

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Ronald W. Kazmierczak, Regional Director

Northeast Region Headquarters
2984 Shawano Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-662-5100
FAX 920-662-5413
TTY Access via relay - 711

BRRTS # 07-36-550503

January 3, 2008

Mr. Frank Simmons
Invensys, Inc.
33 Commercial Street, C41-2E
FoxBoro, MA 02035

Subject: Technical Assistance Clarification for meeting three possible closure scenarios
Former Paragon Electric Property, 606 Parkway Boulevard, Two Rivers, WI
Parcel # 053-211-102-001.08, BRRTS Case # 02-36-000153

Dear Mr. Simmons:

Purpose

The purpose of this letter is to provide clarifications as to recommended Department of Natural Resources (the "Department") requirements to meet three possible closure scenarios at the former Paragon Electric Facility at 606 Parkway Boulevard Two Rivers, Wisconsin ("the Property"). The Property consists of 26.72 acres of land located in parts of Sections 2 and 11, Township 19 North, Range 24 East, Manitowoc County, Wisconsin. The Property is shown in Figure 1. The applicable Bureau for Remediation and Redevelopment (BRRTS) Sites are identified on Figure 2.

Request

On November 9, 2007, your Consultant, Vasanta Kalluri of STS/AECOM, requested that the Department issue a liability clarification letter. The letter is to address three scenarios:

1. Closure without the requirement for an engineered barrier.
2. Closure without the requirement for the site to be placed on the Soil GIS Registry.
3. Certificate of Completion under the Voluntary Party Liability Exemption program, keeping possible future redevelopment potential in perspective.

The letter requested a "liability clarification," however, the three questions are more technical than liability related, therefore this letter will attempt to answer the technical aspects regarding closure options rather than trying to clarify any liabilities. In order to make this determination, the Department reviewed the following files located at the Northeast Region Headquarters office in Green Bay pertaining to BRRTS cases:

- 04-36-039873
- 04-36-045266
- 02-36-000153
 - Paragon case closure request dated July 26, 2006
 - Paragon final case closure requirements dated May 22, 2007

The Department has examined the Documents listed above and provides the following summary of the facts of the case and opinions concerning potential closure scenarios.

Background and Summary of Environmental Conditions

BRRTS Case # 04-36-039873 (Date of incident: August 6, 1984 Pumping hose failure)

This 1984 spill was caused during a tanker truck delivery when 25 to 30 gallons of trichloroethylene (TCE) spilled near the paint vault onto a paved area. The Department became aware of this spill in February 1989 when the US Environmental Protection Agency reported that soil contamination existed at the Property due to "dripping during product transfer at the unloading station." Attached to this notification was a March 1987 Report prepared by STS Consultants of Green Bay. The Report described two spills that occurred, one during the winter of 1983 and one on August 6, 1984. The 1983 spill apparently did not receive a BRRTS case number. The 1983 spill involved the accidental puncture and leakage of 35 to 40 gallons of toluene and TCE onto lawn and a paved storage area (see Figure 2).

In 1989, The Department required that Paragon install a monitoring well to determine if the contaminated soil from the 1984 spill had leached to groundwater. Paragon hired CBC Environmental to install a well (MW-1) near the paint vault area. Analytical results indicated elevated levels of TCE in groundwater. The Department required an investigation to determine the degree and extent of contamination.

Petroleum Underground Storage Tanks Removal and Work Effort

In December 1989 and April 1990, Paragon hired CBC Environmental Services to remove 4 underground storage tanks from within the building

