Corporation and Warner Industrial Supply at the Subject Property and listed Hawkinson Construction nearby on County Road 63. The 1996 Polk directory had no information.

5.3.3 Historical Maps

Itasca County plat maps were included in the review for this Subject Property. As the majority of the site is located in Section 19 of Grand Rapids Township, the maps are edited down to provide greater visual detail in this report.

The 1972 plat map (Figure 11) shows the Subject Property was owned by Blandin Paper Company, Louis Lavassear owned a 33 acre parcel owner on the southern corner adjacent to the Subject Property, and there were small tracts further south along County Road 76.

The 1978 plat map (Figure 12) shows that Blandin purchased Mr. Lavassear's parcel and sold some land east of the Subject Property to the Minnesota Historical Society. The only change in the 1987 plat map (Figure 13) is that additional land was sold by Blandin to the Minnesota Historical Society for access to County Road 63.

The 1994 plat map (Figure 14) shows Potlatch's ownership of the Subject Property within Section 19. This ownership remained the same in the 2003 plat map (Figure 15).

The 2007 plat map (Figure 16) shows Ainsworth's ownership of the Subject Property within Section 19.

5.3.4 Sanborn® Fire Insurance Maps

A search was conducted to determine if Sanborn® Fire Insurance Maps were available for the Subject Property. Sanborn Maps were created for insurance underwriters and often contain information regarding the uses of individual structures and the locations of fuel and/or chemical storage tanks that may have been on a particular property. Sanborn® maps were unavailable for the Subject Property. The “no coverage” document is included in Appendix A.

6.0 Site Reconnaissance

The AAI rule requires that “*the property shall be visually and physically observed...*” by “*a person with sufficient training and experience...*” to properly conduct the environmental assessment.

I visually observed the Subject Property to identify current land use, obtain evidence of past uses, and to identify surface characteristics of the Subject Property for the presence of recognized environmental conditions. These observations have taken place over the past 13 years when I was the Environmental Manager for Potlatch and then Ainsworth Engineered. The Subject Property was one of the sites I provided environmental compliance services to and was the facility where my office was located. The observations given in this section reflect my lengthy experience with the Subject Property. The most recent site reconnaissance took place on May 15, 2009.

6.1 PROPERTY OBSERVATIONS

The site reconnaissance consisted of walking through and around the building on the Subject Property, along the boundaries, and on all roads and parking lots located on the site. During the site reconnaissance, occupant spaces of the Subject Property were observed, with the exception of those areas mentioned in section 2.4 of this report. The interior and exterior portion of the Subject Property was inspected. I observed (from the Subject Property boundaries) the adjoining properties for evidence of recognized environmental conditions and for indications of past and current land use. While a Potlatch and then Ainsworth employee, I periodically walked the facility fence line and traveled through the undeveloped, wooded portions of the Subject Property via All Terrain Vehicles.

6.1.1 Process and Facility Description

The Subject Property consists of a manufacturing plant complex with associated offices, parking lots, and log storage areas. The facility produces oriented-strand board of varying thicknesses

and dimensions, although the majority of the finished product is 4' x 8' sheets. When the facility was operating, approximately 100 trucks of logs enter the Subject Property daily, and the lumber is unloaded into the log storage areas of the Subject Property. The wood was stored in the log yard until needed for the plant process. The log yards were emptied in the summer of 2008.

Loaders move the 100-inch logs from the log yard, and put them into "log ponds" where they are submerged in water. Log pond water is circulated through part of the wood wafer drying system's pollution control equipment, providing heat to the log pond water which helps thaw the bark from frozen logs. The log ponds were covered with wood and insulation in the fall of 2006 and bark was piled along the exterior pond walls for additional insulation. Pond water was eventually removed to the Grand Rapids WWTP and the ponds were empty by November 2008.

Removed bark was conveyed outside of the wood room where it is loaded into trucks and sold as biomass fuel. All fuel had been sold on the open market, primarily to Blandin Paper Company. The only bark remaining on site as of May 2009 is that material located next to the empty log ponds.

Once the logs processed, the "green wafers" are sent to rotary dryers. The drying process involves large rotary tumbling dryers that cycle the flakes through a complex path and reduce the moisture content from approximately 50% to around 3 to 4%. After the flakes are dried, they are blended with wax and phenol-formaldehyde resin that, when heated under pressure, binds the flakes into the final product. The Grand Rapids facility has also produced a termite- and fungal decay-resistant product that is treated with copper ammonium acetate. The blended flakes are placed on conveyor systems in alternating layers with respect to flake orientation, building a mat that is placed into a stacked, multi-opening hydraulic press. When the press is loaded, it is closed, and heat and pressure are applied. Upon completion of pressing, the uncut master panels come out of the press on a conveyor, are trimmed into appropriate size for final packaging, and labeled by rolling beneath an ink applicator that identifies the product's manufacturing time and place. The final packaging typically involves edge painting, and stenciling of the packaged bundle of sheets; some product is wrapped.

The facility includes shop areas for heavy equipment maintenance, and also specialized tool making, equipment knife sharpening, and other line equipment maintenance and upkeep. New and used oils were observed stored in these areas, as well as various parts washing stations, sharpening stations, etc. Industrial batteries were observed to be stored in an acid-compatible, sealed container. While the extent of this review does not constitute a facility compliance audit, no obvious evidence of chemical mismanagement was observed.

Fire hydrants are located throughout the log storage yard as part of the facility's overall fire suppression system. The Subject Property draws fire suppression water from the Mississippi River through a small pump house located on the river's edge. This structure contains both electric and diesel engine driven fire pumps. The facility's fire suppression system was drained in November 2008.

A cleared area to the northwest of the plant had been historically used as an exterior storage for scrap metal and some obsolete equipment that would have salvage value in terms of its remaining operational components. There are very few items in this location and none had any lubricants or other possible liquid contaminants in them.

There is a large open area at the southern end of the Subject Property that was originally a bark landfill. This practice was discontinued in the 1980s and was closed before Potlatch Corporation purchased the Subject Property from Blandin Wood Products Company in 1990.

6.1.2 Materials Management

6.1.2.1 Raw Materials

The significant raw materials in OSB manufacturing are 100" logs, powdered phenol-formaldehyde resin, and water based paint used for edge sealer and stenciling. The Subject Property has been idled since 2006 and these raw materials have been removed from the from 2006 through the fall of 2008. Bulk liquids consumed in the manufacturing process include wax

emulsion, copper ammonium acetate solution and 25% caustic soda. The wax and copper ammonium acetate liquids have been removed and these storage tanks are empty. The caustic soda solution tank appears to be empty.

As the Subject Property was being cleaned up after ceasing operations, all barrels and totes were collected and placed inside the wafer storage portion of the manufacturing facility. Collected products were classified and either returned to vendors, recycled or properly disposed of. As of May 2008, approximately 60 empty barrels and 16 empty totes remained in this area.

6.1.2.2 Wood Bark

Removed wood bark was conveyed to an outside storage area located on the east side of the wood room. When the facility was operating, this material was sold as fuel and transported to the primary customer on a daily basis, minimizing the amount of bark stored on site. The only wood bark remaining on site as of May 2009 is bermed alongside the long ponds to help insulate the pond walls. This material was placed there in the fall of 2006 and remains in place as of December 2008 (photograph 1).

6.1.2.3 Spare Equipment

Spare equipment such as electric motors, gearboxes, etc. are stored inside the facility.

6.1.3 Waste Management

6.1.3.1 Scrap metal

Scrap metal was recycled and historically placed in dumpsters that were kept on a paved surface just north of the press hydraulic room. Scrap metal dumpsters were relocated inside the facility buildings in 2007. There is a small amount of scrap metal located in the “boneyard” on the west edge of the Subject Property (photograph 2).

6.1.3.2 Pond soil

Periodically, log-conditioning ponds were drained and cleaned in order to perform repairs and maintenance on the log chain system. The soil and other organic material removed during this cleaning process was placed on a large concrete dewatering pad for further disposal. The process water was collected in a small sump and pumped back into the log pond system. Dewatered solids were tested as part of the waste stream characterization. Test data going back to 1993 supports that the pond soil is not a hazardous waste, but has been classified as petroleum-contaminated soil. This material has been disposed of by transporting it to a licenses composting facility, where the petroleum products break down and then the soil can be used as landfill cover or for other similar topsoil purposes. Occasionally, soil would have to be relocated from the dewatering pad prior to sending it off site, In these instances, the material was placed on impermeable liners and bermed to prevent any ground water contamination. The 2006 aerial photograph (Figure 6) shows one such storage application just to the west of the manufacturing buildings and north of logyard D. As of December 2008, there is approximately 150 yd³ of pond on the dewatering pad and in the bottom of the overflow pond pending disposal. This material has been tested and will require composting (photograph 3).

