ENVIRONMENTAL HEALTH

EHS

SERVICES INC.

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4/29/2003

Washington State Department of Ecology
NWRO, Toxics Cleanup Program
Attn: Teri Fisher
3190 160th Ave. SE
Bellevue WA 98008-5452

RE: Completion of Voluntary Cleanup of Recomp of WA, 1524 Slater Road, Ferndale WA., 98227, Whatcom County

Dear Ms. Fisher:

Recomp of Washington (ROW), located at 1524 Slater Road, Ferndale Washington is requesting that it's name be removed from the Department of Ecology list of suspected or confirmed contaminated sites needing further action and/or be recognized as needing "no further action". Corrective actions taken place to-date, along with ten plus years of conformational testing, assures that this site does not pose a threat to human health or the environment.

It is uncertain what specific findings initiated the listing of this site or if the findings were associated with the parcel owned by ROW or that held by Charles V. Wilder, the previous owner of the ROW parcel and owner of Thermal Reduction Company. In any case, conditions that may have existed on the ROW property that would possibly lead to a listing have long since been corrected. These facility improvements are listed in the "CONSTRUCTED ENVIRONEMNTAL CONTROLS" section of the attached document. Several inspections and/or investigations that took place in the late 1970's and early 1980's identified suspected or confirmed releases of leachate from the facility. At that time the two parcels where united under the operational name of Thermal Reduction Company. In 1990 ROW was split off as a separate company and operated under it's own solid waste handling permit. Since the initial findings numerous investigations, including a CERCLA investigation and years of quarterly ground and surface water monitoring, have occurred at the ROW site and their findings show no indication of release from the site.

These inspections and/or investigations are noted within documents described in the "Thermal Reduction Company / RECOMP of Washington, Site Investigation History" report attached. This report is believed to identify all investigation documents or reports associated with the site in question. The italicized statements are "as written" from the document. The specific passage was chosen to support the support the goal of this effort., removal from the list. Additionally provided in the attached report are the listings of facility improvements that have taken place under the "CONSTRUCTED

ENVIRONEMNTAL CONTROLS" section of the report. The findings of "HYDROGEOLOGY", "GROUND AND SURFACE WATER QUARTERLY TESTING" and "AIR SAMPLING AND SOIL SAMPLING" for which reports have been prepared are also provided. A complete listing of identified documents pertaining to the site is provided in the "LISTING OF ENVIRONMENTAL REPORTS REGARDING THE THERMAL REDUCTION CO., INC. / RECOMP OF WASHINGTON" section of the report.

PROPERTY

The current Recomp of Washington (ROW) facility located at 1524 Slater Road, Ferndale Wa, was originally part of a larger facility owned by Charles V. Wilder Jr. (Wilder) and operated by Thermal Reduction Company Inc. (TRC). When TRC sold property to Recomp in 1990, Wilder retained ownership of property north of the Friese Hide and Tallow access road upon which a closed, permitted hazardous waste disposal site is located. This site is currently undergoing a U.S. Environmental Protection Agency (EPA) Preliminary Assessment and Site Inspection (PA/SI) investigation under the Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) and Superfund Amendments and Reauthorization Act of 1986 (SERA) by Roy F. Weston, Inc. (WESTON) under contract WO 12644-001-002-0112-00. It is important to note that the Welder property is not the subject of this request nor is any contamination, on or off-site, that originated from the wilder property, if any.

The property acquired by Recomp was located south and west of the Friese Hide and Tallow access road, upon which permitted solid waste handling was occurring. The handling activities included incineration of solid waste and disposal of resultant ash on-site. In 1990 ROW sold it's solid waste transfer station to what is now Allied Waste while maintaining some of the permitted solid waste handling operations and converted some of the buildings to the manufacturing of mushroom substrate compost production operated by International Mushroom Service (IMS).

BACKGROUND

Prior to 1974 this property was undeveloped farmland. Since 1974, solid waste handling and disposal has occurred on the site under permit by the Northwest Air Pollution Authority and Whatcom County Health Department. In 1974 Wilder Construction Company, Inc (Wilder) prepared an Environmental Impact Statement to site a 100-ton per day solid waste incinerator and disposal site. The facility was granted a Solid Waste Handling Permit by the Whatcom County Health Department, (then the Bellingham-Whatcom District Department of Public Health). In approximately 1977 TRC was granted a permit to operate a hazardous waste landfill on property north of the Friese Hide and Tallow Road. This landfill was closed in 1979 and is now commonly referred to as the "Wilder landfill-Hazardous Waste Pit". TRC continued to operate the incinerator and ash landfill portion of the site as well. Records indicate that TRC operated the facility until the end of 1989 when Recomp Inc. purchased the current ROW site and re-named it RECOMP. Since 1990, Recomp has continued to modify its

operation to remain current with the community's solid waste handling needs as well as the ever-changing regulatory requirements. Of significance were the facility modifications in 1989. These included the installation of a state of the art recycling facility that included a material recovery facility (MRF) and the composting of processed solid waste. Modifications to the incinerator facility included the installation of a acid gas scrubber and use of a baghouse rather than the existing electrostatic precipitator and the construction of a double lined temporary ash storage facility to hold ash prior to off-site disposal.

The Recomp facility continues to be used for solid waste management however, incineration and ash storage no longer exists on the property and the MRF facility and solid waste composting facility have been converted to a mushroom substrate manufacturing operation. This mushroom operation is scheduled to move from the property as per terms negotiated in an agreement between ROW, The City of Ferndale, and Whatcom County. Future uses of the site are undetermined at this time. The underlying land use is designated manufacturing and will control the types of new uses allowed on the property.

As stated, the Wilder property located to the north of the subject site is currently undergoing a USEPA investigation, contract number 68-SO-01-02. A Sampling and Quality Assurance Plan has been prepared for this investigation. This document characterizes the site (ROW and Wilder) and provides discussion on the findings of various investigations, see pages 1-5 to 1-16. Provided therein, are tabulated results of sampling results that had occurred per investigation.

The following presents justification for the removal of the site from aforementioned "list" or, at a minimum, a determination of "no further action" for this site at this time.

- Permitting authorities have always permitted the site. The Whatcom County Health Department with the Department of Ecology oversight for the solid waste handling permit and Northwest Air Pollution Authority for releases to air. Therefore this site has always had some degree of regulatory oversight.
- Although pre to mid-1980 investigations indicated off site migration of contaminants, several following investigations, including an Environmental Protection Agency investigation, indicate no releases are occurring from the ROW property.
- The State Department of Health conducted a Health Risk Assessment on the facility with no significant adverse findings.
- Fourteen years of groundwater and surface water monitoring did not detect an on-going or significant release from the facility to groundwater or surface water. Twelve years of this monitoring occurred post-closure of the ash landfill thereby providing performance monitoring for the closure controls.
- The landfill has an engineered cover and is surrounded by a controlled density slurry wall on three sides and a re-compacted clay wall on the downgradient side.
- The geology of the site is very restrictive to groundwater movement.
- The landfill does have a constructed, engineered, passive leachate collection system that assures no leachate buildup will occur within the landfill.