Date	"nearby" location	Contents	Contamination
Dec 1989	Receiving Dock area	Tank #1: 550 gal mineral spirits	180 ppm TPH
Dec 1989	Press Room, near TCE Pit degreaser	Tank #2: 550 gal Cutting Oil	85 ppm TCE
Dec 1989	Machine Shop	Tank #3: 2000 gal Cutting Oil	8.3 ppm TPH
Apr 1990	Injection Molding Dept	Tank #1: 12,000 gal diesel fuel	28 ppm TPH 6.5 ppb benzene

ppm: parts per million

ppb: parts per billion

TPH: total petroleum hydrocarbons in soil

According to a March 1990 Report prepared by CBC titled ***A Revised Report of an Above Ground Storage Tank Installation and Underground Storage Tank Closure***, Petroleum hydrocarbons were detected in the soils near tank #1 and tank #3. TCE was detected in soils near tank #2 (adjacent to a TCE Pit degreaser). The tanks were removed but the concrete pad and fill material around each tank was stockpiled and then backfilled into the excavation. There is no record that any contaminated soil was removed from the tank beds at this time.

According to a June 1990 Report prepared by CBC titled ***A Revised Closure of a 12,000 gallon underground Diesel Fuel Storage Tank***, petroleum hydrocarbons were detected in soil and groundwater associated with this tank. The tank was removed but the fill material around the tank was backfilled into the excavation.

In November/December 1990 Sigma Environmental (formerly known as CBC) installed and sampled 3 monitoring wells around the former 12,000 gallon diesel tank. Laboratory results revealed < 4 ppm TPH in soil and <1 ppb of benzene, toluene, ethylbenzene and xylene in groundwater.

During the same time Sigma also installed and sampled 3 monitoring wells around the former mineral spirits tank (adjacent to the TCE degreaser pit). Laboratory results revealed 5.9 ppm TPH in soil and TCE (13, 25, 19 ppb) and Vinyl Chloride (110, 51, 64 ppb) in groundwater. Minimal detects of ethylbenzene, toluene and xylene were also measured.

TCE Contamination Assessment

In February 1990, Paragon Electric contracted with STS Consultants to perform an assessment to determine groundwater flow, the degree and extent of groundwater contamination, and the source of the contamination. This work effort was in response to the two known spills described above and the recent knowledge of the TCE impacts to soil at Tank #2 near the pit degreaser. The work included three soil borings that were converted to two water table wells and a piezometer. The piezometer was installed adjacent to MW-1 previously constructed by CBC Environmental. The analytical results further confirmed the presence of the TCE in the vicinity of the 1984 spill. A monitoring well installed west of the building and upgradient, indicated no detect of TCE and a trace quantity of toluene. As a result of this assessment, the Department issued a "responsible party" letter under the newly created Leaking Underground Storage Tank (LUST) program and created BRRTs case number 03-36-00528.

BRRTS Case: 04-36-045266 *(Date of Incident: November 20, 1990, 70 gallon spill from faulty valve)*

This November 1990 spill was caused by a faulty valve that released TCE product from a degreaser into a pit. The product was pumped into 55 gallons drums.

BRRTS Case: 02-36-000153

When it became clear that the August 1984 TCE spill, the November 1990 TCE spill, and the previously assigned LUST case (#00528) were all part of a widespread TCE groundwater plume, a new BRRTS case (# 02-36-000153) under the Environmental Repair Program was created.

The property is located approximately 400 feet from the shore of Lake Michigan and is adjacent to State Highway 42 and a set of railroad tracks. Site soils consist of medium to poorly graded sand to a depth of approximately 40 feet resting upon 1 to 5 feet of clay followed again by 15 feet of sand underlain by another layer of clay. The water table is encountered at about 7-10 feet below grade. Silurian dolomite bedrock is anticipated at about 90 feet. Flow direction is toward the south, southeast at a gradient of 0.007 foot per foot toward Lake Michigan. Hydraulic conductivity ranges from 1×10^{-4} to 2×10^{-3} cm/sec with a flow rate of 3×10^{-6} to 5×10^{-5} cm/sec.

In 1991, STS Consultants submitted a design and construction proposal to install a soil vapor and groundwater extraction system focusing on the degreaser pit and mineral spirits tank area. Additional wells and piezometers were also proposed.

