



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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September 28, 2006

Mr. Richard Hoff
Stresau Laboratory, Inc.
N8265 Medley Road
Spooner, WI 54801-7819

HW/LIC
FID# 866009320
Washburn Co.

Subject: Final Determination to Conditionally Approve the Feasibility and Plan of Operation Report for a Hazardous Waste Thermal Treatment Unit: R. Stresau Laboratory, Inc., License # 06024, U.S. EPA I.D. No.: WID020488011

Dear Mr. Hoff:

The Department has reviewed the Feasibility and Plan of Operation Report prepared for R. Stresau Laboratory, Inc. for the hazardous waste treatment license re-issuance. A preliminary determination to approve the report was issued by the Department on June 29, 2006. No comments were received on the preliminary determination. The final approval of the feasibility and plan of operation report is enclosed. In addition, this letter confirms that the Department has determined that no environmental impact statement is required, the wetlands water quality standards of ch. NR 103, Wis. Adm. Code have been met, and the needs requirements of s. 289.28, Stats. have been met.

Based on a review of the material submitted, it is the Department's determination that R. Stresau Laboratory, Inc., provides for satisfactory hazardous waste treatment, provided the facility complies with the Feasibility and Plan of Operation Report, the conditions of the approval and chs. NR 660 through 670, Wis. Adm. Code. Note that the Department retains the jurisdiction to either require the submittal of additional information or to modify this approval at any time if, in the Department's opinion, conditions warrant further modifications.

An intent to license will be published in the Wisconsin State Journal and the Spooner Advocate on October 11, 2006. A radio announcement will be aired on the same day. Following the public notice, the Department will re-issue a treatment license that can be renewed annually for a period of up to ten years from the date of issuance.

If you have any questions or concerns, please contact Jill Schoen at 715-839-2788, or contact me at 715-365-8946.

Sincerely,

Connie Antonuk
Regional Air and Waste Leader
Northern Region

Attachment – Final Determination Report

cc: Jim Ross – Spooner
Pat Chabot/Dave Kollasch - WA/3
Jill Schoen – WCR, Eau Claire
Harriet Croke - U.S. EPA Region 5, 77 W. Jackson Blvd., Chicago, IL 60604

BEFORE THE STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

FINAL DETERMINATION TO APPROVE A
FEASIBILITY AND PLAN OF OPERATION REPORT
R. STRESAU LABORATORY, INC.

EPA ID#: WID020488011

FID#: 866009320

HW LICENSE # 0624 (Miscellaneous Unit)

GENERAL FACILITY INFORMATION

Facility Name, Address, Location and Phone Number

R. Stresau Laboratory, Inc.
N8265 Medley Road
Spooner, WI 54801
715-635-2777

Facility Mailing Address

R. Stresau Laboratory, Inc.
N8265 Medley Road
Spooner, WI 54801

Facility Owner and Operator

Wayne Hanson
N8265 Medley Road
Spooner, WI 54801

Landowner

R. Stresau Laboratory, Inc. (same as above)

Facility Contact

Richard Hoff, Compliance Specialist, 715-635-2777, rhoff@stresau.com

Report Certification

Michael J. Pesko, Chief Operating Officer, R. Stresau Laboratory, Inc., N8265 Medley Road,
Spooner, WI

Bruce K. Olson, Short Elliot Hendrickson, Inc., 421 Frenette Drive, Chippewa Falls, WI 54729-3374,
P.E., WI Professional Engineer P.E. Certification No. 34737-006

Hazardous Waste Treatment Capacity

Miscellaneous Unit Treatment – maximum 700 pounds per year reactive hazardous waste, net explosive weight, in a thermal treatment unit.

Facility Description

R. Stresau Laboratory, Inc. (SLI) operates a hazardous waste thermal treatment unit to thermally treat reactive hazardous waste generated on-site. The thermal treatment unit (TTU) is regulated as a miscellaneous unit under ch. NR 664, Subpart X, Wis. Adm. Code.

SLI develops, tests, evaluates, assembles and manufactures energetic devices. Residual energetic material, waste contaminated with energetic material and energetic components and devices are examples of reactive hazardous waste generated and treated by SLI. In preparing munitions for clients, reactive hazardous wastes are generated either as residual materials or components and devices that are no longer needed to fulfill contract agreements. Paper towels and wet wipes used to clean work areas and air filters contaminated with reactive residues are stabilized with No. 1 fuel oil. The waste is safely stored prior to treatment. To treat these reactive hazardous wastes, SLI developed an on-site thermal treatment unit (TTU) which SLI believes is safer than over-the-road transportation. In addition, Department of Transportation requirements prohibit the movement of certain explosive wastes over public highways. SLI generates other types of hazardous waste on-site; however, only waste that is reactive hazardous waste, or is contaminated with reactive hazardous waste, is treated on-site. All other waste will be shipped off-site to an appropriately licensed facility.

