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UNION PACIFIC RAILROAD COMPANY

January 20, 1999

Dr. Ata-ur Rahman
Permits Sections
Industrial & Hazardous Waste Division
Texas Natural Resource Conservation Commission
12100 Park 35 Circle
MC 130
Austin, Texas 78753

Subject: Transmittal, Annual Report 1998; Houston Wood Preserving Works Site, Houston, Texas

Dear Dr. Rahman:

Pursuant to the requirements of Provisions III.B.1, IV.C.4.g, and V.F. of Post Closure Care Permit No. HW-50343-000, please find enclosed two copies of the referenced report. If you have any questions regarding the enclosed report, please call me at (402) 271-5979.

Sincerely,

UNION PACIFIC RAILROAD

Ed Honig, P.E.
Environmental Site Remediation Manager

Enclosure

cc: Ray Risner, TNRCC – Austin
Marsha Hill, TNRCC Region 12 -- Houston
Allyn Davis, EPA Region 6 – Dallas
Thomas Whitehurst, Environmental Resources Management

ENVIRONMENTAL RESOURCES MANAGEMENT

Southern Pacific Transportation Company

Annual Report, Permit No. HW-50343-000, January 1 through December 31, 1998

Houston Wood Preserving Works

January 18, 1999

W.O. #422-09

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
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ERM®

Southern Pacific Transportation

Annual Report, Permit No. HW-05343-000, January 1 through December 31, 1998 *Houston Wood Preserving Works*

January 18, 1999

W.O. #422-09

Robin Mann

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1.0 *INTRODUCTION*

On June 20, 1994, the Texas Natural Resources Conservation Commission (TNRCC) issued Permit Number HW-50343-000 and TNRCC Compliance Plan Number CP-50343 to Southern Pacific Transportation Company (SPTCo). The Permit authorizes post-closure care for one former surface impoundment (TNRCC Permit Unit No. II.B.1) located at the former Houston Wood Preserving Works facility at 4910 Liberty Road, Houston, Texas (Figure 1-1). This Annual Report for 1998 was prepared by Environmental Resources Management (ERM) on behalf of SPTCo in accordance with the requirements of Provisions III.B.1, IV.C.4.g, and V.F. of the Permit.

The Permit requires a RCRA Facility Investigation (RFI), and the Compliance Plan requires an Extent of Contamination (EOC) Investigation. An RFI Work Plan dated October 14, 1994 was approved by the TNRCC on October 16, 1995; and an EOC Work Plan dated September 16, 1994 was approved on September 29, 1995. The RFI/EOC investigations are being completed utilizing a phased approach, and field investigation activities were initiated in October 1995. A Phase 1 RFI/EOC Investigation Report dated May 23, 1996 was submitted to the TNRCC and was approved on January 13, 1997. During November 1997, remediation of the southern drainage ditch was completed, and an Interim Stabilization Measures Report for the ditch was submitted to the TNRCC April 27, 1998. A Phase 2-A RFI/EOC Investigation Report dated February 13, 1998 has been submitted to the TNRCC. Field activities for Phase 2-B of the RFI/EOC investigations were completed during November 1998. During field activities, investigation derived waste (IDW) including soil cuttings, drilling mud, and water was generated. The IDW is stored temporarily on site pending proper disposal.

1.1 *PERMIT REQUIREMENTS*

Provision III.B.1 of the Permit requires that the Annual Report include the following:

1. Information and records required by Title 30 Texas Administrative Code (TAC) Section 335.154, including:

    - U.S. EPA identification number, name, and address of the facility;
    - Calendar year covered by the report;
    - TNRCC (formerly Texas Water Commission) hazardous waste code and quantity of each hazardous waste received by the facility during the year;
    - Method of storage, processing, or disposal of each hazardous waste;

- Most recent closure cost estimate under the regulations contained in 40 Code of Federal Regulations (CFR) Section 264.142 and 30 TAC §335.178 and, for disposal facilities, the most recent post-closure care estimate under 40 CFR §264.144;
- For generators who treat, store, or dispose of hazardous waste on site, a description of efforts undertaken to reduce the volume and toxicity of waste generated;
- For generators who treat, store, or dispose of hazardous waste on site, a description of changes in volume and toxicity of waste actually achieved in comparison with previous years; and
- Certification signed by owner or operator of the facility or authorized representative.

2. Summary of ground water compliance monitoring activities;

3. Summary of inspections made and any remedial and/or maintenance activities conducted;

4. Summary of annual cost estimate adjustments for facility closure and post-closure care;

5. Certification of waste minimization in accordance with Permit Provision V.N., as follows:

    - Permittee has a program in place to reduce the volume and toxicity of all hazardous wastes generated by the facility operation to the degree determined to be economically practicable;
    - The proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee, which minimizes the present and future threat to human health and the environment.

As provided in Provision II.B, the Permit authorizes and requires the permittee to perform post-closure care for a closed landfill consisting of one former surface impoundment, Notice of Registration (NOR) Facility No. 01, with a total surface area of 0.5923 acre and a total capacity of 5,065 cubic yards. Since this facility is closed, hazardous and toxic waste is not received or disposed of at the facility. Wastes are being generated as Investigation Derived Wastes (IDW) associated with the ongoing, periodic monitoring of Point of Compliance (POC) and Corrective Action Observation (CAO) wells, interim remedial activities, and implementation of investigation work plans approved under the Permit and Compliance Plan. A recovery system has not been installed for this facility; therefore, items 1 through 5, as listed above, are addressed herein as they relate to a facility under post-closure care.

