



# Feasibility and Plan of Operation Report (FPOR)

R Stresau Laboratory Inc.

Spooner, WI

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**Feasibility and Plan of Operation (FPOR)**

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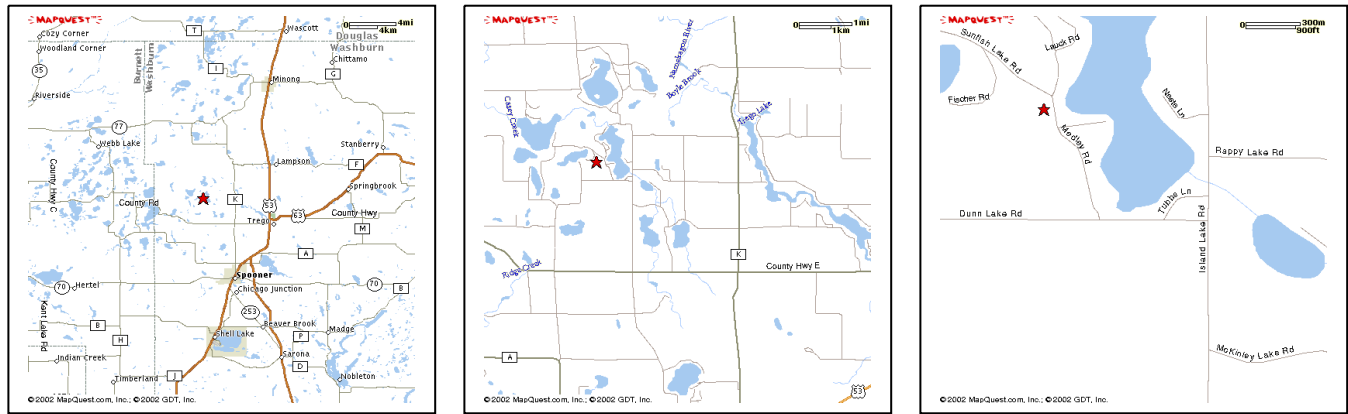
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**Chapter 1 General Facility Description – NR 670.014(2)(a)**

R Stresau Laboratory, Inc. (Stresau) is located approximately ten (10) miles northwest of Spooner, Wisconsin. The eastern boundary of the site is Medley Road. The southern boundary is Dunn Lake Road. Dunn Lake is east, and Sunfish Lake is northwest of Stresau. The property is described as Gov. Lots 5, 6 and 8 in the Township of Casey, Section 23, T 40N R13W. Please refer to the of this report for more detailed maps on the Dunn Lake region, a

For general description purposes, please refer to the maps and photos below:



The rural recreational setting of Stresau dictates the recreational-residential use of the land, primarily east of the facility on Dunn Lake. The land immediately west of the Stresau property is zoned Forestry, and is owned by the University of Wisconsin, Eau Claire, with land use restrictions as a nature conservancy. Adjacent property to the north and south is also zoned Forestry. The Stresau property is zoned Industrial.

## **Chapter 2 Local Approvals / Environmental Impact Review – NR 670.014(2)(x)**

The question as to whether Stresau was required to seek local approval for license renewal was posed to the firm of Quarles & Brady LLP. As Stresau was in operation prior to any zoning laws, the facility was zoned as industrial. As Stresau sought and gained local approval for the initial operation license, it is Stresau's opinion that no approval is necessary for a renewal license based upon the findings and opinion of Quarles & Brady. A copy of Quarles & Brady's memo to Stresau is contained in **Attachment 21a**.

In 1996, David Kafura, WDNR, conducted an Environmental Impact Review. Refer to **Attachment 21q**.

In 2006, Jim Ross, WDNR, conducted an Environmental Assessment Review Amendment. Refer to **Attachment 21r**.

### **Chapter 3 Preliminary Hydrologic, Geologic and Meteorological Information –**

As there have been no known changes to the information previously provided, most of the following is inserted from the 1993 FPOR, as applicable; updates or revisions to previously provided information have been integrated into this report. Refer to the \_\_\_\_\_ for supporting maps and figures related to each of the subsections below.

#### **3a Landform**

The area topography is relatively flat in the southern half of the site, with a gentle slope toward Dunn Lake. The northern half of the site is characterized by slightly hummocky topography with maximum local relief of about 35 feet.

#### **3b Soils and Geology**

A detailed soil survey has not been done for the area; however, a general survey done by the Soil Conservation Service indicates that the soil in the site area is made up of the Omega-Pence-Chetek soil association. This association is described as excessively drained, nearly level to gently sloping, loamy sand to sandy loam underlain by stratified sand or gravelly sand. This material underlying the soil is described as glacial outwash.

