

Mike



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

November 23, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IMMEDIATE ACTION
NOTICE OF VIOLATION
Docket Number 2010-C17

Glyn Holcomb
Holcomb Creosote Company
5016 HWY 601 N
Yadkinville, NC 27055
NCD024900987

Dear Mr. Holcomb:

On December 18, 1980, the State of North Carolina, Hazardous Waste Section (Section) was authorized to operate the State Resource Conservation and Recovery Act (RCRA) Hazardous Waste Program under the Solid Waste Management Act, (Act) N.C.G.S. 130A, Article 9 and rules promulgated thereto at 15A NCAC 13A (Rules) in lieu of the federal RCRA program.

Holcomb Creosote Company, in Yadkinville, North Carolina is currently closed but had operated as a wood treatment and preservative facility using creosote to treat posts and lumber. The facility was operating as a conditionally exempt small quantity generator of hazardous waste. It stopped treating wood in February 2009 and its assets were sold at an auction in September 2009.

Holcomb Creosote facility is also classified as treatment, storage, disposal facility. The facility operated a surface impoundment for many years that received residual materials from the creosoting process. The surface impoundment was closed in 1983 and the contents were land farmed. The surface impoundment and land farming areas are closed and are being monitored with groundwater monitoring wells. These areas are being addressed under the existing post-closure permit by the Facility Management Branch within the Hazardous Waste Section.

On November 12, 2009 Brent Burch, Western Regional Supervisor and Ernest Lawrence, Environmental Senior Specialist with this office, conducted a site visit at Holcomb Creosote. After the visit a meeting was held with Ben Holcomb and Glyn Holcomb at the law office of Lee Zachary. Barry Nelson with Northwest Geoscience, Holcomb Creosote's consultant, also attended the meeting. Bud McCarty and Qu Qi with the Facilities Management Branch of the Hazardous Waste Section were present.

Several areas of concern observed during the site visit must be addressed in order to properly close the facility. These areas of concern were discussed during the meeting.

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Statement of Facts Related to Respondent's Management of Hazardous Waste

Holcomb Creosote operated a creosote treating business using a stainless steel pressure vessel that is 60 inches in diameter and 64 feet long. Instead of operating a drip pad the facility allowed treated lumber to dry in the treatment vessel. During the meeting, Mr. Ben Holcomb and Mr. Nelson said that the treatment vessel still contains waste residues that have accumulated during wood treatment. It was estimated that the quantity of waste would fill two 55-gallon containers.

One 55-gallon sump was used on each end of the vessel to contain any spills that occurred when the vessel doors were opened. Additionally, a 1 ft by 2 ft rectangular catch basin is located at the end of the vessel where treated lumber is removed. Both the 55-gallon sumps and rectangular catch basin appeared to be storing creosote waste and debris.

Treated lumber and posts that dried inside the treatment vessel were stored at the Transfer Area which is located immediately at the end of the pressure vessel. The Transfer Area has soil and gravel over a plastic liner that is estimated to be 25 ft. by 100 ft. The area is covered by a metal roof. In 1990 the soil beneath the liner was certified clean prior to installation. Several inches of soil and gravel above the liner may now have contaminants from incidental drippage of treated lumber. Additionally, underlying soil may have been impacted if the liner was torn or otherwise compromised.

Make up water used in the treating process was stored in an in-ground concrete block structure referred to as the Water Holding Tank. Water from the tank was pumped to the treatment vessel, then to a condenser, and then back to the Water Holding Tank after use. The Water Holding Tank is a rectangular concrete basin that is approximately 6 ft by 20 ft. The unit is partially underground and has a metal roof. It appeared to have a large amount of water that has a black appearance and a strong smell of creosote. The quantity could not be estimated, but the wastewater appears to be several feet deep. It is not known if waste creosote has penetrated the concrete and contaminated the adjacent soil.

There are four aboveground tanks on the property. The exact contents of the tanks were not determined during the visit or meeting. Mr. Ben Holcomb indicated that one of the tanks is believed to have roughly 500 gallons of creosote product. Mr. Ben Holcomb stated that the facility is attempting to sell the creosote product to another wood treatment facility. Mr. Ben Holcomb thought the others would be empty.

There are about thirty (30) 55-gallon containers at various locations behind the buildings. Mr. Ben Holcomb said that two contained waste creosote and one has hydraulic fluid. Mr. Ben Holcomb stated that the other containers appeared to be empty.

Statutory and Regulatory Background

- A. 40 CFR 261.1(a), adopted by reference at 15A NCAC 13A .0106, identifies those solid wastes which are subject to regulation as hazardous wastes under Parts 262 through 265 and Parts 270, 271, and 124 of this Chapter and which are subject to the notification requirements of Section 3010 of RCRA.

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- B. 40 CFR 261.2(b), adopted by reference at 15A NCAC 13A .0106, states that materials are solid waste if they are abandoned by being [1] disposed of; or [2] burned or incinerated; or [3] accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.
- C. 40 CFR 261.3(a), adopted by reference at 15A NCAC 13A .0106, states that a solid waste, as defined in Section 261.2 is a hazardous waste if:
1. It is not excluded from regulation as a hazardous waste under Section 261.4(b); and
 2. It meets any of the following criteria:
 - i. It exhibits the characteristics of hazardous waste identified in Subpart C.
 - ii. It is listed in Subpart D and has not been excluded from the lists in Subpart D under Sections 260.20, and 260.22 of this chapter.
 - iii. It is a mixture of solid waste and hazardous waste that is listed in Subpart D solely because it exhibits one or more of the characteristics of hazardous waste identified in Subpart C, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C.
 - iv. It is a mixture of solid waste and one or more hazardous wastes listed in Subpart D and has not been excluded from this paragraph under Sections 260.20 and 260.22 of this chapter.
- D. GS 130A-290(6), defines "Disposal" as the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwater.
- E. 40 CFR 124.2, defines "Owner" or "Operator" as owner or operator of any "facility or activity" subject to regulation under the RCRA program.
- F. GS 130A-290(22), defines "Person" as an individual, corporation, company, association, partnership, unit of local government, State agency, federal agency or other legal entity.
- G. GS 130A -290(41), defines "Storage" as the containment of solid waste, either on a temporary basis or for a period of years, in a manner which does not constitute disposal.

Violations Requiring Immediate Action

H. It is the determination of the Section that the disposal and storage of the industrial wastes at Holcomb Creosote Company at 5016 Highway 601 North constitutes storage and disposal of solid/hazardous waste subject to all applicable requirements of 40 CFR 261 through 265 and 270. Specifically:

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1. 40 CFR 262.11, adopted by reference at 15A NCAC 13A .0107, requires that a person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste using the following method:
 - a. He should first determine if the waste is excluded from regulation under 40 CFR 261.4.
 - b. He must then determine if the waste is listed as a hazardous waste in Subpart D of 40 CFR Part 261.
 - c. If the waste is not listed as a hazardous waste in Subpart D of 40 CFR Part 261, he must determine whether the waste is identified in Subpart C of 40 CFR Part 261 by either:
 - i. Testing the waste according to the methods set forth in Subpart C of 40 CFR Part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or
 - ii. Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

Holcomb Creosote Company is in violation of 40 CFR 262.11, adopted by reference at 15A NCAC 13A .0107, in that the above-referenced solid waste was generated and disposed on the property as defined in 40 CFR 261.2 and a determination was not made if that waste was a hazardous waste.

2. 40 CFR 270.10(a), adopted by reference at 15A NCAC 13A.0113(b), states that any person who is required to have a permit shall complete, sign and submit an application to the Hazardous Waste Section which meets the requirements of 270.10 and 270.70 through 270.73.

Holcomb Creosote Company is in violation of 40 CFR 270.10(a), adopted by reference at 15A NCAC 13A.0113(b) in that it was required to have a permit to store and dispose the above-referenced waste creosote, and it failed to complete and submit an application for a permit in accordance with the requirements of 270.10 and 270.70 through 270.73.

3. 15A NCAC 13A .0109(a), requires that any person who treats, stores, or disposes of hazardous waste shall comply with the requirements set forth in this section. The treatment, storage or disposal of hazardous waste is prohibited except as provided in 40 CFR Parts 264 and 265, adopted by reference in 15A NCAC 13A .0109 and .0110.

Holcomb Creosote Company is in violation of 15A NCAC 13A .0109(a), in that the above-referenced hazardous waste has been stored and disposed without complying with the requirements set forth in 40 CFR Parts 264 and 265, adopted by reference in 15A NCAC 13A .0109 and .0110.

COMPLIANCE SCHEDULE

By the dates specified below, Holcomb Creosote Company shall comply with the following requirements:

1. Comply with 40 CFR 262.11, adopted by reference at 15A NCAC 13A .0107. An immediate

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determination and/or analysis of the contents of the pressure vessel, sumps, catch basin, water holding tank, aboveground tanks, and containers must be completed to ensure proper characterization and disposition. Due to a suspected or known release of hazardous waste, a comprehensive site characterization is required. The characterization must include areas where containers are stored, the aboveground tanks, sumps, catch basin, water holding tank and transfer area and impacted soil adjacent to these units.

Within 60 days of the effective date of this Notice, develop and submit to the Branch Chemist, two (2) copies of an Initial Site Sampling Plan that characterizes the wastes and release(s) in question. This characterization must comply with the requirements set forth in the Hazardous Waste Section Generator Closure guidance document. (Summary attached). It must include identifying the sources of contamination, the nature and extent of contamination, determining site hydrogeologic conditions, evaluation of fate/transport of the contaminants, pathways for migration, and identifying potential human and environmental receptors.

The Initial Site Sampling Plan will be reviewed by the Branch Chemist to determine its completeness. If it is determined to be complete, the Chemist will determine whether the project will be managed as a generator closure under the guidance of the Section's Compliance Branch or be referred to the Programs Branch. If the remediation of the site remains with the Compliance Branch, two (2) copies of an Assessment and Clean-up Plan must be developed and submitted to this office within 30 days of the Chemist's approval of the Initial Site Sampling Plan. Elements required in the development of an Assessment and Clean-up Plan are outlined in the attached summary of the Generator Closure Guidelines. The Assessment and Clean-up Plan must fully describe all facets of the remediation, a schedule of activities, sampling and analysis methods, and proposed cleanup standards. Failure by Holcomb Creosote Company to complete an effective site remediation may subject the site to additional requirements including closure plans, financial assurance for closure/post-closure and groundwater monitoring.

Upon verification that hazardous waste has been disposed, Holcomb Creosote Company, must immediately cease the discharge/disposal of hazardous waste to the environment and all hazardous wastes shall be removed and manifested to a permitted hazardous waste treatment, storage or disposal facility. The removal must be completed and two (2) copies of a Closure Report submitted to the Branch Chemist within the time frame set forth in the approved schedule submitted in the Assessment and Clean-up Plan and no later than 180 days from the date of the approval of the Assessment and Clean-up Plan.