6.1.3.3 Hazardous waste

The Subject Property has maintained a MPCA issued hazardous waste license (MND058318688) and been classified as a Minimal Quantity Generator of hazardous waste. Hazardous wastes shipped from the Subject Property over the years have been used parts washer solvents, liquids collected from aerosol cans, and some unusable paints, adhesives or other solvents. Several areas of the Subject Property contained products that either could be hazardous wastes if mismanaged (such as used oils, antifreeze, oil filters) or if spent products were disposed (such as parts-washing station solvents).

The Subject Property has a dedicated, secure hazardous waste storage area. As of May 2009, the storage area was empty.

6.1.4 Storage Tanks

There are no known underground storage tanks located on the Subject Property. The EDR report identified that there once was a 6600-gallon underground diesel fuel tank but it was removed by the previous owners, Blandin Wood Products Company in May 1990. The 1990 site assessment (reference A) indicated that this tank was located in the same place where the current aboveground diesel fuel storage tank is located.

ASTs were observed on-site, including a 15,000-gallon chemical storage tank for copper ammonium acetate, two 14,000 gallon emulsified wax tanks, numerous smaller bulk oil tanks in the mobile equipment shop, a 500 gallon diesel fuel tank in the fire pump house, and various operational and storage tanks within the press hydraulic room. Additionally, there is a 5,000-gallon caustic tank in connection with the wet electrostatic precipitator system.

The press hydraulic room contains two large operational systems that contain petroleum products and several bulk storage tanks. The press hydraulic system contains over 10,000 gallons of hydraulic oil and consists of two large tanks, several pumps, filters and control valves. The portion of the room holding the hydraulic system has concrete berms to prevent any spill from leaving the building and has a large concrete pit area under the pumping system that routes hydraulic piping to the press as well as serving as an oil spill containment area. Historically, oil spills collect in this area and are periodically removed for disposal. Although Mr. Richardson indicated that the tanks were emptied in July 2008, standing oil was visible in this lower containment area and oil was visible on the equipment bases during the May 2009 site reconnaissance (photographs 4 and 5).

The second petroleum system in the press hydraulic room is the facility's thermal oil heating system. This portion of the room also has concrete berms to prevent a spill from leaving the building. Pump mechanical seal leaks were the historic source of the small oil leaks from this system. The floor showed signs of past oil leaks, but there was no visible standing oil as of December 2008. Mr. Richardson indicated that the thermal oil system has a total capacity of 20,000 gallons; as of May 2009 there was 2,000 gallons of thermal oil in the drain tank and

approximately 15,000 gallons in the remainder of the system. 3,000 gallons had been removed earlier in 2008 and transferred to another Ainsworth facility.

The only storage tank located outside a building is a 585 gallon diesel fuel tank used for weekend filling of logyard mobile equipment. This tank includes steel secondary containment area that is set directly on unpaved soil and a roof to minimize rainwater accumulation within the containment area. The pump and all associated piping is above ground and the area is protected from inadvertent damage by large concrete blocks placed near the containment. Refueling from this diesel tank occurs on an unpaved surface (photograph 6). There was a mixture of water and petroleum in the containment area as of May 2009 (photograph 7).

The caustic soda solution storage tank is located within one of the buildings and has a secondary containment area that will hold more than the tank's capacity. As of May 2009, there was approximately 3" of dried residue within the containment. The residue appears to be a combination of wood dust and dried sodium hydroxide solution. The residue was dried and cracked, indicating that the material had been in the containment long enough for any liquids to evaporate (photograph 8).

Paints and inks were used for finished product edge sealing and stenciling. These products were received, stored and used in reusable totes that were returned to the vendor. There were only empty paint totes at the Subject Property as of May 2009.

6.1.5 Wood Waste Disposal Site

There is a closed, capped, bark filled landfill (SW-853) on the Subject Property. Located south of the manufacturing buildings, this area is visible by comparing the 1975 and 1991 aerial photographs (Figures 6 and 7 respectively). The landfill cover had typically been mowed once per year to maintain a vegetative cover. This was not completed in 2007, 2008 or yet in 2009. I physically inspected the landfill cap over the summers of 2007, 2008 and as recently as May 15, 2009. The cap appeared to be in adequate condition at the times of inspection (photograph 9).

6.1.6 Water Supply

The Subject Property draws water from two sources; the Mississippi River or two groundwater wells located on site. The groundwater wells are used for potable drinking water and bathrooms and the river water is primarily used for fire protection and some process make-up water. The scale house well (photograph 10) serves only a small bathroom in that building. The main facility well is located south of the office (photograph 11) and serves the remainder of the manufacturing facility. The EDR report and MDH web site both refer cite an incomplete well record (Well #304030) located in the undeveloped, wooded portion north of the logyard. The Minnesota Department of Health (MDH) conducts periodic water quality testing on the potable sources and maintains the well boring records; copies of these three boring records are included in Appendix E.

6.1.7 Wastewater

6.1.7.1 Septic Systems

The facility installed three new septic system drain fields in October 2004, as the original drain fields failed performance inspections required at the time of the facility sale from Potlatch to Ainsworth. System #1 is a small system serving a bathroom at the southeast corner of the shipping area (photograph 12). System #2 is another small drain field serving the wood scale house at the north entrance to the Subject Property (photograph 13). Septic system #3 is the main drain field for the facility and is located west of the log truck entrance road between the road and railroad tracks, directly west of the original drain field location (photograph 14).

6.1.7.2 Process drains

There are very few process drains located at the Subject Property, as it is not permitted to discharge any process water to the environment. The few floor drain systems all are plumbed to pump any water coming into contact with process materials into the log ponds. Water that collects in the press pit is collected and pumped into a large waste water tank located in that area. Liquid collected in this tank is either taken by truck to the Grand Rapids WWTP or pumped to the log ponds for use as make up water. There is a floor drain system in the wood room that

collects any spilled liquids from that location. This drain system collects in a small sump, where it also is pumped back into the pond system (photograph 15).

The third discrete floor drain is located in the mobile equipment shop. A trench collects any spilled liquids and drains into a small sump located in the same area. Mobile equipment was washed inside this room and the wash water collected inside the floor drain system (photograph 16). The solids settle out and the lighter petroleum products float on the liquid surface. Previous testing of the sump solids indicate that this material is also classified as petroleum contaminated soil and it is treated in the same manner as material removed from the bottom of the log ponds. There is an oil skimmer that can remove the petroleum products and collect them in a barrel for recycling or disposal (photograph 17). There is also an installed pump that is piped to the pond system to remove liquids from the sump. As of May 2009, the sump contained liquids and oil was visible on the liquid surface.

On occasion when the log conditioning pond levels are high, process water has been disposed of via trucking to the Grand Rapids waste water treatment plant. In 2008, the facility has drained all six log conditioning ponds and nearly all of the water in the four holding ponds. This liquid has been transported to the Grand Rapids WWTP for disposal.

6.1.8 Stormwater

The Subject Property has a system of culverts and open ditches to route surface storm water away from buildings and manufacturing areas. All surface water eventually drains into the Mississippi River or infiltrates into groundwater. There is one structural feature that directly relate to stormwater management, a large concrete containment basin on the east side of the Subject Property connected to an underground stormwater pipe collecting any water from an area between the main manufacturing buildings. This feature includes two open chambers separated by a wooden weir to dissipate any energy and allow suspended solids to settle before eventually discharging via an open ditch filled with riprap into the eastern wetland and eventually the Mississippi River (photographs 18, 19).

The facility is regulated under the MPCA's General Stormwater Permit for Industrial Activity and has managed stormwater discharges via implementation of a Stormwater Pollution Prevention Plan. The plan requires documented periodic site inspections during non-freezing conditions, including visual inspection of this containment basin. I observed this feature in May 2009 and there was no visible evidence of any cracking or other functional deficiencies.

6.1.9 Lagoons and Monitoring Wells

As noted on the 1975 aerial photograph (Figure 6), a wastewater treatment system was formerly located a few hundred feet north of the current pump house. This was the ozone treatment pond, and was a wastewater treatment system. The system was deemed unnecessary, and closed prior to Potlatch's purchase of the Subject Property in 1990. The 1991 photograph (Figure 7) shows that the impoundment had been filled. The ozone equipment building remains, housing unused electrical equipment.

There are two unused monitoring wells on site that were installed as part of the bark landfill closure discussed in Section 6.1.5. MW-2 is located along the SE bank of the landfill (photograph 20) and MW-4 is further to the north, just past the surface stormwater ditch riprap from the southern facility ditch (photograph 21). Both wells are PVC casings with larger PVC covers in place. There is no record of water sampling from these wells since October 1994. The 2006 internal environmental audit (reference B) referred to a third open monitoring well relating to the closed landfill. This well (MW 11) was located towards the east end of the open area between the manufacturing buildings and was sealed (photograph 22). There are no facility records of this closure.