While a detailed soil survey has not been completed for the site, the Soil Conservation Service (SCS) has surveyed soils north of the Stresau property. This survey found most soils in this region to be of the Menahga series (See **Attachment 21i**). The Menahga series consists of very deep excessively drained, sandy soils formed in glacial outwash under coniferous forests on outwash plains and valley terrains. The surface soil is black and very dark grayish brown loamy coarse sand and coarse sand 4 inches thick. The subsoil is dark brown, dark yellowish brown and brown coarse sand 20 inches thick. The substratum is pale brown coarse sand. Slopes range from 0 to 45 percent. Areas are used for woodland, cropland, and pastureland. The SCS soil scientist (Mr. Fred Simeth) located in Spooner, WI, expects soils on the Stresau property to also be of the Menahga series. These soils have the following characteristics:

<b>SOIL CHARACTERISTICS</b>			
Depth (in)	Permeability (in/hr)	pH	CEC (meg/100g)
0-4	6.0-20	4.5-6.5	2-10 (topsoil)
0-4	6.0-20	4.5-6.5	1-7 (subsoil)
4-24	6.0-20	4.5-6.5	1-4
24-60	6.0-20	5.6-7.3	1-4

Depth to bedrock in the area is generally more than 95 feet below the ground surface. United States Geological Survey (USGS) maps indicate that surficial material across most of the site, except for the southeast corner, is immediately underlain by the Precambrian Chengwatana Volcanic Group. This Group is described as a light to dark gray breccia and tuff with individual flow units ranging from 15 to 95 feet thick; the total thickness of the Group can vary from zero to 25,000 feet. The surficial material in the southeast corner of the site is in contact with the Cambrian Mount Simon Formation, which is composed of a medium to coarse-grained, quartzose, feldspathic sandstone at least 160 feet thick. The lower units in this formation include, from top to bottom, a very fine to fine-

grained quartzose sandstone about 120 feet thick, a silty shale about 55 feet thick, and a very fine to fine-grained quartzose sandstone about 110 feet thick. The property does not contain any major faults running through it, and the nearest faults are several miles away.

### **3c Surface Hydrology**

The average evapotranspiration for the general area is about 18 inches per year. Lakes formed during the glacial epochs dominate the surface topography in the region. Dunn Lake, directly to the east, and Sunfish Lake to the west are the nearest permanent surface water bodies. In general, soil permeability is high, averaging 5 to 10 inches/hour, indicative of a high recharge potential. For this reason, ponding of surface water at the site is rare.

### **3d Groundwater Hydrology**

Published data indicates groundwater flow in the region is to the northwest. Based on a comparison of historical groundwater elevation data to data obtained during groundwater sampling from 2015 through 2020 (refer to **Attachment 21k**), groundwater flow direction is toward the north-northeast.

Depth to ground water in the recent monitoring wells ranges from about 32 to 41 feet below grade (Nos. MW-1, MW-2, MW-3, MW-4S, MW-8, MW-9, MW-10, and MW-10D), and ranges from about 14 to 20 feet below grade (Nos. MW-5S, MW-6S, MW-11 and MW-11D).

The deep well at Stresau produces approximately 22 gallons per minute (gpm); most of the other wells within several miles of the site, and screened in the near surface glacial material, yield between 10 and 25 gpm.

The bedrock lava flows thought to underlie some of the site are not considered good municipal sources of water, since the maximum well yield reported is only 20 gpm.

### **3e Climate/Meteorology**

The climate around the facility is temperate continental. Daytime summer temperatures for Spooner range from an average of 69 to 81 degrees F., and nighttime summer temperatures range from an average of 46 to 56 degrees F. Winter daytime temperatures range from an average of 20 to 38 degrees F., and nighttime temperatures average -2.4 to 15 degrees F. The ground is generally frozen from late November to early April, with the maximum frost depth being about 30 inches. Total annual precipitation averages 29 inches with the average annual snowfall totaling 50.6 inches. Snowfall accounts for about 15 percent of the total annual precipitation.



**Chapter 4 Background/Overview –**

**4a General Description of Facility**

Stresau is a privately owned facility that is involved with . The majority stockholders are Wayne Hanson, Spooner, WI and Mary Lee Poole, Phoenix, AZ., and is the only such facility they own and operate in Wisconsin. The facility’s operations include Research and Development, Test and Evaluation, and Assembly and Manufacturing.

generated by this facility. The | in the preceding examples are small in volume or quantity and many times are not compatible with each other, i.e., . Requirements concerning reactive wastes are many; however, throughout the process of storage and treatment, segregation by is paramount.

There are two basic kinds of reactive waste disposed of at this facility: 1) daily waste, and 2) waste . Daily Waste contains:

- 67% # Fuel Oil (used as fuel and to desensitize )
- 32% Paper (wet ones, paper towels, small amounts of packaging)
- 1%

Stresau Laboratory uses for properly handling and chemical waste as discussed in Chapter 5. and chemical waste is stored in according to compatibility requirements. Stresau Laboratory does not accept any off-site waste. The provides descriptions on and provide drawings and details of the Thermal Treatment Unit (TTU) and . The locations below (except ) are directly related to the TTU's waste handling and deactivation.

is used for

This treatment reduces the amount of daily waste that would normally be Waste processing related to is outside the scope of this license application. Stresau Laboratory has reviewed and implemented is implementing this alternative technology.

**4b Waste Management Units**

There are types of waste handling areas used by Stresau Laboratory as summarized below. These locations are identified in the .