2. Comply with 15A NCAC 13A .0109(a). If it is determined that waste on site is hazardous waste Holcomb Creosote shall not store or dispose of the waste without full compliance with this section. During the interim, pending shipment of hazardous waste, Holcomb Creosote must comply with 40 CFR 262.34(a), adopted by reference at 15A NCAC 13A .0107 which states that:
 - a. If the waste is placed in containers the generator must comply with Subpart I of 40 CFR Part 265 or if the waste is placed in tanks, the generator must comply with Subpart J of 40 CFR Part 265 except 265.197(c) and 265.200. No waste piles are allowed.
 - b. The date upon which each period of accumulation begins must be clearly marked and visible for inspection on each container.
 - c. While being accumulated on-site, each container and tank must be labeled or marked clearly with the words, "Hazardous Waste"; and

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- d. The generator must comply with the requirements for owners or operators in Subparts C & D in 40 CFR part 265, Section 265.16 and 268.7(a)(4).

Potential Consequences of Failure to Comply

You must comply with each requirement of this Immediate Action Notice of Violation (IANOV); however, compliance will not divest the Section of its authority to issue an administrative penalty for the violations cited in this IANOV and additional violations cited in a subsequent Compliance Order with Administrative Penalty. In accordance with NCGS 130A-22(a), the penalty shall not exceed thirty two thousand five hundred dollars (\$32,500.00) per day in the case of a first violation. Each day of a continuing violation shall constitute a separate violation.

Pursuant to NCGS 130A-18, a violation of any provision of the Act or the Rules may also result in the Section initiating an action for injunctive relief. If an injunction is obtained, you will be subject to both the civil and criminal contempt powers of the North Carolina General Courts of Justice.

All reports required by this IANOV should be sent to: Roberta Proctor, Environmental Chemist, P.O. Box 384, Lake Lure, NC 28746.

If you should have questions concerning this Notice, you may contact Mr. Ernest Lawrence at 336-52-5742. Questions concerning the site characterization and remediation should be addressed to Ms. Roberta Proctor, Compliance Branch Chemist at 828-625-0171.

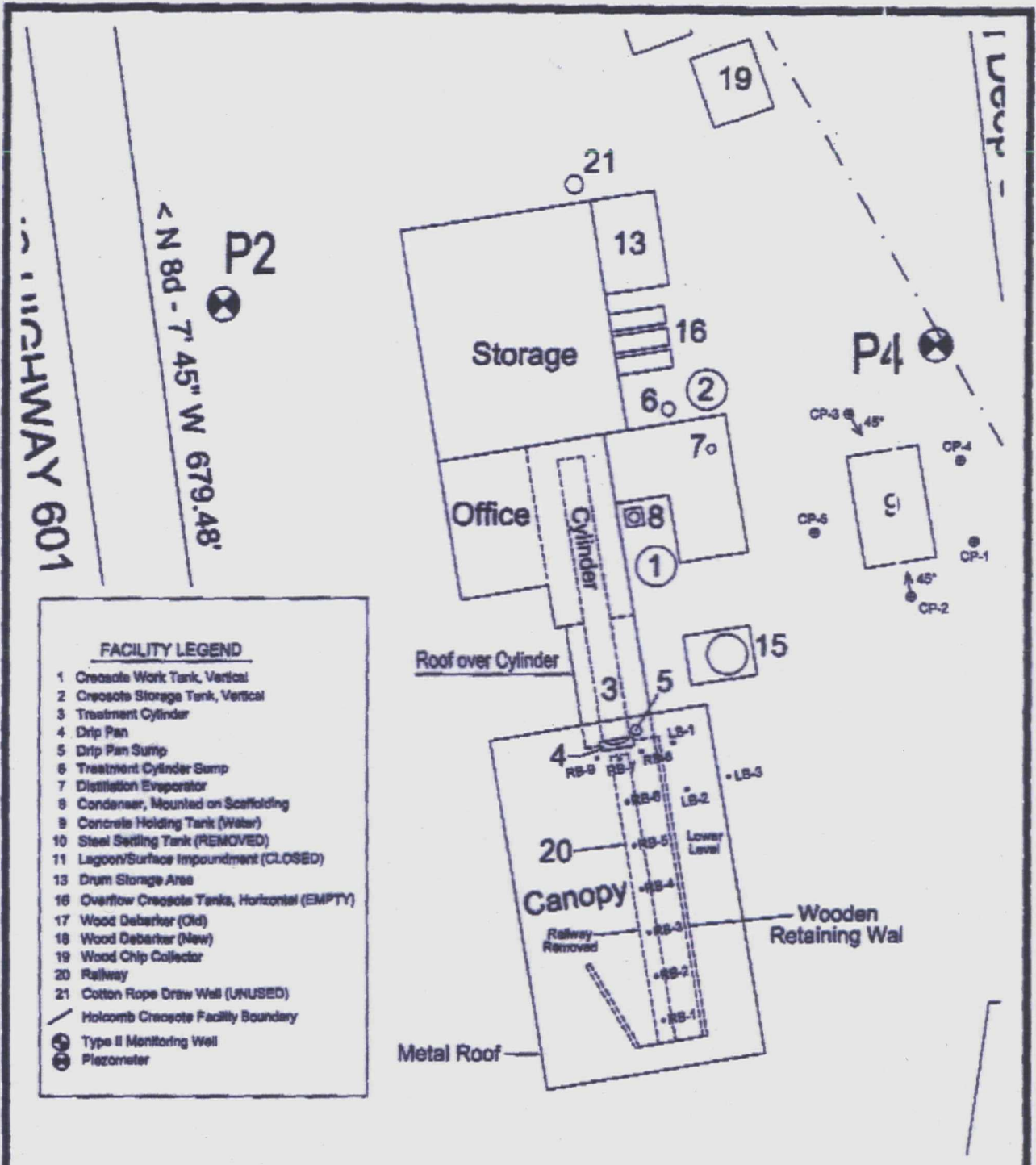
Sincerely,



Elizabeth W. Cannon, Chief
Hazardous Waste Section

Attachment: Summary - Generator Closure Guidance

cc: Central Files
Barry Nelson, Northwest GeoScience
Mike Williford, Compliance Branch Supervisor
Brent Burch, Western Area Supervisor
Roberta Proctor, Chemist
Ernest Lawrence, Environmental Senior Specialist
Lee Zachary, Zachary Law Firm



FACILITY LEGEND

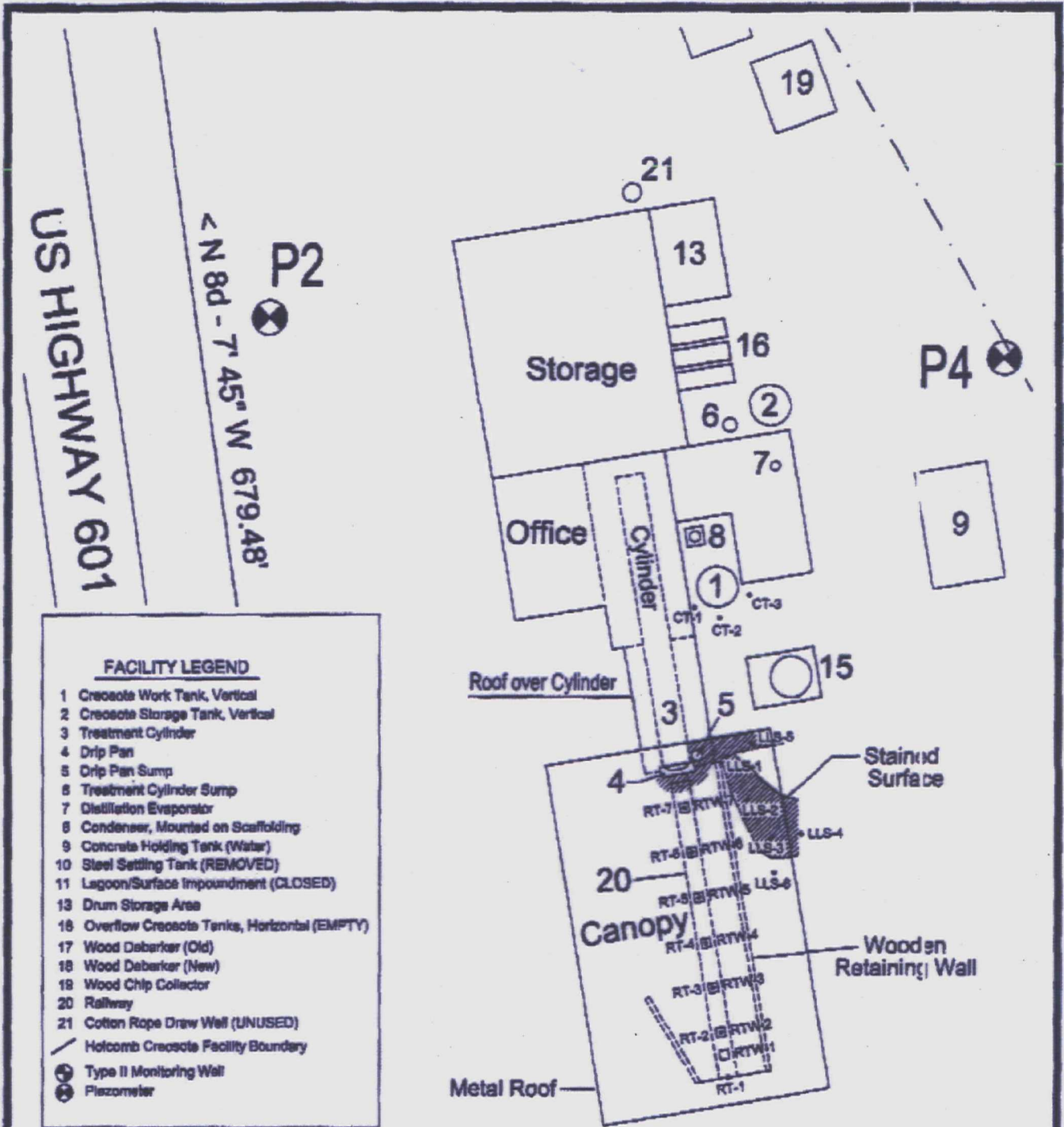
- 1 Creosote Work Tank, Vertical
- 2 Creosote Storage Tank, Vertical
- 3 Treatment Cylinder
- 4 Drip Pan
- 5 Drip Pan Sump
- 6 Treatment Cylinder Sump
- 7 Distillation Evaporator
- 8 Condenser, Mounted on Scaffolding
- 9 Concrete Holding Tank (Water)
- 10 Steel Settling Tank (REMOVED)
- 11 Lagoon/Surface Impoundment (CLOSED)
- 13 Drum Storage Area
- 16 Overflow Creosote Tanks, Horizontal (EMPTY)
- 17 Wood Debarker (Old)
- 18 Wood Debarker (New)
- 19 Wood Chip Collector
- 20 Railway
- 21 Cotton Rope Draw Well (UNUSED)