6.1.10 Polychlorinated Biphenyls

No evidence of polychlorinated biphenyls (PCBs) was found on the Subject Property at the time of the site reconnaissance. A fenced-off electrical substation is located near the south end of the railroad spur serving the Subject Property. Transformers in this area were labeled as "No PCBs" (photograph 23).

Fluorescent lighting fixtures were noted in the office portion of the facility. Some lighting fixture ballasts may contain PCBs, or at least not be labeled specifically as “PCB free.” This review did not involve inspecting individual lighting fixture ballasts.

7.0 Interviews

Interviews with current owners, property managers or occupants are required for a Phase 1 Environmental Site Assessment to meet the requirement given in the AAI rule. Interviews with past owners, operators and occupants likely to have material information about the property are required only if they have been identified, and the information likely to be obtained is not duplicative of information from other sources.

7.1 OWNER'S REPRESENTATIVE

The Subject Property has been shut down since September 2006 and was permanently closed in August 2008; as of May 2009, the remaining person on site was a former employee that is now under contract with the owner to oversee the Subject Property.

Company Name:	Ainsworth Engineered LLC
Interview Date:	May 15, 2009
Name:	Randall S. Richardson
Position:	Property Manager
Years familiar with Subject Property:	9
Telephone Number:	(218) 259-9115

Past owners were not contacted as part of this site assessment, as they would not have material information about the Subject Property that was not previously obtained from other sources.

7.2 LOCAL GOVERNMENT OFFICIALS

I spoke with the following state and county officials regarding the Subject Property. Mr. Leppela was referenced in the EDR report as a MPCA contact for several of the historical spill events and Ms. Hopkins works in the Itasca County Environmental Services Department.

Government Organization:	MPCA	Itasca County
Interview Date:	May 21, 2009	May 26, 2009
Name:	Steve Leppela	Nadine Hopkins
Position:	Emergency Response & Facility Preparedness	Environmental Services Department
Years Familiar with Subject Property:	15	n/a
Telephone Number:	(218) 302-6609	(218) 327-2857

Mr. Leppela stated that the Grand Rapids OSB plant was very good at spill response, they reported process water spills in addition to petroleum product events. The MPCA has no pending enforcement actions with that site and there was no information in the MPCA database or his files regarding the CERC NFRAP reference.

Ms. Hopkins works at in the Environmental Services Department; their responsibilities include planning & zoning as well as environmental compliance. The county records contained no adverse information regarding the Subject Property.

8.0 Findings

8.1 REVEALED FINDINGS

8.1.1 Process and Facility

The Subject Property was undeveloped agricultural land prior to its development in approximately 1972, when Blandin Corporation constructed the original facility and operated a wood products manufacturing plant at the Subject Property. The plant originally included a wastewater treatment pond and an on-site wood bark disposal facility. Both the pond and the disposal facility have been closed. Blandin upgraded the manufacturing facility in the early 1980s with a new production line and then decommissioned and removed most of the original production equipment. Additionally, the Blandin Corporation facility had a “bone yard,” which was a storage location for off-line equipment, similar in some respects to a salvage yard.

The Subject Property was acquired by Potlatch Corporation in June 1990, and continued to manufacture OSB until Ainsworth Lumber Company, Ltd. purchased the Subject Property in September 2004. The facility produced 386 million square feet of board (3/8” basis) in 2005. Market conditions caused Ainsworth to indefinitely curtail production in 2006 and announce the permanent closure in August 2008.

By acreage, the majority of the Subject Property was used for outdoor log storage. There are no primary slashing operation at the Subject Property; the logs are delivered in appropriate lengths of approximately 100-inches.

8.1.2 Materials Management

Only small quantities of raw materials remain on site as of January 2009. There are no 100” logs remaining at the Subject Property, the wax tanks are empty and totes of water-based edge sealing paint have been returned to vendors for disposal. The sodium hydroxide solution used for WESP

cleaning was reported to be all removed from the site. Only wood bark remains bermed on the log pond walls, this organic material may be useable as biomass fuel or suitable for composting.

8.1.3 Waste Management

Pond soil testing indicates that heavy range petroleum products are entering the pond system and settling out in the soil. Pond soil has historically shown some amounts of petroleum contamination due to leaking hydraulic systems and process drains within the manufacturing process. These petroleum products are most probable coming from lubricating or hydraulic system leaks in the wood room. Any spilled liquids end up in the floor trench that is pumped into the log ponds. The other likely source of petroleum entering the pond system is the mobile equipment shop sump. If liquid is pumped over to the ponds before all petroleum is removed via the installed skimmer, additional petroleum products would enter the pond water system.

The Subject property has a dedicated, secure hazardous waste storage cage located in the northwest portion of the finishing line area area. When operating, the facility was classified in the smallest hazardous waste generator category, as the majority of potentially hazardous waste has been managed as Universal or Special wastes. The Subject Property will need to maintain a hazardous waste license while the site is cleaned up and any remaining hazardous waste are disposed of.

8.1.4 Storage tanks

The Subject Property had one underground storage tank that was removed in May 1990 when the Subject Property was owned by the Blandin Wood Products Company, according to information in the EDR Report (Appendix A). The MPCA leak site database does not have a corresponding release report entry near this 1990 date, thus it can be inferred that no evidence of a release was detected at the time the tank was removed, since the MPCA requirements at that time called for removal by certified tank-removal contractors.

The plant contains aboveground tank systems that contain a variety of products and chemicals. The press hydraulic room contains the largest quantities of petroleum products and there are

visible signs of past petroleum spills from both the press hydraulic and thermal oil heating systems. Although Mr. Richardson reported that the press hydraulic system had been emptied in July 2008, standing hydraulic oil remains in the lower portion of the hydraulic system containment pit as of the site reconnaissance.

Bulk chemicals (Copper ammonium acetate and sodium hydroxide) were kept in aboveground storage tanks with dedicated secondary containment areas located in the dryer building. There is no indication of any copper ammonium acetate spills. There are indications of past sodium hydroxide spills in that containment area. As of May 2009, there was approximately 3” of dried residue within the containment. The residue appears to be a combination of wood dust and dried sodium hydroxide solution; was dried and cracked, indicating that the material had been in the containment long enough for any liquids to evaporate.

The Subject Property has one empty 585-gallon diesel fuel tank within a steel secondary containment area that also has a roof to minimize rainwater accumulation. The associated fueling pump is collocated within the containment and has aboveground piping and refueling occurred on an unpaved surface. The November 1990 diesel fuel spill was most likely associated with mobile equipment refueling at this location.

Several liquids were contained in totes or barrels that can be moved about with forklifts. Latex edge sealing paints, stenciling inks and some defoaming chemicals were managed in this fashion.

8.1.5 Wood Waste Disposal Site

There is a closed bark disposal site located on the Southern portion of the Subject Property that was established in the fall of 1972 when Blandin Wood Products Company owned and operated the facility. There are a number of related documents, submittals and correspondence that are included in Appendix F. A September 26, 1979 Stipulation Agreement between Blandin Wood Products Company and the MPCA documented this historical use and began the process of characterizing and closing the site within the Subject Property. According to that document, wood bark, sawdust, log debris, resinated wood dust and small pieces of finished product were

placed in the disposal site. The stipulation agreement required Blandin to submit a compliance schedule to the MPCA that included an engineering report with all the relevant information in order to issue a solid waste landfill permit. The agreement also stipulated that disposal must cease by June 30, 1981.

The limited site records indicated that a closure plan was prepared and submitted to the MPCA in October 1979 with a revision being sent to the MPCA on June 19, 1981. This revision included Blandin Wood Products Company's plan to reclaim the majority of the bark to use as fuel at the parent company's paper mill. Further correspondence indicated that over 750,000 cubic yards of material was reclaimed and used as biomass fuel.

There were a total of three amendments to the 1979 Stipulation agreement; a June 24, 1980 amendment that did not relate to the disposal site, a August 31, 1983 amendment that dealt solely with the disposal area and a September 4, 1987 amendment that extended the disposal site closure date by one year. The 1983 amendment increased the water monitoring requirements and specified a closure date for the disposal site. The 1987 amendment to extend closure by one year to August 1, 1988 so excavated material from the parent company's paper mill expansion could be used as bark disposal site cover material.

Four letters dated between December 9, 1987 and January 25, 1989 documented minor revisions to groundwater monitoring requirements, acceptable use of the closed site, and final closure documents. A September 30, 1988 Blandin Wood Products Company letter inferred that the bark disposal site closure was completed before the regulatory deadline.

8.1.6 Water Supply

Potable water supply comes from two groundwater wells; the main well (#2582118) located approximately 150' south of the manufacturing building and a small dedicated well (#249420) located adjacent to the scale house. The MDH routinely tested water quality from these sources. The third well (#304030) referred to in both the EDR report and MDH database is likely shown

with an incorrect location. No well was found in that approximate area during the site reconnaissance.

