138SERBSF10,609

138SERBSF10,609

Site Name (Subject):	OLD ATC REFINERY
Site ID (Document ID):	NCD986186518
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Date of Document:	12/11/1997
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Program (Document Group):	SERB (SERB)
Document Category:	FACILITY

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MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: December 11, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP and Rusty Harris-Bishop (Superfund) arrived onsite at 15:30, meeting with Todd Wolpert (USCG) and Mike Taylor (EPA OSC). SFP observed cut scrap metal from Tank # 80001 being loaded for off-site transport. SFP opted not to tour the site that day, due to limited activity.

Mike Taylor reported that the next tank slated for demolition was # 55014, followed by # 55015 and the Refractory Tower. He anticipated the completion of product transfer line removal at the end of the week. The unofficial estimate was that 5 miles of line had been decontaminated, and that most of it had contained product prior to decontamination.

MT reported that an 8-foot-deep test pit had been excavated behind Tanks # 55014 and # 55015. The excavation encountered evidence of tank bottom sludge, construction/demolition waste, asbestos, and railroad ties. Soil in the Tank # 80003 area was to be landfarmed onsite, but no other soil-related activity was expected in the near future. SFP and RH-B left the site at 16:45.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: November 19, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP spoke by telephone with Petty Officer Weldon of USCG (910-251-1886). No OSC was on site that day. Officer Weldon reported that cleaning of the product transfer conduits was the only activity occurring onsite. The operation was set to shut down from 11/20 to 12/1, and again on 12/21 .

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: October 21, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP arrived onsite 15:15, meeting with USCG Petty Officer Weldon (No EPA OSC was present). SFP and Weldon toured the sitein Level D protection. SFP observed and photographed the following items:

* Trenches dug in the former areas of Tanks # 80002 and # 80003, to facilitate product recovery from the shallow water table.

* A contractor crew working (in confined space) to power-wash the interior of Tank # 80001.

* Former points of leakage visible on the west side of Tank # 10009, from which product had been transferred.

* Cleaning of product transfer lines in the former pump pit area, southeast of Tank # 40013.

* Demolition of Tank # 55014, using oxyacetylene torches. Surface spills of product from a transfer line were visible on the ground surface southwest of the tank.

SFP left the site at 16:00.

Note: Shortly after 16:00, a cutting torch ignited a petroleum-saturated gasket in Tank # 55014, resulting in a fire which was brought under control by the Wilmington Fire Department. No injuries resulted from the fire.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

Date: 10/31/97
Number of Sheets: 9
(Including cover sheet)

TO: STUART PARKER, NCDEHNR (919) 733-4811
MSO WILMINGTON - 815 4523
LT HANZALIK, GULF STRIKE TEAM (334) 639-6610

FAX No.:

Phone No.:

From: GRANT WELDIN - USCG GULF STRIKE TEAM

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments:
POLREPS 37 + 38 + 36

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV
POLLUTION REPORT (POLREP)

POLREP #38
Old ATC Refinery Site
Surry Street, Wilmington, N.C.

To: Myron D. Lair, Chief, ERRB, Region 4
Michael Norman, ERRB
Dan Thorton, EPA-HQ
Michael Henderson, ERRB
EPA Region 4 Regional Response Center

cc: Bruce Nicholson, NCDEHNR
Capt. J. Williams, USCG, MSO-Wilmington

From: Christopher Militscher, OSC
Michael Taylor, OSC

Date: October 31, 1997
Period covered: 10/27 to 10/31/97

I. BACKGROUND

Response Authority: CERCLA; Fund-lead
NPL Status: Non-NPL
Site No.: 04YR
Contractor Personnel On-Site: 15
USCG-GST: 2
CCO's Contractor: 4

Weather: Conditions generally cooler and showers in the early part of the week.

II. SITUATION:

A. See previous POLREPs for additional details of response.

B. Additional information has been obtained the last few weeks which has potentially increased the scope of work for this removal action. Wastes found by the OSC on the floating roofs of numerous tanks and that some of these wastes contain previously unsuspected heavy metals (i.e. mercury), will potentially increase response costs and the time necessary to perform this removal action.

C. On 10/30, EPA OSCs learned that the RP's motion and request to extend discovery was denied by the U.S. District Court Eastern District of N.C. The RP's request to EPA to allow site access for tank testing on 7 ASTs as part of that discovery was also denied. This potentially "uncomplicates" EPA's efforts to perform a thorough removal action at the site.

III. SITE ACTIVITIES:

A. Earth Tech continued torch cutting of pipelines and draining, dismantling and deconning others. Approx. 3,325 ft. of decontaminated pipeline has been staged for recycling. Earth Tech continued air flushing pipelines between the pump pit and the refractory tower. Approx. 7,800 ft. of pipeline has been air flushed. Earth Tech has drained and disconnected another 9,070 ft. of pipeline.

B. Earth Tech continued cleaning sludge materials from tank #1. A confined space entry was made by the OSC this week and there appears to be several more days of cleaning required to complete this tank. Wastes from tank #1 are being consolidated into tank #8.

C. Earth Tech continued treating the tank 2 & 3 area and to date has treated 651,000 gallons of contaminated water. Approx. 110 gallons of waste has accumulated and will be consolidated with other wastes.

D. Sample results from the floating roof tops of tanks 4 & 5 were received on 10/30 and the wastes contained elevated levels of lead and mercury. Tank 4 also contained elevated levels of chromium. The source of the mercury is unknown and presents a potentially very difficult and costly problem for ultimate treatment and disposal. Furthermore, the presence of this contaminant on-site may lead the OSCs to further examine any and all information which was provided to EPA prior to site take-over in June of 1997. Results from the materials found on the floating roofs other tanks (e.g. tanks 6, 7 etc.) are expected next week.

E. OSCs continued coordination with CCO and its demolition contractor OPS this week, including a review of their revised procedures for implementing the workplan and health and safety plan. CCO's cleanup contractor, Four Seasons was on-site and continued cleanup activities in tank 14 after the fire. The waste material from the roof top has the consistency of a tar and has been very difficult to remove efficiently. Approx. 4,850 gallons of oil contaminated water has been transported off-site for disposal.

F. Earth Tech removed 30 cubic yards of contaminated PPE generated from site cleanup activities and this waste was transported to a TSD facility which is in compliance with the CERCLA Off-site Rule.

ESTIMATED COSTS:

ERRS costs as of 10/27/97 were estimated at $815,000.
EPA/GST costs as of 10/27/97 were estimated at $143,000.

V. FUTURE ACTIONS:

A. EPA will continue to address the waste in the storage tanks and pipelines. Contamination and free-floating product underneath

the floors of tanks #2 & #3 will continue to be addressed by EPA. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater in tank #8 will be treated through a carbon filtration system. Contaminated soil will be excavated for potential on-site treatment or off-site disposal. Consolidated wastes contained in tank #8 will also be addressed. Tank 1 is expected to be completely clean by early next week.

B. The GST will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning demolition activities and scrap metal. Four Seasons is expected to continue cleaning tank 14 through the weekend and early next week.

C. Sample results for the wastes on the floating roofs of tanks 6 & 7 are expected the first week of November. Earth Tech will be working on an RFP for waste disposal of the materials found on the floating roofs of tanks 4 & 5.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

POLREP 37
OLD ATC REFINERY
801 SURRY STREET
WILMINGTON, NORTH CAROLINA

TO: Myron D. Lair, Chief ERRB, EPA Region 4
Shane Hitchcock, ERRB
Dan Thornton, EPA HQTRS, ERD Regional Coordinator
Michael Henderson, Region 4 Community Relations
Region 4, Regional Response Center
U.S. Coast Guard, Gulf Strike Team

cc: Capt. J. Williams, USCG, MSO-Wilmington
Bruce Nicholson, NCDEHNR

FROM: Michael Taylor, OSC
Christopher Militscher, OSC

DATE: 24 October 1997

DATES COVERED BY THIS POLREP: 20 October to 24 October 1997

I. BACKGROUND

RESPONSE AUTHORITY: CERCLA
NPL STATUS: NON-NPL
FUND-LEAD

PERSONNEL ON-SITE

ERRS	-	16
USCG/GST	-	2
OPS	-	4
4Seasons	-	4

WEATHER: General conditions were much cooler for this period. Low temperatures in the 30's with highs in the 60's. Continuous rainfall and windy conditions on 22 October.