--- Holcomb Creosote Facility Boundary

⊗ Type II Monitoring Well

⊙ Piezometer

	PROJECT:	HOLCOMB CREOSOTE	
	TITLE:	Site Map of Boring Locations	
Northwest GeoScience P.C. Applied Earth Scientists P.O. BOX 6418 High Point, NC 27292		LOCATION:	Yodkinville, N.C.
PROJECT #:	09-111	APPROVED BY:	ABN
SCALE:	1" = 30'	DATE:	7/10
		FIGURE:	3



FACILITY LEGEND

- 1 Creosote Work Tank, Vertical
- 2 Creosote Storage Tank, Vertical
- 3 Treatment Cylinder
- 4 Drip Pan
- 5 Drip Pan Sump
- 6 Treatment Cylinder Sump
- 7 Distillation Evaporator
- 8 Condenser, Mounted on Scaffolding
- 9 Concrete Holding Tank (Water)
- 10 Steel Settling Tank (REMOVED)
- 11 Lagoon/Surface Impoundment (CLOSED)
- 13 Drum Storage Area
- 16 Overflow Creosote Tanks, Horizontal (EMPTY)
- 17 Wood Debarber (Old)
- 18 Wood Debarber (New)
- 19 Wood Chip Collector
- 20 Railway
- 21 Cotton Rope Draw Well (UNUSED)

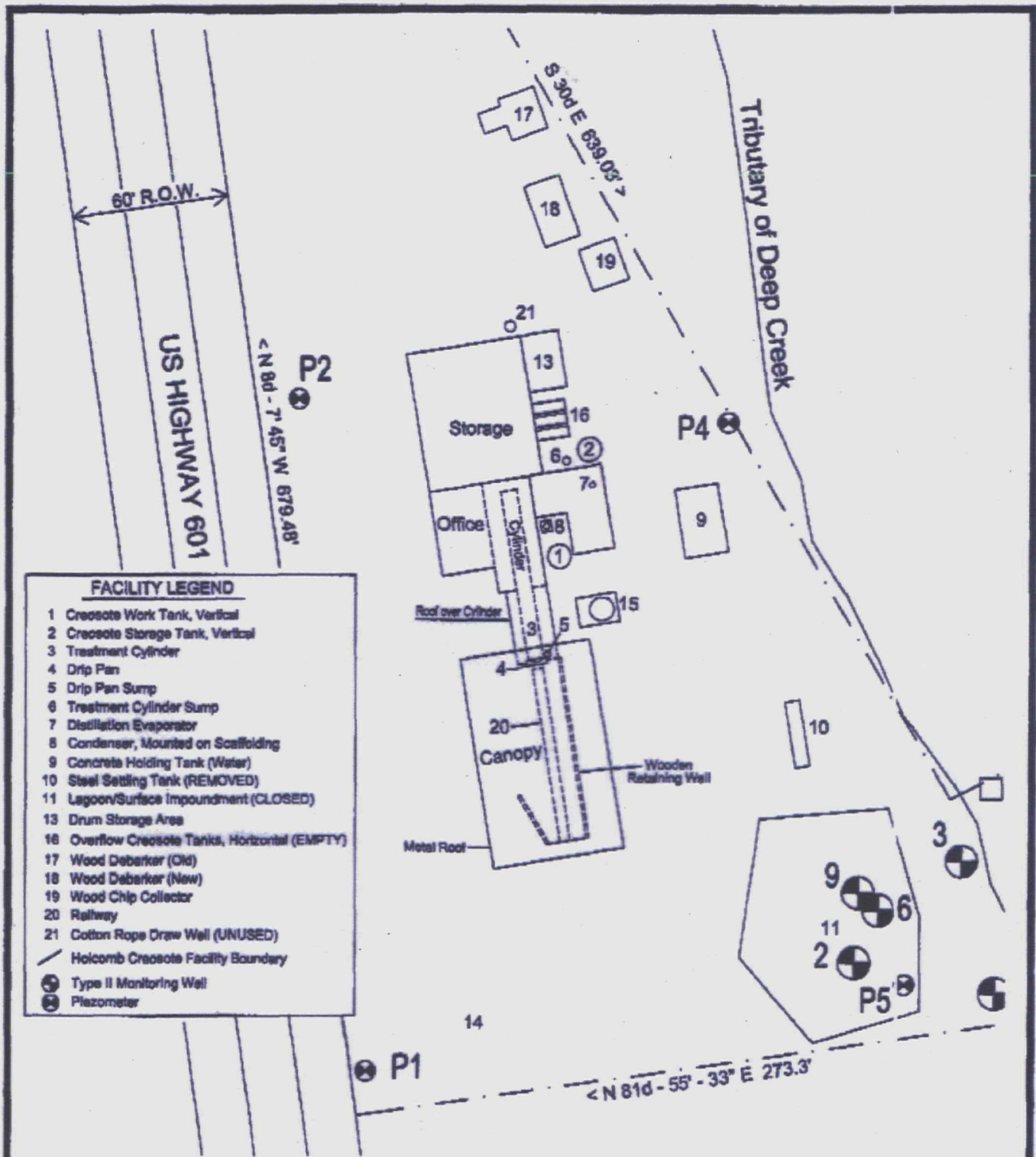
Holcomb Creosote Facility Boundary
 Type II Monitoring Well
 Piezometer

	PROJECT:	HOLCOMB CREOSOTE
	TITLE:	Site Map of Sampling Locations



Northwest GeoScience P.C.
 Applied Earth Scientists
 P.O. BOX 6416
 High Point, NC 27262

LOCATION:	Yadkinville, N.C.	APPROVED BY:	ADN
PROJECT #:	09-111	DRAWN BY:	RLJ
SCALE:	1" = 30'	DATE:	7/10
		FIGURE:	2



FACILITY LEGEND	
1	Creosote Work Tank, Vertical
2	Creosote Storage Tank, Vertical
3	Treatment Cylinder
4	Drip Pan
5	Drip Pan Sump
6	Treatment Cylinder Sump
7	Distillation Evaporator
8	Condenser, Mounted on Scaffolding
9	Concrete Holding Tank (Water)
10	Steel Settling Tank (REMOVED)
11	Lagoon/Surface Impoundment (CLOSED)
13	Drum Storage Area
16	Overflow Creosote Tanks, Horizontal (EMPTY)
17	Wood Debarker (Old)
18	Wood Debarker (New)
19	Wood Chip Collector
20	Railway
21	Cotton Rope Draw Well (UNUSED)
— Holcomb Creosote Facility Boundary	
⊕	Type II Monitoring Well
⊙	Piezometer

	PROJECT: HOLCOMB CREOSOTE	Northwest GeoScience P.C. Applied Earth Scientists P.O. BOX 6413 High Point, NC 27262
	TITLE: Site Map of Production Area	
		APPROVED BY: ABN
		PROJECT #: 09-111
		DRAWN BY: RLJ
		SCALE: 1" = 50'
		DATE: 7/10
		FIGURE: 1

TABLE 15
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Lower Level Wipe Sampling

EPA Method 8270 BNA
Samples collected July 21, 2010

Sample Point	Method Quantitation Limit (ppm)	LL W2	Dilution Adjusted Quantitation Limit [^] (ppm)	LL W1	NCDENR Wipe Sample Cleanup Level (ppm)
EPA 8270 (ppm)					
Acenaphthylene*	0.33	BQL	3.3	BQL	*
Anthracene*	0.33	1.93J	3.3	46.6J	*
Benzo(a)anthracene*	0.33	3.24J	3.3	53.5J	*
Benzo(b)fluoranthene*	0.33	2.64J	3.3	43.2J	*
Benzo(k)fluoranthene*	0.33	1.22J	3.3	17.9J	*
Benzo(a)pyrene*	0.33	1.33J	3.3	21.0J	*
Chrysene*	0.33	5.37J	3.3	97.1J	*
Dibenzo(a,h)anthracene*	0.33	BQL	3.3	BQL	*
Fluoranthene*	0.33	12	3.3	248	*
Indeno(1,2,3-cd) pyrene*	0.33	BQL	3.3	11.0J	*
Phenanthrene*	0.33	9.66J	3.3	240	*
Pyrene*	0.33	6.97J	3.3	174	*
Naphthalene*	0.33	1.83J	3.3	24.2J	*
Total PAHs *	n/a	12	n/a	662	0.031

Dilution Factor [^]

10

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

PAH = Poly-Aromatic Hydrocarbon

* = Constituent clean up level not established. Total PAH cleanup level applies.

Concentrations in **bold** exceed NCDENR Cleanup Levels

LLW = Lower Level Wipe Sample

Wipe samples collected from lower level at locations of LLS1 and LLS2.

TABLE 14
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Lower Level Soil Sampling

EPA Method 8270 BNA
Samples collected July 22, 2010

Sample Point	Method Quantitation Limit (ppm)	Dilution Adjusted Quantitation Limit [^] (ppm)	LL S1	Dilution Adjusted Quantitation Limit [^] (ppm)	LL S2	LL S3	LL S4	Dilution Adjusted Quantitation Limit [^] (ppm)	LL S5	Dilution Adjusted Quantitation Limit [^] (ppm)	LL S6	NCDENR Soil Clean up Level (ppm)
EPA 8270 (ppm)												
Acenaphthylene	0.33	82.5	BQL	99	BQL	BQL	BQL	1.65	0.244J	16.5	2.23J	10
Anthracene	0.33	82.5	1080	99	83.1J	246	320	1.65	7.75	16.5	7.76J	2.4
Benzo(a)anthracene	0.33	82.5	834	99	182	500	266	1.65	2.55	16.5	21.4	0.2
Benzo(b)fluoranthene	0.33	82.5	633	99	293	285	212	1.65	9.08	16.5	45.4	0.7
Benzo(k)fluoranthene	0.33	82.5	237J	99	74.9J	135	67.0J	1.65	3.17	16.5	12.7J	7.5
Benzo(a)pyrene	0.33	82.5	309	99	157	162	99.7	1.65	6.62	16.5	23.6	0.075
Chrysene	0.33	82.5	1080	99	215	458	388	1.65	7.65	16.5	27.2	23
Dibenzo(a,h)anthracene	0.33	82.5	BQL	99	BQL	BQL	BQL	1.65	0.303J	16.5	BQL	0.25
Fluoranthene	0.33	82.5	2840	99	180	2240	1260	1.65	1.67	16.5	35.1	3.4
Indeno(1,2,3-cd) pyrene	0.33	82.5	83.7J	99	50.4J	47.8J	27.1J	1.65	4.86	16.5	13.2J	2.6
Phenanthrene	0.33	82.5	1,110	99	18.0J	408	513	1.65	0.748J	16.5	1.84J	5.4
Pyrene	0.33	82.5	1800	99	182	1900	1190	1.65	3.22	16.5	47.2	8.2
Naphthalene	0.33	82.5	61.5J	99	BQL	BQL	BQL	1.65	BQL	16.5	BQL	0.86
Dilution Factor [^]		250		300			5		50			

ppm = parts per million (mg/kg)
 BNA = Base Neutral Acid Extractables
 BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

LL S = Lower Level Soil
 Soil samples collected at ground surface from lower level.
 Sample locations shown on Figure ___.