1.2 *GEOLOGIC ZONE DESIGNATION*

For simplicity and organizational reasons, the nomenclature to designate strata has been modified somewhat. The native cohesive and transmissive zones underlying the site have been re-designated alphabetically from shallowest to deepest. For example, the shallowest or uppermost transmissive zone is referred to as the A-Transmissive Zone or A-TZ. The lithologic units that underlie the site are the fill material, the A-Cohesive Zone (A-CZ), the A-Transmissive Zone (A-TZ), the B-Cohesive Zone (B-CZ), the B-Transmissive Zone (B-TZ), the C-Cohesive Zone (C-CZ), the C-Transmissive Zone (C-TZ), and the D-Cohesive Zone (D-CZ).

2.0 *REPORT ITEMS*

This section includes the information and records required by Provision III.B.1 of the Permit and listed as numbers 1 through 5 in Section 1.1 of this report.

2.1 *INFORMATION AND RECORDS REQUIRED BY 30 TAC §335.154*

The following sub-sections discuss facility identification, period covered, hazardous waste codes, waste storage information, post-closure care cost estimate revisions, waste minimization, and certification.

2.1.1 *Facility Identification*

This facility is identified by the following information:

EPA identification number:	TXD000820266
Facility name:	Surface Impoundment
Facility address:	Former Houston Wood Preserving Works Southern Pacific Transportation Company 4910 Liberty Road Houston, Texas 77020

2.1.2 *Calendar Year Covered by This Report*

The activity period covered by this report is designated in Provision III.B.1 of the Permit and encompasses January 1 through December 31, 1998.

2.1.3 *Hazardous Waste Codes and Quantities Received*

This facility is closed and has not received any hazardous wastes during the 1998 reporting period. The surface impoundment which is subject to Permit No. HW-50343-000 has been closed and is currently undergoing post-closure care. The NOR for the site includes notice of a temporary container storage area (i.e., less than 90 or 180 days, depending on the volume of waste generated) around the permitted and clean-closed surface impoundment (Permit Unit II.B.1) for the storage of waste ground water generated by purging and sampling of monitor wells and waste soil generated by soil boring completion and monitor well installation. Revisions to the NOR were submitted to the TNRCC's Industrial and Hazardous Waste Division Waste Evaluation Section on two occasions during 1998.

The NOR includes hazardous solid and aqueous wastes generated from soil boring installation, equipment decontamination, and purging of monitor wells for site investigation activities. Non hazardous wastes on the NOR include creosote-affected soils and personal protective equipment generated during

corrective action, scrap metals, waste oil, and waste rail ties. The scrap metals, waste oil, and rail ties are wastes generated from operations at the rail yard and are not related to activities conducted to satisfy the requirements of the Permit.

2.1.4 *Storage, Processing, or Disposal of Hazardous Wastes*

Hazardous waste generated at the facility during the 1998 reporting period was limited to IDW. The IDW consisted of affected ground water generated during monitor well purging and sampling activities (Texas Waste Code No. 0914101H), personal protective equipment and bailers (Texas Waste Code No. 0001301H), and affected soil generated during installation of monitor wells and soil borings (Texas Waste Code No. 0915301H). No IDW was processed at the facility during 1998. Except as noted below, the IDW was properly disposed off site; a copy of the Annual Waste Summary Form for reporting year 1998 is presented in Appendix A.

Approximately 50 gallons of ground water generated from the second semiannual sampling event; and soil cuttings, drilling mud and personal protective equipment from Phase 2-B RFI/EOC investigation activities are being stored temporarily on site in accordance with 30 TAC § 335.69(d) pending off-site disposal. These wastes are contained in 3 rolloff boxes and 62 55-gallon drums.

2.1.5 *Post-Closure Care Cost Estimate*

The regulated unit was clean-closed in 1984. A revised post-closure care cost estimate for 1999 prepared in accordance with 40 CFR § 264.144 is addressed in Section 2.4 of this Annual Report. The total estimated cost for post-closure care for 1999 is $83,000.

2.1.6 *Reduction of Volume and Toxicity of Waste Generated*

Waste minimization typically applies to operating facilities; as stated above, this facility has been closed since 1984. However, wastes are generated at this facility as a result of the specific investigation or post-closure care activities directed by the TNRCC under the Permit and Compliance Plan. These IDW and remediation waste volumes are directly related to the scope and schedule of activities as they are conducted under the RCRA Facility Investigation (RFI) and Extent of Contamination (EOC) Work Plans, as approved by the TNRCC under the Permit and Compliance Plan.

No hazardous wastes were treated or disposed of on site during 1998. The only hazardous waste stored on site was IDW. Investigative techniques such as low-flow ground water sampling and direct-push technologies are utilized during installation and sampling of soil borings, monitor wells and piezometers in order

to reduce the volume of soil cuttings and purge water generated for off-site disposal.

2.1.7 *Waste Minimization Relative to Previous Years*

As stated in Section 2.1.6, IDW volumes are directly controlled by the activities required by the Permit and Compliance Plan. These wastes are not directly comparable with respect to years prior to 1984 when this facility was operating.

2.1.8 *Certification*

A certification signed by the owner or operator of the facility or his authorized representative, as required, is included as Appendix B.

2.2 *SUMMARY OF GROUND WATER COMPLIANCE MONITORING ACTIVITIES*

Existing CAO and POC wells were monitored and sampled on a semiannual basis in March and September 1998 to evaluate the extent of impacted ground water in the A-TZ and B-TZ. A map showing the location of CAO and POC wells is presented as Figure 2-1. The schedule for ground water monitoring was changed from quarterly to semiannual beginning in July 1995, as provided by Provision VI.C.3 of the Compliance Plan. Ground water monitoring results for the March 1998 monitoring event were presented in the first semiannual report, dated July 16, 1998. Ten wells completed in the A-TZ and two wells and three piezometers completed in the B-TZ were sampled during each event in 1998. Ground water monitoring results for the September 1998 monitoring event are included in the second 1998 semiannual report, which will be submitted under separate cover.