A Hazardous Waste Management Unit (HWMU) is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area.






**4c Waste Management, Treatment, and Alternatives**

Of all the options, on-site Open Burning / Open Destruction (OB/OD) is still the most feasible and is recommended for treatment of certain types of \_\_\_\_\_, including those that are unable to be \_\_\_\_\_

The remaining \_\_\_\_\_

\_\_\_\_\_ Stresau conducted research, review, and evaluation of alternate technologies to OB/OD, and provided the findings to DNR, reference May 10, 2017, letter from Stresau to DNR in **Attachment 21x**. Use of the \_\_\_\_\_ to further and significantly reduce the amount of material treated in the TTU. Stresau continues to evaluate alternatives throughout the operating (licensed) period.

The TTU is a site for \_\_\_\_\_

minimal amounts of resulting \_\_\_\_\_ will be placed in \_\_\_\_\_ neutralizes the \_\_\_\_\_

The same follows for the \_\_\_\_\_. This daily waste \_\_\_\_\_. On-site burning eradicates or \_\_\_\_\_

includes \_\_\_\_\_

\_\_\_\_\_ that sits in one of the open topped sleeves. The \_\_\_\_\_

The unit \_\_\_\_\_ which are used one at a time, and a \_\_\_\_\_ may be used \_\_\_\_\_

Certain DOT regulations require that \_\_\_\_\_ be classified prior to shipment. Because classification allows for little variation in composition, many waste \_\_\_\_\_ have not been classified for shipment. Thus, many \_\_\_\_\_ are often limited to waste treatment on site as the only viable option for waste management. DOT restrictions prohibit movement of some \_\_\_\_\_ wastes over public highways. Safety considerations will generally dictate a location close to the point of waste generation. Refer to **Attachment 21g** for examples of off-site treatment facilities. Industry safety standards and practices require decontamination of all \_\_\_\_\_ before use. Much of the reactive waste generated by Stresau is captured on \_\_\_\_\_ wetted with isopropyl alcohol (IPA) and used for such decontamination.

\_\_\_\_\_ the need to dispose of the waste on-site for safety reasons. Some of the wastes cannot be transported without \_\_\_\_\_

Extremely large portions of Stresau's contracts are \_\_\_\_\_

produces \_\_\_\_\_

\_\_\_\_\_ problems. The residuals that result from a \_\_\_\_\_ Nevertheless, these \_\_\_\_\_

Consequently, this \_\_\_\_\_

The customary course of action is that the cognizant \_\_\_\_\_

be followed.

It is the policy of Stresau based on the above discussion to not consider waste until they are notified by the PCO that they will not be used in some other program and that they should be disposed of. Until Stresau receives this notice are considered products. Stresau prefers to return

it is not economically feasible to do so, and the

It is imperative to understand and adhere to all safety, security, and handling measures dictated by Again, Stresau will continue to evaluate alternative treatment options with each Client and DNR for the hazardous wastes processed.

Historically, Stresau has destroyed its generated

This pit is detailed in | The

and non-reportable spills caused by the production line operations (an OSHA requirement). Assembly line operation's on a frequent schedule.

A by-product of the open burning process is ash residue. Stresau has established a waste stream for this residue following the characterization protocol in the . Please refer to **Attachment 21c**, containing copies of ash analyses performed by Pace Analytical.

The ash waste stream is managed by collection, packaging, storage, shipment, and then landfill disposal. The ash is manually collected and packaged into fifty-five (55) gallon drums. The drums are sealed and then stored inside until shipment time.

A log is maintained which details the quantity of daily waste placed into the and ash removed. A separate log is kept which details . A copy of the , as reported in the WDNR Annual Summary sent to the WDNR POC, can be found in .

is specially designed to meet NR 662.016(2)(b) and (e) requirements. Data sheets of are . A review of the plans will show how the floor was designed to contain possible spills. The floor can confine the contents of the largest container stored there and confine more than ten percent (10%) of the total amount of stored waste.

All hazardous waste shipped from this site is manifested on the appropriate state or EPA manifest forms. Should the land disposal restriction notification and or certification apply to a waste stream, it is observed and complied with.

Currently the ash is sent to a disposal facility, Veolia ES Technical Solutions, LLC (Identification #WID003967148), located in Menomonee Falls, Wisconsin. The ash is stored at Veolia's site until shipped to a Veolia site in Gum Springs, Arkansas, Elemental Environmental Solutions LLC (#AID110069419365), where it is treated and stabilized. After treatment, the waste is tested to confirm it is nonhazardous and the waste is disposed at West Kentucky Landfill in Mayfield, KY. As this is a Subtitle D landfill, there is no EPA ID. Refer to **Attachment 21f**.

Historically, Stresau was considered a Small Quantity Generator, but on January 31, 2005, Stresau changed to a Very Small Quantity Generator. Since then, the site has continued to assess its waste generation, and subsequently changed its generator status back to a Small Quantity Generator on February 20, 2019. The facility currently remains a Small Quantity Generator, and continues to track and assess generator status, and remain compliant with Small Quantity Generator standards.