8.1.7 Wastewater

There are three septic systems at the Subject Property, the largest drain field located west of the logyard that serves the manufacturing buildings, a small system at the scale house and a third drain field on the east side of the warehouse dedicated to a bathroom in the shipping area. All drain fields were replaced and recertified as compliant in October 2004 as part of the Subject Property sale from Potlatch to Ainsworth, there have been no changes since that time.

Process water from the log ponds is re-circulated in use. New water was added to the system to replenish what is lost to evaporation or the moisture reduction processes. Water from the pond system was also circulated through the drying system particulate control devices as quench water.-site. Log ponds process water has historically overflowed and spilled outside the buildings. These spills were reported to the proper regulatory authorities and the material was recovered and subsequently properly disposed of. The ponds were emptied in the summer of 2008 and there is some amount of settled pond solids that will require testing and likely disposal as petroleum contaminated soil.

There are floor trench drains within the wood room and one sump in the mobile equipment shop. These process drain systems eventually end up in the pond water system and are a likely source of pond soil petroleum contamination.

8.1.8 Stormwater

The Subject Property has maintained a stormwater pollution prevention plan for many years as part of the General Industrial Permit. Potential stormwater contamination risks have been reduced as exterior storage of raw materials has decreased and manufacturing operations were curtailed. Future storm water issues for the Subject Property will be stormwater accumulation in the uncovered dewatering pad and partially covered log ponds, as the facility is permanently closed and there will be no manufacturing related evaporative water losses.

8.1.9 Lagoons and Monitoring Wells

As noted on the 1975 aerial photograph (Figure 6), a wastewater treatment system including a treatment pond and small building containing ozone producing equipment was located a few hundred feet north of the current pump house. The system was decommissioned prior to Potlatch's purchase of the Subject Property in 1990, although the ozone equipment building remains, housing unused electrical equipment.

There are two unused monitoring wells on site that were installed as part of the bark landfill closure discussed in Section 6.1.5. MW-2 is located along the SE bank of the landfill and MW-4 is further to the north, just past the surface stormwater ditch riprap from the southern facility ditch. There is no record of water sampling from these PVC cased wells since October 1994 and the last facility document from 1997 stated that MPCA would approve any Potlatch formal request for closure of these two wells.

8.1.10 Polychlorinated Biphenyls

Given the age of the Subject Property, it is likely that the facility initially had electrical transformers that were filled with some amount of PCB containing oil. The EDR report made such a reference in one of the database searches (PADS) that referred to the Blandin Wood Products Company and two other databases (FTTS, HIST FTTS) simply indicated that the facility has been subject to Toxic Substance Control Act (TSCA) inspections and was visited on February 18, 1993 and February 27, 2002. Blandin Wood Products Company had notified the MPCA and EPA about PCB containing electrical transformers but I could not locate any detailed records on site of when the materials were removed. The internal environmental audit (reference C) looked audited the PCB program and there were no relevant findings in that audit.

No evidence of polychlorinated biphenyls (PCBs) was found on the Subject Property at the time of the site reconnaissance and the main facility substation transformers were labeled as "No PCBs".

9.0 Conclusions

The AAI rule requires that the environmental professional (EP) offer opinions whether the inquiry has identified conditions indicative of releases or threatened releases of hazardous substances. We have reviewed the above findings, formed our professional opinions and come to the following conclusions.

9.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

This term “recognized environmental conditions” (REC) is defined in the ASTM Standard (E1527-05) as:

The *presence or likely presence* of any hazardous substances or petroleum products on a property under conditions that indicate *an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products* into structures, on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de-minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de-minimis are not recognized environmental conditions.

9.1.1 Historical Recognized Environmental Conditions

The former wood waste disposal site on the Subject Property is a historic recognized environmental condition. The closed wood waste disposal site to the south of the facility was investigated under an administrative order of the MPCA. The investigation has included sustained groundwater monitoring for several parameters. Ultimately, the investigation revealed

groundwater impacts in the shallow groundwater discharging to the adjacent wetland. The main contaminant was phenol, at a “worst case” of 50 parts per million (the current drinking water standard is 4 parts per million). The MPCA issued the site a permit, and approved its closure. Subsequent groundwater monitoring concluded that phenol concentrations had returned to below the drinking water standards.

The existing outside aboveground storage tank (AST) and pump associated with mobile equipment refueling on the Subject Property is a historic recognized environmental condition. The EDR report referred to a 30-gallon diesel spill on November 21, 2000 as a result of an overflowing tank. The report did not give the specific location, but it is reasonable to conclude that it occurred at the refueling station. The tank was empty as of July 2008 according to Mr. Richardson. However, the presence of diesel fuel sheen in the secondary containment, the steel containment in direct contact with unpaved soil and past practice of refueling equipment on an unpaved surface are conditions indicative of a material threat of petroleum releases into the ground from this activity.

The dried caustic soda and wood dust residue in the secondary containment for that storage tank is a historic recognized environmental condition. No information was revealed in the course of the review that indicated a past release of this product occurred to soil or groundwater. However, the presence of dried product residue on the concrete floor of the secondary containment indicates that a liquid spill remained in the containment long enough for the water in the 25% sodium hydroxide solution to evaporate. Any minute fissures in the floor, joints of electrical penetrations would allow product to seep out of the containment area, which would be indicative of a material threat of a hazardous substance release into the soil or groundwater.

9.1.2 Current Recognized Environmental Conditions

The standing oil in the press hydraulic room is a recognized environmental condition. No information was revealed in the course of the review that confirmed any past release of petroleum products occurred to soil or groundwater from the secondary containment area. However, petroleum products have been present in the unsealed concrete secondary containment

area for several months or longer. This condition is indicative of a material threat of petroleum releases into the ground.

The standing oil and water in the mobile equipment shop sump is a recognized environmental condition. No information was revealed in the course of the review that confirmed any past release of petroleum products occurred to soil or groundwater from the sump. However, petroleum products are been present in the floor trench and sump, the building was unheated during the 2008 ~ 2009 winter and the liquid in the floor trench and sump froze. There is a reasonable possibility that these structures would be damaged and allow the oily liquid to enter the soil and groundwater. This condition is indicative of a material threat of petroleum releases into the soil and groundwater.

9.2 EVALUATED AS NO POTENTIAL ADVERSE IMPACT

The past use of portions of the Subject Property as agricultural land does not present a recognized environmental condition. No information was revealed in the course of the review that would indicate a release of petroleum products or hazardous substances occurred to soil or groundwater as a result of the Subject Property's history prior to 1971, when agricultural activities occurred on much of the Subject Property, based on review of aerial photographs.

The current use of the Subject Property as a closed OSB mill does not present a recognized environmental condition. No information was revealed in the course of this review that would indicate a release of petroleum products or hazardous substances occurred to soil or groundwater (above a de minimus level) as a result of the Subject Property's current status as a closed OSB mill.

The documented log pond process water spills associated with the Subject Property are not recognized environmental conditions. No specific data was revealed during the course of the review that would indicate that historic spills have caused soil or groundwater impacts. The spills were contained and no process water was ever reported to reach surface waters (Mississippi River), thus the spills did not present a material risk of harm to public health or the environment.

These events were fully reported to the appropriate government agencies and no regulatory enforcement action was taken or is pending.

The existing aboveground storage tanks (AST) associated with the Subject Property are not recognized environmental conditions. No information was revealed in the course of the review that would indicate a release of petroleum products or hazardous substances occurred to soil or groundwater as a result of the Subject Property's chemical or petroleum product storage, notwithstanding the documented spills. While not a compliance audit, I noted that tanks were appropriately labeled, vented, had secondary containment, were composed of a compatible material for the type of product stored, and generally did not show evidence of leaking or spilling of product.

The previous underground storage tank (UST) associated with the Subject Property is not a recognized environmental condition. No information was revealed in the course of the review that would indicate a release of petroleum products occurred to soil or groundwater as a result of the Subject Property's use of an underground diesel fuel tank. The MPCA leak site database does not have a corresponding release report entry near the May 1990 removal date, thus it can be inferred that no evidence of a release was detected at the time the tank was removed, since the MPCA requirements at that time called for removal by certified tank-removal contractors.

The presence of on-site water wells and monitoring wells are not recognized environmental conditions. While the presence of a well can create a potential conduit for contamination to migrate to deeper aquifers, a well does not meet the definition of a REC, namely, a release or material threat of release of petroleum or hazardous substances to soil or groundwater at the Subject Property.

10.0 Deviations

The AAI rule requires that site assessment reports document all deviations from the AAI protocols, specifically addressing data gaps and report conformity.