The TTU consists of two large metal sleeves that rest in concrete lined pits surrounded by a concrete lined apron. When operated, waste is placed into the metal sleeve and ignited. Procedures and limitations are described in Attachment P of the company's Feasibility and Plan of Operation Report (FPOR). After the reactive wastes have burned and the unit has cooled, ash is collected and stored in a designated hazardous waste accumulation area. The ash is disposed off-site through a hazardous waste contractor. The residual ash from the hazardous waste TTU may exhibit the hazardous waste characteristic for lead and cadmium and possibly other heavy metals.

The TTU also consists of a burn trough that is used to burn off bulk secondary explosives and pyrotechnics. The trough sits on the concrete apron that surrounds the burning pits. A tube also is used to burn detonators within the burn pits. Procedures and limitations for the trough and detonator tube are described in Attachment P of the FPOR.

SLI operates a testing facility approximately four miles north of the main facility. This area is used to test products and perform material reactivity studies. Hazardous waste is not treated at this location; however, ash generated at this site may be accumulated along with ash generated in the TTU.

SLI does not receive hazardous waste from outside sources and treats only waste that is classified as reactive hazardous waste. All other non-reactive hazardous waste generated on-site is shipped to an off-site licensed hazardous waste facility.

Relicensing Procedures

The initial hazardous waste operating license for treatment in the TTU was issued to SLI on August 7, 1996. That operating license was effective for 10 years from the date of issuance. SLI has chosen to continue operating their licensed hazardous waste facility. SLI submitted an FPOR, as required by s. NR 670.010(8), Wis. Adm. Code, on February 2, 2006. The FPOR submitted by SLI describes how the facility will conduct its operations in compliance with the applicable requirements of chs. NR 661, 662, 664, and 670, Wis. Adm. Code.

Determination of Needs

The Wisconsin Department of Natural Resources (the Department) believes there is a need for the facility to treat hazardous waste. The treatment of reactive hazardous waste on-site reduces risks to Stresau employees and eliminates risk to the general public associated with handling and transporting reactive hazardous waste. Some reactive hazardous waste can not be classified for shipment, as required by certain hazardous materials transportation regulations and the movement of certain reactive wastes over public highways is prohibited. In addition, the cost associated with off-site transport and disposal of this type of reactive waste is exorbitant.

Licensing History (Approvals/Determinations)

The original FPOR approval for hazardous waste treatment was issued on May 20, 1996. The original FPOR approval has not been modified since it was issued to Stresau Laboratory. Since the issuance of the initial license on August 7, 1996, Stresau Laboratory has been required to operate in accordance with the conditions in the May 20, 1996, plan of operation report approval.

As part of the re-licensing review process, the Department has reviewed the conditions in the original approval to determine the relevancy of those conditions to this approval. Relevant conditions have been incorporated into this approval since all prior approvals expire unless expressly provided otherwise.

Closure Costs

The closure plan included in the FPOR covers de-contamination of the TTU and associated equipment, disposal of remaining hazardous waste and clean up residue, and analysis of surface and subsurface soils and groundwater surrounding the TTU. Closure procedures and costs for SLI are included in Attachment X of the FPOR. The closure cost estimate, in 2006 dollars, is \$24,507.00. The closure cost estimate is adjusted each year for inflation and any other applicable changes and submitted to the Department for approval.

FINDINGS OF FACT

The Wisconsin Department of Natural Resources (the Department) finds that:

1. R. Stresau Laboratory, Inc., (SLI) owns and operates a hazardous waste treatment unit which is operated according to the miscellaneous unit standards in subch. X of ch. NR 664, Wis. Adm. Code. This unit is a thermal treatment unit (TTU) that burns reactive hazardous wastes in two steel sleeves. Smaller quantities of reactive hazardous wastes are burned in a trough that sits on the burning pad, as well as in a detonator tube. Ash residues generated by the TTU may exhibit the toxicity characteristic for lead or cadmium and are transported and disposed off-site.
2. On May 20, 1996, the Department conditionally approved SLI's March 22, 1993, Feasibility and Plan of Operation Report (FPOR) for the thermal treatment of hazardous waste.
3. The initial hazardous waste operating license was issued by the Department with an effective date of August 7, 1996.
4. SLI submitted a FPOR, dated February 2006, as required to re-license the TTU for another 10-year period. No significant changes to the TTU or operation were proposed. A plan review fee of \$3,000 was received by the Department on February 2, 2006.
5. The Department issued notices of incompleteness on the report in letters dated March 16, 2006 and April 19, 2006. Additional information was requested on May 25, 2006.
6. The following additional submittals were provided by SLI to the Department:

- a. a certification statement, dated March 17, 2006
 - b. response to the Department's April 19, 2006, notice of incompleteness, dated May 10, 2006
 - c. response to the Department's May 25, 2006 e-mail, dated June 13, 2006
 - d. an updated page to the EPA Form 8700-23, dated September 25, 2006
7. The FPOR was deemed complete on June 29, 2006. The Department published the completeness decision, and a preliminary determination that an environmental impact statement for the re-issuance of the hazardous waste license for SLI will not be required, needs criteria of s. 289.28, Wis. Stats., have been met, and the conditional approval in the Spooner Advocate and the Wisconsin State Journal on July 17, 2006. The Department also broadcast a radio announcement on radio station WCSW on the same day.
8. No written comments were received on the preliminary determination or the proposed approval.
9. The Department considered the following additional material in the review of this proposal:
- a. SLI's original Feasibility and Plan of Operation report dated March 1993
 - b. SLI's Environmental Analysis and Decision on the Need for an Environmental Impact Statement, dated January 1996
 - c. the Department's November 22, 1995, dispersion modeling and inhalation risk analysis
 - d. the Department's SLI case file information

CONCLUSIONS OF LAW

The Department concludes that:

1. The Department has promulgated chs. NR 660 through 670, Wis. Adm. Code, establishing minimum requirements for hazardous waste management under the authority of ch. 291, Wis. Stats.
2. The Department has the authority to conditionally approve a FPOR if the conditions are necessary to comply with chs. NR 660 through 670, Wis. Adm. Code, pursuant to s. 289.30(6), Wis. Stats.
3. Pursuant to s. 289.31, Wis. Stats., and s. NR 670.050, Wis. Adm. Code., the Department may issue annual renewals of hazardous waste operating licenses for an effective period of up to 10 years. If the licensee chooses to operate or maintain a hazardous waste facility after the 10-year effective period ends, the licensee must submit, at least 180 days before the end of the effective period, all of the plans and reports which are required before the application for new operating licenses may be submitted, as specified in ss. NR 670.010(1), (3) and (8), Wis. Adm. Code and the applicable sections of chs. NR 660 to 670, Wis. Adm. Code.
4. The Department has rules that govern the testing of hazardous wastes for the purposes of determining treatability. Treatability testing of hazardous wastes and hazardous wastes associated with those treatability studies are exempt from certain hazardous waste rules, in accordance with ss. NR 661.04(4) and (5), Wis. Adm. Code, as long as compliance is achieved with the requirements.
5. The conditions of approval set forth below are necessary to ensure compliance with chs. NR 660 through 670, Wis. Adm. Code.
6. The Department has promulgated ch. NR 103, Wis. Adm. Code to preserve and protect the water quality of wetlands.
7. Pursuant to s. 289.30(6), Wis. Stats., and ch. NR 670, Wis. Adm. Code, the Department has the authority to issue hazardous waste facility plan approvals.

FINAL DETERMINATION

In accordance with s. 289.28(3), Wis. Stats., the Department has determined that there is a need for the facility to treat hazardous waste as approved. The Department has further determined that there is no need for an environmental impact report or environmental impact statement for this facility at this time, pursuant to s. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code, and that the existing facility conforms to wetlands water quality standards pursuant to ch. NR 103, Wis. Adm. Code.

Based on the Findings of Fact and Conclusions of Law, the Department hereby approves SLI's hazardous waste treatment facility feasibility and plan of operation report, submitted in February 2006 and amended on March 17, 2006, May 10, 2006 and June 13, 2006, subject to compliance with ch. 291, Stats., chs. NR 660 through NR 670, Wis. Adm. Code, and the following conditions:

CONDITIONS OF APPROVAL

General Conditions

1. SLI's TTU (the facility) shall be operated in accordance with the approved Feasibility and Plan of Operation Report (FPOR), the requirements of ch. 291, Wis. Stats., chs. NR 660 to 670, Wis. Adm. Code, and the conditions of this approval.
2. The Department retains the right to modify this approval and to require the submittal of additional information. Nothing in this conditional approval shall relieve SLI of the legal obligation to comply with applicable federal, state and local approvals.
3. The conditions set out in s. NR 670.030, Wis. Adm. Code, apply to this facility and are hereby incorporated by reference and made a part of this approval and of any operating license which may be issued for the facility based upon this approval.
4. SLI may not treat, store or dispose hazardous waste in a modified or expanded portion of the facility, until SLI has received written approval from the Department.
5. SLI shall comply with all applicable statutes and rules relating to spills, leaks, or other releases of hazardous waste or other hazardous substances including ch. 292, Wis. Stats., subch. D of ch. NR 664, Wis. Adm. Code, and chs. NR 700 to 754, Wis. Adm. Code.
6. The SLI license for operating the thermal treatment unit is subject to the annual license operating fees listed in Appendix II, ch. NR 670, Wis. Adm. Code, for miscellaneous treatment units.

Specific Conditions

7. On June 8, 2006, SLI submitted a financial responsibility proof mechanism in the amount of \$25,000 for costs associated with closure of the TTU. SLI shall adjust the closure cost estimate for inflation within sixty (60) days prior to the original anniversary date of the establishment of the financial assurance for closure. SLI's anniversary date for the establishment of financial assurance for closure is April 15th of each year.
8. The hazardous waste thermal treatment unit shall consist of two concrete and metal lined thermal treatment pits mounted flush to the ground, one thermal treatment trough and a detonator tube.
9. SLI may treat only wastes bearing the waste codes listed in its January 4, 2006, Part A application, as revised on June 13, 2006. Wastes with similar characteristics, yet different hazardous waste codes,

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- can be managed at the facility only after receiving written approval from the Department following a modification to this determination and the submission of a revised Part A application.
10. SLI shall operate the thermal treatment unit within the unit's licensed capacity. The maximum design capacity for purpose of licensing and closure is 700 pounds of reactive hazardous waste, net explosive weight, per year.
 11. SLI may thermally treat hazardous waste in its hazardous waste unit in accordance with the following limitations:
 - a. Burning is prohibited if any of the following conditions exist:
 - i. rain, heavy snow or lightning;
 - ii. high winds in excess of 20 mph;
 - iii. high humidity in excess of 90% relative humidity;
 - iv. ground level temperature inversion that would minimize dispersion of TTU emissions;
 - v. A DNR-issued burn ban is in effect; or
 - vi. coverage is not available. (Coverage meaning an observer and/or person stationed at the facility communication system.)
 - b. Burning may only be performed by trained and qualified SLI personnel.
 - c. SLI shall obtain a valid DNR-issued burning permit to burn waste in the hazardous waste thermal treatment unit.
 - d. Hazardous waste may be thermally treated only once per day in each of the thermal treatment pits.
 12. Thermal Treatment Unit limitations:
 - a. No more than 700 pounds, net explosive weight, of reactive hazardous waste per year may be treated. Non-hazardous wastes, such as paper, wipes and fuel oil that are intimately mixed with reactive hazardous wastes may be burned in the TTU and are not considered a part of the annual reactive waste burning limit.
 - b. Only waste contaminated with reactive hazardous waste, or reactive hazardous waste, may be burned in the TTU.
 - c. Ammunition and explosives may not be burned in large masses. SLI shall follow the explosive load limits as defined in GWI-EXP-2, GWI-EXP-3 and GWI-EXP-4, Attachment P, of the FPOR.
 - d. SLI shall operate the thermal treatment unit in a safe and responsible manner.
 - e. SLI shall comply with the requirements of ch. NR 445, Wis. Adm. Code, and any other applicable air pollution control rules.
 13. SLI's operating record shall include an inspection checklist or other information to document compliance with the limits in Condition #11 & #12.
 14. SLI operates a non-commercial hazardous waste thermal treatment unit. SLI may treat only reactive hazardous waste that SLI generates on-site. No hazardous waste may be brought from off-site and burned in the thermal treatment unit, with the following exception:
 - a. SLI may burn residual materials from product testing or treatability studies, conducted according to ss. NR 661.04(5) and (6), Wis. Adm. Code, at its North Testing Area if SLI determines that these residual materials are reactive hazardous waste.
 - b. SLI shall obtain a hazardous waste transportation license, according to the requirements of ch. NR 663, Wis. Adm. Code, and s. 291.23(1), Wis. Stats., prior to transporting any hazardous waste from its North Testing Area unless the North Testing Area is a very small quantity generator under s. NR 660.10(139), Wis. Adm. Code, and is in compliance with s. NR 662.220, Wis. Adm. Code and subch. HH of ch. NR 666, Wis. Adm. Code.