**Chapter 5 Waste Classifications** – As required by NR 664.0013

**5a General Description of Waste Types**

There are two general categories of hazardous waste handled at Stresau Laboratory. These two groups include “reactive waste” and “chemical waste.” The term “reactive waste” consists of bulk and component explosives and explosive-contaminated waste, as defined in NR 661.0023 of the Wisconsin Administrative Code (Wis. Adm. Code). The term “chemical waste” is the term used to describe all nonreactive hazardous waste, or unknown potentially hazardous waste. This category could include drummed waste, lab packs, and bulk wastes from on-site Stresau Laboratory facilities. Waste determinations are described further in Chapter 6.

**5b Reactive Waste**

Waste are categorized as reactive wastes, (D003). There are

It is difficult to provide WDNR with an “All-Inclusive List” of

Below is a list of routine products that are commonly used at this site. This list is based on . The representative list of D003 reactive materials is based on generator knowledge, including but not limited to Stresau’s decades-long experience dealing with in their operations.

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Regarding analysis of waste ash from the burning process, Stresau is aware that Toxicity Characteristic Leaching Procedure (TCLP) analysis of the ash is required by WDNR prior to disposal. Refer to **Attachment 21c**.

### **5c Contaminated Solvents**

Various solvents are used at this facility for part washing and cleaning. Parts washing involves clean-up activity in the \_\_\_\_\_ – Stresau does not utilize a parts washer in the machining or maintenance departments. Solvents that are not contaminated with \_\_\_\_\_ are containerized, shipped, and recycled. Solvents that are contaminated with \_\_\_\_\_ primarily \_\_\_\_\_. The quantity of reactive laden solvent is small. Typically, waste solvent is found on paper towels. Isopropyl Alcohol (IPA) and Ethyl Alcohol are solvents most found on paper towels and are used for cleaning work areas. Acetone is used for cleaning contaminated containers and tooling. Ethyl Alcohol is used to wash \_\_\_\_\_. The above procedures result in reactive contaminated solvents that are to be treated in the TTU.

### **5d Ignitable Wastes**

Most of the waste disposed of at this facility is No. 1 fuel oil. As previously explained, No. 1 fuel oil is used in the daily waste buckets to \_\_\_\_\_. Stresau conducted a flash point test on a sample of on-site fuel oil. This test indicated No. 1 fuel oil has a flash point of 130-133 degrees F. A flash point <140 degrees F. is characterized as an ignitable waste (D001). (Fuel oil used to desensitize waste also contains \_\_\_\_\_.)

### **5e General Waste Analysis (NR 664.0013, 670.014(2)(b))**

In accordance with ss. NR 664.0013(1) and NR 670.014(2)(b), Wis. Adm. Code, Stresau maintains records of the chemical and physical analyses of the hazardous waste and hazardous debris to be handled at the facility; the analyses are described and included as supporting documents with the waste analysis plan and waste determinations, refer to \_\_\_\_\_ **respectively**. The analyses contain all the information necessary to treat, store or dispose of the wastes properly according to ch. NR 664, Wis. Adm. Code. Further, the analysis contains all the information which must be known to treat, store or dispose of the waste according to chs. NR 664 and NR 668, Wis. Adm. Code. Stresau implements a \_\_\_\_\_ in accordance with s. \_\_\_\_\_



## **Chapter 6 Waste Analysis Plan and Waste Determinations**

### **6a Waste Analysis Plan – As required by NR 664.0013**

Stresau implements a Waste Analysis Plan (WAP) to ensure that all

The WAP also outlines how the TTU ash that is being stored prior to shipment to an offsite disposal facility will be characterized. Information on and TTU ash is obtained from generator knowledge, . The WAP was developed in accordance with ss. NR 664.0013(2), and NR 670.014(2)(c), Wis. Adm. Code; refer to

Another WAP is used and retained on-site for license exempt activities, as it is for management and treatment in tanks, containers, or containment buildings regulated under ss. NR 662.015, 662.016, and 662.017, Wis. Adm. Code, to meet applicable LDR treatment standards found at s. NR 668.40, Wis. Adm. Code. It describes the procedures that Stresau Laboratory will carry out to comply with the treatment standards. s. NR 668.07(1)(e), Wis. Adm. Code. This WAP is outside the scope of this licensed application and is therefore not included but can be made available to the regulatory authority upon request.

It is the policy of Stresau, based on the discussion in *Chapter 4 – Background/Overview*, to not consider

Daily waste is considered reactive waste as it is generated and is normally treated more frequently.

The Stresau

a similar procedure is used. Basically, the procedure is to determine what waste is to be treated, review the appropriate SDS, segregate the wastes according to compatibility, record the waste on the .

### **6b Waste Determinations – As required by NR 662.011**

Based on the chemical and physical analyses completed in accordance with the WAP, accurate determinations as to whether the waste is a hazardous waste are completed and classified appropriately at the point of generation. A listing of waste streams (wastes generated), determination matrix of whether the waste is hazardous, associated hazardous waste code(s), and disposal method is available; refer to **Attachment 21t**. The listing only includes waste streams that cannot be treated non-thermally as part of the licensed activity. Supporting documentation for each waste determination is provided by generator knowledge

. Stresau maintains a full waste determination worksheet for all waste streams which can be made available to the regulatory authority upon request.