HOLCOMB CREOSOTE

ESTIMATED COSTS FOR REMOVAL OF CONTAMINATED MATERIALS / CREOSOTE

CONCRETE PIT (FLUID DISPOSAL ONLY)

contents:	about 6200 gal sludge						
	about 4200 gal contaminated fluid						
Waste profiling	2	tests		test costs	\$530	per type	\$1,060
haul & dispose	10,400	gallons	190	# drums	\$330	per drum	\$62,700
							\$63,760

VIRGIN CREOSOTE

contents: about 4000 gal Creosote

Waste profiling	1	test		test costs	\$530	per type	\$530
Starting boiler for heating						estimated	\$2,000
disposal costs	4,000	gallons					\$5,000
haul costs			2	hauls	\$2,800	per haul	\$5,600
hoses / pumps	needed at each end		4	times	\$250	each time	\$1,000
hourly rates loading, etc. (2hrs free)			4	hours	\$110	per hour	\$440
Tanker wash-outs	2 x	per haul	4	times	\$1,500	per washout	\$6,000
							\$20,570

DRUMMED WASTE (F034)

Waste profiling	1	test		test costs	\$530	per type	\$530
sludge from drain pit			12	drums	\$330	per drum	\$3,960
(overpack needed??)							\$4,490

QUARRY DUST (FROM RAIL TRACK AREA)

Waste profiling	1	test		test costs	\$530	per type	\$530
already drummed			5	drums	\$330	per drum	\$1,650
							\$2,180

CONTAMINATED SOIL (FROM RAIL TRACK AREA)

Waste profiling	1	test		test costs	\$530	per type	\$530
4,000 cu ft	29,900	gallons	544	# drums	\$330	per drum	\$179,400
							\$179,930
						TOTAL	\$270,930

CONTAMINATED SOIL BELOW CONCRETE PIT

[does not include decon of concrete tank, disposal of washwater or removal of concrete walls and bottom. These tasks are estimated to range from \$10,000 for basic steam cleaning and water disposal, \$500 for demolition costs of walls and bottom, to \$50 - \$100,000 for actual hauling and disposal of the concrete material as hazardous waste.] estimate

							\$75,000
Waste profiling	1	test		test costs	\$530	per type	\$530
2700 cu ft	20,200	gallons	367	# drums	\$330	per drum	\$121,200
							\$196,730
						TOTAL	\$467,660

HOLCOMB CREOSOTE UNIT COSTS FOR DISPOSAL SERVICES SHAMROCK INTERNATIONAL

Each waste type profiling costs: \$530

Concrete Pit

Sludge / fluids \$330 / 55-gal drum hauling per VAC truck

Contaminated Soil Rail Track

soil to be 'drummed' \$330 / 55-gal drum

quarry dust already collected in 5 drums

Sludge from Drip Pan

\$330 / 55-gal drum

Virgin Creosote tank

4000 gallon

hauling costs

\$2800 / load

hoses / pumps used at both ends

\$250 / load (x4)

Flushing costs of tanker:

\$1500 / tanker x 2 per load

loading time costs:

2 hours 'included' in transport costs
anything over this time \$110/hour
add \$220 for each load

**HOLCOMB CREOSOTE
BASIS OF REMEDIAL COST ESTIMATES**

Concrete Pit

inside dimensions 24 ft x 14.5 ft x 6 ft (deep); depth of fluid = 4 ft
appears filled with high, viscous creosote sludge to top of fluid at S end;
at N end high, viscous sludge was encountered at depth of 3 ft.
remainder of fluid appears low viscosity and 'watery'.

Total volume of fluids inside pit: 1390 cu ft
estimated volume of sludge: 825 cu ft = 6,200 gal
estimated volume of 'water': 565 cu ft = 4,200 gal

Contaminated soils along former rail track

soils at southern end found to be contaminated to depth of 3 ft
near cylinder door to maximum 9 ft on east side, and 7 ft on west side.
length of rail track 70 ft
estimated width of excavation at S end 6 feet
estimated width of excavation at N end 20 ft feet
Sta 0+00 - 0+45: average depth: 5 ft; ave width: 7 ft.
Sta 0+45 - 0+70: average depth: 7 ft; ave width: 14 ft.
Therefore, estimated volume of soils to be excavated: 4000 cu ft
equals about 29,900 gallons = 544 x 55-gal drums

Virgin Creosote Tank:

estimated quantity: 4,000 gallon
boiler must be activated to heat the tank to reduce
the viscosity of the creosote to enable it to be pumped
into a tanker

Recovered sludge from Drain pit during clean-up of rail track area

stored in 12 x 55-gal drums

Quarry Dust from around rail track

already stored in 5 drums

Contaminated Soil below Concrete pit

inclined boring identified cont. soil to depth of 10 feet
estimated area 540 sq ft
depth 5 ft below pit
estimated volume 2700 cu ft

TABLE 13
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Lower Boring Split Spoon Soil Sampling

EPA Method 8270 BNA
Samples collected July 23, 2010

Sample Point	Method Quantitation Limit (ppm)	LB3 SS1	LB3 SS2	LB2 SS1	LB2 SS2	LB1 SS2	Dilution Adjusted Quantitation Limit [^] (ppm)	LB1 SS1	NCDENR Soil Clean up Level (ppm)
EPA 8270 (ppm)									
Sample Depth (ft. bgs)		0-2	2-4	0-2	2-4	2-4		0-2	
Anthracene	0.33	0.079J	BQL	BQL	BQL	0.191J	16.5	148	2.4
Benzo(a)anthracene	0.33	0.224J	BQL	0.120J	BQL	0.253J	16.5	242	0.2
Benzo(b)fluoranthene	0.33	0.31	BQL	.0105J	BQL	0.173J	16.5	122	0.7
Benzo(k)fluoranthene	0.33	BQL	BQL	BQL	BQL	0.102J	16.5	38.6	7.5
Benzo(a)pyrene	0.33	0.123J	BQL	0.058J	BQL	0.100J	16.5	69	0.075
Chrysene	0.33	0.449	BQL	0.141J	BQL	0.267J	16.5	190	23
Dibenzo(a,h)anthracene	0.33	BQL	BQL	BQL	BQL	BQL	16.5	BQL	0.25
Fluoranthene	0.33	1.24	BQL	0.253J	BQL	1.27	16.5	1080	3.4
Indeno(1,2,3-cd)pyrene	0.33	BQL	BQL	BQL	BQL	BQL	16.5	21.6	2.6
Phenanthrene	0.33	1.34	BQL	BQL	BQL	0.873	16.5	1730	5.4
Pyrene	0.33	0.861	BQL	0.381	BQL	1.09	16.5	678	8.2
Naphthalene	0.33	BQL	BQL	BQL	BQL	0.064J	16.5	207	0.86
Dilution Factor [^]							50		

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in **bold** exceed NCDENR Soil Cleanup Levels

LB# SS# = Lower Boring Split Spoon Sample

Split spoon soil samples collected from lower borings east of rail track leading to treatment cylinder.

TABLE 12
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Concrete Pit Split Spoon Soil Sampling

EPA Method 8270 BNA
 Samples collected July 20, 21, and 22, 2010

Sample Point	Method Quantitation Limit (ppm)	CP1 SS1	CP1 SS2	CP1 SS5	CP1 ST6	CP2 SS1	CP2 SS2	CP2 SS3(A)	CP1 SS8	CP2 SS3(B)	CP4 SS1	CP4 SS2	CP5 SS1	Dilution Adjusted Quantitation Limit* (ppm)	CP1 SS7	CP4 SS3	CP5 SS3	Dilution Adjusted Quantitation Limit* (ppm)	CP3 SS1	CP3 SS2	CP3 SS3	CP3 SS4	CP3 SS5	Dilution Adjusted Quantitation Limit* (ppm)	CP1 SS3	Dilution Adjusted Quantitation Limit* (ppm)	CP1 ST4	CP5 SS2	NCDENR Soil Clean up Level (ppm)	
EPA 8270 (ppm)																														
Sample Depth (ft. bgs)		0-1	1-2	6-8	8-10	7-9	9-10	10-11	11-12	11-12	0-2	2-4	0-2		10-11	4-5	4-5		3-4	4-6	6-7	7-9	9-10		2-3			5-6	2-4	
Acenaphthylene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	0.079J	BQL	0.076J	1.65	BQL	BQL	BQL	3.3	BQL	BQL	BQL	BQL	BQL	6.6	BQL	16.5	BQL	BQL	10	
Anthracene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.133J	BQL	BQL	0.235J	BQL	0.180J	1.65	BQL	1.44J	BQL	3.3	11.8	13.3	45.8	23.6	BQL	6.6	5.92J	16.5	3.48J	10.2J	2.4	
Benzo(a)anthracene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.452	BQL	BQL	1.15	BQL	0.56	1.65	2.28	5.5	26.7J	3.3	10.7	13.7	12.8	19.9	20.6	6.6	13.2	16.5	33.2	28	0.2	
Benzo(b)fluoranthene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	1.71	BQL	BQL	1.56	BQL	1.1	1.65	1.99	12.8	91.5	3.3	3.92	4.58	4.71	6.9	7.44	6.6	9.04	16.5	22.8	8.56J	0.7	
Benzo(k)fluoranthene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.53	BQL	BQL	0.981J	BQL	0.255J	1.65	0.563J	3.41	23.2J	3.3	1.60J	1.52J	1.74J	2.46J	2.30J	6.6	2.66J	16.5	9.16J	BQL	7.5	
Benzo(a)pyrene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.503	BQL	BQL	0.905	BQL	0.589	1.65	0.848J	6.19	27.6J	3.3	2.54J	2.85	2.86J	4.43	4.55	6.6	2.97J	16.5	7.95J	4.09J	0.075	
Chrysene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.872	BQL	BQL	1.29	BQL	0.675	1.65	2.61	7.77	42.5J	3.3	10.6	10.9	10.6	16.9	18.8	6.6	13.9	16.5	34.6	32.2	23	
Dibenzo(a,h)anthracene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	0.104J	BQL	BQL	1.65	BQL	1.10J	8.61J	3.3	BQL	BQL	BQL	BQL	BQL	6.6	BQL	16.5	BQL	BQL	0.25	
Fluoranthene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.758	BQL	BQL	0.926	BQL	0.701	1.65	8.46	5.19	56.3	3.3	59.1	100	69.6	142	BQL	6.6	71.6	16.5	104	137	3.4	
Indeno(1,2,3-cd)pyrene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.349	BQL	BQL	0.342	BQL	0.170J	1.65	BQL	3.81	21.0J	3.3	BQL	0.742J	0.797J	1.11J	1.06J	6.6	1.40J	16.5	2.34J	BQL	2.6	
Phenanthrene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	0.171J	0.148	0.242J	BQL	BQL	0.111J	1.65	1.49J	0.459J	9.21J	3.3	122	197	145	310	363	6.6	60.7	16.5	4.83J	17	5.4	
Pyrene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	1.2	BQL	BQL	1.75	0.049J	1.31	1.65	8.16	9.72	62.9	3.3	45.6	69.7	50.6	97.3	BQL	6.6	46	16.5	97.1	89.8	8.2	
Naphthalene	0.33	BQL	BQL	BQL	BQL	BQL	BQL	BQL	1.81	BQL	BQL	BQL	BQL	1.65	BQL	BQL	BQL	3.3	83.8	122	87.9	212	BQL	6.6	BQL	16.5	BQL	BQL	0.86	
Dilution Factor ^															5				10					20			50			

ppm = parts per million (mg/kg)
 BNA = Base Neutral Acid Extractables
 BQL = BQL (Below Quantitation Limits)
 J = Estimated value. Present but below Quantitation Limit.
 ^ = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor
 Concentrations in bold exceed NCDENR Soil Cleanup Levels

(sample depths have been adjusted to rounded real bgs)
 CP2 and CP3 are inclined borings (installed at 45°)
 CP# SS# = Concrete Pit Split Spoon Sample
 CP# ST# = Concrete Pit Shelby Tube
 Split spoon soil sample collected from borings adjacent to concrete pit.