The wells and piezometers are summarized below:

Monitor Well or Piezometer ID	Transmissive Zone Screened
MW-1A	A-TZ
MW-2	A-TZ
MW-3	A-TZ
MW-4	A-TZ
MW-5	A-TZ
MW-7	A-TZ
MW-8	A-TZ
MW-9	A-TZ
MW-10A	A-TZ
MW-11A	A-TZ
MW-10B	B-TZ
MW-11B	B-TZ
P-10	B-TZ
P-11	B-TZ
P-12	B-TZ

For the purposes of this report, the ground water analytical data for each semi-annual sampling event are listed in Tables 2-1 through 2-4; results are tabulated separately for the A-TZ and B-TZ. For each sampling event, detected concentrations of analytes in excess of the Ground Water Protection Standard are indicated by bold italics.

Table 2-5 lists the total depth, casing reference elevation, the measured depth to water, and the calculated water level elevation relative to mean sea level for each monitor well and piezometer. For both water-bearing zones, the monitor wells and piezometers provide a general indication that the potentiometric surfaces have relatively low gradients. Data gathered as part of the RFI indicates that the horizontal hydraulic gradient is typically 0.001 ft/ft in both the A-TZ and the B-TZ.

2.3 *SUMMARY OF INSPECTIONS AND REMEDIAL/MAINTENANCE ACTIVITIES*

By letter dated January 10, 1995, the TNRCC acknowledged fulfillment of the requirement of Compliance Plan Provision XI.B by approving the Operation and Maintenance (O&M) Plan, dated August 19, 1994, together with the addendum to the O&M Plan, dated December 8, 1994. Under this O&M Plan, inspections of the surface impoundment and monitor wells are conducted on a monthly basis. O&M Plan Amendment 2, dated May 20, 1995 and Amendment 3 dated June 23, 1995 were submitted to the TNRCC on May 21, 1995 and August 8, 1995, respectively. By letter dated October 13, 1995, the TNRCC approved the second and third amendments to the O&M Plan. O&M Plan Amendment 3 establishes a weekly schedule for the surface impoundment and a quarterly inspection schedule for the monitor wells.

Inspection of the integrity of the well casings was conducted quarterly during January, March, September, and December 1998. In September 1998 cracks were noted in the concrete pads around monitor wells MW-7, MW-8, and MW-9. The cracks were reevaluated at the next quarterly inspection in December 1998 and it was determined that the cracks were not significant enough to warrant repair. Otherwise no comments were made concerning monitor well inspections in 1998.

Inspections related to the impoundment and container storage areas for IDW were performed weekly. On March 18, April 4, and April 9, 1998 tall grasses and crawfish burrows were observed at the impoundment. The impoundment was mowed and no crawfish burrows were noted after April 9, 1998. Future burrows will be filled with a bentonite/water slurry. The weekly inspection for September 22, 1998 also noted tall grasses and standing water. The impoundment was mowed the following week and no standing water was

observed. It was also noted in the September 22, 1998 weekly inspection that some fence posts were bent. Upon reevaluation it was determined that the fence was stable and no repairs were needed.

2.4 *SUMMARY OF ANNUAL COST ESTIMATE FOR POST-CLOSURE CARE*

An adjusted annual cost estimate for post-closure care in 1999 is presented in Appendix C. The post-closure care cost estimate includes ground water monitoring, inspection, and operation and maintenance costs averaged on an annual basis. Ground water monitoring includes quarterly sampling and analysis for newly-installed monitor wells and piezometers and semiannual sampling and analysis for existing monitor wells and piezometers. For estimation purposes, it was assumed that six new wells and/or piezometers would be installed during 1999. Inspection and maintenance activities include monthly inspection for monitor well integrity, weekly inspections of the closed surface impoundment and the container storage areas, and minor repairs and upgrades. Cost for replacement of existing monitor wells is not included. The annual cost estimate for post-closure care has been adjusted from 1998 dollars in accordance with 40 CFR §264.144 using the Implicit Price Deflator obtained from the U.S. Department of Commerce. The Implicit Price Deflator results in an inflation factor of 1.0114. The total estimated post-closure care cost for 1999 is $83,000.

2.5 *CERTIFICATION OF WASTE MINIMIZATION*

The volume and toxicity of IDW are directly controlled by the activities required by the Permit and Compliance Plan. The scope and schedule of activities proposed in the RFI and EOC Work Plans, as approved by the TNRCC, were designed to reduce the volume and toxicity of the IDW generated by the facility investigations to the degree determined to be economically practicable and in accordance with the requirements of the Permit and Compliance Plan. Waste minimization has occurred and will continue through the use of low-flow ground water sampling, and direct push and hydropunch techniques, where practical, as outlined in the Work Plans. Relative to the method of treatment, storage, or disposal utilized at the facility, waste is temporarily stored and disposed of using methods designed to minimize the present and future threat to human health and the environment.

Tables

TABLE 2-1

Summary of Analytical Results for the A-Transmissive Zone (A-TZ)

First Semiannual Sampling Event, 1998
Houston Wood Preserving Works
Houston, Texas

Analyte	PQL (GWPS)1	MW-01A 3/3/98	MW-02 3/3/98	MW-03 3/3/98	MW-04 3/3/98	MW-05 3/4/98	MW-07 3/4/98	MW-08 3/4/98	MW-09 3/4/98	MW-10A 3/3/98	MW-11A 3/3/98
Chlorobenzene	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.005	***0.010***	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	0.005	***0.024***	ND	ND	ND	***0.007***	ND	ND	ND	ND	***0.006***
Acenaphthene	0.010	***0.094***	***0.026***	***0.060***	ND	ND	ND	***0.032***	ND	ND	***0.063***
Acenaphthylene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.010	***0.059***	***0.020***	***0.044***	ND	ND	ND	***0.022***	ND	ND	***0.017***
Di-n-butylphthalate	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	0.050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	***0.023***
2,6-Dinitrotoluene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	0.010	***0.068***	***0.020***	***0.052***	ND	ND	ND	***0.023***	ND	ND	***0.023***
2-Methylnaphthalene	0.010	***0.041***	ND	ND	ND	ND	ND	***0.016***	ND	ND	ND
Naphthalene	0.010	***0.320***	***0.031***	ND	ND	ND	ND	***0.300***	ND	ND	ND
Nitrobenzene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Nitrophenol	0.050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	0.010	***0.028***	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

All values reported in mg/L. ND - Not detected at the Practical Quantitation Limit (PQL).