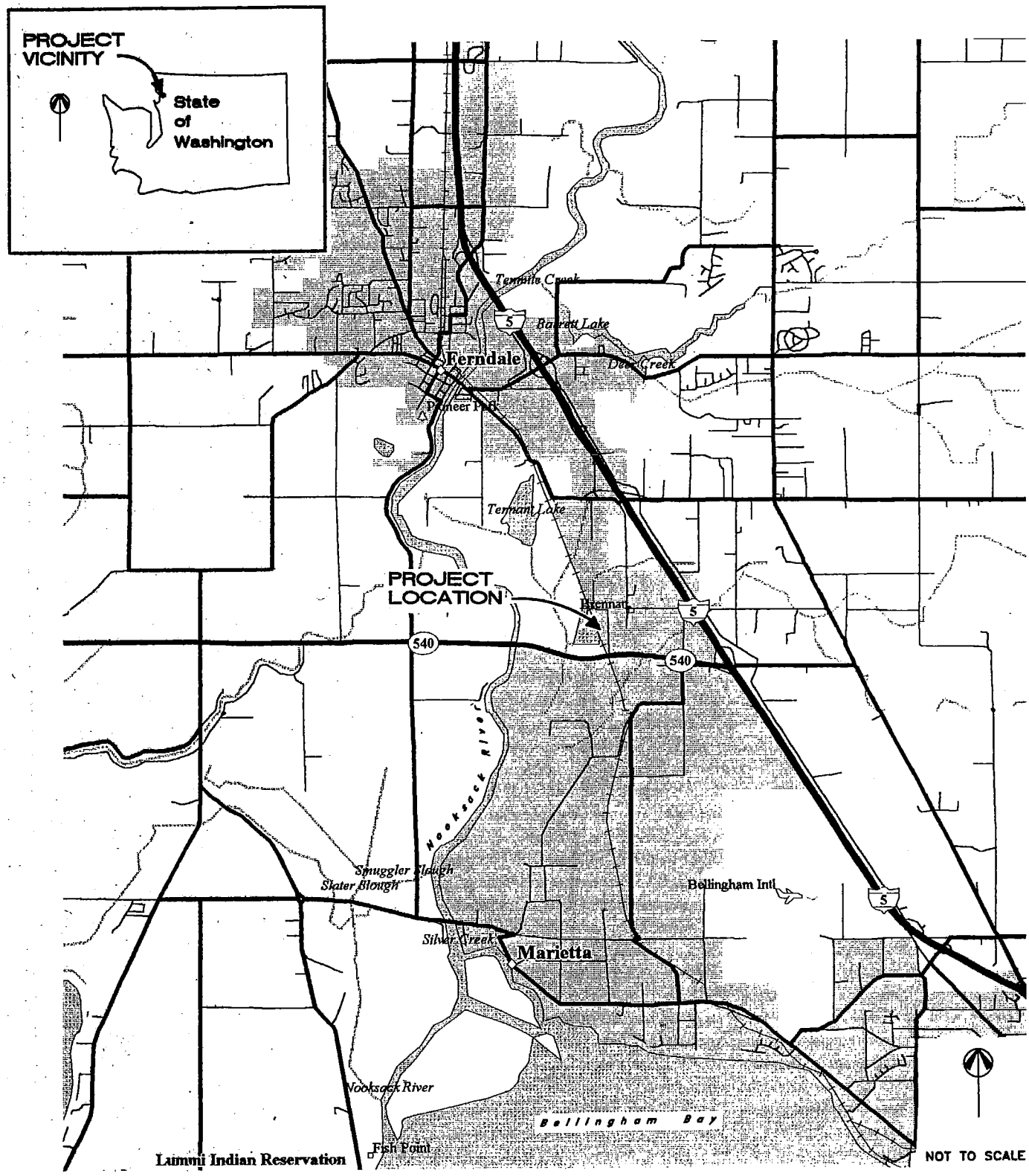
- Collected leachate is discharged to a POTW under a discharge permit that requires monthly testing of the discharge. Discharge results are well below permit limitations.
- The City of Ferndale POTW that receives the wastewater required ROW to remove all sludge impacted by the TRC/RECOMP operations. This removal has been completed.
- All temporarily stored ash has been removed from the site and disposed of in accordance with an ash handling plan and permit.
- The waste materials in the landfill were characterized by EPA and DOE and found to be suitable to be left on-site.
- No additional landfilling occurred following closure of the ash landfill in 1989.
- A hydrogeological investigation was conducted on the site with oversight and approval from the Whatcom County Health Department and the Department of Ecology.
- The three water-barring zones found through hydrogeological investigation have very low production rates making them unsuitable for use.
- There is no known ground water use downgradient of the site, between the site and the Nooksack River.
- The facility is located within the City of Ferndale in a manufacturing zone. A significant amount of new development has occurred around the site and the site itself has long-term committed uses within the complex. Therefore, the site will not be converted to residential use nor will it be abandoned.
- A solid waste transfer station with a long-term commitment resides on the property. This operation will require continued permitting and inspection by the Health Department; therefore long-term oversight is assured.
- The Facility if fenced.
- A public participation grant was awarded to a concerned citizen group to investigate the facility and findings of State and Federal investigations have had substantial publicity thereby assuring public participation and involvement.

Based upon the efforts of Recomp, numerous consulting firms, several agencies and citizens, the site cleanup efforts were accomplished. The documents prepared for the site, as outlined in the attachments, reflect a wealth of information that has been gathered on the ROW site. Chronologically they portray, in effect, what amounts to a "Voluntary Cleanup" of the site. These actions took place under jurisdictional review and approval and involved citizen participation and public notice. Therefore it is believed that the essence of a voluntary cleanup has occurred that assures the site is controlled and is protective of human health and the environment.

Thank you for your consideration.

David L. Bader R.S.
Environmental Health Specialist
Principal

Attachments.