**Chapter 7 Description of Security Procedures and Equipment – As Required by NR 664.0014**

Site access to the reactive wastes is controlled by

Through the implementation of

“The owner or operator shall prevent the unknowing entry and minimize the possibility for unauthorized entry ...”.

**Chapter 8 Inspections Schedule – As Required by NR 664.0015**

A company procedure, \_\_\_\_\_, has been written regarding hazardous material inspections. The procedure contains an inspection log as well as a schedule.

*Note: A copy of this procedure is included as an example of the current procedure and is subject to periodic change. To avoid a license review, and associated fee, the contents of this Stresau procedure, and others provided, should not become a mandated part of the license.*

The burn pit is inspected, by the operator, prior to commencing a burn. Ash is periodically removed, placed in buckets, and transported to Bldg. #14 for secure storage. At this time, the \_\_\_\_\_ is inspected for cracks, broken welds, fractures, holes, and weak areas. An annual TTU Certification Inspection and Verification is performed by the \_\_\_\_\_ with a copy of the completed inspection being provided to the WDNR POC.

In the past, the \_\_\_\_\_ was removed and subjected to hydraulic testing. Since the installation of the rolling roof covering the entire TTU slab, precipitation is prevented from encountering the TTU slab, so there is little if anything to collect in the run-off tank. As the burn pits are constructed in such a manner as to prevent any ground water intrusion and precipitation, and run-on is prevented, it is Stresau’s position that hydraulic testing of the \_\_\_\_\_ is only necessary following an incident that may have compromised the integrity of the unit. As there has been no incident occurrence during the period from the last TTU license renewal, no hydraulic testing has been necessary.

**Chapter 9 Personnel Training – As Required by NR 664.0016**

Personnel involved in the collection, separation, storage, transportation, TTU operation, ash collection and storage have partaken in initial and annual refresher on-the-job training. Training records are maintained digitally and in hard copy. A copy of the current training record can be found in **Attachment 21h**; copies of the procedures trained on can be found in .

**Chapter 10 Description of Preparedness and Prevention Procedures – As Required by NR 670.014(2)(f) and (h)**

**10a Prevention of Unloading Hazards -**

All phases of the TTU operation are conducted by personnel from the

Copies of the written procedures as described below are provided in \_\_\_\_\_ :

*Note: A copy of these procedures is included as examples of the current procedures and are subject to periodic change. To avoid a license review, and associated fee, the contents of these Stresau procedures should not become a mandated part of the license.*

**10b Communications -**

Stresau uses a

### **10c Fire Prevention Equipment -**

Due to the nature of site operations, smoking is not allowed beyond the front employee/visitor parking area or outside of the designated smoking area adjacent to the employee breakroom. Stresau has more than 50 ABC type fire extinguishers throughout the facility, with no less than 2 in the company truck. Additional equipment includes water backpacks and various grass and brush fire fighting tools. Stresau has provided training and equipment to a volunteer group to assist in fire control until the Spooner Fire Department and/or WDNR arrives. The protocol for this situation is covered in . A copy of this procedure can be found in

### **10d Prevention From or Flooding of Waste Handling Areas, and Prevention of Contamination of Water Supplies -**

**10d(1): Water Infiltration** - Water infiltration and spills of any kind are visually inspected by each authorized employee who enters a storage unit. Visual survey of any storage facility entered is standard procedure. Any liquid noted would be collected and properly containerized for process testing prior to disposal. Since all the wastes are under roofs, the probability of water contacting the wastes (Liquids, Reactives, and Solids) is extremely low. If water does infiltrate the storage areas, the integrity of the containers will most likely will be maintained. Therefore, the water may be mopped up and the collected water discharged. Should any of the containers appear to be compromised, the WDNR and Spooner will be consulted before any collected water is discharged.

**10d(2): Run-on Contaminant** - As described previously in this report, the

the possibility of water contacting the wastes is minimal.

The burn pit is constructed of concrete and equipped with a

thus keeping ash confined to the watertight that is inspected prior to any burn and emptied periodically by personnel from

The TTU area is located at

. The area has a

The infiltration rate of soil surrounding the area is high.

These precautions prevent run-on from occurring at the site.

The policy of Stresau is to not burn during precipitation events and to leave

This serves to limit the likelihood of precipitation entering the burn pit

There have been infrequent occasions when precipitation has entered these areas. In the past, this water was not removed, rather wastes were placed in the pit and the materials ignited on top of the water. The heat from the burn process is adequate to remove water by evaporation. Stresau has altered

all burn procedures such that the operator will inspect the \_\_\_\_\_ for water prior to loading the unit. If water is present, the operator will not burn reactive waste that day, rather the operator will load the sleeve with approximately 2 gallons of fuel oil and ignite it to remove water by evaporation. Destruction of reactive waste will be done the following day.