II. SITUATION

See previous POLREPs for additional details of response.

III. SITE ACTIVITIES

The EPA's contractor, Earth Tech, removed and contained waste material from the pipelines in the tank farm and along the south side of the facility. Earth Tech continued removal of waste in storage tank #1. Approximately 5,800 gallons of waste oil, sludge and water was removed during this week. Temporary

storage of this material is within tank #10. This waste will be transported to a permitted facility in the future.

Waste water from tank #8 continues to be processed and treated through the on-site treatment unit. During this period 38,840 gallons of water has been treated. There continues to be approximately 200,000 gallons of waste water awaiting treatment from tank #8.

Water from recovery trenches located within the former tank #2 and #3 area continues to circulate for the recovery of oil from the contaminated soils. Approximately 600,000 gallons has been processed since inception of this system. Heavy sheening from contaminated soil continues to be evident from the former tank #2 and #3 area. Continual rain on 22 October has flushed more oil into the recovery trenches for collection.

Decontamination procedures continue on recovered piping, valves and scrap metal. A total of 1,000 feet of piping has been dismantled during this period. More than 2,000 feet of insulation along the high viscosity lines has also been removed. All decontaminated material is temporarily staged in designated areas for future recycling.

The contractor, Oilfield Pipe & Supply (OPS), arrived on-site to conduct demolition activities for the property owner on 21 October. OPS initiated demolition work on tank #14, a storage tank previously identified by the EPA as an OPA issue. During demolition and hot cutting of the tank wall sparks from torches used ignited the foam seal around the internal floating roof. The foam seal contained residual oil and sludges from the previous operators activities prior to abandonment in 1986. The storage tank was cleaned from the internal floating roof to the floor in August of 1997 by a separate contractor working for the property owner under a voluntary cleanup action. At approximately 4 pm the fire department arrived on scene from a drill exercise at the adjacent JLM terminal. The fire was extinguished after the fire department applied water through the vents and down the top hatch onto the internal roof.

The USCG Gulf Strike Team, and Earth Tech Remediation evacuated the site and followed the site safety plan accordingly. OPS was also evacuated to the designated areas. There were no injuries and no danger to the surrounding tanks, pipelines or site structures. Continuous air monitoring was conducted due to the smoke and potential release of gases from the burn. The fire department utilized draegar tubes along Front street for potential releases and found no detection of any concerns. For safety precautions a 24 hour fire watch was maintained on site by the crew after the fire department left the property. Earth Tech, the USCG Gulf Strike Team, and the USCG MSO Wilmington, along with the Wilmington fire department responded to this incident quickly and effectively.

Four Seasons Environmental initiated cleanup of the remaining oil and water from storage tank #14 on 24 October. Oil cleanup activities will continue through the week of 27 October.

Confined space entries were conducted by the OSC, ETI and the GST on 23 and 24 October. Tanks 4, 5, 6, 7, 12, 13, and 15

were entered both vertically and horizontally for assessment of potential contamination. Samples were collected from various locations from within the storage tanks. Results are pending laboratory analysis for future response activities by the EPA.

IV. ESTIMATED COSTS

ERRS costs as of 17 October were estimated at $775,000.

V. FUTURE ACTIONS

EPA will continue to address the waste in the storage tanks, pipelines and drums. Contamination under storage tanks #2 and #3 will continue to be recovered via an oil recovery system. The former pump pit area and associated pipelines will be removed. The contents within the pipelines will be identified and removed for disposal. Contaminated waste water from tank #8 will continue to be treated through a carbon filtration system. Contaminated soil will continue to be excavated for potential on-site treatment or off-site disposal. The Gulf Strike Team will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues and recyclable materials.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

POLREP 36
OLD ATC REFINERY
801 SURRY STREET
WILMINGTON, NORTH CAROLINA

TO: Myron D. Lair, Chief ERRB, EPA Region 4
Shane Hitchcock, ERRB
Dan Thornton, EPA HQTRS, ERD Regional Coordinator
Michael Henderson, Region 4 Community Relations
Region 4, Regional Response Center
U.S. Coast Guard, Gulf Strike Team

CC: Capt. J. Williams, USCG, MSO-Wilmington
Bruce Nicholson, NCDEHNR

FROM: Michael Taylor, OSC
Christopher Militscher, OSC

DATE: 20 October 1997

DATES COVERED BY THIS POLREP: 13 October to 18 October 1997

I. BACKGROUND

RESPONSE AUTHORITY: CERCLA
NPL STATUS: NON-NPL
FUND-LEAD

PERSONNEL ON-SITE
ERRS - 16
USCG/GST - 2

WEATHER: Continuous rain and cooler temperatures were persistent throughout the week. Temperatures ranged from the low 70's for the high to the upper 40's for the low. A storm system (Noreaster) developed off the coast of North Carolina over the weekend of 18 October.

II. SITUATION

See previous POLREPs for additional details of response.

III. SITE ACTIVITIES

Earth Tech continued removal actions within the above-ground storage tank #1, the pipelines, and the former pump pit area. Waste material from the storage tank #1 has been transferred into tank #8 and #10 for temporary storage. Approximately 30,000 gallons of material has been transferred from this storage tank.

Compatibility testing was performed prior to this addition of waste material.

The waste water treatment unit continues to treat waste water from storage tank #8. During this period an estimated 21,750 gallons of waste water was treated. There continues to be more than 200,000 gallons of waste water awaiting treatment from tank #8.

More than 50,000 gallons of water from recovery trenches located within the former tank #2 and #3 area continues to circulated for the recovery of oil from the contaminated soils. Approximately 550,000 gallons has been processed since inception of this system. Heavy sheening from contaminated soil continues to be evident from the former tank #2 and #3 area.

The ERRS contractor continues decontamination procedures on recovered piping, valves and scrap metal. A total of 1,500 feet of piping has been removed during this period. Over 750 feet of insulation along the high viscosity lines has also been removed. Decontaminated material is temporarily staged in designated areas for future recycling.

Light oil sheening continues to be observed within the inlet area of the site leading to the Cape Fear River. Due to tidal influences and soil contamination from the site oil sheening has been documented from this facility since the initial response by the U.S. Coast Guard in 1991. This sheening appears more prevalent after substantial rainfalls and high tide. Temporary placement of recovery boom and absorbent pads are being used by the EPA to capture any sheening from the inlet to the river. This area will continue to be observed and addressed during the removal action.

IV. ESTIMATED COSTS

ERRS costs as of 17 October were estimated at $705,000.

V. FUTURE ACTIONS

EPA will continue to address the waste in the storage tanks, pipelines and drums. Contamination under storage tanks #2 and #3 will continue to be recovered via an oil recovery system. The former pump pit area and associated pipelines will be removed. The contents within the pipelines will be identified and removed for disposal. Contaminated waste water from tank #8 will continue to be treated through a carbon filtration system. Contaminated soil will continue to be excavated for potential on-site treatment or off-site disposal. The Gulf Strike Team will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues and recyclable materials.

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV
POLLUTION REPORT (POLREP)

POLREP #35
Old ATC Refinery Site
Surry Street, Wilmington, N.C.

To: Myron D. Lair, Chief, ERRB, Region 4
Michael Norman, ERRB
Dan Thorton, EPA-HQ
Michael Henderson, ERRB
EPA Region 4 Regional Response Center

cc: Bruce Nicholson, NCDEHNR
Capt. J. Williams, USCG, MSO-Wilmington

From: Christopher Militscher, OSC
Michael Taylor, OSC

Date: October 10, 1997
Period covered: 10/4 to 10/10/97

I. BACKGROUND

Response Authority: CERCLA; Fund-lead
NPL Status: Non-NPL
Site No.: 04YR
Contractor Personnel On-Site: 15
USCG-GST: 2

Weather: Conditions generally cooler and in the mid 80's with lows in the 60's.