[1]PQL - *Practical Quanititation Limit* as defined on Table I of the Compliance Plan, and determined by the analytical methods of EPA SW-846. The PQL is the Ground Water Protection Standard.

[2] ***Bold, italics*** indicate values reported above the Ground Water Protection Standard (GWPS).

[3]The compound was not detected but the reported detection limit was greater than the PQL.

TABLE 2-2

Summary of Analytical Results for the B-Transmissive Zone (B-TZ)

First Semiannual Sampling Event, 1998
Houston Wood Preserving Works
Houston, Texas

Analyte	PQL (GWPS)1	MW-10B 3/3/98	MW-11B 3/3/98	P-10 3/4/98	P-11 3/4/98	P-12 3/4/98
Chlorobenzene	0.005	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005	ND	ND	ND	ND	ND
Methylene chloride	0.010	ND	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Xylene (total)	0.005	ND	ND	ND	ND	ND
Acenaphthene	0.010	***0.018***	ND	***0.120***	***0.023***	ND
Acenaphthylene	0.010	ND	ND	ND	ND	ND
Anthracene	0.010	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.010	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.010	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	0.010	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.010	ND	ND	ND	ND	ND
Chrysene	0.010	ND	ND	ND	ND	ND
Dibenzofuran	0.010	ND	ND	***0.050***	ND	ND
Di-n-butylphthalate	0.010	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.010	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	0.050	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.010	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	0.010	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	0.010	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.010	ND	ND	ND	ND	ND
Fluoranthene	0.010	ND	ND	ND	ND	ND
Fluorene	0.010	***0.012***	ND	***0.074***	***0.014***	ND
2-Methylnaphthalene	0.010	ND	ND	***0.025***	ND	ND
Naphthalene	0.010	ND	ND	***7.800***	ND	ND
Nitrobenzene	0.010	ND	ND	ND	ND	ND
p-Nitrophenol	0.050	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.010	ND	ND	ND	ND	ND
Pentachlorophenol	0.050	ND	ND	ND	ND	ND
Phenanthrene	0.010	ND	ND	***0.034***	ND	ND
Phenol	0.010	ND	ND	ND	ND	ND
Pyrene	0.010	ND	ND	ND	ND	ND

NOTES:
All values reported in mg/L. ND - Not detected at the Practical Quantitation Limit (PQL).
[1]PQL - *Practical Quanititation Limit* as defined on Table I of the Compliance Plan, and determined by the analytical methods of EPA SW-846. The PQL is the Ground Water Protection Standard.
[2] ***Bold, italics*** indicate values reported above the Ground Water Protection Standard (GWPS).
[3]The compound was not detected but the reported detection limit was greater than the PQL.

TABLE 2-3

Summary of Analytical Results for the A-Transmissive Zone (A-TZ)

Second Semiannual Sampling Event, 1998
Houston Wood Preserving Works
Houston, Texas

Analyte	PQL (GWPS)1	MW-01A 9/23/98	MW-02 9/23/98	MW-03 9/23/98	MW-04 9/22/98	MW-05 9/21/98	MW-07 9/22/98	MW-08 9/22/98	MW-09 9/21/98	MW-10A 9/23/98	MW-11A 9/23/98
Benzene	0.005	***0.017***[2]	ND	ND	ND	***0.002***	ND	ND	ND	ND	***0.007***
Chlorobenzene	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	0.010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.005	***0.033***	ND	ND	ND	***0.004***	***0.004***	ND	ND	ND	***0.007***
Toluene	0.005	ND	ND	ND	ND	***0.023***	ND	ND	ND	ND	ND
Xylene (total)	0.005	***0.051***	ND	ND	ND	***0.023***	***0.003***	ND	ND	ND	***0.014***
Acenaphthene	0.010	***0.189***	ND	***0.046***	ND	ND	ND	ND	ND	ND	***0.117***
Acenaphthylene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Anthracene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Benzo(a)anthracene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Benzo(a)pyrene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
bis(2-Chloroethoxy)methane	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
2-Chloronaphthalene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Chrysene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Dibenzofuran	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Di-n-butylphthalate	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
2,4-Dimethylphenol	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
4,6-Dinitro-o-cresol	0.050	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
2,4-Dinitrotoluene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
2,6-Dinitrotoluene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
1,2-Diphenylhydrazine	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
bis(2-Ethylhexyl)phthalate	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Fluoranthene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Fluorene	0.010	***0.133***	ND	***0.030***	ND	ND	ND	ND	ND	ND	ND[3]
2-Methylnaphthalene	0.010	***0.212***	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Naphthalene	0.010	***2.140***	ND	ND	ND	ND	ND	ND	ND	ND	***0.750***
Nitrobenzene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
p-Nitrophenol	0.050	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
N-Nitrosodiphenylamine	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Pentachlorophenol	0.050	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Phenanthrene	0.010	***0.103***	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Phenol	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]
Pyrene	0.010	ND[3]	ND	ND	ND	ND	ND	ND	ND	ND	ND[3]

NOTES:

All values reported in mg/L. ND - Not detected at the Practical Quantitation Limit (PQL).

[1]PQL - *Practical Quanititation Limit* as defined on Table I of the Compliance Plan, and determined by the analytical methods of EPA SW-846. The PQL is the Ground Water Protection Standard.

[2] ***Bold, italics*** indicate values reported above the Ground Water Protection Standard (GWPS).

[3]The compound was not detected but the reported detection limit was greater than the PQL.