In 1992, a combined soil vapor, groundwater sparging and extraction system was implemented at the source below the building. In the mid 1990s, several other groundwater extraction wells were installed outside of the building to continue withdrawal of contaminated groundwater that had moved away from the source. The extracted groundwater was discharged via aeration chambers into the City of Two Rivers Sanitary Sewer. The soil vapor and groundwater extraction remedy operated from 1992 to 2002. New groundwater extraction wells were installed downgradient as the immediate source area

became less impacted and the contamination plume continued to expand and migrate toward Lake Michigan. In all, it is estimated that 1,000 pounds (80+ gallons) of TCE were removed from the groundwater during the remediation time period.

In 2000, when cleanup at the source appeared successful in reducing TCE levels in monitoring wells, closure was requested but subsequently denied by the Department in 2001 due to the high levels of TCE in groundwater that had moved downgradient, off site and under State Hwy 42 toward Lake Michigan. An additional bioaugmentation remedy using an edible oil substrate was proposed in 2004 to address the fleeing groundwater plume. However after the sampling of groundwater from 8 new water table wells and piezometers and finding low TCE levels, the additional remedy was found to no longer be necessary.

It is postulated that sufficient degradation and mixing was occurring at that distance from the source that the plume had become stable and natural attenuation and degradation would likely continue to reduce the contaminant levels in groundwater to below regulatory levels. When the impacted groundwater reaches Lake Michigan at a considerable distance off-shore, concentrations would either be very low or sufficient dilution of groundwater with surface water would occur and thus the contamination would not be a threat to drinking water intakes in Lake Michigan. The most recent closure request was received on July 27, 2006 and on September 27, 2006, the Closure Committee granted conditional closure of this case and required the submittal of updated site narrative, tables, and figures. On May 27, 2007, the Department received the updated materials needed for closure and placement of the Property on the Department's GIS registry. If the property owners accept the Department's current closure option, the Property will be listed on the GIS Registry due to NR 140 groundwater enforcement standard exceedances of numerous chlorinated solvent compounds on the source Property as well as off-source properties. It would also be listed on GIS Registry with a land use control requiring the maintenance of an impervious barrier or "cap" as indicated below.

To address your request, here is a discussion regarding three possible closure scenarios:

1) Closure without the requirement for an engineered barrier?

The site could be closed without a requirement for an engineered barrier if analytical results show that there is no residual soil contamination. The reason for the "capping" requirement is that the soil underneath the building has not been sampled "post remediation." It is unknown if contaminated soil remains under the cap and if the cap were removed, would the exposed, potentially contaminated soil contribute to increased groundwater contamination or an expanding plume.

A full vertical and horizontal soil sampling strategy (above the water table) to determine the degree and extent of any soil contamination under the building and pavement areas would have to be completed in order for the Department to make a different closure determination than the current option (see below in italics). If there is no soil contamination there would not be a need for a "cap" requirement. The Property would still be on the GIS registry as it is the source for TCE groundwater contamination at the site.

If there is soil contamination, the Department would need to evaluate the degree and extent of contamination and its location relative to planned reuse of the building and/or redevelopment. If contaminant levels are above site specific residual contaminant levels it may be possible to cap only portions of the property or to excavate soil in critical areas. It is recommended that a workplan be submitted to the Department describing the soil sampling strategy so that we can weigh in on the appropriate number of samples, sampling depths, and parameters.

This is the current land use control as approved by the NER Closure Committee based on the May 22, 2008 closure documentation received for the Property:

Cover or Barrier

*Pursuant to s. 292.12(2)(a), Wis. Stats., the pavement or other impervious cap that currently exists in the location shown on the attached map shall be maintained in compliance with the **attached maintenance plan** dated May 22, 2007, in order to minimize the infiltration of water and prevent additional groundwater contamination that would violate the groundwater quality standards in ch. NR 140, Wis. Adm. Code, and to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health. If soil in the specific locations described above is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans.*

Prohibited Activities

The following activities are prohibited on any portion of the property where pavement and building foundation is required as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; or 6) construction or placement of a building or other structure.