II. SITUATION:

A. See previous POLREPs for additional details of response.

III. SITE ACTIVITIES:

A. Earth Tech continued torch cutting of pipelines and draining and deconning others. Earth Tech continued vacuum pumping of viscous materials from tank 1 into tank 8 for consolidation and treatment. Approx. 9,000 gallons of materials were transferred this week. Confined space operations during this removal work have been going extremely well. Earth Tech re-established wastewater treatment system #2 and began flushing and treating in tank 2/3 areas.

B. Earth Tech has reset WWTS #1 for tank #8 once transfer operations from tank #1 are complete. Alum will be applied early next week to tank #8. The treatability study showed positive

results for this pre-treatment measure. This week, approx. 6,000 gallons of crude and water from the pipelines were pumped into tank #10 for consolidation with like materials.

C. To date, approx. 8,500 feet of pipeline has been drained, flushed and dismantled. Approx. 2,000 feet of this pipeline was torch cut this week between tank rows 4 & 8. Insulation continues to be removed as well, including 1,000 feet from the pipelines behind tanks 14 & 15.

D. The GST completed soundings for tank #8 and there is an estimated 300,000 gallons of materials in this tank which will begin treatment next week.

E. OSCs continued coordination with CCO and its demolition contractor OPS this week, including a review of their workplan and and health and safety plan.

IV. ESTIMATED COSTS:

ERRS costs as of 10/9/97 were estimated at $681,000.

V. FUTURE ACTIONS:

A. EPA will continue to address the waste in the storage tanks and pipelines. Contamination and free-floating product underneath the floors of tanks #2 & #3 will continue to be addressed by EPA. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater will be treated through a carbon filtration system. Contaminated soil will be excavated for potential on-site treatment or off-site disposal. Consolidated wastes contained in tank #8 will also be addressed.

B. The GST will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning demolition activities and scrap metal.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

Date: 10-10-97
Number of Sheets: 03
(Including cover sheet)

TO: BRUCE NICHOLSON NCDEHNR

FAX No.: 919-733-4811

Phone No.:

From: BM1 Goolsby (GST)

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments: POLREP #35

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

POLREP 34
OLD ATC REFINERY
801 SURRY STREET
WILMINGTON, NORTH CAROLINA

TO: Myron D. Lair, Chief ERRB, EPA Region 4
Shane Hitchcock, ERRB
Dan Thornton, EPA HQTRS, ERD Regional Coordinator
Michael Henderson, Region 4 Community Relations
Region 4, Regional Response Center
U.S. Coast Guard, Gulf Strike Team

CC: Capt. J. Williams, USCG, MSO-Wilmington
Bruce Nicholson, NCDEHNR

FROM: Michael Taylor, OSC
Christopher Militscher, OSC

DATE: 03 October 1997

DATES COVERED BY THIS POLREP: 29 September to 03 October 1997

I. BACKGROUND

RESPONSE AUTHORITY: CERCLA
NPL STATUS: NON-NPL
FUND-LEAD

PERSONNEL ON-SITE
ERRS - 15
USCG/GST - 2

WEATHER: Heavy thunderstorms and flooding occurred through the weekend of 27 September. Temperatures ranged from the low 80's for the high and 50's for the low during this period.

II. SITUATION

See previous POLREPs for additional details of response.

III. SITE ACTIVITIES

The ERRS contractor, Earth Tech, has continued removal actions within the former pump pit area and the former 16 inch crude oil line. Waste material within the former crude pipeline continued to be drained with the accumulation of a significant volume of petroleum waste. The ERRS contractor collected more than 12,000 gallons of waste material from this pipeline over a three day period.

The contents of storage tank #9, generated from the collection of the tank farm pipelines, was transferred to tank #11 after this tank's structural integrity was discovered to be badly deteriorated. Compatibility tests are being performed on all material from the pipelines prior to temporary storage with existing waste streams. Segregation of waste from the crude oil pipelines and the lighter petroleum pipelines will continue throughout the recovery process.

The wastewater treatment unit is currently treating waste water from storage tank #8. This unit was transferred from storage tank #1 on 01 October, upon completion of water treatment from this tank. The total volume of wastewater treated from tank #1 is 456,151 gallons. There is an estimated 230,000 gallons of wastewater and more than 40,000 gallons of adulterated oil and sludge stored in tank #8 from the previous actions of the responsible party.

The oil recovery unit located within the former tank #2 and #3 area continues to be operational. Heavy rainfall resulted in localized flooding within the extreme lower area of the site during this period. The recovery system has processed approximately 40,000 gallons this week. A total of 439,000 gallons has been processed since inception of this system. Heavy sheening from contaminated soil continues to be evident from the former tank #2 and #3 area. There is significant sheening from the northern portion of the property parallel with the Unocal facility after a heavy rainfall.

The ERRS contractor continues decontamination procedures on recovered piping, valves and scrap metal. These items are temporarily staged in a designated area for future recycling. All wastewater generated from the decon area is processed through the on-site wastewater treatment system.

CCO has secured a contractor for removal and recycling of site storage tanks, pipelines and valves. Items and material designated for recycling will be reviewed and assessed by EPA prior to release from the site.

IV. ESTIMATED COSTS

ERRS costs as of 01 October were estimated at $615,000.

V. FUTURE ACTIONS

EPA will continue to address the waste in the storage tanks, pipelines and drums. Contamination under storage tanks #2 and #3 will continue to be recovered via an oil recovery system. The former pump pit area and associated pipelines will be removed. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater from tanks #1 and #8 will continue to be treated through a carbon filtration system. Contaminated soil will continue to be excavated for potential on-site treatment or off-site disposal. The Gulf Strike Team will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues and recyclable materials.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPA REGION IV
OIL & HAZARDOUS SUBSTANCES
EMERGENCY RESPONSE AND REMOVAL

Date: 10-3-97
Number of Sheets: 03
(Including cover sheet)

NATIONAL STRIKE FORCE NSF U.S. COAST GUARD GULF STRIKE TEAM

TO: [redacted] BRUCE NICHOLSON

FAX No.: [redacted] 919- 733-4811

Phone No.:

From: Bml Goolsby

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments: GREETINGS FROM ATC

POL.REP

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV
POLLUTION REPORT (POLREP)

POLREP #33
Old ATC Refinery Site
Surry Street, Wilmington, N.C.

To: Myron D. Lair, Chief, ERRB, Region 4
Michael Norman, ERRB
Dan Thorton, EPA-HQ
Michael Henderson, ERRB
EPA Region 4 Regional Response Center

cc: Bruce Nicholson, NCDEHNR — 919-571-4148
Capt. J. Williams, USCG, MSO-Wilmington

From: Christopher Militscher, OSC
Michael Taylor, OSC

Date: September 26, 1997
Period covered: 9/20 to 9/26/97

I. BACKGROUND

Response Authority: CERCLA; Fund-lead
NPL Status: Non-NPL
Site No.: 04YR
Contractor Personnel On-Site: 14
USCG-GST: 2

Weather: Conditions generally cooler and in the mid 80's with lows in the 60's. Heavy precipitation occurred for the later part of week but did not halt work.

II. SITUATION:

A. See previous POLREPs for additional details of response.

III. SITE ACTIVITIES:

A. No one from the RP, Axel Johnson, showed up on 9/22 to perform tank testing. The issue regarding the RP's site access and tank testing is temporarily on hold.

B. Earth Tech continued work on the dismantling of the pump pit, draining pipelines, removing and treating of oil and contaminants from tank #80001 via the wastewater treatment system, and performed oil recovery from the areas around tanks #80002 & #80003.

C. Earth Tech has treated approximately 45,530 gallons of wastewater from tank #80001 this week. To date, an estimated

452,300 gallons has been treated. WWT system #2 treated 48,000 gallons this week to total 399,000 gallons to date.

D. Earth Tech continued work on the draining and dismantling of the pipelines. To date, 5,750 feet of pipeline has been drained, flushed and dismantled. Leaded product continues to be recovered. Gasoline and light ends are being stored in tank #9 and total approximately 6,000 gallons. Of the 5,750 feet, approximately 950 feet has been decontaminated and staged for removal. Insulation continues to be removed as well.