TABLE 2-4

Summary of Analytical Results for the B-Transmissive Zone (B-TZ)

Second Semiannual Sampling Event, 1998
Houston Wood Preserving Works
Houston, Texas

Analyte	PQL (GWPS)1	MW-10B 9/23/98	MW-11B 9/22/98	P-10 9/22/98	P-11 9/22/98	P-12 9/21/98
Benzene	0.005	***0.006***	***0.001***	ND	ND	ND
Chlorobenzene	0.005	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005	ND	ND	ND	ND	ND
Methylene chloride	0.010	ND	ND	ND	ND	ND
Ethylbenzene	0.005	***0.013***	***0.012***	***0.026***	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Xylene (total)	0.005	***0.009***	***0.010***	***0.017***	ND	ND
Acenaphthene	0.010	***0.084***	ND[3]	ND[3]	***0.027***	ND
Acenaphthylene	0.010	ND	ND[3]	ND[3]	ND	ND
Anthracene	0.010	ND	ND[3]	ND[3]	ND	ND
Benzo(a)anthracene	0.010	ND	ND[3]	ND[3]	ND	ND
Benzo(a)pyrene	0.010	ND	ND[3]	ND[3]	ND	ND
bis(2-Chloroethoxy)methane	0.010	ND	ND[3]	ND[3]	ND	ND
2-Chloronaphthalene	0.010	ND	ND[3]	ND[3]	ND	ND
Chrysene	0.010	ND	ND[3]	ND[3]	ND	ND
Dibenzofuran	0.010	ND	ND[3]	ND[3]	ND	ND
Di-n-butylphthalate	0.010	ND	ND[3]	ND[3]	ND	ND
2,4-Dimethylphenol	0.010	ND	ND[3]	ND[3]	ND	ND
4,6-Dinitro-o-cresol	0.050	ND	ND[3]	ND[3]	ND	ND
2,4-Dinitrotoluene	0.010	ND	ND[3]	ND[3]	ND	ND
2,6-Dinitrotoluene	0.010	ND	ND[3]	ND[3]	ND	ND
1,2-Diphenylhydrazine	0.010	ND	ND[3]	ND[3]	ND	ND
bis(2-Ethylhexyl)phthalate	0.010	ND	ND[3]	ND[3]	ND	ND
Fluoranthene	0.010	ND	ND[3]	ND[3]	ND	ND
Fluorene	0.010	***0.053***	ND[3]	ND[3]	ND	ND
2-Methylnaphthalene	0.010	ND	ND[3]	ND[3]	ND	ND
Naphthalene	0.010	***0.230***	***0.580***	***0.785***	ND	ND
Nitrobenzene	0.010	ND	ND[3]	ND[3]	ND	ND
p-Nitrophenol	0.050	ND	ND[3]	ND[3]	ND	ND
N-Nitrosodiphenylamine	0.010	ND	ND[3]	ND[3]	ND	ND
Pentachlorophenol	0.050	ND	ND[3]	ND[3]	ND	ND
Phenanthrene	0.010	***0.044***	ND[3]	ND[3]	ND	ND
Phenol	0.010	ND	ND[3]	ND[3]	ND	ND
Pyrene	0.010	ND	ND[3]	ND[3]	ND	ND

NOTES:
All values reported in mg/L. ND - Not detected at the Practical Quantitation Limit (PQL).
[1]PQL - *Practical Quanititation Limit* as defined on Table I of the Compliance Plan, and determined by the analytical methods of EPA SW-846. The PQL is the Ground Water Protection Standard.
[2] ***Bold, italics*** indicate values reported above the Ground Water Protection Standard (GWPS).
[3]The compound was not detected but the reported detection limit was greater than the PQL.