2) Closure without the requirement for the site to be placed on the Soil GIS Registry?

The reason the Property could be closed with placement on the Soil GIS registry is due to the unknowns associated with the lack of "post remediation" soil sampling. The answer to scenario #2 is that same as for scenario #1. If there is no soil contamination above regulatory levels there would be no need for capping.

However, because of existing groundwater contamination above NR 140 Wis. Admin. Code enforcement standards, the Property would still be placed on the GIS Registry for groundwater regardless of whether or not there is soil contamination.

3) Certificate of Completion under the Voluntary Party Liability Exemption (VPLE) Program, keeping possible redevelopment potential in perspective?

The Property would be eligible to enter into the VPLE program because a release to the environment has occurred. Under this Closure scenario, the typical procedure for properties in the VPLE process would have to be followed. The main difference is that the primary chlorinated solvent release at the site is already known and cleaned up to allow for closure of that particular activity with a land use control and a GIS registration. However, the rest of the Property would have to be thoroughly evaluated and potentially investigated. Your consultant would need to complete a Phase I Assessment and submit that along with the application form, appropriate fees, and any reports or documents that the Department does not have in its possession. The application could also include a workplan for any proposed Phase II sampling of locations where Recognized Environmental Conditions (REC) are identified as a result of the Phase I work effort. Annette Weissbach of our Green Bay office would be

the assigned Project Manager and would review the VPLE application and the Phase I for completeness and provide comments regarding any additional areas of concern.

Listed below are a few areas that would be potential candidates for phase II sampling:

- o The underground tanks that had been pulled and backfilled with existing soil
- o Any above ground tanks without secondary containment
- o Any "back door" areas where accidental dumping may have occurred
- o RCRA metals in soils
- o Parking lot drainage low points (old outdoor spills)
- o Chemical storage areas (indoors/outdoors)
- o Soil/vapors beneath the building

This determination is based solely on the information provided in the submitted reports and the nature and degree of contaminants as reported to the Department in these reports. The Department makes no determination concerning the presence or absence of hazardous substances on the Property, other than those reported in the documents identified above. In the future, if the Department becomes aware of new information concerning the contaminants referenced above, or the presence of other contaminants on the Property not previously identified, the Department will need to evaluate that data to determine if response actions may be required.

The Bureau for Remediation and Redevelopment Tracking System (BRRTS) identification number for this activity is included at the top of this letter. The Department tracks information on all determinations such as this in a database that is available on the Internet at <http://dnr.wi.gov/org/aw/rr/>. See "BRRTS on the web" under "Contaminated Land Databases".

I hope this letter provides you with clarification for the three closure options you inquired about. If you have any additional questions or further concerns, please contact Annette Weissbach at (920) 662-5165.

Lastly, in reviewing the file and closure information, it was discovered that the copies of the Deed supplied as part of the GIS packet do not match the Deed described for the Paragon Property identified as Parcel #053-211-102-001.08 in the Manitowoc County Tax Records. To assure that we have the correct information in the GIS packet, please provide us with a copy of the current Deed that matches the parcel number associated with the Paragon Electric Property.

Sincerely,



Bruce Urben
NER RR Team Supervisor

Attach: Figure 1 – Paragon Electric Property location in Two Rivers
Figure 2 – Approximate location of BRRTS sites on Property

Cc: Vasanta Kalluri – STS Consultants, 1035 Kepler Drive, Green Bay, WI 54311-8320
Dan Pawlitzke – City of Two Rivers Economic Development Supervisor,
PO Box 87, Two Rivers, WI 54241-0087
Craig Nielson – Hart Corporation, 900 Jaymor Rd, Southampton, PA 18966-3820



Former Paragon Electric Property

FIGURE 1
Paragon Electric Property Location
Two Rivers, Wisconsin - January 3, 2008