**10d(3): Contaminated Ground Water -** The burn pit is a

Refer to \_\_\_\_\_.

Ground water contamination should not be a problem or a concern for these reasons:

1. The site is \_\_\_\_\_ . Therefore, no run-on is possible.  
(Refer to FEMA National Flood Hazard Layer, \_\_\_\_\_ )
2. The site has a \_\_\_\_\_
3. For contamination to leave the pit it must pass through a \_\_\_\_\_
4. For contamination to leave the \_\_\_\_\_

**10d(4): Precipitation Run-off-** As stated in the previous Section 10d(2) above, with the installation of the \_\_\_\_\_ , precipitation run-off is no longer a concern, as it does not come into contact with the \_\_\_\_\_ . However, if for whatever reason, should precipitation in any form come in contact with the \_\_\_\_\_ , it shall be collected in the existing 2,000-gallon collection tank. The initial sizing and installation of the 2,000-gallon collection tank was based upon the data gathered and calculated in the original FPOR. It was calculated that the 25-year rainfall would produce 1,952 gallons of run-off to be collected.

**10d(5): Groundwater Monitoring -** As a part of the initial FPOR, groundwater and soil sampling was conducted to gather information on existing conditions and to establish a benchmark to gauge future sampling. Sampling began in 1995 as part of a RCRA Release Assessment and the DNR approved Workplan, and continued annually as recommended by WDNR; reference **Attachment 21k**. Current monitoring protocol follows the scope of work documented in an August 1, 2012, letter from Stresau to Mr. Morris (WDNR), for both total and dissolved metals, volatile organic compounds (VOCs), and polynuclear aromatic hydrocarbons (PAHs); reference **Attachment 21k** for specific constituents. Stresau has conducted annual groundwater sampling from the three (3) wells nearest the TTU, and one (1) well located to the southwest of the TTU. Copies of the sampling from 2015 through 2020 can be found in **Attachment 21k**. Due to the lack of any significant findings in soil samples at Stresau's North Site, a reduction in the rate from annually to biennially was requested and granted.

A recent Site Investigation (SI) Report, dated April 22, 2021, was provided to WDNR, included in **Attachment 21k**. The following is from the Executive Summary of that document:

*Soil, groundwater, and septic waste samples collected from the Stresau site during this SI were analyzed for parameters approved by the WDNR, including volatile organic compounds*

*(VOCs), polynuclear aromatic compounds (PAHs), total and TCLP RCRA metals, dioxins, furans, and/or perchlorate. The concentrations of these parameters identified in site media were compared to the appropriate state and/or federal regulatory criteria, if available.*

*The results of the SI indicate relatively low concentrations of several parameters were detected in the samples analyzed from the various site media. When compared to regulatory criteria, limited soils or groundwater exceedances were identified for three different parameters. No enforcement standards, maximum contaminant levels, or industrial residual contaminant levels were exceeded in any of the samples analyzed from the site.*

*Based on the results of the SI, SEH believes no further investigation or remediation is required and recommends continued groundwater monitoring for the site.*

In some form, Stresau will continue a monitoring program until such time an alternate sampling protocol is agreed to with the WDNR.

### **10e Prevention of Releases to Atmosphere**

The structures and equipment identified in Chapter 4 and \_\_\_\_\_, and procedures identified in this Chapter and \_\_\_\_\_, describe the prevention and minimization of releases to the atmosphere. The \_\_\_\_\_) provides descriptions on \_\_\_\_\_ and the TTU. Transfer of waste to be treated in the TTU is placed in \_\_\_\_\_.

On site burning eradicates or neutralizes the \_\_\_\_\_ locally and eliminates the possibility of general public involvement with the \_\_\_\_\_. The ash waste stream is managed by collection, packaging, storage, shipment, and then landfill disposal. The ash is manually collected and packaged into drums, sealed, and then stored inside \_\_\_\_\_ until shipment time.

Some non-material emissions from the TTU are expected. However, from past modeling performed there is no evidence of exceeding any standards. According to the Environmental Analysis and Decision on the Need for an Environmental Impact Statement (EIS) (**Attachment 21q**), “A dispersion modeling and inhalation risk screening analysis for specific emissions, such as heavy metals, was conducted by DNR’s Air Management Program. The modeling assumed a worst-case scenario; all material placed into the unit was emitted into the air, the unit was operated for 4 hours per day 365 days per year. The point of maximum air quality impact was found to be near the Stresau property boundary, on its northeast side. The dispersion modeling showed that the hazardous air pollutant concentrations were below the regulatory levels set forth in Chapter NR 445, Wis. Admin. Code, and the National Ambient Air Quality Standards for lead, particulate matter, nitrogen oxides and carbon monoxide.” This is supported by the dispersion modeling and inhalation risk screening analysis of hazardous air pollutant emissions from the Thermal Treatment Unit (TTU) at Stresau Laboratory, Inc., conducted by DNR, dated November 22, 1995. Additional information regarding the analysis of air pollution issues and alternative methods is described in the May 10, 2017, letter from Stresau to the DNR, included in **Attachment 21x**.