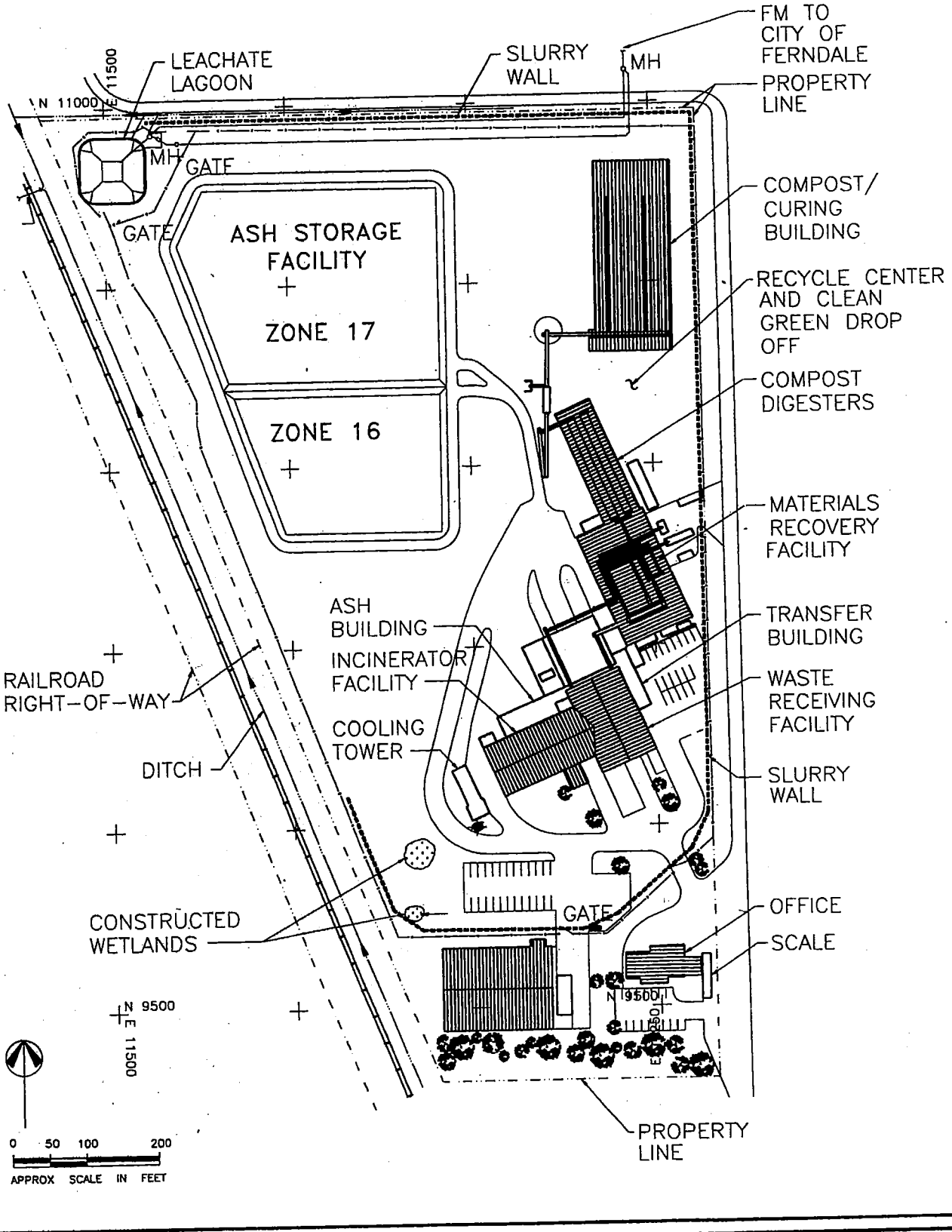


vasey engineering

Vicinity Maps

Recomp of Washington
Ferndale, Washington

Figure 1

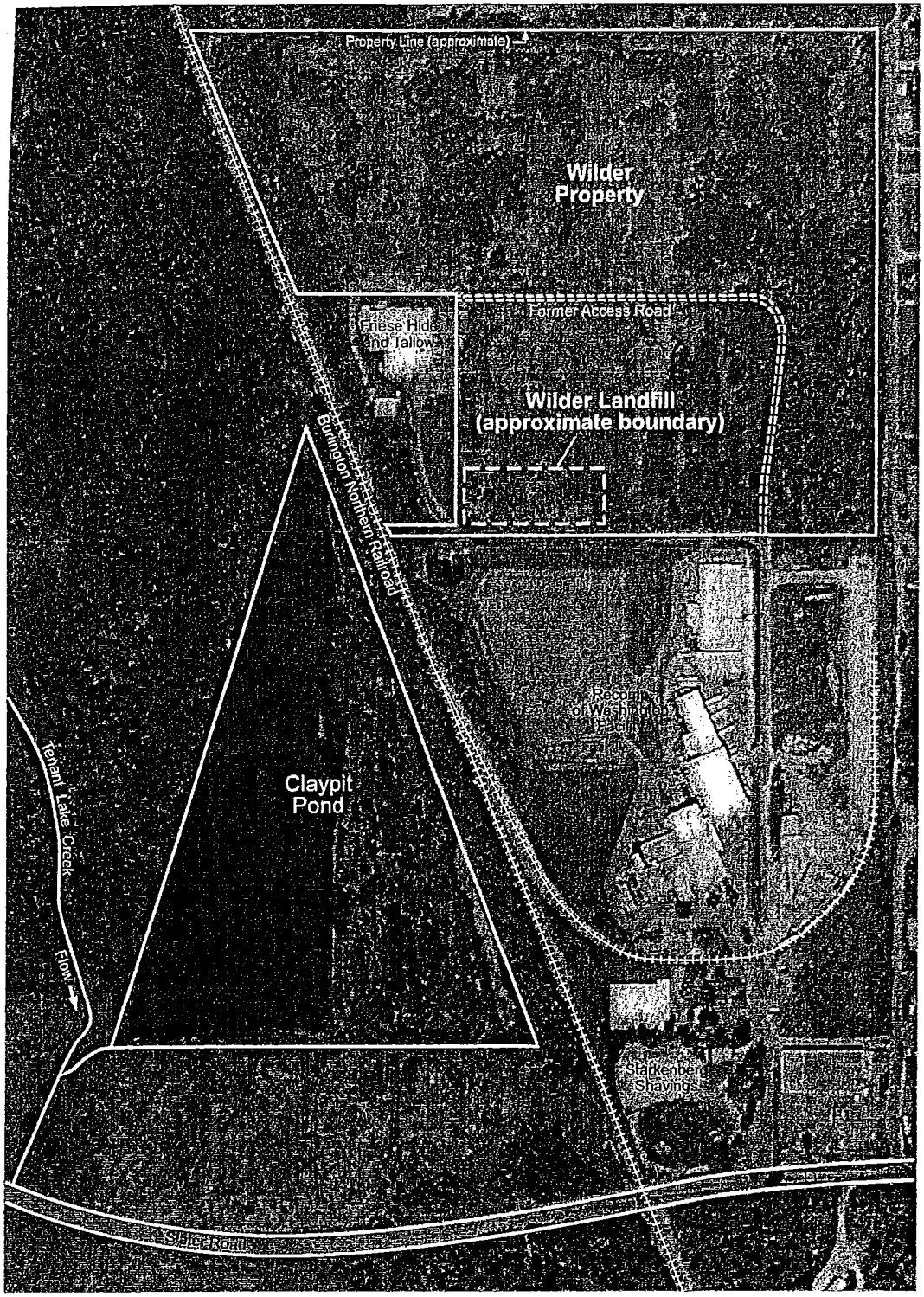


1:200 RECOMP\08-B.DWG - TILEMODE 07/15/96

vasey engineering

SITE MAP
Recomp of Washington
Ferndale, Washington

Figure
2



Source: Walker and Associates Aerial Photograph, 9 August 2001.