E. EAD's Beswick and Cox were on-site on 9/23 to interview former ATC employees, meet with CCO's Linda Carroll and to perform a site walk-thru with the OSC. A very informative videotape was provided to EPA by former ATC employee Don Arthur. Based upon his and other information, numerous tanks had leaked while ATC was operational.

F. OSC and GST performed additional sampling on-site on 9/25, including the wastes and contamination under tanks #2 & #3 and the "seep" along the roadway below tank #1. It is suspected that xylene may be migrating during rain events towards the ATC property and is causing a sheen in recovery trench #1.

G. On 9/26, tank #9 sprung a small leak and was immediately discovered and quickly plugged by Earth Tech. This tank has visible signs of severe corrosion and leaded gasoline and other "light ends" from the pipelines will now have to be transferred to either tank #10 or #11 after Earth Tech inspects them.

H. CCO's and EPA's immediate efforts to continue removal of scrap and to dismantle the empty tanks and other process equipment by CCO's contractor have been put on hold due to Axel Johnson's continued legal actions against CCO which are impacting cleanup plans for the site. However, OSCs are continuing to coordinate with CCO on getting their demolition contractor on-site within the next week or two.

IV. ESTIMATED COSTS:

ERRS costs as of 9/23/97 were estimated at $564,000. A provision rate for WWT system #1 has been proposed by Earth Tech at $75.00 per day. This issue needs to be finalized with the CO and contractor.

V. FUTURE ACTIONS:

A. EPA will continue to address the waste in the storage tanks and pipelines. Contamination and free-floating product underneath the floors of tanks #2 & #3 will continue to be addressed by EPA. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater will be treated through a carbon filtration system. Contaminated soil will be excavated for potential on-site treatment or off-site disposal. Wastes from PRP activities contained in tank #8 will also be addressed.

B. The GST will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning demolition activities and scrap metal, although there will be a delay in the current plans as previously mentioned in this report.

C. OSCs are preparing a cost estimate regarding tank and process equipment dismantling in the event that CCO is unable to perform this work. The potential scope of work for this removal action continues to be expanded based upon further site characterization and other sources of information regarding leaks and contamination, past dumping practices by ATC, etc.

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV
POLLUTION REPORT (POLREP)

POLREP #32
Old ATC Refinery Site
Surry Street, Wilmington, N.C.

To: Myron D. Lair, Chief, ERRB, Region 4
Michael Norman, ERRB
Dan Thorton, EPA-HQ
Michael Henderson, ERRB
EPA Region 4 Regional Response Center

cc: Bruce Nicholson, NCDEHNR
Capt. J. Williams, USCG, MSO-Wilmington

From: Christopher Militscher, OSC
Michael Taylor, OSC

Date: September 19, 1997
Period covered: 9/14 to 9/19/97

I. BACKGROUND

Response Authority: CERCLA; Fund-lead
NPL Status: Non-NPL
Site No.: 04YR
Contractor Personnel On-Site: 15
USCG-GST: 2

Weather: Conditions generally cooler and in the mid 80's with lows in the 60's. Heavy precipitation and thunderstorms delayed work twice this week.

II. SITUATION:

A. See previous POLREPs for additional details of response.

B. OSCs responded to a request through CCO for site access for Axel Johnson to perform tank testing on 7 ASTs beginning on 9/22/97. OSCs prepared memorandum to EAD's Beswick and EPA management regarding this issue and further coordinated with them. This request, subsequently, disrupted OSC and USCG oversight duties while the issue was being addressed. Until specified concerns can be resolved, OSCs are denying access to Axel Johnson's contractor.

III. SITE ACTIVITIES:

A. Earth Tech continued work on the dismantling of the pump pit, draining pipelines, removing and treating of oil and contaminants from tank #80001 via the wastewater treatment system, and performed

oil recovery from the areas around tanks #80002 & #80003.

B. Earth Tech has treated approximately 64,000 gallons of wastewater from tank #80001 this week. To date, an estimated 403,000 has been treated. An estimated 100,000 gallons remains in this tank.

C. Earth Tech continued work on the draining and dismantling of the pipelines. To date, 3,750 feet of pipeline has been drained, flushed and dismantled. Leaded product continues to be recovered. Gasoline and light ends are being stored in tank #9 and total approximately 5,000 gallons. Of the 3,750 feet, approximately 750 feet has been decontaminated and staged for removal. Insulation continues to be removed as well.

D. Oil recovery efforts from the trenches and pits around tanks #80002 & #80003 were delayed this week due to flooding around the treatment system. Heavy rainfall on 9/16 and 9/18 disrupted collection and treatment operations, but it is expected to be re-started today.

E. During a site walk thru on 9/17, OSC observed a heavy sheen around tanks #6 & #7. One area of pipeline between these two tanks shows evidence of past leakage. Earth Tech is working to minimize this leakage while they work on the pipelines. Drum wastes left on site by Axel Johnson's contractor have been bulked with other oil wastes in tank #8.

F. OSC and GST inspected tank #14 on 9/18. This tank cleaning was successful by CCO's contractor Four Seasons.

G. CCO's and EPA's efforts to continue removal of scrap and to dismantle the empty tanks by CCO's contractor have been put on hold due to Axel Johnson's continued legal actions against CCO which are impacting cleanup plans for the site.

IV. ESTIMATED COSTS:

ERRS costs as of 8/28/97 were estimated at $523,000. EPA/GST costs as of 8/28/97 estimated at $107,000.

V. FUTURE ACTIONS:

A. EPA will continue to address the waste in the storage tanks and pipelines. Contamination and free-floating product underneath the floors of tanks #2 & #3 will continue to be addressed by EPA. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater will be treated through a carbon filtration system. Contaminated soil will be excavated for potential on-site treatment or off-site disposal. Wastes from PRP activities contained in tank #8 will also be addressed.

B. The GST will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site

activities with the property owner concerning demolition activities and scrap metal, although there will be a delay in the current plans as previously mentioned in this report.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

Date: 9-19-97
Number of Sheets: 10
(Including cover sheet)

TO: Stuart Parker Jr, NCDEH;NR

FAX No.: 919-733-4811

Phone No.:

From: OSC Militscher

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments: Pages # 31 & # 32

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

POLREP 31
OLD ATC REFINERY
801 SURRY STREET
WILMINGTON, NORTH CAROLINA

TO: Myron D. Lair, Chief ERRB, EPA Region 4
Shane Hitchcock, ERRB
Dan Thornton, EPA HQTRS, ERD Regional Coordinator
Michael Henderson, Region 4 Community Relations
Region 4, Regional Response Center
U.S. Coast Guard, Gulf Strike Team

cc: Capt. J. Williams, USCG, MSO-Wilmington
Bruce Nicholson, NCDEHNR

FROM: Michael Taylor, OSC
Christopher Militscher, OSC

DATE: 11 September 1997

DATES COVERED BY THIS POLREP: 02 September to 11 September 1997

I. BACKGROUND

RESPONSE AUTHORITY: CERCLA
NPL STATUS: NON-NPL
FUND-LEAD

PERSONNEL ON-SITE
ERRS - 15
USCG/GST - 2
CCO contr.- 5

WEATHER: Temperatures ranged from the 90's for the high and 50's for the low during this period. Heavy thunderstorms and lightning occurred on 03 and 11 September.

II. SITUATION

See previous POLREPs for additional details of response.

III. SITE ACTIVITIES

EPA's ERRS contractor, Earth Tech, continued removal actions within the former pump pit area. Waste material within the pipelines continued to be drained, collected and dismantled. Additional tetraethyl lead pipelines were discovered underground during this period. These lines are being unearthed and drained. A substantial quantity of flammable material has been collected from the pipelines. A six inch pipeline yielded an estimated 500 gallons of waste material. Compatibility tests are being performed on all material from the pipelines prior to temporary storage within tank #9. Elevated organic levels continue to exist within the pump pit area from the recovery system. Appropriate safety measures are being taken by the contractor for the potential threats that exist in this area.

The wastewater treatment unit, from storage tank 80001, has treated approximately 310,000 gallons of wastewater. There is an estimated 125,000 gallons of wastewater remaining in tank 80001. More than 270,000 gallons of adulterated oil, water, and sludge is stored within tank #8. This wastewater will be addressed after tank 80001 is completed.