**Chapter 11 Mitigate the Effects of Equipment or Power Failures – As Required by NR 670.014(2)(h)4.**

Due to the simple nature of disposing of waste in the burn pit, a power failure is not an issue -- no power is used to treat the waste. By following carefully written procedures, equipment failure should not occur. The major equipment component in the burning operation is the

by a  
critically affect a burn in process.

. This unit's power is supplied  
. Failure of this unit would not

**Chapter 12 Contingency Plan – As Required by NR 664.0050**

A contingency plan has been developed and implemented to describe the actions facility personnel shall take to comply with ss. NR 664.0051 and 664.0056, Wis. Adm. Code, in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility. The procedures and provisions of the contingency plan have been prepared in compliance with the requirements of NR 664.0050, Wis. Adm. Code; refer to GWI-SAF-30 in . Copies of this plan have been distributed to the

. Updated copies shall be provided as changes occur.

Due to the a full facility evacuation plan is not necessary. In the event that evacuation is necessary for any particular building, personnel shall meet in either for a head count and further instruction. , GWI-SAF-30.

Stresau currently operates no equipment that, if left as is, in the event of an emergency will threaten human health or the environment outside of the facility. Additional details can be found in |

**Chapter 13 Prevention of Exposure to Personnel – As Required by NR 670.014(2)(h)5.**

Several policies and procedures have been written and audited to ensure the proper, efficient, and safe gathering, handling, storage, processing, ash collection and waste removal, which provides proper prevention of exposure to personnel. Refer to .

**Chapter 14 Precautions to Prevent Accidental Ignition or Reaction of Ignitable, Reactive or Incompatible Wastes - As Required by NR 664.0017**

Reactive wastes will be stored in an "appropriate" on "appropriate" are as follows:

. The criteria that will rule

1.

2. Proper labeling will play a major part in proper storage of reactive wastes. Proper labeling will designate reactive wastes from

3. All Stresau |

4. Smoking, matches, or flame producing devices are only allowed in a Designated Smoking area and in the Parking Area. Refer to below drawing:

**Chapter 15 Traffic Pattern, Estimated Volume and Control – NR 670.014(2)(j)**

When the initial FPOR was being prepared in March 1992, Stresau had one hundred and forty-two (142) employees at the Dunn Lake facility. This number is currently less than 75 employees. There are presently approximately ten to fifteen (10-15) lake homeowners that must travel north of the facility driveway. Traffic is therefore almost entirely Stresau employees on the town road that provides ingress and egress to the facility. Traffic near the TTU is entirely Stresau employees and authorized visitors. The estimated average daily traffic (workdays only) is less than three hundred (300) vehicles on the town road and one (1) near the burn site. Traffic controls on the town road are standard.

**Chapter 16 Locational Standards – As Required by NR 670.014(2)(k)3**

Neither the TTU site nor storage areas are located within a 100-year floodplain, as indicated on the FEMA National Flood Hazard map ( ).

Neither the TTU site nor the storage areas are located within a wetland. A NR103 review of this site is required for licensing this facility. A copy of the Wetlands Map for this area was included within the initial Environmental Assessment. This map clearly shows the non-existence of wetlands in the vicinity of the TTU site. The TTU site should have no impact on wetlands. Therefore, it is our understanding that this discussion should be adequate in exempting this facility from further NR103 review. A copy of the WDNR Wetlands Review can be found in ( ). As nothing has changed from the date of this review, nor since the 2006 License Renewal, it is our opinion that it would not be necessary to conduct a new review.

The physical location of the TTU from the property boundaries is more than adequate for this operation. Refer to ( ) for actual distances as shown on the TTU Building Data Sheet and Figures.

**Chapter 17 Non-compliance Issues – As required in NR 670.005 and 670.014(2)(x)**

As of this writing, Stresau is under no non-compliance order from the WDNR or EPA. Administrative orders previously issued by WDNR were rescinded and withdrawn and are no longer in effect.

Stresau received a Notice of Non-compliance, dated September 14, 2012, from Mr. Steve Ashenbrucker, WDNR. At issue was the requirement to include a facility evacuation plan, per s. NR 664.0052, Wis. Adm. Code, and revise personnel training records to correspond with the requirements of s. NR 664.016(4), Wis. Adm. Code. Both issues were corrected and reported to Mr. Ashenbrucker in a response letter dated January 21, 2013.

Stresau received inquiry from Mr. Ashenbrucker following his on-site inspection of May 13, 2014, requesting additional information on our waste minimization efforts. Response was provided on May 14, 2014.

A compliance inspection was performed by EPA on July 19-20, 2017, and subsequently a notice of violation (NOV) was issued by EPA on March 8, 2018. Stresau responded to EPA on April 11, 2018, and on August 1, 2018. Based on the information provided to EPA, EPA concluded that no additional enforcement actions will be taken, in a letter issued to Stresau dated January 3, 2020.