0 300 600

Scale in Feet

Site Vicinity Diagram
Wilder Landfill-Hazardous Waste Pit PA/SI
Ferndale, Washington

WESTON MANAGER DESIGNER /CONSULTANTS

Figure
1-3

02-0020 Fig1-3.ai

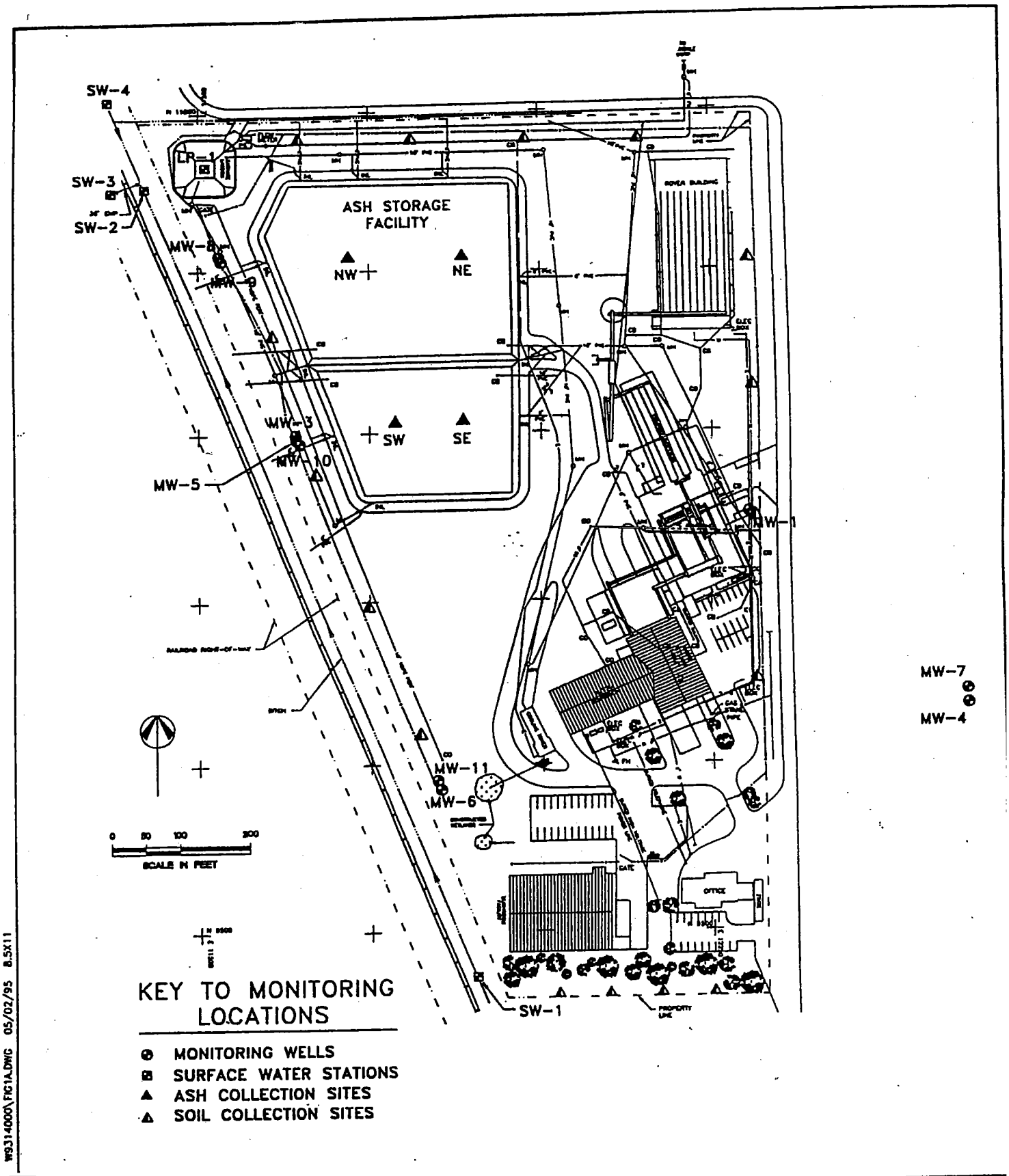


Figure 4.

Monitoring Locations
Recomp of Washington

Smayda Environmental Associates, Inc

LISTING OF ENVIRONMENTAL REPORTS REGARDING THE THERMAL REDUCTION CO., INC. / RECOMP OF WASHINGTON

Environmental Impact Statement, Relative to the Proposed 100-ton Per Day solid Waste Incinerator and Disposal Site, State Highway 540 Near Ferndale, Washington by Wilder Construction Company, Inc., for Northwest Air Pollution Authority, May 15, 1774.

Field Investigations of Uncontrolled Hazardous Waste Sites, FIT Project, Task Report To The Environmental Protection Agency, Contract No. 68-01-6056, Wilder's Landfill, Ferndale, Washington, Final Report, TDD 10-8006-03, Ecology and Environment, Inc., December 1981.*

Site Inspection Report – Thermal Reduction Co., Inc. Bellingham, Whatcom County, WA. WADOE 78207362, Hector Douglas, State of Washington Department of Ecology 1987*

Technical Assistance Team (TAT) Phase 1, Sampling Summary Report For: Thermal Reduction Co., Inc., Whatcom County, Washington. Prepared for the U.S.E.P.A. Superfund Response and Investigations Section by Ecology and Environment, Inc., Seattle, WA., TDD T10-8810-047, February 1989.*

Comments to the TAT Study Report for the Thermal Reduction Co., Inc., (TRC) Site, Golder Associates, Douglas, March 14, 1989*

Atmosphere Emissions Evaluation – Thermal Reduction Co., Inc., Consumate CS-2000 Incinerators, PPC Electrostatic Precipitator, Bellingham, WA, February 12-13, 1987, AmTest, Inc., Redmond , Wa.

Technical Memorandum to Thermal Reduction Co., Inc. Preliminary Hydrological Investigation, Bellingham Washington. – Golder Associates – Redmond, WA June 1988.*

Source Emissions and Continuous Emissions Monitor Evaluation, Thermal Reduction Co., Inc., Consumate CS-2000 Incinerators, PPC Electrostatic Precipitator, Bellingham, WA August 11-12, 1988

E.P. Tox Combined Ash Testing Thermal Reduction Co., Inc., Bellingham, WA. December 20, 1988

State of Washington Department of Ecology Source Test, Summary of Emissions to Atmosphere. December 22, 1988.

