DECLARATION FOR AMENDMENT TO THE RECORD OF DECISION

SITE NAME AND LOCATION

Reynolds Metals Company (RMC)
Saint Lawrence Reduction Plant
Massena, New York

OPERABLE UNITS/AREAS OF CONCERN

All hazardous waste remediation areas identified by the Department at the RMC Saint Lawrence Reduction Plant, Massena, New York.

STATEMENT OF BASIS AND PURPOSE

This Amendment to the Record of Decision (ROD) presents the selected remedial action for the above-listed RMC site developed in accordance with the New York State Environmental Conservation Law (ECL) and the Commissioner's Organization and Delegation Memorandum 89-05. It is consistent with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 USL Section 9601, et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). Section VIII of the original ROD lists the documents that comprise the Administrative Record for the RMC site. The documents in the Administrative Record and the attached Amendment to the ROD are the basis for the selected remedial action.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response actions selected in this ROD, present a current or potential threat to public health, welfare and the environment.

DESCRIPTION OF THE AMENDMENT TO THE RECORD OF DECISION

The Amendment will allow RMC to dispose of soils contaminated with PCBs at levels equal to or greater than 50 ppm in an off-site landfill instead of performing on-site treatment and on-site disposal of treated residuals. Low-level contaminated soils (less than 50 ppm PCBs) will be placed in RMC's on-site landfill and capped. In addition, the Amendment includes a design clarification to the North Yard remediation. In the southern portion of the North Yard the design clarification will allow RMC to establish a predefined horizontal limit of excavation based on a soil PCB concentration of 100 ppm. Soils within that horizontal limit

contaminated with PCBs at levels equal to or greater than 25 ppm will be excavated to a depth predetermined by existing and additional soil borings and sampling. In the northern portion of the North Yard the design change will increase the area to be excavated by removing all soils contaminated PCBs at levels of 10 ppm or greater. Upon completion of excavation work, confirmatory samples will be taken. Further excavation will be considered if preferential pathways for vertical contaminant migration are identified during excavation. All areas where PCB contamination in the soil equals or exceeds 10 ppm will be capped with an impervious cap. Final remediation in the North Yard will be undertaken upon plant closure.

DECLARATION

This amendment to the ROD will be protective of human health and the environment, and will comply with applicable State Environmental Quality Standards and the Commissioner's Organization and Delegation Memorandum 89-05.

6/27/95
Date

Michael J. O'Toole, Jr., P.E.
Director
Division of Hazardous Waste Remediation
NYSDEC

AMENDMENT TO THE

RECORD OF DECISION

REYNOLDS METALS COMPANY

St. Lawrence County, New York

In January of 1992, the New York State Department of Environmental Conservation (NYSDEC) issued a Record of Decision (ROD) for six areas of contamination at the Reynolds Metals Company (RMC) St. Lawrence Reduction Plant in Massena, New York (see Figure 1). As part of the ROD, soils in the North Yard and other areas of the facility contaminated with Polychlorinated Byphenyls (PCBs) at concentrations of 25 ppm or greater were to undergo on-site treatment prior to on-site land disposal. Soils in the North Yard contaminated with PCBs at levels of 25 ppm or greater were to be excavated for on-site treatment. Soils remaining that were contaminated with PCBs at levels between 10 ppm but less than 25 ppm were to be capped with a multi-layered asphalt cap. The ROD specified incineration as the chosen treatment technology but allowed RMC to evaluate other technologies including solvent extraction and thermal desorption.

In accordance with NYSDEC Commissioner's Organization and Delegation Memorandum #89-05, Section 9, RMC requested that the Department amend the ROD to eliminate on-site treatment and instead allow for off-site disposal of contaminated soils at concentrations of PCBs of 50 ppm or greater. Excavated soils containing less than 50 ppm PCBs will be consolidated in the on-site industrial landfill and capped in accordance with NYSDEC and United States Environmental Protection Agency (USEPA) requirements for hazardous waste landfills. To support that request, RMC presented to the NYSDEC a document entitled Request for Modification of Record of Decision, Reynolds Metals Company St. Lawrence Reduction Plant, Massena, New York dated January 1995. This document was prepared by RMC's consultant Woodward-Clyde Consultants.