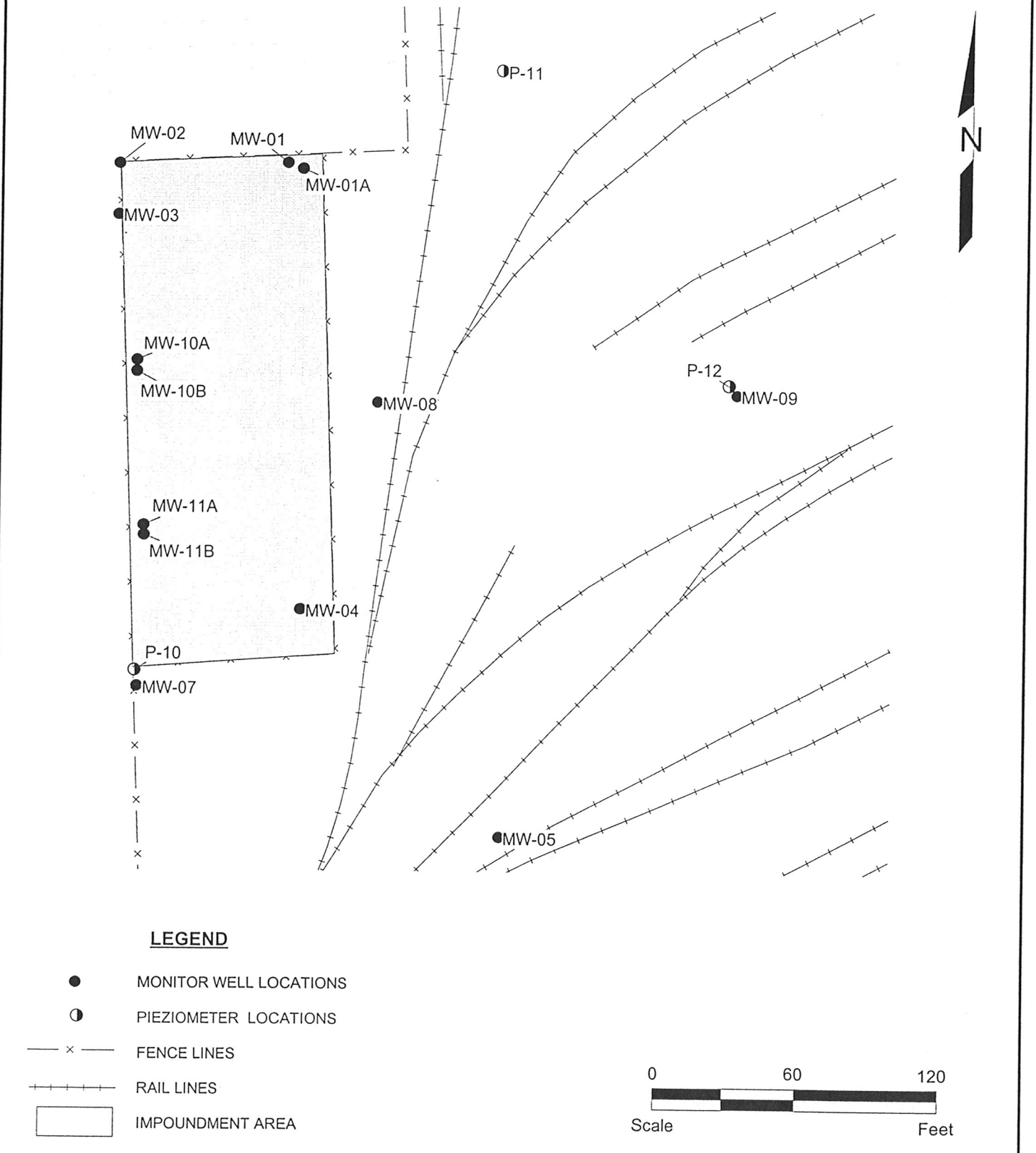
TABLE 2-5

Semiannual Water Level Depths And Elevation
March and September 1998

Houston Wood Preserving Works
Houston, Texas

A-TZ Well	Reference Elevation (Feet Mean Sea Level)	Depth to Water (Feet)		Water Level Elevation (Feet Mean Sea Level)	
		March	September	March	September
MW-1A	47.95	2.87	4.70	45.08	43.25
MW-2	48.03	2.88	4.18	45.15	43.85
MW-3	48.55	3.37	5.28	45.18	43.27
MW-4	49.85	5.00	7.05	44.85	42.80
MW-5	49.35	4.54	6.59	44.81	42.76
MW-7	48.86	4.14	6.34	44.72	42.52
MW-8	49.37	4.38	6.31	44.99	43.06
MW-9	49.29	4.15	6.11	45.14	43.18
MW-10A	49.90	4.87	6.82	45.03	43.08
MW-11A	50.04	5.16	7.28	44.88	42.76
B-TZ Well	**Elevation**	**March**	**September**	**March**	**September**
MW-10B	49.97	5.00	7.06	44.97	42.91
MW-11B	50.19	5.35	7.49	44.84	42.70
P-10	47.72	N/A	5.25	N/A	42.47
P-11	49.02	4.08	5.91	44.94	43.11
P-12	48.82	3.78	5.64	45.04	43.18

Figures



ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

DESIGN: MLY	CHECKED: RZM	DATE: December 16, 1998
DRAWN: MLY	SCALE: AS SHOWN	W.O.NO: 422-009

FIGURE 2-1
MONITORING WELLS AND PIEZOMETERS
TNRCC PERMIT UNIT No. II.B.1.
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS

ERM

Annual Waste Summary for Data Year 1998

Appendix A

January 18, 1999

W.O. #422-09

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

BK820422-A99

MC 129
INDUSTRIAL AND HAZARDOUS WASTE DIVISION
TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
P.O. BOX 13087
AUSTIN, TEXAS 78711-3087 TELEPHONE: (512) 239-6832

d H. Honig
outhern Pacific Railroad
910 Liberty Road
ouston, TX 77001 402-271-5979

ANNUAL WASTE SUMMARY

Your SOLID WASTE REGISTRATION NUMBER: 31547 (1–6) G1 Report for: 19 98 (8)

FOR DATA YEAR: 1998

☐ (22) NO REPORT REQUIRED {See 30 TAC 335.9(a)(3); also see instructions}

Your EPA ID # TXD008202666 (10)

SUMMARY STATUS: ☒ ORIGINAL SUMMARY ☐ REVISED SUMMARY ☐ SUPPLEMENTAL SUMMARY

YOUR WASTE GENERATION FEE IS CALCULATED FROM THIS REPORT. BE SURE THE INFORMATION IS CORRECT.
TO REPORT WASTEWATER, SEE INSTRUCTION BOOKLET RG-151.

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO. (31)	EPA HAZARDOUS WASTE NO. (35)	EPA HAZARDOUS WASTE NO. (39)	EPA HAZARDOUS WASTE NO. (43)	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED (47)	UNITS (56)
00013011					Soil generated primarily by the boring of monitoring we		

QUANTITY HANDLED	UNITS (66)	SYSTEM TYPE CODE (67)	FEE (70)	FACILITY NUMBER (71)	RECEIVER'S EPA ID # (76)	COMMENTS (88–117)
		M				
		M				
		M				
		M				

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO. (31)	EPA HAZARDOUS WASTE NO. (35)	EPA HAZARDOUS WASTE NO. (39)	EPA HAZARDOUS WASTE NO. (43)	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED (47)	UNITS (56)
04003011					Petroleum contaminated soils generated as part of corre	1284	P

QUANTITY HANDLED	UNITS (66)	SYSTEM TYPE CODE (67)	FEE (70)	FACILITY NUMBER (71)	RECEIVER'S EPA ID # (76)	COMMENTS (88–117)
200	P	M132		H1307	TXD016673147	
1084	P	M124		74262	TXD981914898	
		M				
		M				

Certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

GEOFFREY REEDER — Preparer (PRINT NAME) — Signature of Preparer — 01 19 99 — Date