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15. SLI shall inspect the TTU's concrete liners and steel sleeves following the procedures outlined in Attachment M, GWI-EXP-5 of the FPOR. SLI shall certify, at least annually, the unit's integrity. The inspection and certification statement shall become part of the SLI's operating record.
16. SLI shall continue to conduct annual groundwater monitoring for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and total metals at the TTU, and bi-annual surface soil sampling for metals (barium, cadmium, chromium, copper, lead, mercury, nickel, silver and zinc) at the North Testing Site to assess environmental trends. SLI shall submit an annual report summarizing the sampling results to the Department's Northern Region Waste and Materials Management Program by March 1st of each year.
17. SLI shall make appropriate hazardous waste determinations for all burned residuals produced by the thermal treatment unit according to the requirements of ss. NR 662.011 and 664.0013, Wis. Adm. Code. At a minimum, the residuals will be analyzed annually. Re-characterization information shall become part of SLI's operating record.
18. SLI shall comply with all applicable requirements of the Department's air pollution control rules and directives including but not limited to obtaining all necessary permits to operate in accordance with these rules. SLI shall notify the Department of any change in operation that results in an increase in the maximum potential emissions of an air contaminant or which results in the emission of an air contaminant not previously emitted.
19. The Department reserves the right to require corrective action by SLI under the authority of s. 291.37, Wis. Stats. and chs. NR 660 - 670, Wis. Adm. Code.
20. SLI shall maintain an operating record at the facility. In addition to general recordkeeping requirements in s. NR 664.0073, Wis. Adm. Code, the operating record shall include:
 - a. Copies of the approved Feasibility and Plan of Operation Report, license, license application and appendices, and financial proof mechanisms.
 - b. Copies of well construction forms for all groundwater monitoring wells.
 - c. Copies of Annual Monitoring Reports required in Condition # 16.
 - d. Copies of annual activity reports required under Condition # 21.
 - e. Copies of hazardous waste manifests.
 - f. Copies of all contingency plan incidents.
 - g. Inspection records that contain the results and frequency of all TTU inspection and maintenance activities.
 - h. Copies of all waste minimization certifications.
 - i. Records detailing the date, time, source and description and quantity of waste treated in the TTU.
 - j. Copies of the TTU operation checklist as required in Condition #13.
 - k. Additional information pertaining to personnel training and contingency planning, as required in ss. NR 664.0054 and 664.0016, Wis. Adm. Code.
21. Annual Activity Report. The Annual Activity Report shall be prepared in accordance with s. NR 664.0075, Wis. Adm. Code. The Annual Activity Report shall be submitted to the Department by March 1st of each year.
22. Additional Reports. SLI shall prepare and submit the following information to the Department by March 1st of each year:
 - a. Waste minimization assessment as required by Condition # 23.
 - b. Annual Groundwater and Soil Monitoring Reports required in Condition # 16.
 - c. Information detailing changes in volume and/or toxicity of hazardous waste in comparison to previous years.
 - d. Manifest Error Reports, if applicable.

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- e. Most recent closure cost estimates as required by s. NR 664.0142, Wis. Adm. Code.

Note: Copies of all reports shall be submitted to the Waste and Materials Management Program contact for the Department's Northern Region.

23. Waste Minimization. SLI shall continually assess its waste minimization efforts. An annual certification shall be made to verify that a program is in place to reduce the volume and toxicity of hazardous waste while simultaneously determining the feasibility of new programs by assessing their economic, safety and practicable ramifications. This certification shall also include a statement that the reactive hazardous waste burning in the thermal treatment unit is the only practicable disposal mechanism available to SLI that can satisfactorily minimize the present and future threat to human health and the environment.
24. Closure. SLI shall close the facility in accordance with the closure plan included in the Feasibility and Plan of Operation report and with the applicable sections of chs. NR 660 through 670, Wis. Adm. Code.
25. Financial Responsibility. SLI shall demonstrate compliance with the financial responsibility requirements of subch. H of ch. NR 664, Wis. Adm. Code.

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, sections 227.52 and 227.53, Wis. Stats., establish criteria for filing a petition for judicial review. Such a petition shall be filed with the appropriate circuit court and shall be served on the Department. The petition shall name the Department of Natural Resources as the respondent.

Dated: _____

SEP 28 2006 *mkp*

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Connie Antonuk

Connie Antonuk
Air & Waste Team Leader
Northern Region

Jill Schoen

Jill Schoen, CHMM
Licensing and Plan Review Specialist
Eau Claire Service Center