This document is a summary of the information that can be found in greater detail in the above referenced request for ROD modification.

The following is a brief discussion on the rationale behind the ROD amendment, and an evaluation of the amendment's ability to meet New York State standards, criteria and guidelines (SCGs), and also be protective of public health, safety or welfare, and the environment or natural resources. This information is taken from the consultant's ROD amendment document referenced above.

RATIONALE

When the feasibility studies for the North Yard remediation were undertaken in 1991, off-site disposal alternatives were not considered cost effective because of high landfill disposal fees. Landfill disposal costs for PCB contaminated soils have dropped to a point where it is now economically feasible. Industrial waste minimization programs have resulted in more space being available at hazardous waste landfills at a much lower cost. The Amendment to the ROD will minimize the volume of contaminated soils being shipped off-site for disposal by allowing soils with less than 50 ppm PCBs to be consolidated at RMC's on-site landfill. This will increase the volume of contaminated soils for on-site disposal from an estimated 53,000 cubic yards to 61,600 cubic yards. However, this

small increase in volume will not significantly increase the size of the cap and it's subsequent cost.

Off-site disposal of soils containing PCBs will also reduce the exposure risk to workers involved with the remediation, on-site personnel and the surrounding community when compared to on-site incineration. In addition, off-site disposal will occur in a secure facility where risks are minimized, and project scheduling for off-site disposal will be more reliable.

EVALUATION OF THE ROD AMENDMENT AND COMPARISON WITH THE EXISTING ROD REQUIREMENTS

SHORT-TERM IMPACTS AND EFFECTIVENESS

This evaluation criterion addresses the following effects during the construction and implementation phase until remedial response objectives are met:

- Protection of the community during remedial construction activities.
- Environmental impacts during remedial construction activities.
- Time until remedial response objectives are achieved.
- Protection of workers during remedial construction activities.

When compared to on-site treatment, off-site landfilling will reduce short-term impacts. Potential risks to on-site workers will be lessened by reducing the materials handling requirements needed for on-site treatment. Air emissions from the treatment technology will be eliminated by using off-site disposal. The remediation time frame will be significantly shorter by eliminating mobilization and operation of the treatment equipment. Potential short-term risks of transporting PCB contaminated material will increase somewhat.

LONG-TERM EFFECTIVENESS AND PERMANENCE

This evaluation criterion addresses the results of a remedial action in terms of:

- Permanence of the remedial alternative.
- Magnitude of the risk remaining after remediation.
- Adequacy of controls.
- Reliability of controls, if any, used to manage treatment residuals or untreated wastes that remain at the site following remediation.

The NYSDEC considers destruction, separation/treatment, or solidification/chemical fixation of inorganic waste as permanent remedies. Therefore, on-site treatment of PCB contaminated soils is considered as providing the most long-term effectiveness and permanence. Off-site landfilling does provide for permanent management in a secure, monitored location where adequate and reliable controls are provided. Landfilling soils with PCB concentrations less than 50 ppm in the on-site landfill will provide adequate containment with reliable controls at no significant increase in risk.

REDUCTION OF TOXICITY, MOBILITY, AND VOLUME

Reduction of toxicity, mobility, and volume criterion includes consideration of the following:

- Amounts of hazardous materials that are destroyed or treated, including how principal threat(s) are addressed;
- Degree of expected reduction in toxicity, mobility, and volume estimated as an approximate percentage of reduction;
- Degree to which treatment is irreversible, and;

- Types and quantities of treatment residuals that remain following treatment.