TABLE 11
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Concrete Pit Shelby Tube Soil Sampling

EPA Method 8270 BNA
 Samples collected July 22, 2010

Sample Point	Method Quantitation Limit (ppm)	CP4 5'	Dilution Adjusted Quantitation Limit^ (ppm)	CP4 8'	Dilution Adjusted Quantitation Limit^ (ppm)	CP5 5'	Dilution Adjusted Quantitation Limit^ (ppm)	CP5 8'	NCDENR Soil Clean up Level (ppm)
Sample Depth (ft. bgs)		5		8		5		8	
EPA 8270 (ppm)									
Acenaphthylene	0.33	BQL	1.65	BQL	6.6	3.05J	0.66	BQL	10
Anthracene	0.33	BQL	1.65	0.910J	6.6	BQL	0.66	0.778	2.4
Benzo(a)anthracene	0.33	BQL	1.65	2.17	6.6	16.4	0.66	0.988	0.2
Benzo(b)fluoranthene	0.33	BQL	1.65	4.07	6.6	28.3	0.66	1.5	0.7
Benzo(k)fluoranthene	0.33	BQL	1.65	1.42J	6.6	9.81	0.66	0.437J	7.5
Benzo(a)pyrene	0.33	BQL	1.65	2.21	6.6	11.6	0.66	0.534J	0.075
Chrysene	0.33	BQL	1.65	4.06	6.6	22.5	0.66	1.33	23
Fluoranthene	0.33	BQL	1.65	2.37	6.6	59.7	0.66	1.98	3.4
Indeno(1,2,3-cd) pyrene	0.33	BQL	1.65	1.20J	6.6	7.31	0.66	0.222J	2.6
Phenanthrene	0.33	BQL	1.65	BQL	6.6	129	0.66	0.514J	5.4
Pyrene	0.33	BQL	1.65	4.22	6.6	48.6	0.66	3.28	8.2
Naphthalene	0.33	BQL	1.65	BQL	6.6	22.8	0.66	BQL	0.86
Dilution Factor ^			5		20		2		

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

^ = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in **bold** exceed NCDENR Soil Cleanup Levels

CP# #' = Concrete Pit (#) Depth (in feet)

Shelby tube samples collected from borings adjacent to rail track leading to concrete pit.

TABLE 10
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Creosote Tank Soil Sampling

EPA Method 8270 BNA
Samples collected July 23, 2010

Sample Point	Method Quantitation Limit (ppm)	CT1	Dilution Adjusted Quantitation Limit [^] (ppm)	CT2	CT3	NCDENR Soil Cleanup Level (ppm)
EPA 8270 (ppm)						
Anthracene	0.33	BQL	1.65	1.32J	0.526J	2.4
Benzo(a)anthracene	0.33	0.096J	1.65	5.11	1.9	0.2
Benzo(b)fluoranthene	0.33	0.200J	1.65	9.81	6.36	0.7
Benzo(k)fluoranthene	0.33	0.109J	1.65	2.77	1.71	7.5
Benzo(a)pyrene	0.33	0.103J	1.65	3.64	3.13	0.075
Chrysene	0.33	0.190J	1.65	7.26	2.53	23
Fluoranthene	0.33	0.248J	1.65	4.26	2.38	3.4
Indeno(1,2,3-cd)pyrene	0.33	BQL	1.65	1.27J	0.990J	2.6
Phenanthrene	0.33	BQL	1.65	1.86	BQL	5.4
Pyrene	0.33	0.279J	1.65	14.6	2.59	8.2
Dilution Factor [^]			5			

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in **bold** exceed NCDENR Soil Cleanup Levels

CT = Creosote Tank

Soil samples collected from hand auger installed adjacent to creosote tank.

TABLE 9
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Rail Boring Shelby Tube Soil Sampling

EPA Method 8270 BNA
 Samples collected July 27, 2010

Sample Point	Method Quantitation Limit (ppm)	RB1 0'	RB4 3'	RB6 3'	RB9 3'	Dilution Adjusted Quantitation Limit [^] (ppm)	RB2 0'	RB3 0'	RB8 0'	Dilution Adjusted Quantitation Limit [^] (ppm)	RB4 0'	Dilution Adjusted Quantitation Limit [^] (ppm)	RB7 0'	Dilution Adjusted Quantitation Limit [^] (ppm)	RB2 3'	RB5 3'	RB6 0'	RB7 3'	RB8 3'	Dilution Adjusted Quantitation Limit [^] (ppm)	RB5 0'	RB9 0'	NCDENR Soil Cleanup Level (ppm)								
Sample Depth (ft. bgs)		0	3	3	3		0	0	0		0		0		3	3	0	3	3		0	0									
EPA 8270 (ppm)																															
Acenaphthylene	0.33	BCL	BCL	0.081J	BQL	1.65	BQL	BQL	0.830J	3.3	BQL	6.6	BQL	16.5	BQL	BQL	BQL	9.61J	4.94J	66	BQL	BQL	10								
Anthracene	0.33	0.492	0.177J	0.124J	BQL	1.65	2.76	0.958J	7.04	3.3	2.84J	6.6	0.122J	16.5	37.6	BQL	23.2	229	74.4	66	67.6	127	2.4								
Benzo(a)anthracene	0.33	0.501	0.552	1.76	BQL	1.65	1.62J	5.14	5.42	3.3	12.6	6.6	22.2	16.5	32.8	46	55.4	108	30.1	66	56.7J	252	0.2								
Benzo(b)fluoranthene	0.33	0.927	0.907	1.19	BQL	1.65	1.58J	6.42	9.65	3.3	11.6	6.6	23.7	16.5	17.8	18.3	40.1	39.9	13.9J	66	34.0J	204	0.7								
Benzo(k)fluoranthene	0.33	0.321J	0.439	0.448	BQL	1.65	0.666J	1.98	2.63	3.3	3.75	6.6	7.94	16.5	10.1J	9.85J	16.4J	590	7.67J	66	BQL	90.9	7.5								
Benzo(a)pyrene	0.33	0.411	0.515	0.66	BQL	1.65	0.672J	2.89	4.25	3.3	4.66	6.6	10.4	16.5	8.02J	4.64J	15.7J	22.3	12.2J	66	BQL	106	0.075								
Chrysene	0.33	0.633	0.764	1.7	BQL	1.65	2.14	5.3	6.33	3.3	13	6.6	23.4	16.5	44.8	45.1	82.3	97.2	37.2	66	67.9	254	23								
Dibenzo(a,h)anthracene	0.33	BQL	BQL	BQL	BQL	1.65	BQL	BQL	1.75	3.3	BQL	6.6	BQL	16.5	BQL	BQL	BQL	BQL	BQL	66	BQL	BQL	0.17								
Fluoranthene	0.33	1.27	1.49	1.75	0.095J	1.65	7.21	3.03	8.47	3.3	11.5	6.6	16.8	16.5	180	460	247	1680	128	66	428	1170	3.4								
Indeno(1,2,3-cd) pyrene	0.33	0.254J	0.481	0.243J	BQL	1.65	BQL	1.33J	2.09	3.3	2.22J	6.6	4.58J	16.5	BQL	BQL	6.96J	6.48J	4.26J	66	BQL	49.9J	2.6								
Phenanthrene	0.33	1.36	0.255J	0.221J	BQL	1.65	8.43	1.96	1.51J	3.3	2.53J	6.6	BQL	16.5	11.4J	919	57.7	3540	400	66	656	483	5.4								
Pyrene	0.33	1.13	13.6	2.16	0.184J	1.65	5.14	5.03	6.33	3.3	14.4	6.6	43.5	16.5	103	280	250	1060	108	66	288	980	8.2								
Naphthalene	0.33	BQL	BQL	BQL	BQL	1.65	BQL	BQL	BQL	3.3	BQL	6.6	BQL	16.5	BQL	BQL	BQL	583	1060	66	28.0J	BQL	0.86								
Dilution Factor [^]							5						10						20						50						200

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x

Concentrations in bold exceed NCDENR Soil Cleanup Levels

RB# #' = Rail Boring (Shelby tube samples) Depth

Shelby tube samples collected from borings in centerline of rail track leading to treatment cylinder.

TABLE 8
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Rail Boring Split Spoon Soil Sampling