The oil recovery unit established for the former tank #2 and #3 area continues to be operational. Recovery of oil from the shallow groundwater table is accumulating slowly due to the "recharge" rate of the groundwater in the #3 trench. Approximately 100 gallons of waste oil is currently collected in the holding tanks. This recovery system will be enhanced with additional water to expedite oil recovery.

Four Seasons Environmental Services, continues removal of sludge and solids from tank #14. Pretreatment and stabilization of the sludges has continued after the holiday break. A final tank cleaning was completed on 10 September. All removal actions for tank #14 will be completed by 12 September.

IV. ESTIMATED COSTS

ERRS costs as of 03 September were estimated at $485,000.

V. FUTURE ACTIONS

EPA will continue to address the waste in the storage tanks, pipelines and drums. Contamination under storage tanks #2 and #3 will be recovered via an oil recovery system. The former pump pit area and associated pipelines will be removed. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater from tanks #1 and #8 will continue to be treated through a carbon filtration system. Contaminated soil will continue to be excavated for potential on site treatment or off site disposal. The Gulf Strike Team will continue to provide on site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues and scrap metal. Additional equipment, which includes a vacuum truck, will be mobilized to the site for addressing the removal of pipelines and tank contents.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

Date: 29 AUG 97
Number of Sheets: 3
(Including cover sheet)

TO: Steward F. Parker Jr. N.C. Dept of Env. Health

FAX No.: 919-733-4811

Phone No.:

From: Mk2 Phil Hand

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments: POLREP # 30

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV
POLLUTION REPORT (POLREP)

POLREP #30
Old ATC Refinery Site
Surry Street, Wilmington, N.C.

To: Myron D. Lair, Chief, ERRB, Region 4
Michael Norman, ERRB
Greg Weigel, EPA-HQ
Michael Henderson, ERRB
EPA Region 4 Regional Response Center

cc: Bruce Nicholson, NCDEHNR
Capt. J. Williams, USCG, MSO-Wilmington

From: Christopher Militscher, OSC
Michael Taylor, OSC

Date: August 29, 1997
Period covered: 8/25 to 8/29/97

I. BACKGROUND

Response Authority: CERCLA; Fund-lead
NPL Status: Non-NPL
Site No.: 04YR
Contractor Personnel On-Site: 11
USCG-GST: 2
CCO Contractors: 4

Weather: Conditions generally cooler and in the mid 80's with lows in the 60's. No precipitation this week.

II. SITUATION:

A. See previous POLREPs for additional details of response.

III. SITE ACTIVITIES:

A. Earth Tech continued work on the dismantling of the pump pit, the removal and treatment of oil and contaminants from tank #80001 via the wastewater treatment system, and performed oil recovery from the areas around tanks #80002 & #80003.

B. Earth Tech has treated approximately 286,100 gallons of wastewater from tank #80001 to date. The addition of 500 lbs. of alum to the tank greatly enhanced the settlement of TSS and the efficiency of the treatment system has improved. Treatment volumes exceeded 10,000 gallons per day for the first time during this reporting period.

C. Earth Tech continued work on the draining and dismantling of the pipelines. Leaded product continues to be recovered. It appears that many of the pipelines had been flushed with leaded gasoline at one time.

D. Oil recovery efforts from the trenches and pits around tanks #80002 & #80003 have been fairly successful to date. To date, approximately 231,000 gallons of water have been treated and re-applied. However, Earth Tech and the OSCs continue to evaluate this system for improved efficiency. Not only is this physical separation method working, but the reduction of the high level of contaminants in the trenches has enhanced biological activity of pollutants. Algae growth appears to be assisting in the reduction of the overall pollution load in these areas. Some of the more heavily contaminated areas may be isolated and then removed and stockpiled with other staged soils.

E. Earth Tech and the OSCs continued worked on the finalization of plans for ultimate transportation and disposal of wastestreams. Several potential wastestreams have been identified and include the following:

ATCWS 1: Non-haz PPE/debris; Arrangements completed
ATCWS 2: Non-haz oil/sludges; TBD
ATCWS 3: Asbestos; Arrangements in progress
ATCWS 4: Contaminated scrap/debris; TBD
ATCWS 5: Contaminated soil: TBD
  A. Non-haz
  B. Haz
ATCWS 6: Haz oil/gasoline; TBD
ATCWS 7: Spent carbon; TBD

Some of these wastestrams may be combined if analytical results indicate compatability. Also, haz soils may be treated on-site prior to T & D to render them non-haz (i.e. to meet TCLP and land ban restrictions).

As a planning estimate, approximately 12,000 cubic yards has recently been estimated for the total of contaminated soils. This includes the soils by tanks #80002 & #80003, the refractory tower area, the area below the refractory tower, the area by tanks #80006 & #80007, and the buried wastes in the pit in "Area 5". The estimate may change depending upon additional sampling and further site characterization.

F. CCO's contractor continued work on cleaning tank #14. Following appropriate fire and safety measures, Four Seasons cut a 10-foot hole in the tank to allow a bobcat to enter the tank. The GST performed confirmatory LEL/O_2 monitoring after Four Seasons had performed their monitoring. Continuous air monitoring, fire watch and engineering controls were employed while the bobcat was used to scrap and consolidate the sludges in the tank. Materials were collected using a vacuum truck and then solidified in a lined sludge box. This operation has been very successful to date and

has greatly improved the efficiency of cleaning the tank sludges.

G. CCO's demolition contractor, D.H. Griffin, is expected on-site in the next two weeks to begin a coordinated removal of other ASTs. The OSCs have reviewed and commented on their proposed workplan and have coordinated with the property owner on appropriate clarifications.

IV. ESTIMATED COSTS:

ERRS costs as of 8/28/97 were estimated at $428,000. EPA/GST costs as of 8/28/97 estimated at $87,000.

V. FUTURE ACTIONS:

A. EPA will continue to address the waste in the storage tanks, pipelines and drums. Contamination and free-floating product underneath the floors of tanks #2 & #3 will continue to be addressed by EPA. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater will be treated through a carbon filtration system. Contaminated soil will be excavated for potential on-site treatment or off-site disposal. Wastes from PRP activities contained in tank #8 will also be addressed.

B. The GST will continue to provide on-site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues, demolition activities and scrap metal.

C. OSCs will continue to monitor progress and actions of CCO's contractors, including Four Seasons and D.H. Griffin. It is anticipated that the work on tank #14 by CCO and Four Seasons will be completed within the next two weeks.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

Date: 25 AUG 97
Number of Sheets: 3
(Including cover sheet)

TO: Steward F. Parker Jr.
N.C. Dept of Env. Health

FAX No.: 919-733-4811

Phone No.:

From: MK2 Phil HAND

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments: POLREP #29

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

POLREP 29
OLD ATC REFINERY
801 SURRY STREET
WILMINGTON, NORTH CAROLINA

TO: Myron D. Lair. Chief ERRB. EPA Region 4
Shane Hitchcock, ERRB
Greg Weigel, EPA HQTRS, ERD Regional Coordinator
Michael Henderson, Region 4 Community Relations
Region 4, Regional Response Center
U.S. Coast Guard, Gulf Strike Team

cc: Capt. J. Williams, USCG, MSO-Wilmington
Bruce Nicholson, NCDEHNR

FROM: Michael Taylor, OSC
Christopher Militscher, OSC

DATE: 22 August 1997

DATES COVERED BY THIS POLREP: 16 August to 22 August 1997

I. BACKGROUND

RESPONSE AUTHORITY: CERCLA
NPL STATUS: NON-NPL
FUND-LEAD

PERSONNEL ON-SITE
ERRS - 10
USCG/GST - 2
CCO contr.- 8

WEATHER: Temperatures in the low to mid-90's during this period. Heavy thunderstorms and lightning occurred on the 18th, 20th and 21 August.

II. SITUATION

See previous POLREPs for additional details of response.

III. SITE ACTIVITIES

EPA issued a press release to the public on 22 August. The release is for the purpose of providing updated information regarding ongoing site removal actions conducted by ERRB.