A compliance inspection was performed by WDNR on September 13, 2018, and subsequently an NOV was issued by WDNR on November 7, 2019, for violations of state hazardous waste rules and laws. Stresau received an Administrative Order (No. 2019-NOEE-R Stresau Laboratory Inc.) from the WDNR issued on December 14, 2020. An enforcement conference was held on December 18, 2019, and the WDNR provided an enforcement conference summary letter dated January 21, 2020. A Revised Administrative Order was issued to Stresau on January 12, 2021. Stresau filed a petition for judicial review challenging the Orders on January 13, 2021. The WDNR subsequently issued a Withdrawal and Rescission of the Original and Revised Administrative Order to Stresau dated January 21, 2021. Stresau continues to work with the WDNR, and relevant agencies. Refer to **Attachment 21x** for a history of license activities.

**Chapter 18 RCRA Hazardous Waste Part A Permit Application – NR 670.010(1)**

The completed current Part A Permit application is contained in **Attachment 21p**.



**Chapter 19 Closure – As required by NR 664.0110**

Should the decision be made to permanently discontinue OB/OD treatment, Stresau shall comply with current requirements contained in Chapter NR 664, Subchapter G, Wis. Adm. Code, and follow a Closure Plan and Long-term Care Plan, refer to **Attachment 21v**. Based on the closure procedures, anticipated closure costs have been identified and are summarized below. Since this is not a new or materially modified treatment unit, the cost estimate is based on guidance provided by WDNR (refer to **Attachment 21x**), using inflation data to adjust the calculated cost from 2020 to 2023, and adding in long-term care costs. Further, insurance is in place to protect against sudden occurrences. Cost adjustment utilizes the inflation rate calculation method allowed under s. NR 664.0142(2), Wis. Adm. Code.

***Estimated Closure Cost***<sup>1</sup>

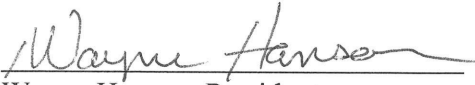
Item/Activity	Unit	Unit Cost	Extended Cost
<i>Closure Activities</i>			
P.E. Costs (Includes soil and water sampling, laboratory fees and oversight)	LS	\$8,750.00	\$8,750.00
Hazardous waste removal and treatment (TTU ash), 2 drums.	per Drum	\$164.50	\$329.00
	LS	\$8,800.00	\$8,800.00
	LS	\$4,400.00	\$4,400.00
Subtotal			\$22,279.00
Contingency Allowance (10%)		10%	\$2,228.00
Estimated Total (2006)			\$24,507.00
Estimated Total (2020) Compound Inflation Factor		1.2829	\$31,440.03
<i>Estimated Subtotal (2023) Compound Inflation Factor</i>		1.1597	\$36,461.00
<i>Post-Closure (Long-term Care) Activities</i>			
Groundwater sampling (4 existing monitoring wells – 2 events) - Laboratory	Each (8 total)	\$662.50	\$5,300.00
Groundwater sampling (4 existing monitoring wells – 2 events) – Labor, Expenses, and Reports	Hour (20 total)	\$175.00	\$3,500.00
Cap and Cover Integrity Maintenance (quarterly, 2 years) – Labor and Expenses	Each	\$700.00	\$5,600.00
Monitoring well abandonment	VF	\$12.60	\$5,920.00
Post-Closure Subtotal			\$20,320.00
Contingency Allowance (10%)		10%	\$2,032.00
<i>Estimated Subtotal for Post-Closure (2023)</i>			\$22,352.00
<b>Total</b>			<b>\$ 58,813.00</b>

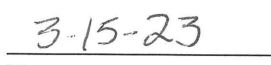
<sup>1</sup> Cost Estimate based on: extent and manner of operation which makes closure the most expensive; a third party performing closure activities; does not incorporate any salvage value of hazardous and non-hazardous wastes, or facility structures or equipment, land or other assets; and no zero cost for hazardous wastes, or non-hazardous wastes, which may have economic value.

Financial assurance for closure has been established in accordance with ch. NR 664.1043, Wis. Adm. Code, in the form of an Irrevocable Letter of Credit as described in s. NR 664.1043(4)(d), Wis. Adm. Code. A copy of the financial assurance is provided in **Appendix 21n**, which follows WDNR Form 4430-025.

**Chapter 20 Certification – As required by NR 670.011**

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

  
Wayne Hanson, President

  
Date

## **Chapter 21 Attachments**

***21a Ouarles & Brady Memo on Local Approval***

***21c TTU Waste Lab Analyses***

***21f Veolia / FWS Information***

***21g Clean Harbors / General Dynamics Disposal Facilities***

***21h Training Records***

***21i SCS Soil Survey***

***21k Groundwater Sampling Report***

***21m DOD Contractor's Safety Manual***

***21n Financial Assurance***

***21o Pollution Liability Insurance Policy***

***21p RCRA Form A Application***

***21q WDNR Environmental Impact Review – 1996***

***21r WDNR Environmental Assessment Review Amendment 2006***

***21v Closure Plan***

***21w SEH Certification***

***21x History of License Activities***

***21y WDNR Licensed Facility Checklist***

***21z Application for Confidential Status***