EPA Method 8270 BNA
 Samples collected July 23, 2010

Sample Point	Method Quantitation Limit (ppm)	RB6 SS3	RB7 SS4	RB8 SS5	RB9 SS2	Dilution Adjusted Quantitation Limit [^] (ppm)	RB8 SS4	Dilution Adjusted Quantitation Limit [^] (ppm)	RB9 SS3	Dilution Adjusted Quantitation Limit [^] (ppm)	RB5 SS3	RB6 SS2	RB8 SS2	Dilution Adjusted Quantitation Limit [^] (ppm)	RB7 SS3	Dilution Adjusted Quantitation Limit [^] (ppm)	RB7 SS2	Dilution Adjusted Quantitation Limit [^] (ppm)	RB5 SS2	Dilution Adjusted Quantitation Limit [^] (ppm)	RB8 SS3	NCDENR Soil Cleanup Level (ppm)
Sample Depth (ft bgs)		5-7	7-9	9-11	3-5		7-9		5-7		5-7	3-5	3-5		5-7		3-5		3-5		5-7	
EPA 8270 (ppm)																						
Acenaphthylene	0.33	BQL	BQL	BQL	BQL	1.65	BQL	3.3	BQL	16.5	12.6J	8.25J	13.8J	66	BQL	165	BQL	264	BQL	330	BQL	10
Anthracene	0.33	BQL	BQL	BQL	BQL	1.65	2.15	3.3	2.07J	16.5	105	101	192	66	84.8	165	242	264	162J	330	505	2.4
Benzo(a)anthracene	0.33	BQL	0.091J	BQL	0.125J	1.65	0.886J	3.3	2.41J	16.5	110	103	92	66	30.4J	165	144J	264	131J	330	176J	0.2
Benzo(b)fluoranthene	0.33	BQL	BQL	BQL	0.222J	1.65	BQL	3.3	BQL	16.5	44.8	38.3	47.2	66	BQL	165	BQL	264	BQL	330	BQL	0.7
Benzo(k)fluoranthene	0.33	BQL	BQL	BQL	BQL	1.65	BQL	3.3	BQL	16.5	17.7	17.2	20.8	66	BQL	165	BQL	264	BQL	330	BQL	7.5
Benzo(a)pyrene	0.33	BQL	BQL	BQL	0.074J	1.65	0.336J	3.3	BQL	16.5	24	19.2	39.5	66	BQL	165	BQL	264	BQL	330	BQL	0.075
Chrysene	0.33	BQL	BQL	BQL	0.168J	1.65	1.03J	3.3	2.40J	16.5	103	84.1	108	66	41.2J	165	155J	264	141J	330	207J	23
Fluoranthene	0.33	BQL	0.331	BQL	0.650J	1.65	4.07	3.3	15.8	16.5	1760	977	649	66	154	165	1110	264	1130	330	903	3.4
Indeno(1,2,3-cd) pyrene	0.33	BQL	BQL	BQL	BQL	1.65	BQL	3.3	BQL	16.5	8.10J	5.51J	13.3J	66	BQL	165	BQL	264	BQL	330	BQL	2.6
Phenanthrene	0.33	BQL	0.547	BQL	0.268J	1.65	9.29	3.3	21.2	16.5	2940	1750	382	66	349	165	1950	264	2530	330	2060	5.4
Pyrene	0.33	BQL	0.336	0.047J	0.521	1.65	3.1	3.3	14.6	16.5	983	521	471	66	112	165	714	264	969	330	600	8.2
Naphthalene	0.33	BQL	BQL	0.180J	BQL	1.65	11.2	3.3	4.25	16.5	BQL	160	3710	66	850	165	105J	264	723	330	5230	0.86
Dilution Factor [^]		5		10		50		200		500		800		1000								

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in **bold** exceed NCDENR Soil Cleanup Levels

RB# SS# = Rail Boring Split Spoon Sample

Split spoon soil samples collected from borings in centerline of rail track leading to treatment cylinder.

TABLE 7
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Rail Track Wipe Sampling

EPA Method 8270 BNA
Samples collected July 21, 2010

Sample Point	Method Quantitation Limit (ppm)	RTW1	RTW2	RTW3	RTW4	RTW5	RTW6	RTW7	NCDENR Wipe Sample Cleanup Level (ppm)
EPA 8270 (ppm)									
Anthracene*	0.33	38.5	4.04J	BQL	6.38J	20.4	16.5	19.6	*
Benzo(a)anthracene*	0.33	21.6	2.79J	1.28J	1.71J	8.30J	25	27.6	*
Benzo(b)fluoranthene*	0.33	19.3	2.63J	1.20J	1.80J	6.38J	16.4	27	*
Benzo(k)fluoranthene*	0.33	8.02J	1.69J	BQL	BQL	3.10J	8.09J	3.00J	*
Benzo(a)pyrene*	0.33	6.73J	1.22J	BQL	BQL	2.98J	9.24J	11.1	*
Chrysene*	0.33	32.7	4.65J	2.10J	2.88J	9.81J	43	33.8	*
Fluoranthene*	0.33	100	14.9	6.98J	12.2	39.7	103	107	*
Indeno(1,2,3-cd) pyrene*	0.33	4.07J	BQL	BQL	BQL	BQL	2.82J	4.07J	*
Phenanthrene*	0.33	126	18	6.88J	20	68	121	97.1	*
Pyrene*	0.33	73.5	7.57J	3.61J	5.64J	25.2J	77.8	89.6	*
Naphthalene*	0.33	1.24J	BQL	BQL	BQL	BQL	3.68J	2.22J	*
Total PAHs *	n/a	411.6	32.9	n/a	32.2	128.1	402.7	412.8	0.031

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

^ = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

PAH = Poly-Aromatic Hydrocarbon

* = Constituent clean up level not established. Total PAH cleanup level applies.

Concentrations in **bold** exceed NCDENR Cleanup Levels

RTW = Rail Track Wipe

Wipe samples collected from liner leading beneath center line rail track leading to treatment cylinder.

TABLE 6
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Rail Track Quarry Dust Sampling

EPA Method 8270 BNA
Samples collected July 20, 2010

Sample Point	Method Quantitation Limit (ppm)	Dilution Adjusted Quantitation Limit [^] (ppm)	RT1	RT2	RT3	Dilution Adjusted Quantitation Limit [^] (ppm)	RT4	RT5	RT6	Dilution Adjusted Quantitation Limit [^] (ppm)	RT7	NCDENR Soil Cleanup Level (ppm)
EPA 8270 (ppm)												
Anthracene	0.33	49.5	48.0J	396	248	495	1940	1580	2050	198	597	2.4
Benzo(a)anthracene	0.33	49.5	99.9	312	222	495	399J	504	402J	198	291	0.2
Benzo(b)fluoranthene	0.33	49.5	121	236	168	495	296J	531	279J	198	303	0.7
Benzo(k)fluoranthene	0.33	49.5	35.4J	106	60.6	495	125J	140J	170J	198	88.2J	7.5
Benzo(a)pyrene	0.33	49.5	31.2J	57.9	40.2J	495	93.6J	144J	93.3J	198	75.9J	0.075
Chrysene	0.33	49.5	149	489	339	495	711	837	705	198	420	23
Fluoranthene	0.33	49.5	402	1750	1180	495	2100	2500	2110	198	1330	3.4
Indeno(1,2,3-cd) pyrene	0.33	49.5	18.1J	45.0J	30.3J	495	BQL	70.2J	BQL	198	33.6J	2.6
Phenanthrene	0.33	49.5	147	1610	1080	495	3210	3150	2480	198	1610	5.4
Pyrene	0.33	49.5	342	1080	714	495	1740	2100	1660	198	1120	8.2
Naphthalene	0.33	49.5	BQL	20.5J	10.0J	495	BQL	60.9J	62.7J	198	BQL	0.86
Dilution Factor [^]		150			1500			600				

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in **bold** exceed NCDENR Soil Cleanup Levels

RT = Rail Track

Samples collected from quarry dust along center line of rail track leading to treatment cylinder.

TABLE 5
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Drain Pit Soil Sampling

EPA Method 8270 BNA
Samples collected July 9, 2010

Sample Point	Method Quantitation Limit (ppm)	Dilution Adjusted Quantitation Limit [^] (ppm)	DP1	DP2	Dilution Adjusted Quantitation Limit [^] (ppm)	DP3	DP4	DP5	NCDENR Soil Cleanup Level (ppm)
EPA 8270 (ppm)									
Acenaphthylene	0.33	6.6	1.84J	1.92J	16.5	2.59J	BQL	BQL	10
Anthracene	0.33	6.6	209	201	16.5	415	88.6	107	2.4
Benzo(a)anthracene	0.33	6.6	57.4	71.4	16.5	103	38.8	47	0.2
Benzo(b)fluoranthene	0.33	6.6	103	83.8	16.5	116	79.1	73.8	0.7
Benzo(k)fluoranthene	0.33	6.6	28.7	35.2	16.5	29.9	25.1	23	7.5
Benzo(a)pyrene	0.33	6.6	10.7	21.5	16.5	28.8	7.48J	8.84J	0.075
Chrysene	0.33	6.6	163	123	16.5	173	128	110	23
Dibenzo(a,h)anthracene	0.33	6.6	5.17J	5.54J	16.5	6.67J	3.59J	13.6J	0.25
Fluoranthene	0.33	6.6	548	448	16.5	816	435	448	3.4
Indeno(1,2,3-cd) pyrene	0.33	6.6	20.7	23.3	16.5	22.9	14.7J	13.6J	2.6
Phenanthrene	0.33	6.6	190	200	16.5	700	102	132	5.4
Pyrene	0.33	6.6	321	265	16.5	525	254	273	8.2
Naphthalene	0.33	6.6	5.46J	12.4	16.5	13.6J	4.66J	3.47J	0.86
Dilution Factor [^]			20		50				

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in **bold** exceed NCDENR Soil Cleanup Levels

DP = Drain Pit

Soil samples collected from area around drain pit at treatment cylinder.

TABLE 4
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Quarry Dust Soil Sampling

EPA Method 8270 BNA
 Samples collected July 9, 2010

Sample Point	Method Quantitation Limit (ppm)	Dilution Adjusted Quantitation Limit [^] (ppm)	QD11	QD18	Dilution Adjusted Quantitation Limit [^] (ppm)	QD5	QD6	QD7	QD8	QD9	QD10	QD16	QD17	QD21	QD22	Dilution Adjusted Quantitation Limit [^] (ppm)	QD20	Dilution Adjusted Quantitation Limit [^] (ppm)	QD19	NCDENR Soil Cleanup Level (ppm)
EPA 8270 (ppm)																				
Acenaphthylene	0.33	3.3	BQL	BQL	6.6	2.13J	1.26J	BQL	BQL	BQL	BQL	1.55J	BQL	BQL	BQL	33	BQL	66	BQL	10
Anthracene	0.33	3.3	0.771J	1.25J	6.6	222	67.2	3.82J	11.5	13.7	1.70J	129	23.1	13.1	4.84J	33	21.4J	66	20.5J	2.4
Benzo(a)anthracene	0.33	3.3	4	4.1	6.6	107	57	5.73J	10.8	15.4	4.66J	85	32.5	30.6	32	33	19.5J	66	29.1J	0.2
Benzo(b)fluoranthene	0.33	3.3	12.5	9.19	6.6	118	76.9	21	26.8	41.2	13	111	48.9	38.4	59.8	33	27.2J	66	36.6J	0.7
Benzo(k)fluoranthene	0.33	3.3	6.78	2.50J	6.6	35	30.1	4.06J	6.76	7.86	3.62J	23	15.3	11.1	17	33	11.6J	66	18.1J	7.5
Benzo(a)pyrene	0.33	3.3	2.25J	0.806J	6.6	18.9	13.1	1.57J	2.65J	5.06J	2.49J	23.2	6.48J	6.43J	16.9	33	BQL	66	BQL	0.075
Chrysene	0.33	3.3	8.21	10	6.6	227	128	18.5	26	38.8	14.7	14.4	61.5	60.5	49.3	33	43.1	66	79.1	23
Dibenzo(a,h)anthracene	0.33	3.3	0.584J	BQL	6.6	4.66J	4.06J	BQL	0.716J	1.75J	BQL	5.21J	1.72J	1.46J	17	33	BQL	66	BQL	0.25
Fluoranthene	0.33	3.3	8.87	31.5	6.6	640	319	35.7	47	112	34	463	192	158	70.6	33	171	66	255	3.4
Indeno(1,2,3-cd) pyrene	0.33	3.3	2.23J	1.18J	6.6	18.6	16.6	2.42J	3.10J	5.30J	2.70J	19.1	7.06	6.38J	9.4	33	4.18J	66	BQL	2.6
Phenanthrene	0.33	3.3	3.08J	11.8	6.6	435	166	7.2	10.5	45.7	13.4	324	127	53.8	18.3	33	106	66	128	5.4
Pyrene	0.33	3.3	11.9	15.6	6.6	433	208	26.6	32.8	53.4	19	37.1	137	98.6	70.9	33	91.2	66	138	8.2
Naphthalene	0.33	3.3	BQL	BQL	6.6	3.66J	2.05J	BQL	BQL	0.885J	BQL	3.28J	1.28J	1.91J	BQL	33	BQL	66	BQL	0.86
Dilution Factor [^]			10		20										100		200			

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in bold exceed NCDENR Soil Cleanup Levels

QD = Quarry Dust

Samples collected from quarry dust along rail track leading to treat

QD 5 to QD 11 along west side of track; QD 16 to QD 22 along east side of track.