Removal actions conducted by Earth Tech during this period continued with the dismantling and removal of the pump pit area.

The tetraethyl lead pipelines were drained and removed. Substantial quantities of flammable material is being recovered and collected from the pipelines. All material is temporarily contained within storage tank #9 after appropriate field tests are performed. Elevated organic levels exist within the tank farm as detected by direct reading instruments. Health and safety measures continue to be taken by the crew for the potential threats that exist in this area.

Wastewater treatment through unit #1 continues to treat material from storage tank 80001. To date, approximately 245,000 gallons of wastewater has been treated on-site. The treatment system has experienced periods of inoperation due to the elevated level of TSS. A flocculating agent, aluminum ammonium sulfate, will be added to tank 80001 to remove the TSSs and improve the operation of the wastewater treatment unit.

The oil recovery unit for the former tank #2 and #3 area has been assembled. Earth Tech has initiated irrigation of the #3 area during this period. Upgrades will be installed to automate the system for a continual recovery operation.

Earth Tech has prepared IFB's for the services of a vac-truck and T&D of hazardous debris. Additional IFB's will be prepared for site containers and disposal of other waste streams.

The property owner's contractor, Four Seasons Environmental Services, continues removal of sludge and solids from tank #14. Pretreatment and stabilization of the sludges was initiated on 21 August. This action is anticipated to continue through 08 September.

A second contractor for the owner, D.H. Griffin, removed all staged scrap metal accumulated from tank #2 and #3 during this period. Multiple loads of scrap steel were transported off-site via dump trailers for recycling.

IV. ESTIMATED COSTS

ERRS costs as of 21 August were estimated at $395,000.

V. FUTURE ACTIONS

EPA will continue to address the waste in the storage tanks, pipelines and drums. Contamination under storage tanks #2 and #3 will be recovered via an oil recovery system. The former pump pit area and associated pipelines will be removed. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater from tanks #1 and #8 will continue to be treated through a carbon filtration system. Contaminated soil will continue to be excavated for potential on site treatment or off site disposal. The Gulf Strike Team will continue to provide on site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues and scrap metal. An action memorandum for increased funding is currently in routing for review and authorization.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

POLREP 25
OLD ATC REFINERY
801 SURRY STREET
WILMINGTON, NORTH CAROLINA

TO: Myron D. Lair, Chief ERRB, EPA Region 4
Shane Hitchcock, ERRB
Greg Weigel, EPA HQTRS, ERD Regional Coordinator
Michael Henderson, Region 4 Community Relations
Region 4, Regional Response Center
U.S. Coast Guard, Gulf Strike Team

cc: Capt. J. Williams, USCG, MSO-Wilmington
Bruce Nicholson, NCDEHNR

FROM: Michael Taylor, OSC
Christopher Militscher, OSC

DATE: 25 July 1997

DATES COVERED BY THIS POLREP: 21 July to 25 July 1997

I. BACKGROUND

RESPONSE AUTHORITY: CERCLA
NPL STATUS: NON-NPL
FUND-LEAD

PERSONNEL ON-SITE
ERRS - 12
USCG/GST - 2
CCO contr. - 4

WEATHER: Temperatures reached into the low to mid 90's with extreme humidity. Remnants from Hurricane Danny affected the site on 24 July. Severe thunderstorms and lightning temporarily stopped work on 23 and 24 July.

II. SITUATION

See previous POLREPs for additional details of response.

III. SITE ACTIVITIES

Cleaning and decontaminating scrap metal on tank #2 and #3 continued during this period. An excavator and grappler was utilized to consolidate and load out all scrap metal into dump trucks. More than seventy percent of the scrap has been staged in designated areas on site for the owner to address at a later date.

An automated water treatment system continues to treat waste water from tank #1. The automated system is setup for operating 24 hours a day. However, due to a high volume of suspended solids and contaminants within the wastewater from tank #1 the system has experienced some nonoperational periods. Modifications to the system have been installed. Representative water samples have been collected daily with composites for the week to be analyzed for specific contaminants. A local laboratory will conduct analysis of the water samples. The contractor is awaiting the initial analytical data from samples collected during the previous reporting period.

A representative water sample from the pretreated liquids in tank #1 was collected on 24 July. Analysis will be conducted to check the effectiveness of the treatment unit.

One 30 yard rolloff box was loaded with nonhazardous waste personal protective equipment, visqueen, crushed drums and debris on 24 July. The majority of the waste was accumulated from the previous site contractor for the PRP, Axel Johnson. The PRP's contractor did not make arrangements for transportation and disposal of this waste stream.

Shrub and debris removal along pipelines continues. Some pipelines and valves located within the pump pit area have been observed leaking material due to heat expansion during the day. Temporary containment measures are instituted until EPA can permanently address these pipelines.

Four Seasons Environmental Services (FSES) was hired by the property owner to remove an estimated 120,000 gallons of oil and sludges from tank #14. FSES initiated this activity on 21 July. Approximately 15,000 gallons of pumpable oil was removed by vac truck and transferred to a rail car for future off site disposal.

IV. ESTIMATED COSTS

ERRS costs as of 24 July were estimated at $250,000.

V. FUTURE ACTIONS

EPA will continue to address the waste in the storage tanks, pipelines and drums. Storage tanks #2 and #3 will be completely removed to address contamination underneath the floors. Oil recovery from the groundwater under tanks #2 and #3 will be addressed utilizing a second treatment unit. Identified asbestos wrapping around the pipelines will be removed. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater from tanks #1 and #8 will continue to be treated through a carbon filtration system. Contaminated soil will continue to be excavated for potential on site treatment or off site disposal. The Gulf Strike Team will continue to provide on site monitoring of contractor activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues and scrap metal.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

Date: 7/29/97
Number of Sheets: 03
(Including cover sheet)

TO: Stuart Parker

FAX No.: 919-733-4811

Phone No.:

From: P.O. R Elkins

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments:

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

POLREP 24
OLD ATC REFINERY
801 SURRY STREET
WILMINGTON, NORTH CAROLINA

TO: Myron D. Lair, Chief ERRB, EPA Region 4
Shane Hitchcock, ERRB
Greg Weigel, EPA HQTRS, ERD Regional Coordinator
Michael Henderson, Region 4 Community Relations
Region 4, Regional Response Center
U.S. Coast Guard, Gulf Strike Team

cc: Capt. J. Williams, USCG, MSO-Wilmington
Bruce Nicholson, NCDEHNR

FROM: Michael Taylor, OSC
Christopher Militscher, OSC

DATE: 19 July 1997

DATES COVERED BY THIS POLREP: 14 July to 19 July 1997

I. BACKGROUND

RESPONSE AUTHORITY: CERCLA
NPL STATUS: NON-NPL
FUND-LEAD

PERSONNEL ON-SITE
ERRS - 13
USCG/GST - 2
STATE - 1

WEATHER: Temperatures consistently reached into the low to mid 90's. Severe thunderstorms and lightning affected the site on 18 July.

II. SITUATION

See previous POLREPs for additional details of response.

III. SITE ACTIVITIES

The ERRS contractor continued scrap metal decontamination on tank #2 and #3. Grapplers and dump trucks were mobilized on 17 July for loading and staging of scrap in designated areas. All decontaminated scrap metal is temporarily staged within the former ATC parking area for future recycling by the property owner.

A water treatment system was initiated on 12 July for wastewater within tank #1. The current treatment system is setup for complete automation and is operating 24 hours a day. Approximately 100,000 gallons has been processed as of 18 July. Representative water samples have been collected daily with composites for the week to be analyzed for specific contaminants. A local laboratory will conduct analysis of the water samples to assure cleanup goals are met.

Excavation of contaminated soil underneath tanks #2 and #3 continue. Visual contamination of soils laden with adulterated crude oil and sludge are temporarily stockpiled within the diked area near tank #3. Elevated air monitoring readings from the flame ionization detector (FID) and the photoionization detector (PID) have been detected in the former tank #2 and #3 areas during excavation. Direct readings have been reported up to 2,000 thousand ppm for organic vapors. Groundwater was encountered under tank #2 at approximately 15 inches in depth. Oil has been discovered floating on the groundwater during excavation. Layers of soil contamination exist under tank #3 to an estimated four feet, which is also the depth to reach the shallow water table.