Metal Concentrations in the Claypit Pond Area, Bellingham, Whatcom County, Washington, Part 1; Metal Concentration in Sediments of Claypit Pond Area Including a Review o f Metals Levels Found in Water Samples., Part II; Metals Concentrations in Fish Caught in Claypit Pond., Jim Cubbage, Department of Ecology, February 10, 1989.*

Geotechnical Design Report Proposed Temporary Ash Storage Facility – Thermal Reduction Co., Inc., (TRC) Bellingham, Washington. Golder Associates, Inc. May 1989*

Engineering Report for the Thermal Reduction Co., Inc. Landfill Closure and Temporary Ash Storage Facility Construction. Harper Owes, Seattle, Washington May 24, 1989*

EPA Site Assessment of RECOMP--June, 1990, Harding Lawson Associates*

Technical Enforcement Support at Hazardous Waste Sites TES 11 – Zone 4, Field Sampling and Laboratory Analysis Report For Oversight Of Ground Water And Surface water Sampling At Thermal Reduction Company, Inc., Science Applications International Corporation (SAIC) for EPA, November 1990*

Results of Monitoring Well and Surface Water Sampling Conducted March 13 & 14, 1989, Tom Smayda, Harper Owes, Seattle, Washington May 25, 1989*

Geophysical Data report, thermal Reduction Company, Ferndale WA
EPA contract F68-01-7347 and Technical Directive Document F10-8903-006, Ecology and Environment

TRC RISK ASSESSMENT, Harriet Ammann, Washington State Department of Health, May 1991*

1999 ANNUAL REPORT, Recomp of Washington, Inc., March 2000*

Final Report To Thermal Reduction Company (TRC), Geotechnical Design Report Proposed Soil Bentonite Slurry Wall, Bellingham, Washington, Golder Associates Inc. February 20, 1990*

Engineering Report, Industrial Wastewater System, for Recomp of Washington, June 27,1996, Vasey Engineering*

Sampling and Quality Assurance Plan, Wilder Landfill-Hazardous Waste Pit Preliminary Assessment/Site Inspection, Ferndale, Washington. Submitted to U.S. Environmental Protection Agency, Contract No. 68-SO-01-02. Prepared by Roy F. Weston, Inc., May 20, 2002*

Assessment of Surface and Ground Water Quality At Thermal Reduction Company (TRC) Site, Allyson S. Smith, Huxley College of Environmental Studies, Western Washington University, Prepared for Safe Waste Management Now, July 19, 1991 (Not to be reproduced)

* Document Readily Available.

The following are excerpts (italicized) from the preceding described document. If statement is not italicized the author of this document has paraphrased it. In general, the documents are presented by date of presentation and may not correspond to the year when the actual investigation/sampling occurred.

1979

As described in report titled Metals Concentrations in the Claypit Pond Area, Part I and Part II, Jim Cubbage, Department of Ecology, February 1989.

"Claypit Pond was the site of an inferred fish kill in 1979 (an age class of fish was missing from a sample taken in 1980) and relatively high heavy metal concentrations in water (Kittle 1980). These problems were mitigated by the installation of a leachate interceptor in 1981, and much of the runoff from the site is now piped to the Ferndale sewage treatment plant."

1981

Field Investigations of Uncontrolled Hazardous Waste Sites, FIT Project, Report to EPA, Contract No. 68-01-6056, Wilder's Landfill, Ferndale, Washington, Ecology & Environment, Inc., December 1981

Abstract, Page ii, Paragraph 1
"Leachate from Wilder's landfill is contaminating a stream that flows into a nearby pond stocked by the Washington Department of Game. Analysis of surface water showed migration of cadmium, chloride, chromium, lead, and selenium into the pond. The resultant pollution probably caused fish kills or failure to breed. Fish-tissue samples showed heavy-metal levels well within the limits set for human consumption, however. If the landfill is not brought into compliance with state and RCRA regulations, it should be closed."...

Section 7.3 Human-Health Considerations, page 43, Paragraph 1
"There are three possible routes of exposure to people from runoff from the landfill: ground-water, surface water, and fish. The ground-water is protected by the geology of the site (see 2.4). The surface water is not used for drinking or swimming, but the fish are taken and probably eaten."

Page 43, Paragraph 2
"The fish are not contaminated above the levels thought safe for human consumption (see Table 5). Neither does the water in Claypit Pond exceed the maximum levels established for water from which aquatic organisms are taken for human consumption (see Table 6)."

1985

Potential Hazardous Waste Site Preliminary Assessment (PA) of May 1, 1985

This investigation was cited by Hector Douglas in his December 1987 SITE INSPECTION REPORT, Thermal Reduction Company, WADO78207362

NOTE: This Report was not found.

1986

August 26, 1986 Ecology PA/SI Phase I SI, WAD 078207362, Susanne Milham, DOE.
October 26, 1986 Ecology PA/SI Phase II SI, WADO78207362 File., Susanne Milham, Mike Blum, DOE.

These investigations are included as part of the SITE INSPECTION REPORT, Thermal Reduction Company, December 1987, Hector Douglas, WADO78207362

Appendix A, Phase I, Site Inspection, September 24, 1986, Page 1, Paragraph 5
"Leachate from the site was flowing uncontrolled toward an adjacent ditch which drains to claypit pond."

Appendix A, Phase II, Inspection & Sampling 10-6-86, September 13, 1986, Paragraph 8
Testing was conducted at six locations, *"All samples will be analyzed for EPA priority pollutants."*

Results included in SITE INSPECTION REPORT,WASO78207362.

1987

Site inspection Report, Thermal Reduction Company Ferndale, Whatcom County, Washington, WADO78207362, December 1987, By Hector Douglas, WSDOE, Preliminary Assessment/Site Inspection Unit

Conclusions And Recommendations, Page 14, Paragraph 1
"This report documents a history of problems at the site, including off-site contamination, violations and noncompliance. Lateral migration of leachate from the hazardous waste pit (now closed) occurred in the past and may still occur, although not as prolifically."

Conclusions And Recommendations, Page 14, Paragraph 3
"The present day landfill has received upgrades including a leachate containment trench, a collection pond and a pumphouse and tightline connection to the City of Ferndale Sewer System. But assumptions about the performance of this containment system,

without sufficient engineering studies of the "native clay" and the site's hydrogeology cannot be guaranteed."

1988

Technical Memorandum to Thermal Reduction Co., Inc. Preliminary Hydrological Investigation, Bellingham Washington. – Golder Associates – Redmond, WA June 1988.

Section 1.1, Background, Page 1, Paragraph 2
"A preliminary hydrologic report was prepared for TRC by SCS Engineers in 1987. As part of the SCS investigation, three monitoring wells (MW1, MW-2, and MW-3) were installed ..."

Section 1.1, Background, Page 1, Paragraph 3
"The scope of this phase of work is to develop a preliminary hydrogeologic site characterization beneath the TRC site. This phase of work has included the drilling and installation of eight additional monitoring wells; groundwater and surface water sampling and chemical analysis, and mapping of surface water drainage, seeps, and springs."

April 1, 1988 letter from Dave Garland, Department of Ecology to Dave Bader, Bellingham Whatcom Health Department

February 24, 1988 DOE sampled Water flowing through culvert into Clay Pit Pond. Found water exceeded drinking water standards for selenium, iron and manganese.

Selenium, 51ppb
Manganese 153ppb
Iron 1260ppb

April 7, 1988 letter from David Bader, Whatcom County Health Department, to Ali Raad, Department of Ecology regarding Site Inspection Report, Thermal Reduction Company, DOE 1987 (by Hector Douglas)

" These are indeed real concerns where considerable time and intensive study could and should be directed. However, the urgency that one feels by reading this document is the result of the redundancy of commenting on data gathered during the years of 1978, '79, '80, '81, and by the limited unconfirmed data gathered in 1986, '87, all of which may not truly reflect the conditions as they now exist."

William J. Glasser, R.S., M.P.H, EPA , Superfund Response & Investigation Section Letter to Jim Anderson, President Thermal Reduction Company October, 20, 1988. Confirmation letter to direct Ecology and Environment to conduct investigation.