10.1 DATA GAPS

The AAI rule defines data gaps as “*a lack of or inability to obtain information required by the standards and practices listed in the regulation despite good faith efforts by the environmental professional or prospective landowner to gather such information.*” This section will document my attempts to fill the data gaps, comment on their significance and if the gaps affect the overall findings.

10.1.1 Property Valuation Reduction for Environmental Reasons

A property valuation analysis is being completed by other companies as shown in Section 3.2 of the Itasca Economic Development Corporation Request for Proposal (RFP) titled Property Audit and Feasibility Study Services for Itasca Eco Industrial Park. That analysis will include any valuation adjustments based on environmental reasons for the Subject Property. The User can then determine any site condition implication on commercial terms for the sale of the Subject Property. It is my professional opinion that this gap will be eliminated by the property valuation analysis, thus eliminating any possible significance associated with that topic not being covered in this report.

10.2 REPORT CONFORMITY

This report does not fully conform to the AAI component “consider the relationship of purchase price to fair market value” as described in Sections 4.4 and 10.1.1.

11.0 Non-Scope Considerations

11.1 ASBESTOS

The Subject Property has an asbestos survey on file. The survey was completed in 1998 under Potlatch's ownership and identified where there was Asbestos Containing Materials (ACM) and Presumed Asbestos Containing Materials (PACM). (reference F). The Subject Property's environmental files include records on various asbestos abatement projects completed at this location.

11.2 RADON

A radon gas survey was not part of this project scope.

11.3 LEAD BASED PAINT

The Subject Property has a lead paint survey on file. The survey was completed in 1998 under Potlatch's ownership and identified where there may be lead based paint (reference G).

11.4 DRINKING WATER

The Subject Property's potable water system is classified as a non-community, non-transient water system by the Minnesota Department of Health. There are periodic water quality testing records on file in the Subject Property's environmental. The Health Department suspended water testing once facility employment dropped below 25 people.

11.5 WETLANDS

There are two areas of the facility property that are considered as wetlands. Using the U.S. Forest Service's Circular 39 classification system, a small portion on the northwest edge of the Subject Property the west of the incoming railroad track is classified as a Type 3 shallow marsh. This area drains via culverts under the railroad tracks and truck entrance road, and then via an intermittent stream into the Mississippi River. There is a larger wetland on the Subject Property's

eastern boundary that is classified as a Type 4 deep marsh. Portions of the Subject Property stormwater drainage system empty into this wetland.

11.6 REGULATORY COMPLIANCE

A regulatory compliance audit was not part of this project scope. The last internal environmental audit was conducted in December 2005 and given a status update in March 2006 (reference C).

11.7 CULTURAL AND HISTORICAL RESOURCE

A review of cultural and historic resources was not part of this project scope.

11.8 INDUSTRIAL HYGIENE

A review of industrial hygiene was not part of this project scope.

11.9 HEALTH AND SAFETY

A review of health and safety issues was not part of this project scope.

11.10 ECOLOGICAL RESOURCES

A review of ecological resources was not part of this project scope.

11.11 ENDANGERED SPECIES

Considerations concerning endangered species was not part of this project scope.

11.12 INDOOR AIR QUALITY

A review of indoor air quality was not part of this project scope.

11.13 HIGH VOLTAGE POWER LINES

A review of high voltage power lines was not part of this project scope.

12.0 References

- A. Barr Engineering Co., *Environmental Assessment – Appendix, Blandin Wood Products Company*; Grand Rapids, MN, May 21, 1990
- B. Wenck Associates, Inc. *Phase 1 Environmental Site Assessment, Potlatch OSB Mill*; Grand Rapids, MN, August 25, 2004
- C. Ainsworth Engineered (USA) LLC, *Internal Environmental Audit, Grand Rapids OSB*; Grand Rapids, MN, December 2005 with update as of March 2006.
- D. Headwaters Environmental, Inc., *Environmental Site Assessment, Ainsworth Engineered LLC OSB Mill*; Grand Rapids, MN, January 7, 2009.
- E. Michael Twite, *MPCA Multi Media Inspection – Outbrief Notes*; Grand Rapids MN, May 27, 1998.
- F. Nova Consulting Group Inc., *Asbestos Building Survey Report, Project # M7M-125*; March 1~9, 1998
- G. Nova Consulting Group, Inc., *Lead Based Paint Testing Report, Project #M97-1477*; June 1, 1998

13.0 Signature Page

I declare that to the best of my professional knowledge and belief, I meet the definition of an “Environmental Professional” as defined in §312.10 of this part (US EPA’s All Appropriate Inquiry rule). I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. This report was completed in substantial conformance with the federal rule; any deviations from the rule requirements are specified within the report.

Michael G. Twite, President

Headwaters Environmental, Inc.

Date

14.0 Qualifications

The AAI Rule includes the following criteria as one means to be considered an “Environmental Professional”.

1. B.A./B.S. degree or higher in any science or engineering degree

Mr. Twite has a Bachelors Degree in Mechanical Engineering, University of Minnesota.

2. More than 5 years relevant experience. “Relevant experience” includes:

- **ESAs, other investigations and remediation**
- **understanding of surface and subsurface environmental conditions**
- **proven experience using professional judgment to develop opinions regarding releases or threatened releases of hazardous substances**

Mr. Twite has been an Environmental Manager in the forest products industry from 1996 to 2008 and owner of Headwaters Environmental for 2 years. In these 14 years, he has been involved in the following work that qualifies as relevant experience:

- owner’s representative in five environmental site assessments in the US and Canada
- Completed three limited scope Phase I Environmental Site Assessments for wood products facilities
- Lead auditor for 10 of 17 environmental audits at manufacturing facilities.
- Trained three facility EH&S supervisors.
- Constructed two composting facilities to remediate petroleum contaminated soil.
- Developed environmental programs for spill prevention, storage tanks, stormwater, soil remediation, solid waste and hazardous waste.
- Completed paper mill landfill closure project on time and under budget. Also managed post –closure operations.
- Managed the wood ash land application program for two facilities.
- Managed \$1.3 MM boiler rebuild. Completed project under budget and on schedule.
- Managed several projects including thermal oxidizer rebuilds, rotary dryer and baghouse replacements.
- Reviewed Aboveground Storage Tank requirements for an industrial client –
- Developed and conducted DOT Hazardous Materials employee training.
- Completed numerous federal and state air permit applicability analysis for industrial facilities
- Completed HAZCOM program hazard analysis on over 200 products

15.0 Figures

- Figure 1: 2006 Aerial Photograph with property boundaries
- Figure 2: 1939 Aerial Photograph
- Figure 3: 1947 Aerial Photograph
- Figure 4: 1953 Aerial Photograph
- Figure 5: 1966 Aerial Photograph
- Figure 6: 1975 Aerial Photograph
- Figure 7: 1991 Aerial Photograph
- Figure 8: 2003 Aerial Photograph
- Figure 9: 1998 City Directory
- Figure 10: 2001 City Directory
- Figure 11: 1972 Plat Map
- Figure 12: 1978 Plat Map
- Figure 13: 1987 Plat Map
- Figure 14: 1994 Plat Map
- Figure 15: 2003 Plat Map
- Figure 16: 2007 Plat Map



Figure 1: 2006 Aerial Photograph showing Property Boundaries

Ainsworth Engineered LLC – Grand Rapids, MN

Headwaters Environmental, Inc.
Simple solutions to complex problems



Figure 2: 1939 Aerial Photograph

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Figure 3: 1947 Aerial Photograph

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Figure 4: 1953 Aerial Photograph

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Figure 5: 1966 Aerial Photograph

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Figure 6: 1975 Aerial Photograph

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Figure 7: 1991 Aerial Photograph

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Figure 8: 2003 Aerial Photograph