Two soil samples were collected from tank #2 and #3 on 17 July for further identification of contaminants. The on site chemist prepared the samples for a field screen of possible PCBs. The field screen test detected PCB contamination above 50 ppm. For confirmation of this test a local laboratory is conducting the analysis to include PCB and metals contamination. Results are expected by 25 July.

Clearing of shrub and debris from pipelines continues. The ERRS contractor will complete this task by next week for the immediate pipelines scheduled to be addressed. Snakes, ticks and widespread poison plants continue to be encountered during this task.

IV. ESTIMATED COSTS

ERRS costs as of 17 July were estimated at $192,000.

V. FUTURE ACTIONS

EPA will continue to address the waste in the storage tanks, pipelines and drums. Storage tanks #2 and #3 will be completely removed to address contamination underneath the floors. The contents within the pipelines will be identified and removed for disposal. Contaminated wastewater will continue to be treated through a carbon filtration system. Contaminated soil will continue to be excavated for potential on site treatment or off site disposal. The Gulf Strike Team will continue to provide on site monitoring of contractor

activities. EPA will continue to coordinate site activities with the property owner concerning OPA issues and scrap metal. The owner's contractor will begin addressing tank #14 during the week of 21 July.

US. Environmental Protection Agency
US. Coast Guard, Gulf Strike Team
Fax Cover Sheet for
Old ATC Refinery

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPA REGION IV
OIL & HAZARDOUS SUBSTANCES
EMERGENCY RESPONSE AND REMOVAL

Date: 7-21-97
Number of Sheets: 4
(Including cover sheet)

NATIONAL STRIKE FORCE
NSF
U.S. COAST GUARD
GULF STRIKE TEAM

TO: Stuart Parker

FAX No.: 919-733-4811

Phone No.: 919-733-2801

From: OSC M. Taylor

FAX No.: (910)-251-0313

Phone No.: (910)-251-1886 <EPA> or (910)-251-2229 <GST>

Comments: Polrep for OLD ATC Refinery Site

MEMORANDUM

To: File
From: Stuart F. Parker,
Hydrogeologist
Date: September 18, 1997
Subject: Old ATC Refinery,
Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP called the EPA office trailer (910-251-1886). OSC Chris Militscher reported that site operations were going as scheduled, but that he was very busy due to recently initiated litigation activities by PRP Axel Johnson. He advised not to visit the site this week, but to try contacting him next week when logistics become more manageable.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: September 12, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP called the EPA office trailer (910-251-1886) on 8/19/97, 8/27/97, and 9/11/97 to discuss project status. On 8/19, Mike Taylor reported that Envirotech would be cleaning out the product transfer lines, starting with the smaller tetraethyl lead (TEL) lines, during the next 2-3 weeks. The procedure consisted of the following:

1) Gravity drainage of the lines.
2) Slow vacuum extraction of additional product.
3) Compatibility testing of the extracted wastes.
4) Storage in an on-site tank.

MT reported that cleanup was proceeding on Tank # 50014, and that the contractor DH Griffin was hauling scrap metal off the site.

On 8/27/97, Chris Militscher reported that work was proceeding well at the site. On 9/11, Todd Wolpert of USCG reported that EPA was not at the site that week, but that pipeline cleaning was proceeding. SFP tentatively planned to visit the site on 9/17/97.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30303-3104

RECEIVED
AUG 27 1997
SUPERFUND SECTION

Jack Butler
North Carolina Division of
Solid Waste Management
P.O. Box 27687
Raleigh, NC 27611-7687

Dear Mr. Butler:

We are pleased to provide a copy of the action memorandum for a Request for Removal Action Ceiling Increase with Exemption from the $2 Million Statutory Limitation at the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina. If you have any questions or comments concerning this document, please contact the On-Scene Coordinator at the following address:

Michael Taylor
U.S. Environmental Protection Agency
Waste Management Division
Emergency Response and Removal Branch
61 Forsyth Street SW - 11th FL
Atlanta, Georgia 30303
(404) 562-8762

Sincerely,

Myron D. Lair, Chief
Emergency Response and Removal Branch

Enclosure

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (40% Postconsumer)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30303-3104

4WD-ERRB

MEMORANDUM

SUBJECT: Request for Removal Action Ceiling Increase with Exemption from the $2 Million Statutory Limit at the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina

FROM: Michael Taylor, On-Scene Coordinator
Christopher A. Militscher, On-Scene Coordinator
Emergency Response & Removal Branch

TO: Richard D. Green, Acting Director
Waste Management Division

SITE ID# YR

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of a ceiling increase and an emergency exemption from the $2 Million Statutory Limit. This request is made in an effort to continue removal actions at the Old ATC Refinery Site, located at 801 Surry Street in Wilmington, North Carolina. The Old ATC Refinery Site meets the criteria for conducting further removal actions under section 300.415(b)(5) of the National Contingency Plan (NCP) and the exemption for exceeding the statutory limit under section 104(c)(1)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA). Additional funds are requested to address and complete actions necessary for eliminating hazardous substances from this non-NPL Site. The total project ceiling if approved will be $3,505,000 of which an estimated $2,800,000 will be funded from the Regional removal allowance. This project ceiling funding includes $200,000 utilized by an emergency response action in July of 1995.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS identification number: NCD986186518

Removal category: Time Critical Removal

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (40% Postconsumer)

A. Site Description

1. Removal Site Evaluation

Site conditions and background for the Old ATC Refinery Site (Site) are consistent with the previous description outlined in the May of 1997 Action Memorandum. The Site was referred to EPA by the U.S. Coast Guard, Wilmington, North Carolina Marine Safety Office. The Site is a former oil refinery that was established in the 1960's by Titan Petroleum. The facility processed and refined crude oil then stored the oil within several multi-million gallon aboveground storage tanks. Naphtha, diesel and gasoline were products refined at this facility. Tetraethyl lead (TEL), an anti-knock agent, was blended into the refined gasoline during the 1970's. This process was later discontinued but still remained on-site until EPA's emergency response action in 1995. Lead residuals and sludge remain in the facility's storage tanks and is suspected within the numerous pipelines. In addition, several releases occurred at the facility during petroleum refinement which resulted in widespread soil contamination.

A small quantity of abandoned containers 55-gallons and less are staged and secured. These containers will require identification and future disposal.

Several boilers and the refractory/distillation tower remain from the refining operation. Three oil/water separators located around the facility previously contained listed K051 waste. This waste stream has been addressed.

Two of the multi-million gallon storage tanks were dismantled by EPA in June of 1997 with more than 18 aboveground storage tanks (ASTs) remaining on-site. These leaking ASTs were dismantled to address contamination from underneath the floors. Adulterated oil/sludge material has been identified within these storage tanks. Upon removal of these tanks contaminated soil was excavated and EPA discovered the shallow groundwater table was contaminated with oil.

The facility pipelines are located throughout the tank farm which contain adulterated crude oil and refinery waste. The pipelines addressed within the former pump pit area contain waste streams of diesel, gasoline, and crude oil. A TEL pipeline remains in place with confirmed tetraethyl lead concentrations of 317 mg/l. Air monitoring from an organic vapor analyzer (OVA) and combustible gas indicator (CGI) revealed elevated levels considered to be a health risk being emitted from the TEL pipeline. The extreme temperatures during the summer creates heat expansion causing the pipelines to continuously leak and emit flammable vapors.

Surface soil contamination continues to exist in previously identified areas. The primary contaminants identified from sampling are lead, chromium, vanadium and polycyclic aromatic hydrocarbons (PAHs). Extensive soil contamination is identified under the former leaking ASTs dismantled by EPA.

Within the former tank #2 and #3 area the groundwater exists at approximately two feet below surface. It has been documented that oil from the leaking storage tanks has impacted the groundwater.

Asbestos containing material (acm) exists along the facility pipelines and within the refractory/distillation tower. The pipelines, steam lines and refractory tower has wrapping identified with acm from the previous refining operation. This material is being removed and disposed by EPA.