0 0.5 1
Miles

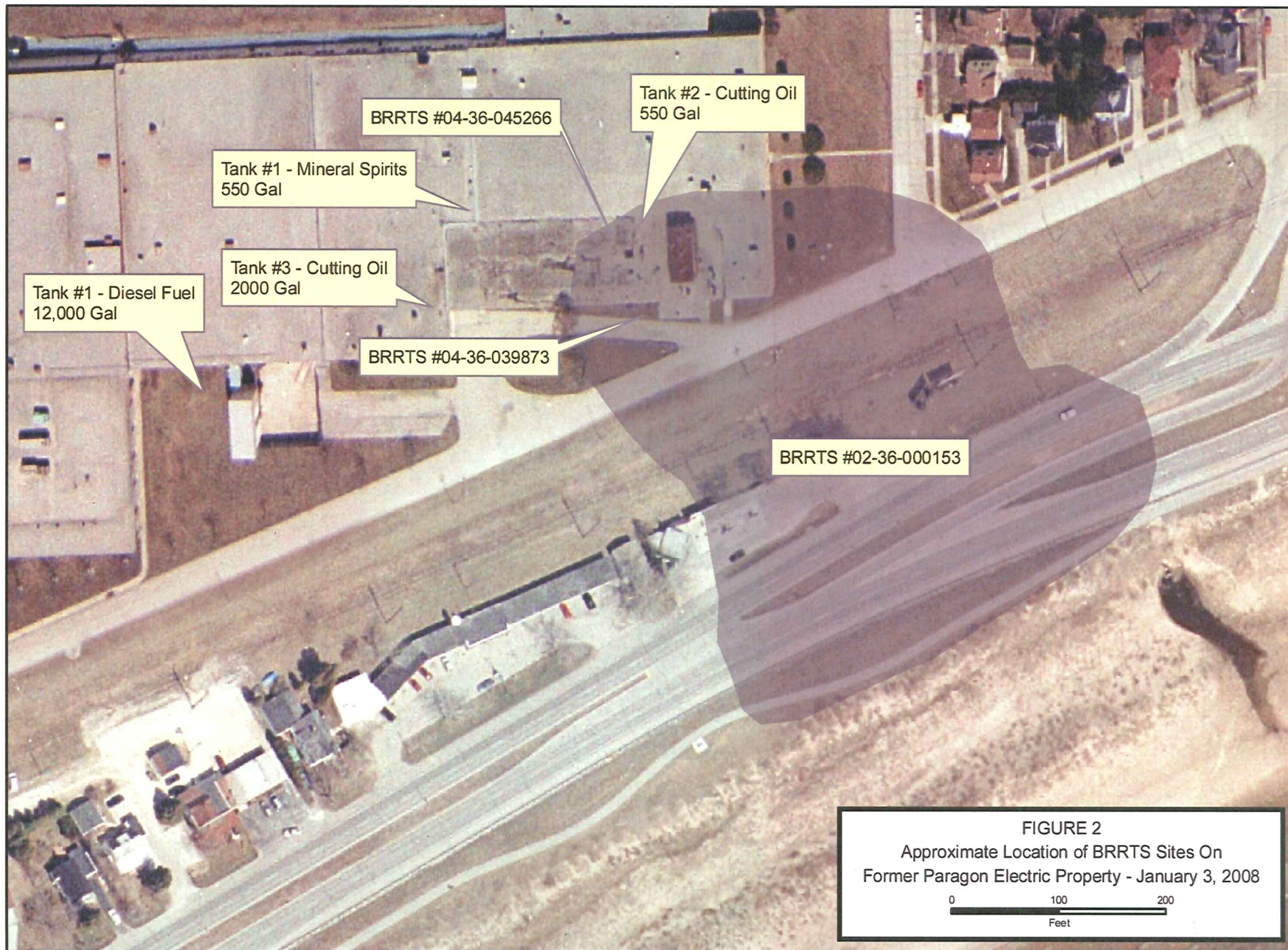


FIGURE 2
Approximate Location of BRRS Sites On
Former Paragon Electric Property - January 3, 2008