"The purpose of this site assessment is twofold. First, to determine if there are any releases or threats of releases of hazardous substances which may present an endangerment to public health or the environment. Secondly,, to support and compliment the data collection efforts of the Departments of Ecology, Social and Health Services, and the Environmental Protection Agency Research Triangle Park (EPA) – RTP)."

November 23, 1988, NEWS RELEASE

"The state department of Social and Health Services, Toxic Substances Section, will utilize information obtained from EPA-DOE funded incinerator air sampling to determine if health risks are associated with burning municipal garbage. The assessment will also determine the effects of the incinerator ash landfill on air and water quality. The testing of Thermal Reduction's emissions is to begin the second week of December with formal report to be completed in March. Assisting in the study are the Bellingham-Whatcom Health District, the U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology(WDOE), and Northwest Air Pollution Authority."

November 8, 1988 letter from Thomas Smayda, Harper Owes, to James Anderson, TRC Re: EPA Site Assessment at TRC.

"A Technical Assistance Team (TAT) consisted of Ecology and Environmental, Inc. personnel who performed the Site Assessment on behalf of EPA. Soils, sediment, ash and surface and ground waters were collected over a three day period from November 2 to 4, 1988. The aim was to determine of CERCLA Hazardous Substances (50 FR 47951, Nov. 20, 1985) exist on site."

Sampling Plan/ Quality Assurance Project Plan For: Thermal Reduction Company, Contract No: 68-01-7368, TDD T10-8810-047, Ecology and Environment, Inc., October 1988

Project objectives " The objectives of this project are to characterize public and environmental health hazards at this site due to potentially contaminated soil or ground or surface water, and to assess the potential for removal. Accordingly, the goals of this initial site visit are: to conduct preliminary screening sampling of ash, soil, ground and surface water; to obtain background information and documentation (e.g., photographing, mapping) associated with the site; and to conduct a brief radiation survey. Data obtained from this site visit will be used to develop a more comprehensive sampling plan for a future visit(s)."

1989

February 10, 1989 letter to Mr. Roy Lundgren, Thermal Reduction Co. from Tom Eaton, Manager, Solid & Hazardous Waste Program, Department of Ecology. RE: Metals Concentrations in the Claypit Pond Area, Part I and Part II, Jim Cubbage, Department of Ecology, February 1989.

Paragraph 2
"According to the study, Claypit Pond sediments contain elevated levels of copper, chromium, and zinc. A comparison of other freshwater and marine sediments indicates that chromium levels are some of the highest found in Washington State."

Paragraph 3
The Ecology study of metals in fish caught in Claypit Pond found that metal concentrations are below the legal limits set by the U.S. Food & Drug Administration, the Canadian government, and more stringent "advisory" limits used in California and Wisconsin. If these limits are used as a guide in determining health risks associated with eating fish, then the fish from Claypit Pond apparently pose no significant risk."

Geophysical Data report, Thermal Reduction Company, Ferndale Wa
EPA contract F68-01-7347 and Technical Directive Document F10-8903-006, Ecology and Environment

On March 30, 1989 a geophysical survey was conducted by E&E to "delineate the boundaries of the ash disposal area" and " Identify areas of anomalous terrain conductivity that may be indicative of buried drums which may contain potentially hazardous materials.". Additional work was recommended "to identify the source of the anomalously high conductivity values in the ash disposal area"

Julie Sellick, DOE, Supervisor /Solid and Hazardous Waste Section, letter to Roy Lundgren, Environmental Manager Thermal Reduction Company, May 17,1989

Stating *"Ecology has reviewed the following reports"*

1.Report regarding the radioactivity investigation conducted on March 23, 1989, by the Office of Radiation Protection's (ORP) Environmental Protection Section of the Washington State Department of Social and Health Services. That report concluded that " ...no evidence of radioactive waste was observed during our investigation."

2. Report regarding the geophysical survey conducted on March 30, 1989, by Ecology and Environmental, Inc., a consulting firm contracted by the US Environmental Protection Agency's Region 10 Office in Seattle, Washington. That report concluded that " ...additional work is recommenced at the site to identify the source of the anomalously high conductivity values in the ash disposal area."

" ...two additional test pits revealed the presence of a large steel plate and several drums containing solidified fiberglass resins within the landfill."

"Based on the two recent test pits and the test pits and geotech borings installed within the old ash landfill during the last two weeks in March 1989, we have concluded that the materials and wastes buried within the landfill may remain within the landfill. We also agree that no radioactive materials or wastes were found within the landfill. We, therefore, find that the questions regarding the contents and stability of the old ash landfill have been adequately answered, ..."

January 25, 1989, inter- office, DOE from Jim Cubbage, Environmental Investigations and Laboratory Services to Ali Raad, Subject Thermal Reduction Company Ash Designation.

"...Overall, the sampling procedure (14 samples of 8-houur composites of ash) appears thorough and reveals both the variation in metals concentrations in ash as well as the overall mean concentrations. Based on these data, the ash fails the EOTOX test for lead and is within the range designated dangerous waste. The upper 90% confidence interval of the other metals (Hg, As, Cr, Cd, Se, Ag) are below the EPTOX thresholds listed in WAC 173-303 (method 1310)."

December 1988, Peter Houck, MD, Department of Social and Health Services conducted a study of aseptic meningitis in Whatcom County, 1988. Report Date, December 29, 1988

Bellingham & Whatcom County Health Department, David Bader to Roy Lundgren, Thermal Reduction Company, Letter January 3, 1989 Regarding aseptic meningitis occurrence in Whatcom county.

"It has been alleged that the burning of biomedical waste at Thermal Reduction Company could be the source of this outbreak. The findings of this report do not support this theory"

1990

EPA Hazardous Waste Program Fact Sheet December 10, 1990

On March 7, 1990 EPA issued an Administrative Order to the Thermal Reduction Company (TRC) under the authority of the Resource Conservation and Recovery Act (RECRA). The Order required the company to sample the existing on-site groundwater monitoring wells, sample the surface water on the site and in nearby Claypit Pond, and to determine the extent of contamination leaving the ash pile through leachate.

TRC was required to conduct this work under EPA guidelines and oversight. EPA hired its own contractor to oversee the company's work and verify the results. EPA issued this

Order because past studies of the facility suggested that it may have been contaminating area groundwater and was a potential threat to area fisheries and wildlife.

December 11, 1990 letter to Jim Anderson, RECOMP of WA from Charles Findley, Director of Hazardous Waste Division EPA

Paragraph 1
"EPA has concluded its review of the data collected during the June 1990 3013 investigation. We have determined that the data do not justify additional investigation of your facility. EPA therefore accepts your October 11, 1990 submittals as satisfying the 3013 order, as amended on March 7, 1990

Technical Enforcement Support at Hazardous Waste Sites TES 11 – Zone 4, Field Sampling and Laboratory Analysis Report For Oversight Of Ground Water And Surface water Sampling At Thermal Reduction Company, Inc., Science Applications International Corporation (SAIC) for EPA, November 1990.