On-site treatment will irreversibly reduce the toxicity and volume of hazardous waste while off-site landfilling will not. The ROD amendment does not meet permanent treatment criteria. Under the existing ROD provisions, approximately 27,600 cubic yards of residuals from on-site treatment will be disposed of on site. The ROD amendment will allow soils containing PCBs at 50 ppm or greater to be shipped off site for disposal; soils containing PCBs under 50 ppm will be disposed of in the on-site landfill. This will increase the on-site disposal volume by an estimated 8,600 cubic yards.

IMPLEMENTABILITY

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of the services and materials required during its implementation. The implementability criterion considers:

- Construction and operation requirements.
- Reliability of the technology.
- Ease of undertaking additional remedial action.
- Monitoring considerations.
- Permitting and other activities needed to coordinate with offices and agencies.
- Availability of adequate off-site treatment, storage capacity and disposal services.
- Availability of necessary equipment, specialists, skilled operators, and provisions to ensure any necessary additional resources.
- Availability of services and materials.

Off-site landfilling provides a more implementable approach by eliminating the need to procure, mobilize, and operate a treatment system. The stockpiling, soils preparation and handling, and handling and disposal of treatment residuals as required by a treatment system are also eliminated. Excavation and direct load-out of contaminated soils simplify construction and operation requirements and the availability of adequate off-site disposal capacity, necessary equipment, and services and materials make off-site landfilling highly implementable.

COMPLIANCE WITH APPLICABLE STANDARDS, CRITERIA, AND GUIDELINES (SCGs)

Both the on-site treatment and off-site landfilling alternatives will comply with all applicable SCGs. These SCGs will include land disposal restrictions under TSCA and RCRA regulations, guidance for disposal of PCB contaminated materials, and regulations pertaining to transport of hazardous waste. Landfilling of low level contaminated soils (less than 50 ppm PCBs) will be done in RMC's on-site landfill, which has already been approved for consolidation of low level contaminated soils and permanent closure.

PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

This assessment is based on a composite of factors assessed under other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with standards, criteria, and guidelines.

Both alternatives provide adequate protection of human health and the environment. Off-site landfilling will reduce on-site risks by speeding up remediation and eliminating air discharges (assuming incineration or thermal treatment). However, on-site treatment and PCB destruction reduces potential risks from off-site transportation and landfilling.

COST

RMC has estimated that by implementing the off-site landfilling alternative a cost savings of $9.9 million could be realized when compared to on-site treatment. The updated capital cost for the original scope of work as outlined in the current ROD is now estimated by RMC at $63.3 million (assuming incineration). By implementing the off-site landfilling alternative the capital cost is estimated at $53.4 million.

DESIGN CHANGE

RMC has also requested a design change for the North Yard remediation. The design change will allow RMC to establish a predefined horizontal limit of excavation that minimizes disruption of plant operations in this area. Soils within that horizontal limit will be excavated to a depth predetermined by existing and additional soil borings and sampling. Further excavation will be considered if preferential pathways for vertical contaminant migration are identified.

RMC is an active manufacturing plant, with the North Yard of the facility central to the majority of the production activities. The North Yard is a high traffic area through which all of the plant's raw materials pass (see Figure 2). Remediation of PCBs in this area, which is critical to daily operations, must address potential disruption of manufacturing activities and the potential risk of exposure to the workers of the plant. Changes to the remediation methods will minimize disruption to the North Yard operations by reducing the surface area affected by excavation work while not significantly reducing the volume of waste removed.

Most of the difference occurs in the southern part of the North Yard where groundwater controls are currently in use and have the most potential to be effective. Impacts to plant operations from excavation work in this area will be minimized by establishing a predefined horizontal limit of excavation based on a surface soil PCB concentration of 100 ppm. All soil at depth, contaminated with PCBs at levels 25 ppm or above, will be removed as determined by soil borings and sampling. The design change will reduce the overall area to be excavated in the southern part of the North Yard by approximately 1.0 acre.