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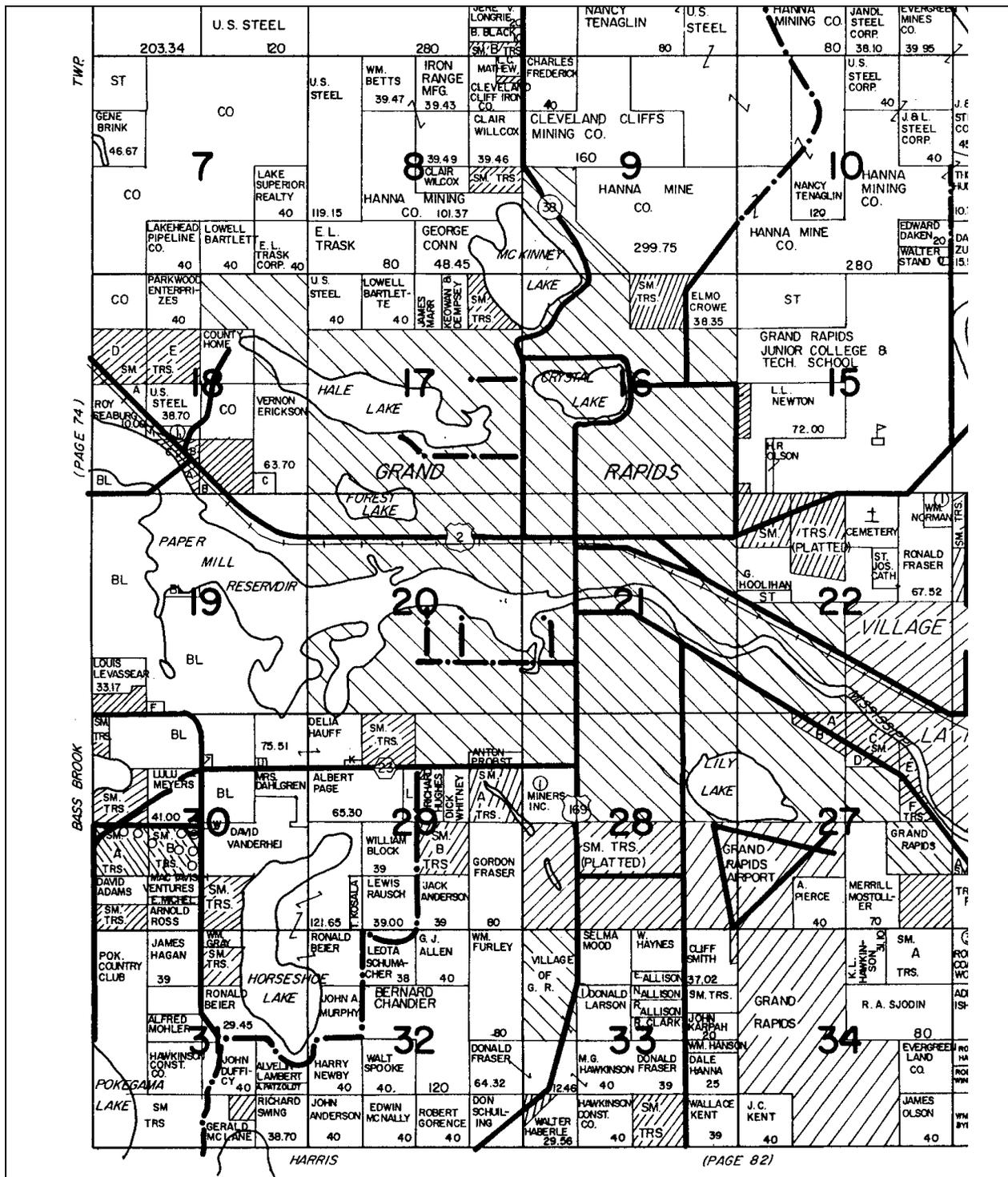


Figure 11: 1972 Plat Map

Ainsworth Engineered LLC – Grand Rapids, MN



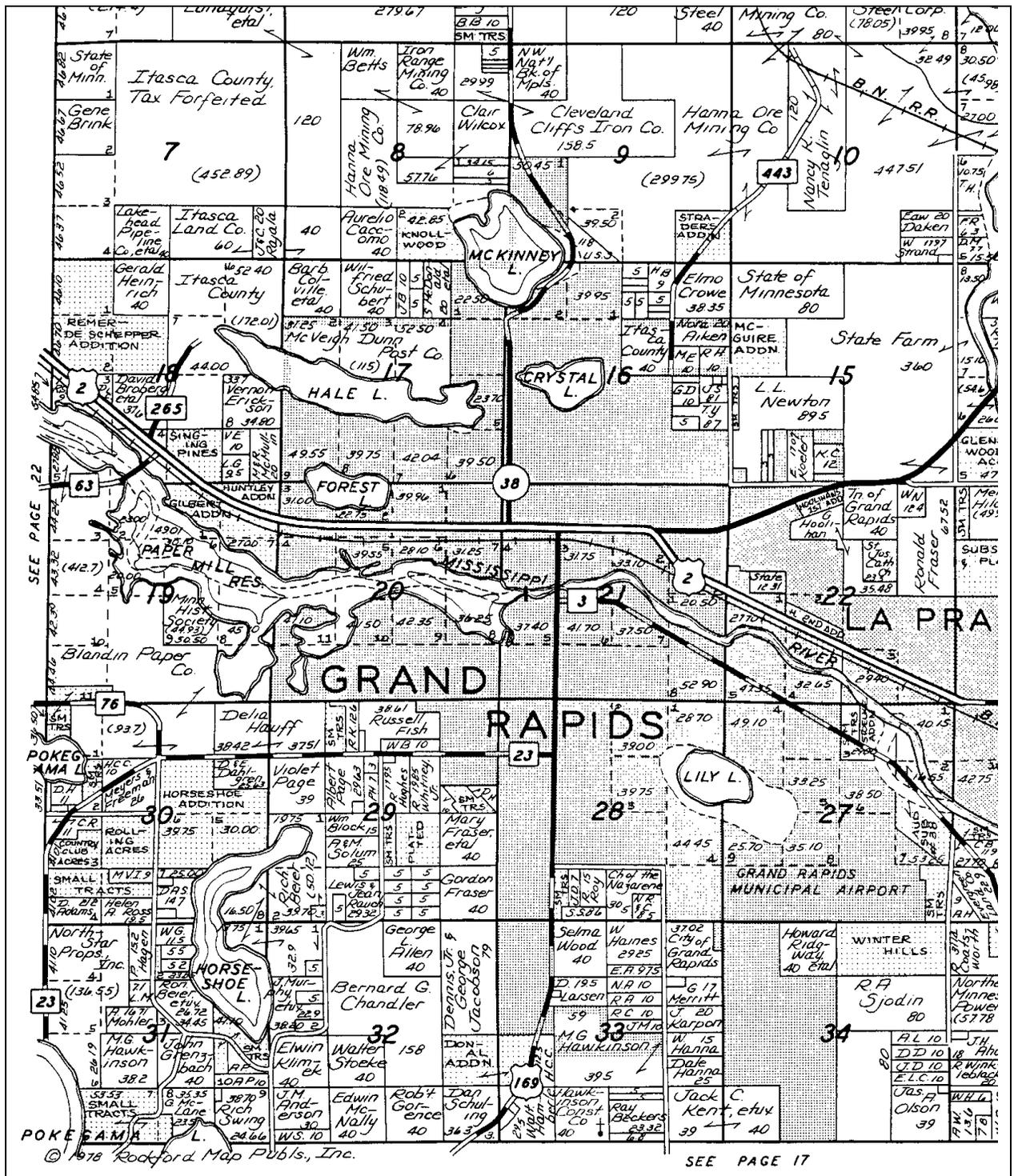


Figure 12: 1978 Plat Map

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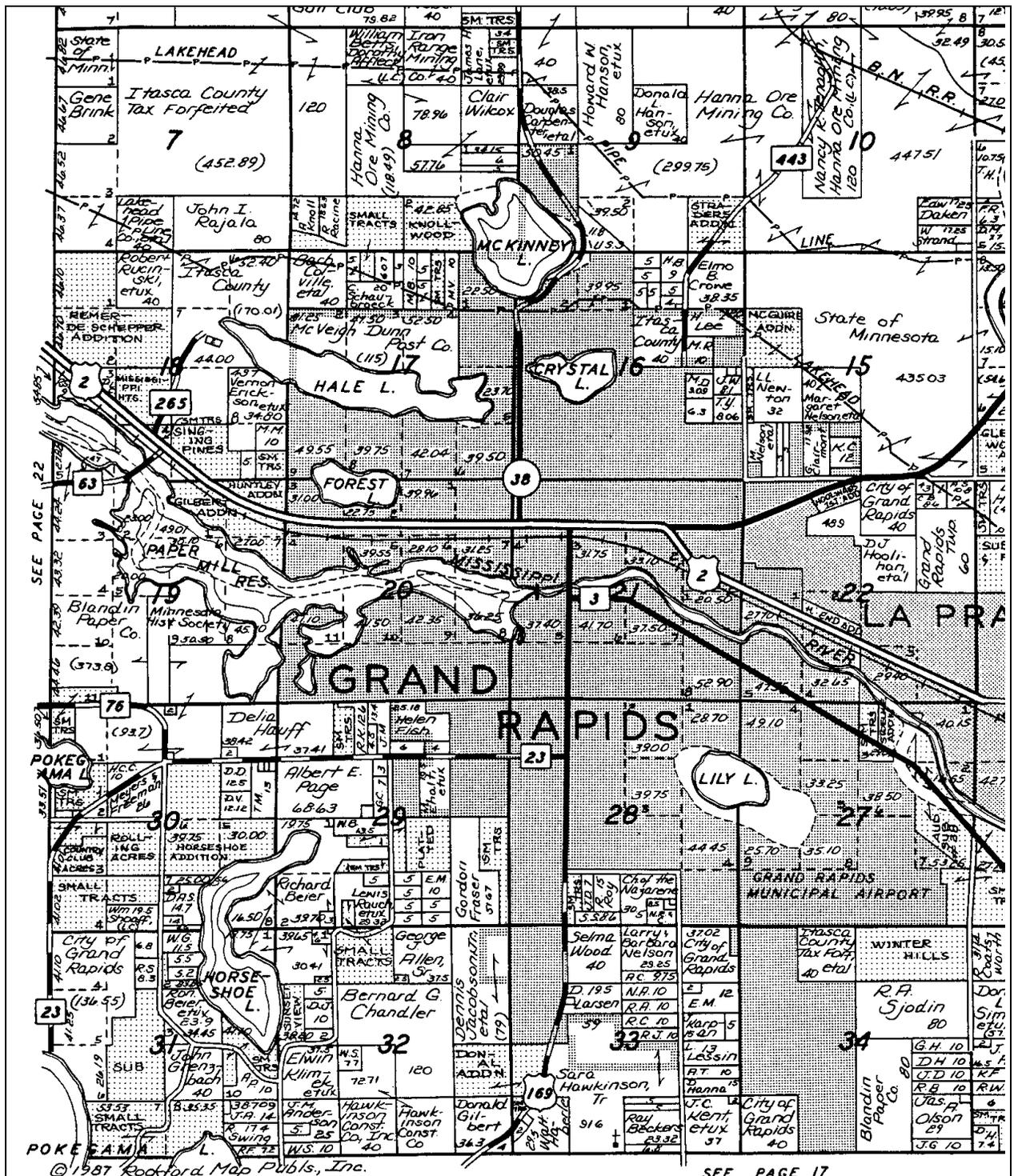