Purpose and Scope, Page 1, Paragraph 2
"This report addresses sample collection procedures utilized by HLA and compares and discusses the results of the physical and chemical analyses performed by HLA on the oversight split samples collected by SAIC/TSC field personnel."

Volatile Organic Compounds, Page 8, Paragraph 1
All of SAIC'S VOC were below detection limit except for trace amounts of acetone and 2-butanone due to laboratory contamination.

Semi-Volatile Organic Compounds, Page 8, Paragraph 2
SAIC's semi-volatile compound results were also below the detection limit except for bis (2 ethylhexyl) phthalate at MW-9 (2 ug/l, laboratory contaminant).

Total and Dissolved Metals, Page 9, Paragraph 1
There were no exceedances of primary inorganic maximum contaminant limits (MCL) in both HLA and SAIC ground water and surface water samples.

Pesticides/PCB's and Herbicides, Page 9, Paragraph 3
There were no detected pesticides/PCB's and herbicides from the SAIC and HLA ground water and surface water samples.

Quality Assurance/Quality Control, Page 10, Paragraph 1
HLA and SAIC followed their required project QA plan procedures for collecting samples, collecting an equipment field blank, utilizing custody seals, and completing chain of custody forms. The HLA and SAIC data validation reports included acceptable results for all QA/QC procedures for this sampling event.

EPA Site Assessment of RECOMP--June, 1990, Submitted to Mr. Roy Lundgren RECOMP of Washington, December 6, 1990, Harding Lawson Associates

"Presented herein are the results of water quality sampling conducted June 4, 5, 6, and 7, 1990 from seventeen locations adjacent to RECOMP of Washington."

"These efforts included such things as preparation of a Sample and Analysis Plan (HLA, February 16, 1990), analysis for an expanded list of chemicals constituents, rigorous quality assurance documentation, the sharing of selected split samples with an EPA contact firm and field oversight by EPA personnel."

"Overall, the good agreement between EPA and HLA data indicates that HLA data from all sampling locations can be considered to be valid."

"CONCLUSION"
"The results of this intensive sampling effort indicate that groundwater and surface water contamination is not a problem at the RECOMP facility."

Assessment of Surface and Ground Water Quality At Thermal Reduction Company (TRC) Site, Allyson S. Smith, Huxley College of Environmental Studies, Western Washington University, Prepared for Safe Waste Management Now, July 19, 1991

Introduction, Page ii, Paragraph 2
In July of 1990, Safe Waste Management, and director Barbra Brenner, received a public participation grant from the Washington Department of Ecology t study health risks associated with surface and groundwater contamination from the site. Safe Waste Management Now contracted Huxley College of Environmental studies of Western Washington University to conduct this study.

Conclusions and Recommendations, Page xi, #2
We have concluded that a health-based risk assessment connot be completed for the following reasons:

- *Metals did not exceeded the primary drinking water standard in any surface or groundwater sample. Further more than 95% of the data for these metals were below detection limits.*
- *Most of the data for organic carcinogens were below detection limits.*

TRC RISK ASSESSMENT, Office of Toxic Substances, Washington State Department of Health, Harriet Ammann, May 1991

Results, Page 1, Paragraph 5
"Carcinogenic risk for all chemicals collectively evaluated in this assessment was less than one incidence in a hypothetical population of one million. Results of chemicals evaluated in this study for both cancer and noncancer hazard are in a similar range to that found for other municipal waste incinerator emissions."

Results, Page 2, Paragraph 2
"The results of this study are to be viewed in the perspective of new control technology (acid gas scrubber) that has been applied to TRC, and which are now operative. Actual emission efficiency tests have shown the new technology to reduce total HCL emissions by 97.9 percent. This represents a substantial reduction in HCL emission levels comparative to those seen in the present study, upon which this risk assessment is based."

1992

August 26, 1992 letter to James Anderson, President, Recomp of Washington from James Pendowski, DOE re: approval of Special Incinerator Ash Management Plan and Ash Monofill Permit

"Recomp of Washington's ash management plan, dated March 1992, is approved with conditions,..."

Special Incinerator Ash Disposal Permit, WA-02-08-92, Issued on 08/26/92. Among the conditions of the permit are:

S5. Required Reports (b) Testing results for all tests performed under Chapter 173-306-500 WAC

S6. The permittee shall take the following samples and make the following tests:
Ground Water: Sample each ground water monitoring well and test for the following on quarterly basis,....
Soils: Sample and test for cadmium on a annual basis.
Air: Sample and test for lead on a monthly basis.
Surface Water: Sample and test as for ground water.

August 28, 1990 SITE REGISTER, HAZARDOUS SITES LIST, Whatcom County lists Thermal Reduction Landfill, Ferndale Ranked #1, RA in Progress.

(Not sure if this in a new listing or continuation of previously existing listing)

1995

Preston Gates Ellis, Consent Decree, May 30, 1996, Consent Decree entered into July 5, 1996 #96-2-01293-5

"In September and October of 1995 Ecology reviewed the data, the sampling plan, the laboratory protocols, and the conclusions, and concurred on all aspects for this decision by letter in November 1995 that the ash was not a dangerous waste."

Soffia Gudmundsdottir, January 25, 1995 to John Keeling, Department of Ecology

"Soils monitoring for Cadmium is an annual sampling requirement which started in 1993 submitted with annual reports ."

1996

Engineering Report, Industrial Wastewater System for Recomp of Washington, Vasey Engineering, June 27, 1996

Purpose and Scope, Page 1, Paragraph 1
Vasey Engineering was retained by RECOMP to prepare an engineering report that (1) addresses the conditions and requirements of RECOMP 'S State Waste Discharge Permit, (2) develops alternatives and recommendations for reducing industrial waste loadings to the Ferndale Wastewater Treatment Plant and (3) evaluates opportunities for recycle and reuse of process water to reduce operating costs.

Recent Improvements, Results Summary, Page 36, Paragraph 1
As can be seen from the table, the RECOMP recycle program already implemented has reduced metals discharges substantially, from a 95% reduction in cadmium to a 99% reduction in lead.

2001

Department of Ecology, Cullen D. Stephenson, Program Manager, letter to Frank Moscone, Recomp of Washington, January 22, 2001, Re: Final closure of temporary ash storage facility and Notice of Completion.

"This letter is your "Notice of Completion" as provided in paragraph 68 of the consent decree. The Washington State Department of Ecology deems that Recomp has fully satisfied the terms of Consent Decree NO. 96 2 012993 5."
January 22, 2001 Cullen Stephenson, DOE Program Manager, sends "Letter of Completion" declaring *that;*

"the Department personnel have inspected the temporary ash disposal facility and found that all of the temporarily stored ash was removed as required by the Consent Decree."
Further stating *"Recomp has fully satisfied the terms of Consent Decree NO. 96 2 012935."*

DOE and RECOMP submit joint motion to dismiss May 27, 2001

Judge David Nichols grants Motion to Dismiss.