In the northern part of the North Yard, where remediation will not impact daily operations, the design change will increase the area currently required to be excavated under the ROD by removing all soils contaminated with PCBs at levels of 10 ppm or greater. As a result, the total area of North Yard excavation will increase from an estimated 4.6 acres to 4.9 acres. The volume of contaminated soils to be excavated will decrease slightly from an estimated 23,200 cubic yards to 21,800 cubic yards.

All areas where post-remedial PCB contamination in the soil equals or exceeds 10 ppm will be capped with a low permeability asphaltic pavement or equivalent cap. Final remediation in the North Yard will be undertaken upon plant closure.

EVALUATION SUMMARY

Both the current on-site treatment alternative and the off-site landfill disposal alternative are protective of human health and the environment. Both alternatives are able to achieve the remedial action objectives established in the current ROD, and both comply with all applicable SCGs. The on-site treatment alternative has potential risks to on-site personnel from increased materials handling requirements and air emissions, while the off-site landfilling alternative has potential risks from the transportation requirements and landfilling operations. The off-site landfilling alternative is more cost effective than on-site treatment.

SUMMARY OF THE GOVERNMENT'S DECISION

With the exception of cost, the NYSDEC feels that both the on-site treatment alternative and the off-site landfill disposal alternative are protective of human health and the environment. When combined with the design change to facilitate excavation in the North Yard, the off-site landfilling alternative is more cost effective and will provide for a faster and efficient remediation. Therefore, the NYSDEC's decision is to amend the ROD and to allow for off-site landfilling of contaminated soils in lieu of on-site treatment. The Amendment will be protective of human health and the environment, comply with applicable state and federal environmental quality standards and be economically viable.

DOCUMENTATION OF SIGNIFICANT CHANGES

RMC's request for an amendment to the ROD as presented to the public in the Proposed Amendment to the Record of Decision, and during the May 17, 1995 public meeting is based on information presented in the Administrative Record. During the public comment period, and the public meeting, comments were received, considered, and responded to in the Responsiveness Summary. In general, comments received during the public comment period were points of clarification and/or points to consider during the design phase of the project.

No new information was received during the public comment period concerning the Proposed Amendment to the Record of Decision that required changes to RMC's original request.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

On May 1, 1995, an informational letter was mailed to interested parties concerning the Proposed Amendment to the Record of Decision, and the NYSDEC published the document for the Reynolds Metals Company site. Copies of the document were sent to representatives of the NYSDEC, NYSDOH, local, state and federal government officials, local residents, RMC and their engineering consultant, and other concerned parties.

On May 17, 1995 a public meeting was held in Massena at the Massena Public Library. The purpose of the meeting was to describe RMC's request for a ROD amendment, solicit public comment and provide a means for the public to express any concerns and have questions answered.

On May 31, 1995 the public comment period expired. All comments, questions, and concerns were catalogued, reviewed, and responded to accordingly. The NYSDEC's responses are documented in the Responsiveness Summary.