Figure 13: 1987 Plat Map

Ainsworth Engineered LLC – Grand Rapids, MN

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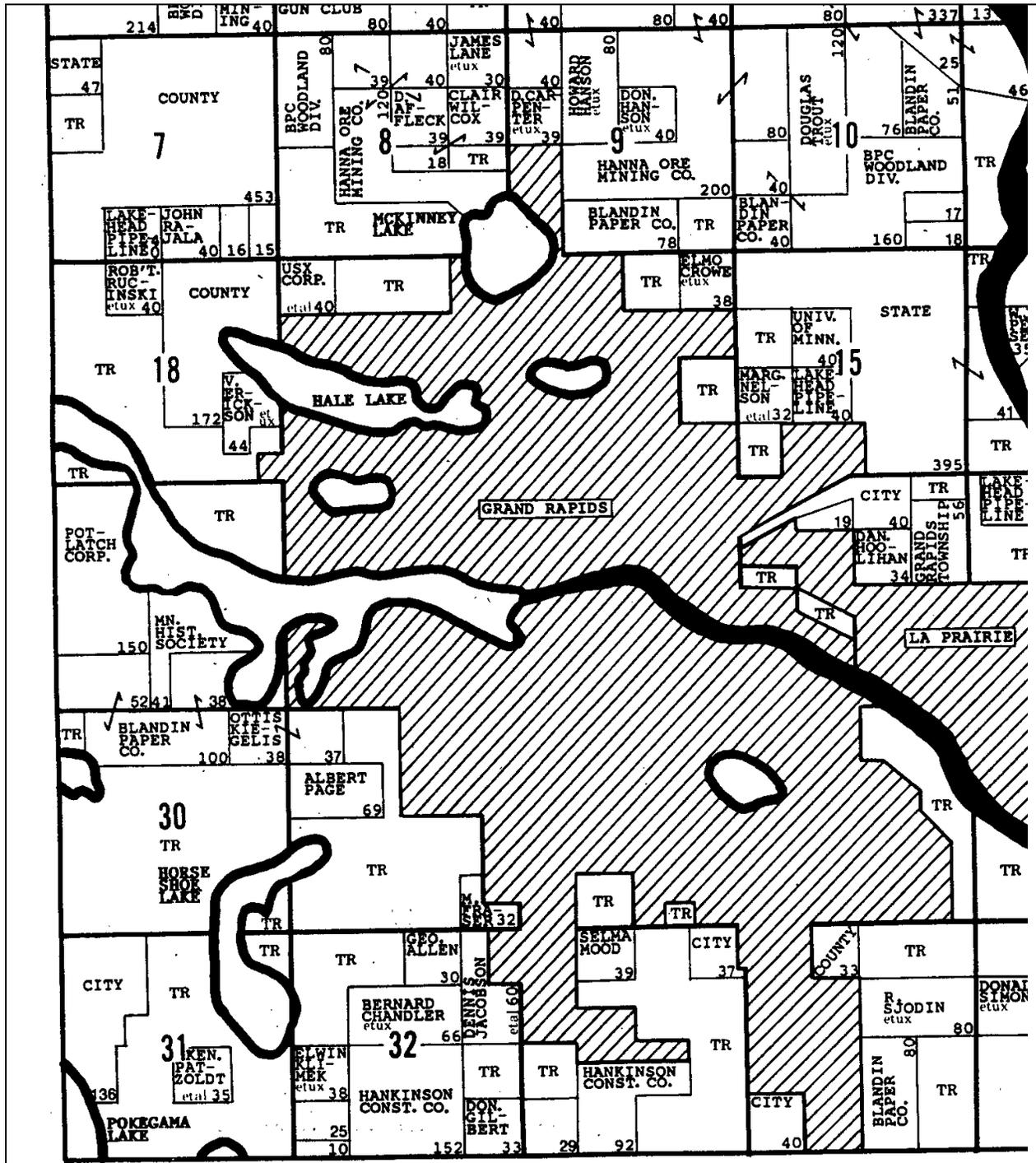