2002

Sampling and Quality Assurance Plan, Wilder Landfill-Hazardous Waste Pit Preliminary Assessment/Site Inspection, Ferndale, Washington. Submitted to U.S. Environmental Protection Agency, Contract No. 68-SO-01-02. Prepared by Roy F. Weston, Inc., May 20, 2002

Page 1-10, Last paragraph
Based on the Phase II PA/SI (August and September, 1996) *Ecology concluded:*

- *"...chromium in the sediments of stream #1may indicate chronic leaching from the hazardous waste pit"* (Located on Wilder Property)
- *"Lateral migration of leachate from the hazardous waste pit (now closed) occurred in the past and may still occur, although not as prolifically."*

1.2.3.1.10 TRC Quarterly Monitoring, 1988-2002, Page 1-15, Paragraph 1
Quarterly monitoring of groundwater and surface water stations began at the ROW facility in 1988 (Vasey Engineering 1994). Surface water stations include the railroad culvert draining to Claypit Pond, and the streams draining to the culvert from the north and the south. Occasional exceedances of inorganic surface water criteria were reported at various surface water stations in the first decade of sampling, but recent data indicates no ongoing surface water issues (Dodd 2002a).

CONSTRUCTED ENVIRONMENTAL CONTROLS

Engineering Report, June 28, 1989, Landfill Closure and Temporary ash Storage Facility Construction, Harper Owes

The existing closed landfill was re-graded and the cover improved to meet the minimum requirement of two feet of compacted soil with permeability of 1x10-6 or less. The landfill located to the south of the closed landfill was re-graded and closed to meet the minimum requirement of two feet of compacted soil with permeability of 1x10-6 or less.

A lined cutoff trench with a perforated drainpipe was constructed along the west side of the landfill areas to collect leachate seeps from the landfills. The collected leachate is discharged to the city of Ferndale Wastewater treatment facility.

A temporary ash storage pad was constructed above the closed landfills. This pad consists of a 18 inches of native compacted soil covered by a 80 mil High density polyethylene (HDPE) membrane liner and 4 inches of asphalt treated base. The pad is equipped with a drainage system capable of delivering storm water to the Ferndale wastewater treatment plant or to storm water. The temporary ash storage pad has leak detection capabilities and settlement measurement devices.

The leachate storage lagoon was constructed of 2 feet of compacted clay covered by 80ml HDPE liner.

Surface water that may come into contact with ash from paved areas adjacent to the incineration facilities are collected in a piped drainage system and discharged to the leachate storage lagoon.

Final Report To Thermal reduction Company (TRC), Geotechnical Design Report Proposed Soil Bentonite Slurry Wall, Bellingham, Washington, February 20, 1990

The purpose of the soil-bentonite slurry wall is intended to divert perched groundwater in the Sumas Outwash sand around the site and thus reduce the amount of groundwater entering the ash disposal facility.

The slurry wall was constructed around the site on the north, east and south sides and was tied into existing compacted clay berms along the western and northern sides of the facility. The slurry wall has a target permeability of 1x10-7

HYDROGEOLOGY

Technical Memorandum to Thermal Reduction Co., Inc. Preliminary Hydrological Investigation, Bellingham Washington. – Golder Associates – Redmond, WA June 1988.

"A preliminary hydrologic report was prepared for TRC by SCS Engineers in 1987. As part of the SCS investigation, three monitoring wells (MW1, MW-2, and MW-3) were installed ..."

"The scope of this phase of work is to develop a preliminary hydrogeologic site characterization beneath the TRC site. This phase of work has included the drilling and installation of eight additional monitoring wells; groundwater and surface water sampling and chemical analysis, and mapping of surface water drainage, seeps, and springs."

"Three main water-bearing zones have been identified on the TRC site as a result of the previous and this most recent investigation."...

- *A shallow water table zone within the Sumas Outwash perched atop the Bellingham Drift.*
- *A confined zone located between approximate elevations –16 and –35 feet within the Bellingham Drift. This intermediate zone is characterized as a alternating layersa of sandy silt, sand and silts, and silty sand within a deposit composed primarily of clay and silt.*

- *A deeper, confined zone penetrated by MW-3 between elevations –53.9 and –90 feet described as sandy silt interlayered with very fine sand.*

All water-bearing zones produce little water. During purging, all wells could be emptied with a hand bailer. Some wells took greater than 24 hours for recovery to static water level condition."

"Three undisturbed samples of the slit and clay deposits of the Bellingham Drift clays were tested for vertical permeability.." "These samples represent the clay, silts that are between water-bearing zones." "The vertical permeability of all three samples tested were around 10^{-8} cm/sec."

First Quarter 2001 Ground and Surface Water Monitoring., Environmental Health Services Inc., May 3, 2001

"Recovery rates for wells were also monitored this quarter. Wells MW-7, MW-9, MW-10 and MW-11, that monitor the uppermost water strata, nearly recovered in 4 to 5 days. MW-4, MW-8, MW-5 and MW-6 had recovered from <34% to 75% of static level within 6 days of sampling. A charting of the results is attached."

Ground water flow is known to be north-northwest, Harper-Owes and others. No wells have been identified between the site and the Nooksack River.

GROUND AND SURFACE WATER QUARTERLY TESTING

Conducted Quarterly from 1988 through 3rd Quarter 2001

1999 ANNUAL REPORT, Recomp of Washington, Inc., Appendix B, Summary of Ground Water Monitoring Data for the Period 1988 through December 1999, Berryman & Henigar, March 2000

Page B-1
"Average horizontal groundwater velocity 0.75 ft/yr (WNW)"

Page B-3, Paragraph 4
The data do not exhibit any readily identifiable trends that indicate leachate migration to any of the monitoring wells.

Page B-3, Paragraph 6
"In conclusion, groundwater hydrology and groundwater quality are similar to previous years. No leachate migration is evident from the monitoring data."

1999 ANNUAL REPORT, Recomp of Washington, Inc., Appendix C, Summary of Surface Water Monitoring Data for the Period 1988 through December 1999, Berryman & Henigar, March 2000

Page C-2, Paragraph 5
"In summary, there is no known hydraulic linkage between industrial areas of Recomp and the surface water drainage, and no surface water contamination by Recomp is evident. Although, water quality in the ditch adjacent to the west boundary of Recomp is poorer this year due to other sources."

AIR SAMPLING AND SOIL SAMPLING

1999 ANNUAL REPORT, Recomp of Washington, Inc., Submitted to: Washington Department of Ecology, March 2000

Section 4.2.6 A, Page 25
Ambient air samples have been collected and analyzed on a quarterly basis since early 1994 and through to the first quarter of 1998. The data generated throughout this time clearly indicate that, results of such sampling are significantly less than the standard of 1.5 micrograms per cubic meter of air {WAC 173-306-440(2)(c)}. Accordingly, ROW requested a reduction in air monitoring frequency. It received authorization from Ecology (Letter dated May 21, 1998) to reduce sampling frequency to once per year.

Section 4.2.6 B, Page 26
Soil Sampling has been undertaken since 1993 through 1997. The data accumulated during this time frame clearly indicates that, results of such sampling would warrant the reduction of such a frequency schedule. Accordingly, ROW requested and received authorization from Ecology (letter dated May 21, 1998) that the sampling frequency for cadmium in soil be reduced to once every five years.