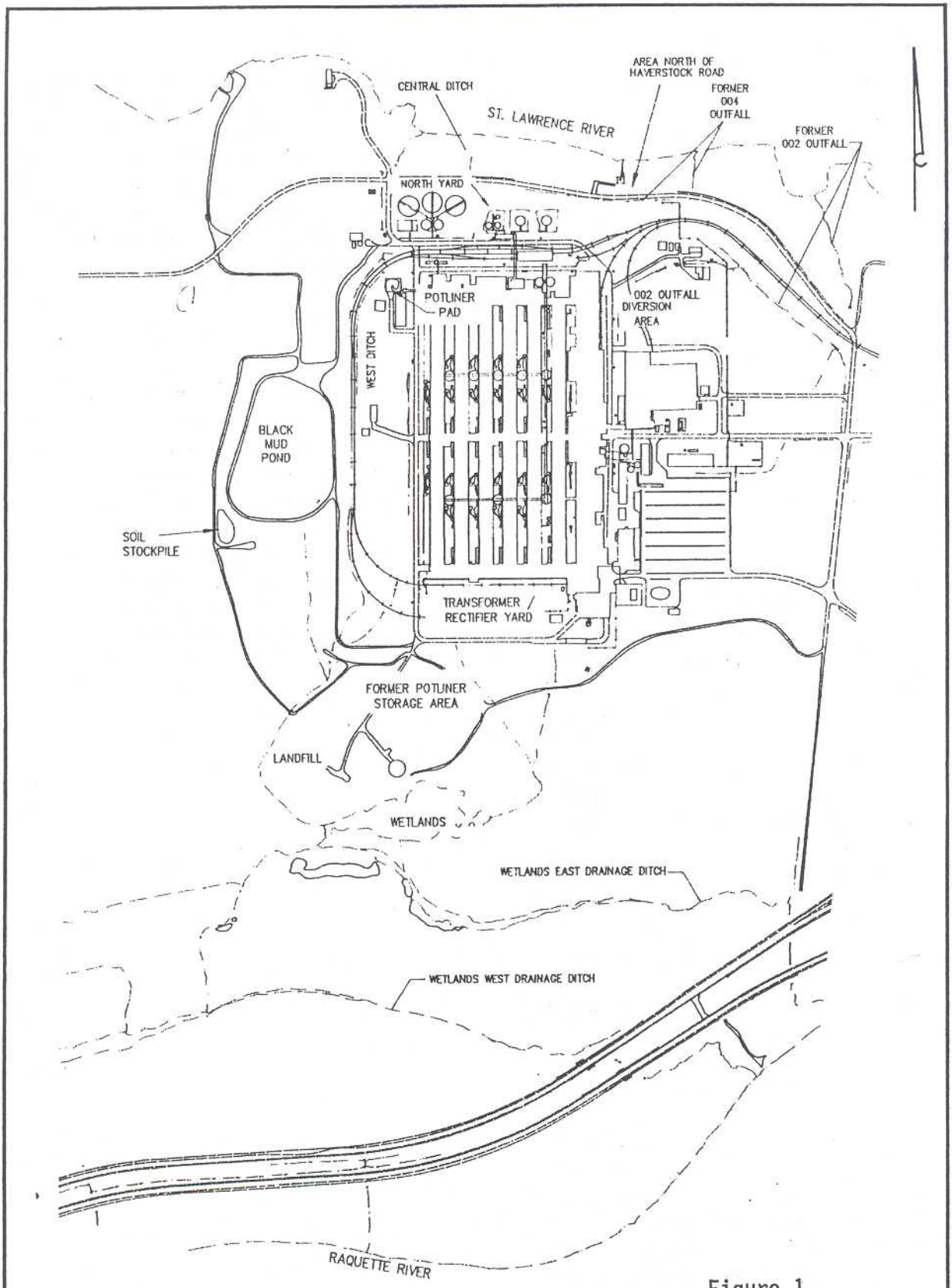


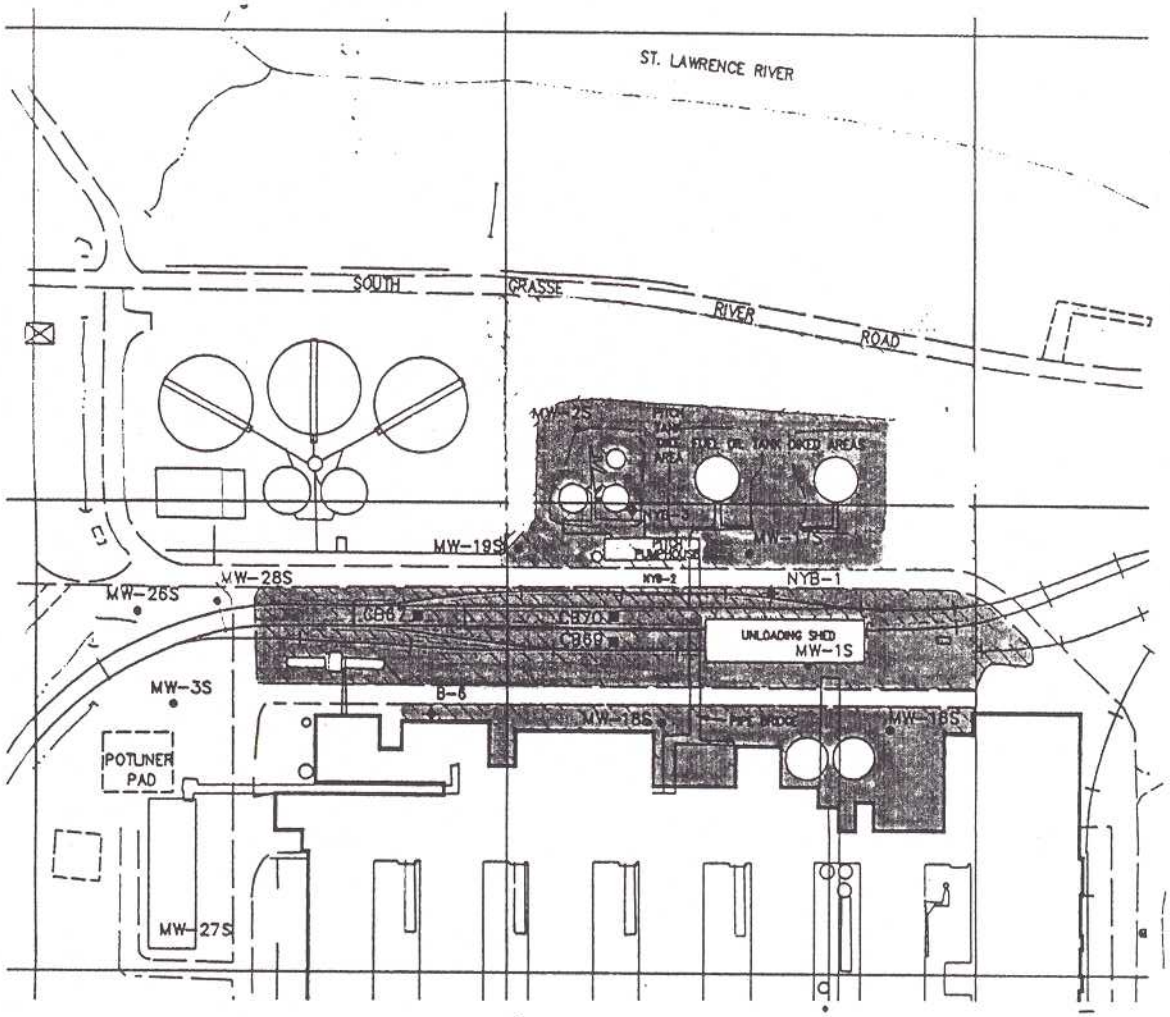
Figure 1

REYNOLDS METALS COMPANY
MASSENA, NEW YORK

WOODWARD-CLYDE CONSULTANTS
Consulting Engineers, Geologists and Environmental Scientists

AREAS OF CONCERN
ST. LAWRENCE REDUCTION PLANT

Job No.: 88C2515A-E	Drawing No. 95150373	Date: 05/23/91
Checked by: PRJ	Rev. No.:	
Scale: 0 200 400 FEET		



LEGEND:

- SHALLOW MONITORING WELL
- BORING LOCATION
- STORMWATER CATCH BASIN
- APPROXIMATE LOCATION OF ASPHALT-COMPOSITE CAP

NORTH YARD
REYNOLDS METALS COMPANY
MASSENA, NEW YORK

Rev. No.	Date	Type of Revision	Checked by:

Figure 2