TABLE 3
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Liner Wipe Testing East Side Rail Track

EPA Method 8270 BNA
 Samples collected July 9, 2010

Sample Point	Method Quantitation Limit (ppm)	WP8	WP9	WP10	BLANK	Dilution Adjusted Quantitation Limit* (ppm)	WP7	NCDENR Wipe Sample Cleanup Level (ppm)
EPA 8270 (ppm)								
Anthracene*	0.33	0.004J	0.008J	BQL	BQL	3.3	0.018J	*
Benzo(a)anthracene*	0.33	0.003J	0.004J	BQL	BQL	3.3	0.030J	*
Benzo(b)fluoranthene*	0.33	0.004J	0.005J	0.002J	BQL	3.3	0.058J	*
Benzo(k)fluoranthene*	0.33	0.001J	0.001J	BQL	BQL	3.3	0.017J	*
Benzo(a)pyrene*	0.33	BQL	BQL	0.001J	BQL	3.3	BQL	*
Chrysene*	0.33	0.007J	0.007J	0.002J	BQL	3.3	0.078J	*
Dibenzo(a,h)anthracene*	0.33	BQL	BQL	BQL	BQL	3.3	BQL	*
Fluoranthene*	0.33	0.026	0.024	.003J	BQL	3.3	0.212	*
Indeno(1,2,3-cd) pyrene*	0.33	BQL	BQL	BQL	BQL	3.3	BQL	*
Phenanthrene*	0.33	0.02	0.026	0.001J	BQL	3.3	0.055J	*
Pyrene*	0.33	0.015	0.015	0.003J	BQL	3.3	0.123	*
Naphthalene*	0.33	.003J	.003J	0.003J	.002J	3.3	BQL	*
Total PAHs *	n/a	0.061	0.065	n/a	n/a	n/a	0.335	0.031
Dilution Factor ^						10		

ppm = parts per million (mg/kg)
 BNA = Base Neutral Acid Extractables
 BQL = BQL (Below Quantitation Limits)
 J = Estimated value. Present but below Quantitation Limit.
 ^ = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor
 PAH* = Poly-Aromatic Hydrocarbon
 * = Constituent clean up level not established. Total PAH cleanup level applies.
 Concentrations in **bold** exceed NCDENR Cleanup Levels

WP = Wipe

Wipe Sample of liner collected along east side of rail track

TABLE 2
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Drain Pit Wipe Testing

EPA Method 8270 BNA
 Samples collected July 9, 2010

Sample Point	Method Quantitation Limit (ppm)	Dilution Adjusted Quantitation Limit [^] (ppm)	DPWP4	Dilution Adjusted Quantitation Limit [^] (ppm)	DPWP1	DPWP2	DPWP3	DPWP5	NCDENR Wipe Sample Cleanup Level (ppm)
EPA 8270 (ppm)									
Acenaphthylene*	0.33	1.65	BQL	3.3	BQL	BQL	BQL	BQL	*
Anthracene*	0.33	1.65	0.009J	3.3	0.028J	0.083J	0.053J	0.016J	*
Benzo(a)anthracene*	0.33	1.65	0.017J	3.3	0.023J	0.060J	0.036J	0.017J	*
Benzo(b)fluoranthene*	0.33	1.65	0.025J	3.3	0.053J	0.137	0.064J	0.037J	*
Benzo(k)fluoranthene*	0.33	1.65	0.010J	3.3	0.020J	0.036J	0.021J	0.012J	*
Benzo(a)pyrene*	0.33	1.65	BQL	3.3	BQL	0.015J	BQL	BQL	*
Chrysene*	0.33	1.65	0.052	3.3	0.058J	0.171	0.083J	0.044J	*
Dibenzo(a,h)anthracene	0.33	1.65	BQL	3.3	BQL	BQL	BQL	BQL	*
Fluoranthene*	0.33	1.65	0.135	3.3	0.206	0.427	0.264	0.149	*
Indeno(1,2,3-cd) pyrene*	0.33	1.65	BQL	3.3	BQL	0.017J	BQL	BQL	*
Phenanthrene*	0.33	1.65	0.023J	3.3	0.068J	0.237	0.133	0.034J	*
Pyrene*	0.33	1.65	0.08	3.3	0.123	0.278	0.168	0.090J	*
Naphthalene*	0.33	1.65	BQL	3.3	BQL	0.285	BQL	BQL	*
Total PAHs *	n/a	n/a	#NAME?	n/a	0.329	1.535	0.565	0.149	0.031
Dilution Factor [^]		5		10					

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

PAH = Poly-Aromatic Hydrocarbon

* = Constituent clean up level not established. Total PAH cleanup level applies.

Concentrations in **bold** exceed NCDENR Cleanup Levels

DPWP = Drain Pit Wipe

Wipe samples collected from liner at same locations as DP1 through DP5 near drain pit.

TABLE 1
HOLCOMB CREOSOTE
Closure Sample Collection - Round 1
Cylinder Door Soil Sampling

EPA Method 8270 BNA
Samples collected July 9, 2010

Sample Point	Method Quantitation Limit (ppm)	Dilution Adjusted Quantitation Limit [^] (ppm)	CL1	CL2	CL3	CL4	NCDENR Soil Cleanup Level (ppm)
EPA 8270 (ppm)							
Acenaphthylene	0.33	16.5	BQL	BQL	5.18J	6.61J	10
Anthracene	0.33	16.5	66.9	62.1	109	78.7	2.4
Benzo(a)anthracene	0.33	16.5	28.1	37	43.7	212	0.2
Benzo(b)fluoranthene	0.33	16.5	30.3	26.9	27.9	208	0.7
Benzo(k)fluoranthene	0.33	16.5	10.0J	9.85J	12.6J	40.6	7.5
Benzo(a)pyrene	0.33	16.5	9.70J	15.8J	18.8	81	0.075
Chrysene	0.33	16.5	34.2	44.9	54.3	231	23
Dibenzo(a,h)anthracene	0.33	16.5	4.06J	2.01J	2.24J	3.16J	0.25
Fluoranthene	0.33	16.5	133	257	239	1160	3.4
Indeno(1,2,3-cd) pyrene	0.33	16.5	4.06J	6.38J	7.19J	38.7	2.6
Phenanthrene	0.33	16.5	188	428	526	1940	5.4
Pyrene	0.33	16.5	95.8	138	163	861	8.2
Naphthalene	0.33	16.5	BQL	300	520	BQL	0.86
Dilution Factor [^]			50				

ppm = parts per million (mg/kg)

BNA = Base Neutral Acid Extractables

BQL = BQL (Below Quantitation Limits)

J = Estimated value. Present but below Quantitation Limit.

[^] = Quantitation Limit adjusted for Dilution Factor = Quantitation Limit x Dilution Factor

Concentrations in **bold** exceed NCDENR Soil Cleanup Levels

CL = Cylinder Door

Soil sample collected from soil adjacent to treatment cylinder door.

L Drive

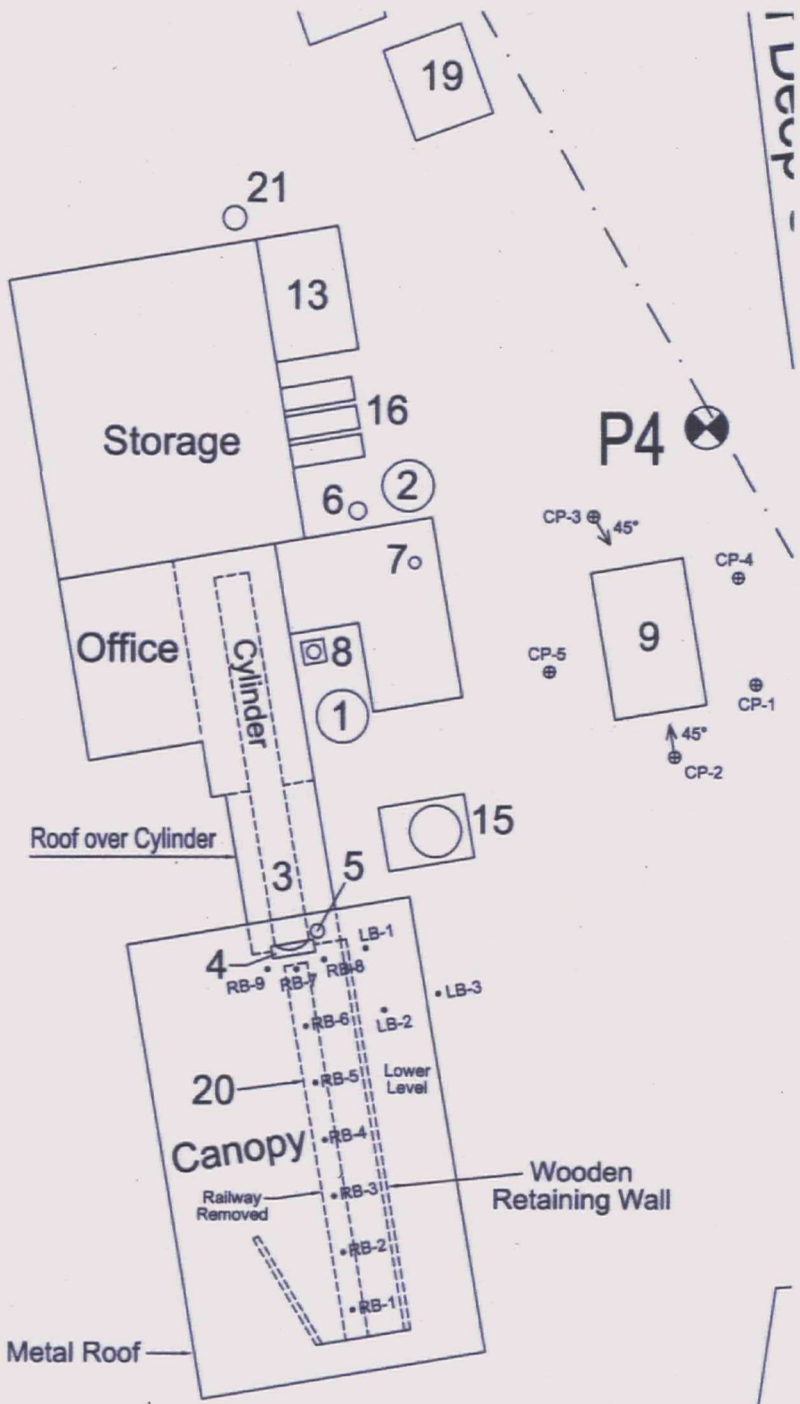
HIGHWAY 601

> N 8d - 7' 45" W 679.48'