GEOFFREY REEDER — Authorized Agent (PRINT NAME) — Signature of Authorized Agent — 01 19 99 — Date

Form TNRCC - 0436-A (Rev. 10-10-97)

IC 129
NDUSTRIAL AND HAZARDOUS WASTE DIVISION
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910 Liberty Road
ouston, TX 77001 402-271-5979

ANNUAL WASTE SUMMARY

Your SOLID WASTE REGISTRATION NUMBER: 31547 (1–6) G 1 Report for: 19 98 (8)

FOR DATA YEAR: 1998

☐ 22 NO REPORT REQUIRED {See 30 TAC 335.9(a)(3); also see instructions}

Your EPA ID # TXD000820266 (10)

SUMMARY STATUS

☒ ORIGINAL SUMMARY ☐ REVISED SUMMARY ☐ SUPPLEMENTAL SUMMARY

YOUR WASTE GENERATION FEE IS CALCULATED FROM THIS REPORT. BE SURE THE INFORMATION IS CORRECT. TO REPORT WASTEWATER, SEE INSTRUCTION BOOKLET RG-151.

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO. (31)	EPA HAZARDOUS WASTE NO. (35)	EPA HAZARDOUS WASTE NO. (39)	EPA HAZARDOUS WASTE NO. (43)	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED (47)	UNITS (56)
0501203H					Spent solvent		

QUANTITY HANDLED	UNITS (66)	SYSTEM TYPE CODE (67)	FEE (70)	FACILITY NUMBER (71)	RECEIVER'S EPA ID # (76)	COMMENTS (88–117)
		M				
		M				
		M				
		M				

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO. (31)	EPA HAZARDOUS WASTE NO. (35)	EPA HAZARDOUS WASTE NO. (39)	EPA HAZARDOUS WASTE NO. (43)	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED (47)	UNITS (56)
0909101H					Aqueous waste with low surfactants. Groundwater generat		

QUANTITY HANDLED	UNITS (66)	SYSTEM TYPE CODE (67)	FEE (70)	FACILITY NUMBER (71)	RECEIVER'S EPA ID # (76)	COMMENTS (88–117)
		M				
		M				
		M				
		M				

ertify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Geoffrey Redder — Preparer (PRINT NAME) — Geoffrey Redder — Signature of Preparer — 01 19 99 — Date

Geoffrey Redder — Authorized Agent (PRINT NAME) — Geoffrey Redder — Signature of Authorized Agent — 01 19 99 — Date

Form TNRCC 0436-A (Rev. 10-10-97)

WAS[illegible]UATI[illegible]TION
MC 129
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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
P.O. BOX 13087
AUSTIN, TEXAS 78711-3087
TELEPHONE: (512) 239-6832

ANNUAL WASTE SUMMARY

Your SOLID WASTE REGISTRATION NUMBER: 31547 (1) G1 (6) Report for: 19 98 (8)

FOR DATA YEAR: 1998

☐ (22) NO REPORT REQUIRED {See 30 TAC 335.9(a)(3); also see instructions}

Your EPA ID # TXD000820268 (10)

Ed H. Honig
Southern Pacific Railroad
4910 Liberty Rd.
Houston, TX 77001 402-271-5979

SUMMARY STATUS: ☒ ORIGINAL SUMMARY ☐ REVISED SUMMARY ☐ SUPPLEMENTAL SUMMARY

YOUR WASTE GENERATION FEE IS CALCULATED FROM THIS REPORT. BE SURE THE INFORMATION IS CORRECT. TO REPORT WASTEWATER, SEE INSTRUCTION BOOKLET RG-151.

TEXAS WASTE CODE (3)	EPA HAZARDOUS WASTE NO. (31)	EPA HAZARDOUS WASTE NO. (35)	EPA HAZARDOUS WASTE NO. (39)	EPA HAZARDOUS WASTE NO. (43)	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED (47)	UNITS (56)
9,1,2,4,8,9,H					Creosote sludge, soil mixture generated as part of corr		

QUANTITY HANDLED	UNITS (66)	SYSTEM TYPE CODE (67)	FEE (70)	FACILITY NUMBER (71)	RECEIVER'S EPA ID # (76)	COMMENTS (88–117)
		M				
		M				
		M				
		M				

TEXAS WASTE CODE (3)	EPA HAZARDOUS WASTE NO. (31)	EPA HAZARDOUS WASTE NO. (35)	EPA HAZARDOUS WASTE NO. (39)	EPA HAZARDOUS WASTE NO. (43)	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED (47)	UNITS (56)
9,1,4,1,0,1,H	K001	F034			Groundwater generated from purging of various monitor	2140	P

QUANTITY HANDLED	UNITS (66)	SYSTEM TYPE CODE (67)	FEE (70)	FACILITY NUMBER (71)	RECEIVER'S EPA ID # (76)	COMMENTS (88–117)
2150	P	M134		32299	TXD000719518	
		M				
		M				
		M				

certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

GEOFFREY REDDOCK — Preparer (PRINT NAME) — Signature of Preparer — 01 19 99 Date

GEOFFREY REDDOCK — Authorized Agent (PRINT NAME) — Signature of Authorized Agent — 01 19 99 Date

MC 12
INDUSTRIAL AND HAZARDOUS WASTE DIVISION
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AUSTIN, TEXAS 78711-3087 TELEPHONE: (512) 239-6832

d H. Honig
outhern Pacific Railroad
910 Liberty Road
ouston, TX 77001 402-271-5979

ANNUAL WASTE SUMMARY

Your SOLID WASTE REGISTRATION NUMBER: 31547 (1) G 1 (6) Report for: 19 98 (8)

FOR DATA YEAR: 1998

☐ (22) NO REPORT REQUIRED {See 30 TAC 335.9(a)(3); also see instructions}

Your EPA ID # TXD000820286 (10)

SUMMARY STATUS

☒ ORIGINAL SUMMARY ☐ REVISED SUMMARY ☐ SUPPLEMENTAL SUMMARY

YOUR WASTE GENERATION FEE IS CALCULATED FROM THIS REPORT. BE SURE THE INFORMATION IS CORRECT.
TO REPORT WASTEWATER, SEE INSTRUCTION BOOKLET RG-151.