Figure 14: 1994 Plat Map

Ainsworth Engineered LLC – Grand Rapids, MN



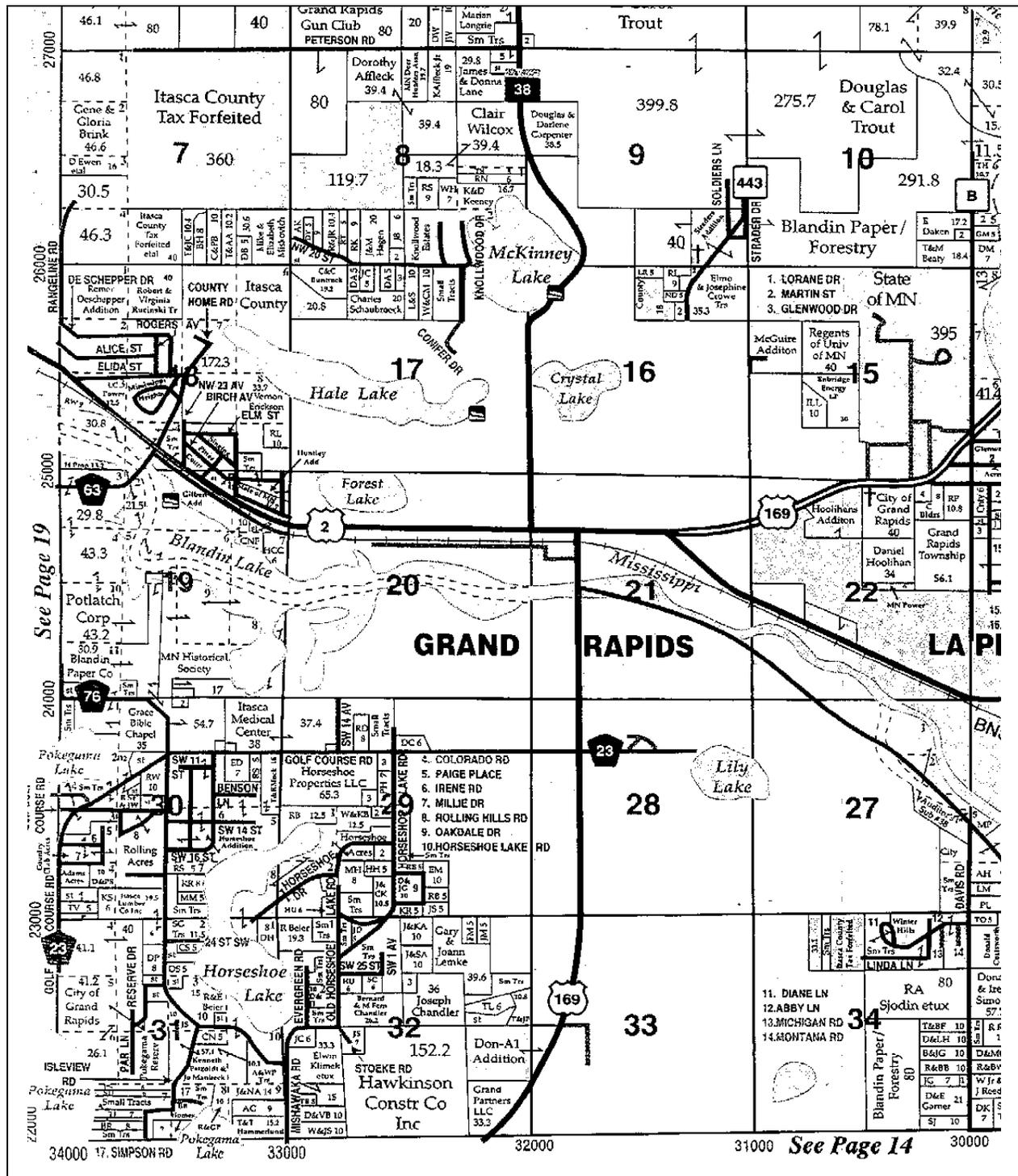


Figure 15: 2003 Plat Map

Ainsworth Engineered LLC – Grand Rapids, MN



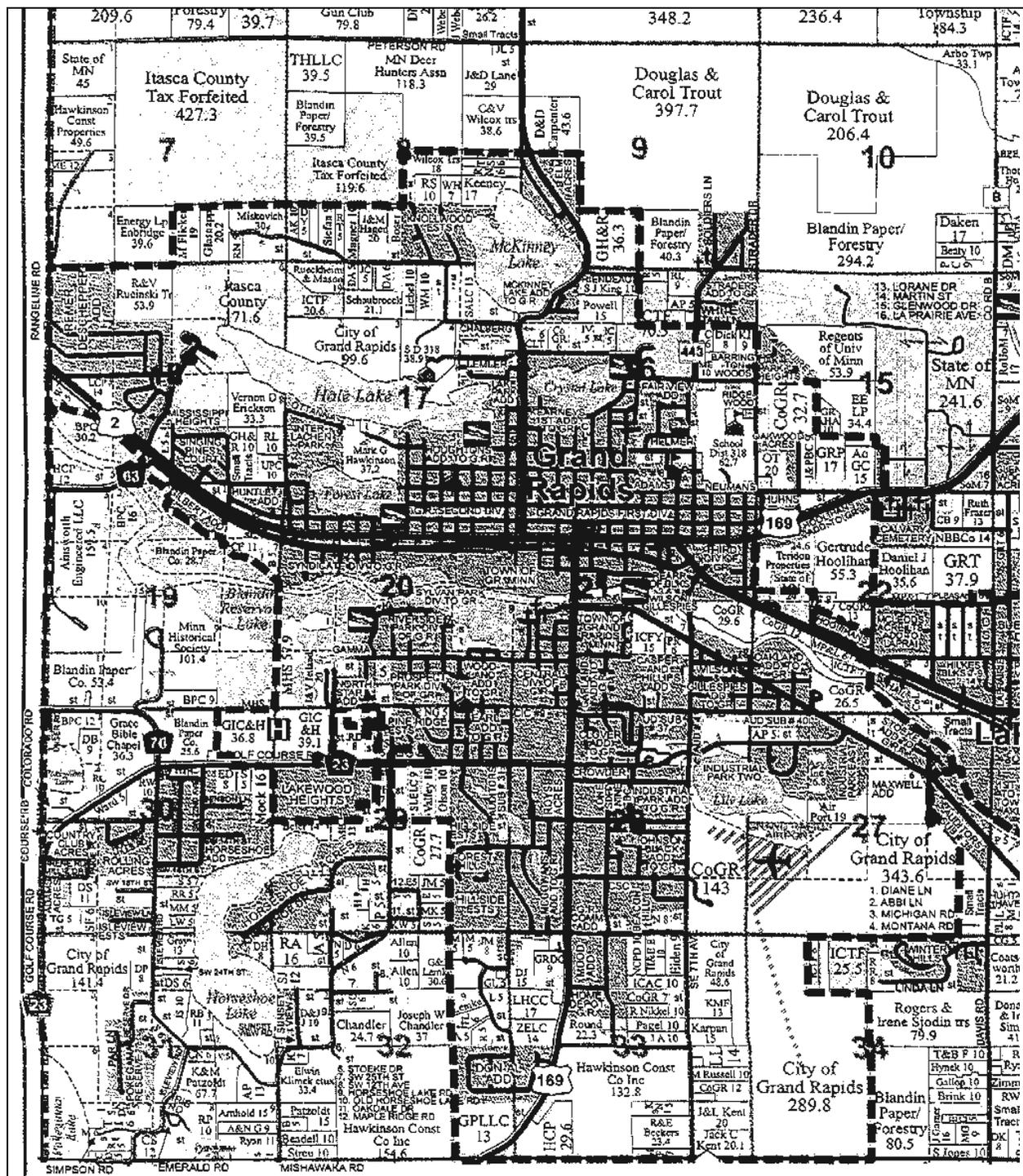


Figure 16: 2007 Plat Map

Ainsworth Engineered LLC – Grand Rapids, MN

Headwaters Environmental, Inc.
Simple Solutions to Complex Problems

16.0 Site Photographs



Photograph 1: Wood Bark at Log Ponds (Section 6.1.2.2.)



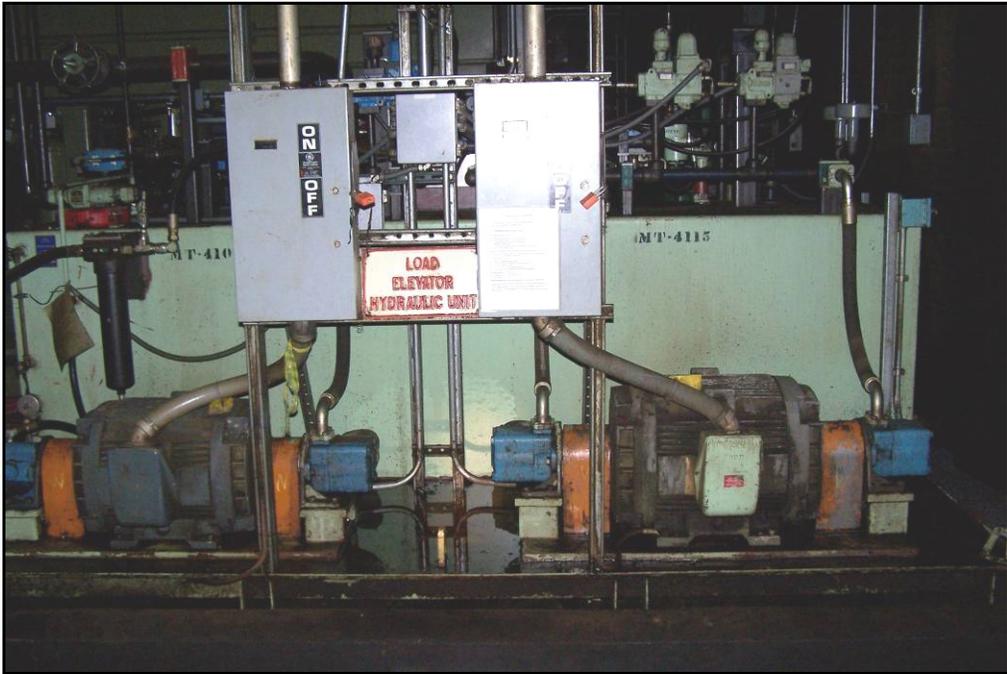
Photograph 2: Scrap metal in "Boneyard" (Section 6.1.3.1.)



Photograph 3: Pond Soil on Dewatering Pad (Section 6.1.3.2.)



Photograph 4: Oil at Press Hydraulic System (Section 6.1.4)



Photograph 5: Oil at Press Hydraulic System (Section 6.1.4)



Photograph 6: Diesel Refueling Station (Section 6.1.4)



Photograph 7: Diesel Refueling Station Containment (Section 6.1.4)



Photograph 8: WESP Caustic Tank Secondary Containment (Section 6.1.4)



Photograph 9: Closed Bark Landfill, South Edge Vegetation (Section 6.1.5)



Photograph 10: Scale House Well (Section 6.1.6)



Photograph 11: Main Facility Well (Section 6.1.6)



Photograph 12: Septic Drain field #1 for Shipping Area (Section 6.1.7.1)



Photograph 13: Septic Drain field #2 for Scale House (Section 6.1.7.1)



Photograph 14: Septic Drain field #3 for Manufacturing Area (Section 6.1.7.1)



Photograph 15: Wood room floor trench (Section 6.1.7.2)



Photograph 16: Mobile equip shop floor trench (Section 6.1.7.2)



Photograph 17: Oil Skimmer (Section 6.1.7.2)



Photograph 18: Stormwater detention basin (Section 6.1.8)



Photograph 19: SW detention basin interior (Section 6.1.8)



Photograph 20: MW2 (Section 6.1.9)



Photograph 21: MW4 (Section 6.1.9)



Photograph 22: MW11 (Section 6.1.9)