P2

P4

FACILITY LEGEND	
1	Creosote Work Tank, Vertical
2	Creosote Storage Tank, Vertical
3	Treatment Cylinder
4	Drip Pan
5	Drip Pan Sump
6	Treatment Cylinder Sump
7	Distillation Evaporator
8	Condenser, Mounted on Scaffolding
9	Concrete Holding Tank (Water)
10	Steel Settling Tank (REMOVED)
11	Lagoon/Surface Impoundment (CLOSED)
13	Drum Storage Area
16	Overflow Creosote Tanks, Horizontal (EMPTY)
17	Wood Debarker (Old)
18	Wood Debarker (New)
19	Wood Chip Collector
20	Railway
21	Cotton Rope Draw Well (UNUSED)
— Holcomb Creosote Facility Boundary	
	Type II Monitoring Well
	Piezometer



	PROJECT:	HOLCOMB CREOSOTE
	TITLE:	Site Map of Boring Locations



Northwest GeoScience P.C. Applied Earth Scientists P.O. BOX 6418 High Point, NC 27262		
LOCATION:	Yadkinville, N.C.	APPROVED BY: ABN
PROJECT #:	09-111	DRAWN BY: RLJ
SCALE: 1" = 30'	DATE: 7/10	FIGURE: 3

US HIGHWAY 601

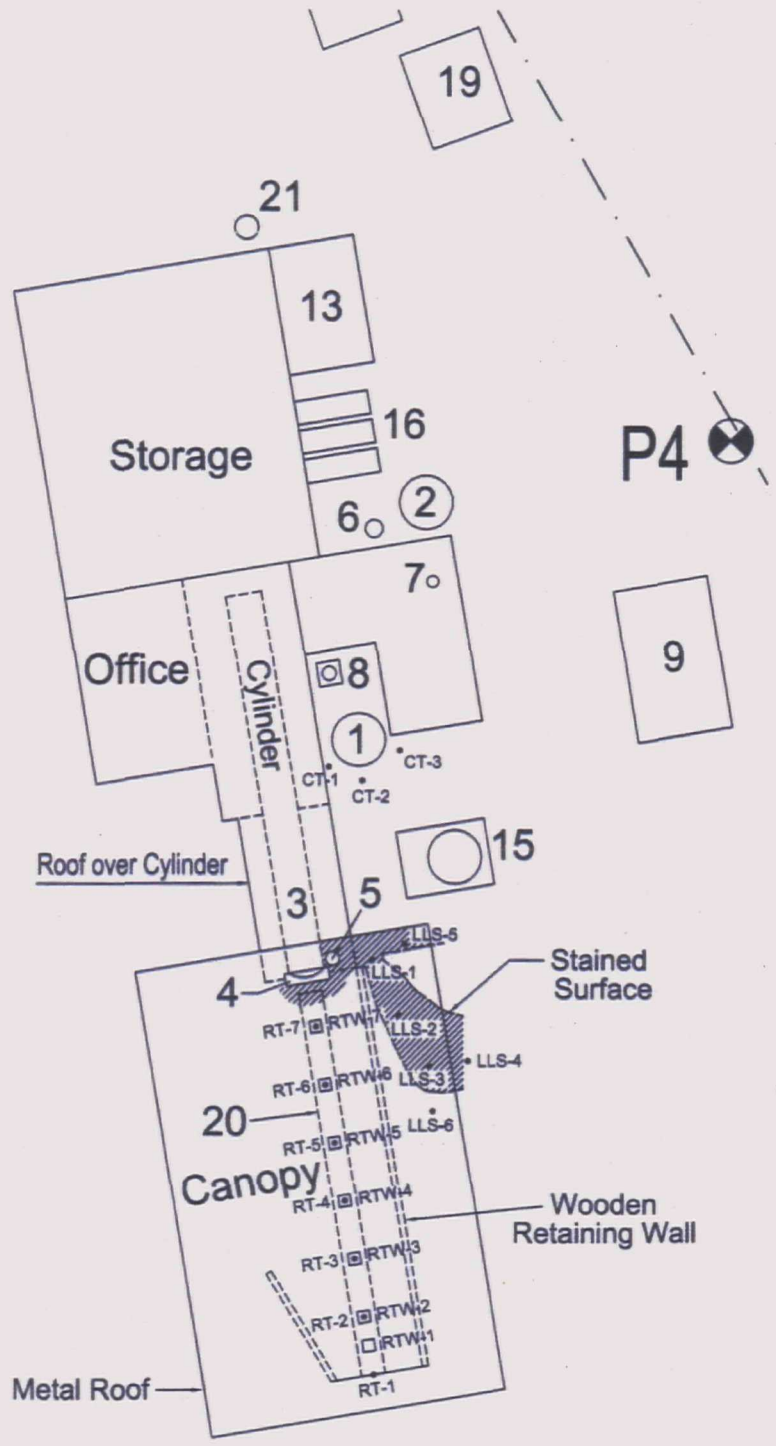
> N 8d - 7' 45" W 679.48'

P2

P4

FACILITY LEGEND

- 1 Creosote Work Tank, Vertical
 - 2 Creosote Storage Tank, Vertical
 - 3 Treatment Cylinder
 - 4 Drip Pan
 - 5 Drip Pan Sump
 - 6 Treatment Cylinder Sump
 - 7 Distillation Evaporator
 - 8 Condenser, Mounted on Scaffolding
 - 9 Concrete Holding Tank (Water)
 - 10 Steel Settling Tank (REMOVED)
 - 11 Lagoon/Surface Impoundment (CLOSED)
 - 13 Drum Storage Area
 - 16 Overflow Creosote Tanks, Horizontal (EMPTY)
 - 17 Wood Debarker (Old)
 - 18 Wood Debarker (New)
 - 19 Wood Chip Collector
 - 20 Railway
 - 21 Cotton Rope Draw Well (UNUSED)
- Holcomb Creosote Facility Boundary
- ⊗ Type II Monitoring Well
- ⊙ Piezometer



PROJECT:

HOLCOMB CREOSOTE

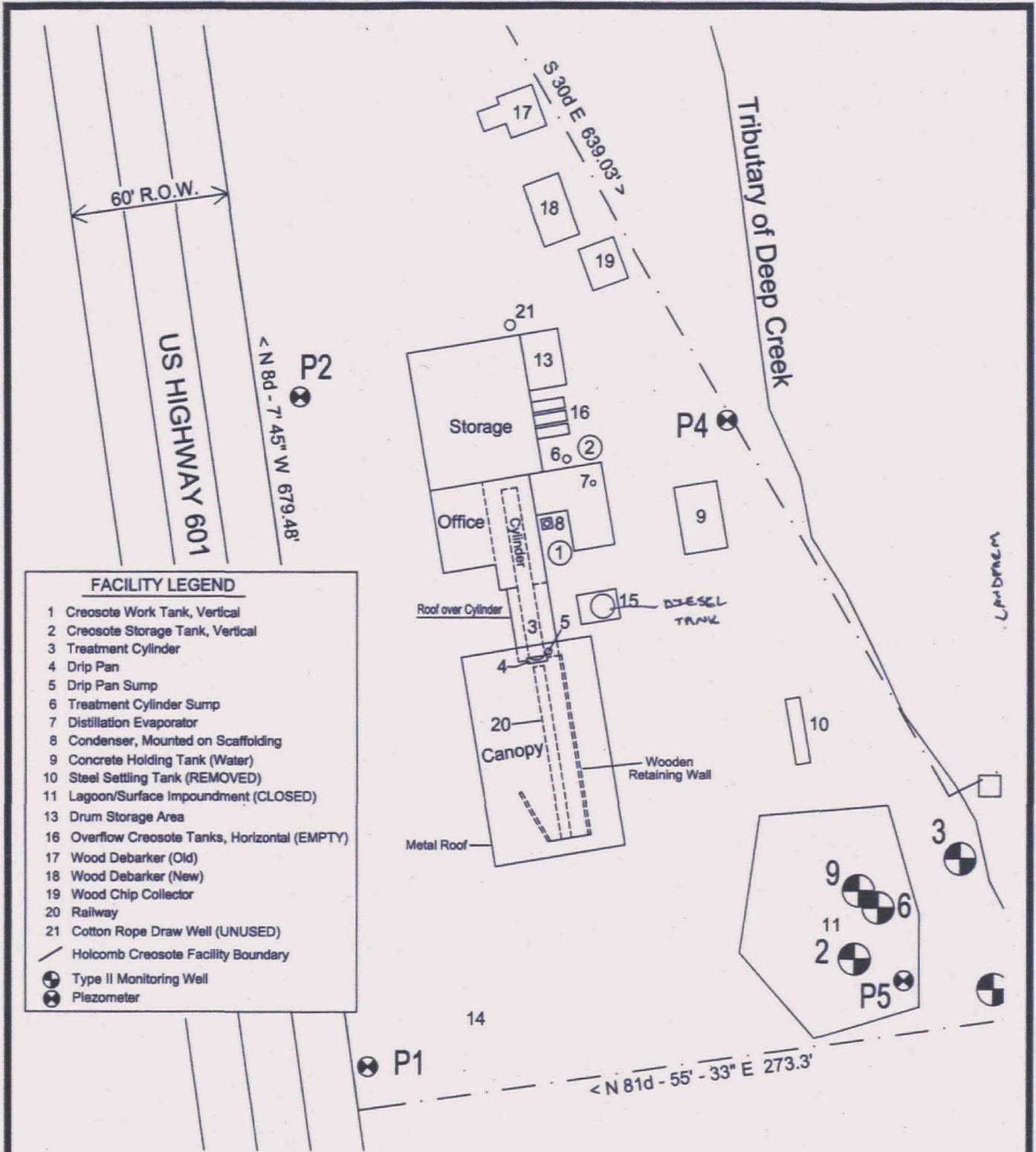
TITLE:

Site Map
of
Sampling Locations



Northwest GeoScience P.C.
Applied Earth Scientists
P.O. BOX 6418
High Point, NC 27262

LOCATION:	Yadkinville, N.C.	APPROVED BY:	ABN
PROJECT #:	09-111	DRAWN BY:	RLJ
SCALE:	1" = 30'	DATE:	7/10
		FIGURE:	2



	PROJECT:	HOLCOMB CREOSOTE
	TITLE:	Site Map of Production Area



Northwest GeoScience P.C. Applied Earth Scientists P.O. BOX 6418 High Point, NC 27262		
LOCATION:	Yadkinville, N.C.	APPROVED BY: ABN
PROJECT #:	09-111	DRAWN BY: RLJ
SCALE: 1" = 50'	DATE: 7/10	FIGURE: 1