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED	UNITS
0915301H (3)	(31)	(35)	(39)	(43)	Soil derived from the boring of monitoring wells for in	(47)	(56)

QUANTITY HANDLED	UNITS	SYSTEM TYPE CODE	FEE	FACILITY NUMBER	RECEIVER'S EPA ID #	COMMENTS
	(66)	M (67)	(70)	(71)	(76)	(88) (117)
	(66)	M (67)	(70)	(71)	(76)	(88) (117)
	(66)	M (67)	(70)	(71)	(76)	(88) (117)
	(66)	M (67)	(70)	(71)	(76)	(88) (117)

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED	UNITS
09163081	(31)	(35)	(39)	(43)	Empty drums previously used to contain monitor well pur	945 (47)	P (56)

QUANTITY HANDLED	UNITS	SYSTEM TYPE CODE	FEE	FACILITY NUMBER	RECEIVER'S EPA ID #	COMMENTS
945	P (66)	M141 (67)	(70)	H1307 (71)	TXD016673147 (76)	(88) (117)
	(66)	M (67)	(70)	(71)	(76)	(88) (117)
	(66)	M (67)	(70)	(71)	(76)	(88) (117)
	(66)	M (67)	(70)	(71)	(76)	(88) (117)

certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

GEOFFREY REEDER — Preparer (PRINT NAME) — Signature of Preparer — 01 19 99 Date

GEOFFREY REEDER — Authorized Agent (PRINT NAME) — Signature of Authorized Agent — 01 19 99 Date

Form TNRCC - 0436-A (Rev. 10-10-97)

VAS LUAT TION
MC 129
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ANNUAL WASTE SUMMARY

Your SOLID WASTE REGISTRATION NUMBER: 31547 (1) G 1 (6) Report for: 19 98 (8)

FOR DATA YEAR: 1998

☐ (22) NO REPORT REQUIRED {See 30 TAC 335.9(a)(3); also see instructions}

Your EPA ID # TXD000820266 (10)

d H. Honig
outhern Pacific Railroad
910 Liberty Road
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SUMMARY STATUS

☒ ORIGINAL SUMMARY ☐ REVISED SUMMARY ☐ SUPPLEMENTAL SUMMARY

YOUR WASTE GENERATION FEE IS CALCULATED FROM THIS REPORT. BE SURE THE INFORMATION IS CORRECT. TO REPORT WASTEWATER, SEE INSTRUCTION BOOKLET RG-151.

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED	UNITS
09174061	K001 (31)	F034 (35)	(39)	(43)	Plastic and used Personal Protective Equipment generate	2400 (47)	P (56)

QUANTITY HANDLED	UNITS	SYSTEM TYPE CODE	FEE	FACILITY NUMBER	RECEIVER'S EPA ID #	COMMENTS
2400	P (66)	M141 (67)	(70)	5021 2 (71)	TXD000838896 (76)	(88–117)
	(66)	M (67)	(70)	(71)	(76)	(88–117)
	(66)	M (67)	(70)	(71)	(76)	(88–117)
	(66)	M (67)	(70)	(71)	(76)	(88–117)

TEXAS WASTE CODE	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	EPA HAZARDOUS WASTE NO.	WASTE DESCRIPTION	TOTAL QUANTITY GENERATED	UNITS
	(31)	(35)	(39)	(43)		(47)	(56)

QUANTITY HANDLED	UNITS	SYSTEM TYPE CODE	FEE	FACILITY NUMBER	RECEIVER'S EPA ID #	COMMENTS
	(66)	M (67)	(70)	(71)	(76)	(88–117)
	(66)	M (67)	(70)	(71)	(76)	(88–117)
	(66)	M (67)	(70)	(71)	(76)	(88–117)
	(66)	M (67)	(70)	(71)	(76)	(88–117)

ertify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

GEOFFREY REEDER — Preparer (PRINT NAME) — Signature of Preparer — 01 19 99 — Date

GEOFFREY REEDER — Authorized Agent (PRINT NAME) — Signature of Authorized Agent — 01 19 99 — Date

Certification

Appendix B

January 18, 1999
W.O. #422-09

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

Appendix B

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with 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 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.

Mr. Edwin H. Honig, P.E.
Authorized Representative
Southern Pacific Transportation Company

Post-Closure Care Cost Estimate

Appendix C

January 18, 1999
W.O. #422-09

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

BK820422-A99

Appendix C

Post-Closure Care Cost Calculation

Former Houston Wood Preserving Works
4910 Liberty Road
Houston, Texas

Surface Impoundment
Post-Closure Care Permit HW-50343-000
Industrial Solid Waste Registration No. 31547

Ground Water Monitoring

15 existing wells/piezometers sampled semiannually at a cost of $950 each	$28,500
6 installed wells/piezometers at a cost of $1,500 each	$9,000
6 new wells/piezometers sampled quarterly at a cost of $950 each	$22,800
	$60,300

Inspection and Maintenance

21 wells/piezometers inspected monthly at a cost of $50 each	$12,600
Impoundment/storage area inspected weekly at a cost of $150/week	$5,200
Minor repairs and/or upgrades (estimated)	$4,000
	$21,800

Total Estimated Cost (1998)	**$82,100**
Adjusted to 1999 dollars using the inflation factor of 1.0114 (1)	**$83,000**

NOTE:

(1) The annual cost estimate for post-closure care has been adjusted from 1998 dollars in accordance with 40 CFR §264.144 using the Implicit Price Deflator obtained from the U.S. Department of Commerce. The Implicit Price Deflator results in an inflation factor of 1.0114.