2. Physical Location

The physical location is consistent with the description provided in the May of 1997 Action Memorandum. The Old ATC Refinery Site (ATC) is located at 801 Surry Street in Wilmington, New Hanover County, North Carolina. The Site is bordered by a former Unocal 76 terminal to the north, a battery recycling facility to the northeast, Surry Street to the east, the JLM oil terminal to the south, and the Cape Fear River to the west.

The Site is located within the city limits of Wilmington, North Carolina. The downtown area is approximately six blocks to the north of the facility. The nearest residence is located less than 0.1 mile east of the Site.

3. Site Characteristics

The Site characteristics described in the May of 1997 Action Memorandum have not changed significantly. The Site is an abandoned petroleum refinery located on approximately 13 acres of land on the eastern bank of the Cape Fear River. Multiple structures exist at the refinery consisting of dozens of ASTs ranging in capacity of 20,000 gallons to 3.36 million gallons. An estimated five miles of pipelines exist within the tank farm, which also contains the former TEL pipelines. A refractory/distillation tower is located on the southeastern portion of the property along with furnaces and boilers.

The Site continues to be identified within the 100-year floodplain and is susceptible to localized flooding and seasonal hurricanes. Flooding continues to be a significant concern for migration of current site contaminants.

The Cape Fear River continues to receive all of the site's surface runoff and drainage. The Cape Fear river is used for

shipping both domestic and international goods. The river is also a source of commercial fishing and is widely used by the local population for recreational purposes.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant.

Releases and threats of release of hazardous substances continue to be consistent with the May of 1997 Action Memorandum. The release of hazardous substances is more prevalent from years of deterioration on the Site. The tetraethyl lead pipelines and former product lines continue to show signs of leakage from the elevated temperatures and heat expansion during the ongoing removal action.

Adulterated oil and sludge exists throughout the facility pipelines and storage tanks. An estimated 500,000 gallons of oil, water and sludge remains to be addressed. Existing pipelines reveal a large quantity of the material recovered is adulterated gasoline, diesel and crude oil. The identified waste streams and volume of material encountered presents a fire and explosion threat. A fire or explosion would emit elevated levels of toxic emissions into the atmosphere and would directly affect the immediate population. In the event of a fire evacuations of hundreds of residents would be probable.

Extensive soil contamination continues to be identified throughout the facility. Surface contamination has already been identified at both the refractory/distillation area and along the Cape Fear River. Additional soil contamination has been identified under the former tank #2 and #3 areas. Upon removal of the ASTs in June of 1997 widespread soil and groundwater contamination was discovered.

Elevated levels of lead and chromium continue to be a direct contact threat within the soil. Contaminants will continue to migrate in surface soils as well as to surface waters, and possibly groundwater, if left uncontrolled.

5. NPL status

The site is not listed on the NPL.

6. Maps, pictures and other graphic representations.

Available upon request.

B. Other Actions to Date

1. Previous and Current Actions

The description of previous actions in the May of 1997 Action Memorandum remains accurate. Actions taken since the dispute resolution and fund lead action initiated in June of 1997 have consisted of mobilizing an Emergency and Rapid Response Services contractor.

The dismantling and removal of ASTs #2 and #3 were completed in July of 1997. The setup and initiation of a water treatment unit for treating the contents of AST #1 and #8 continues to be operational. The transportation and disposal of waste generated by the potentially responsible party (PRP) was completed by EPA in July of 1997. Addressing the contamination of oil and sludge within the soil and groundwater under ASTs #2 and #3 has been initiated. Removal of asbestos containing material wrapped around the existing pipelines was removed during August of 1997. Dismantling of the facility pipelines and recovery of the material contained within the pipelines was initiated in August of 1997 and continues. Many of these operations will continue throughout the removal action due to the volume and extent of contamination encountered.

C. State and Local Authorities' Role

1. State and Local Actions to Date

There have been no significant changes to State and local activities to date. The State of North Carolina continues their involvement as a support role to EPA during this fund lead action.

2. Potential for Continued State/Local Response

No significant changes have occurred with the State and local authorities for initiating a response action at this facility. The response capabilities of the State of North Carolina and local government continue to be limited.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

The Old ATC Refinery Site continues to pose threats to the public health or welfare as previously addressed in the May of 1997 Action Memorandum.

The Site continues to meet the requirements for initiating a time-critical removal in accordance with criteria listed in

Section 300.415 of the NCP. Potential contaminant exposure to nearby human population, contaminant migration to surface soil, as well as surface and groundwater, weather conditions, and the threat of fire and explosion continue as major threats at this facility.

Analytical data from the surface and subsurface soil indicate elevated levels of lead, chromium, vanadium, and PAHs. Engineering practices to prevent and minimize continued spread of contaminants are being instituted. However, prolonged periods between removal actions allow for a greater chance of direct contact or spreading contamination through heavy rainfall and flooding.

The threat of fire at this facility from the ASTs and pipelines is a threat to the public that would result in air emissions and toxic releases. The contents of these pipelines and ASTs preliminarily consist of adulterated gasoline, diesel, crude oil and sludge. In addition, there are pipelines that exist from the former TEL blending tank. TEL has been confirmed at more than 300 mg/l from the pipelines around the blending area. As stated in the May of 1997 Action Memorandum, TEL is toxic by ingestion, inhalation, and skin absorption. The threshold limit value is 0.1 mg per cubic meter. It is Immediately Dangerous to Life and Health (IDLH) at a concentration of approximately 3 ppm.

The Site is prone to constant rainfall and periodic flooding. This facility is within a flood plain and is susceptible to seasonal hurricanes. In June and August of 1996 Hurricanes Bertha and Fran deluged the Site causing substantial damage to the storage tanks. Migration of known contamination areas was expanded from the flooding along the Cape Fear river. Continual floods or torrential rainstorms will substantially increase the spread of contamination. Surface water into the Cape Fear river will contribute to elevated contaminant levels. Such a scenario would potentially affect the local fishing industry and recreational areas along the river.

The Site is currently fenced along three sides of the property to prevent access. Additional business establishments are immediately adjacent the property lines. A recycling business is within 50 feet of the TEL pipelines. Though steps have been taken to limit access, there remains a direct contact threat of human exposure. Individuals are not restricted from entering the Site along the river side of the property. Fencing the entire site is not a feasible option due to the terrain and location.

The Agency for Toxic Substances and Disease Registry (ATSDR) has reviewed the preliminary data and analytical results from the December of 1996 and February of 1997 sampling effort. The OSC's

proposed cleanup goals have been concurred with by ATSDR. The OSC's proposed cleanup goals and the contaminants of concern, which include chromium, vanadium and PAHs, are consistent with previous removal actions performed by ERRB.

The cleanup goal for lead was previously established prior to this fund lead action. However, after further evaluation and assessment toward the risk to the public and the environment the action level for lead has been proposed for 1,000 mg/kg. This cleanup goal is consistent with previous removal actions performed by ERRB.

B. Threats to the Environment

Threats to the environment will continue as long as waste exists on site. Adulterated oil and sludge within the ASTs and leaking pipelines will continue to impact the environment. Contaminated soil will continue to pose a threat to the environment through migration pathways into nearby soils, surface water and groundwater. All media have been impacted to an extent since the operation of the facility during the 1970's and 80's. There is extensive soil contamination from the burial of sludge and tank bottoms located along the river bank from previous operations at this facility. Lead levels are reported at 93,000 mg/kg in this area. Burial of refractory waste exists around the refractory/distillation tower, also containing elevated lead and chromium levels. ASTs are badly deteriorated and have potentially been leaking for years. Leaks and spills from this facility have impacted not only the soil but also surface and groundwater. Oil from underneath the two leaking ASTs has been discovered floating on the groundwater at a depth of two feet below surface. Air releases from the ASTs and pipelines will continue as long as waste remains at this facility.

The Site will continue to present a threat of fire, and threat of toxic emissions through air releases. There will continue to be a direct contact threat. There is also an ongoing threat of migration from soil contamination, in addition to a continuous threat of contamination to surface and groundwater.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants, and contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to the public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Section 104(c) of CERCLA as amended by SARA, limits Federal emergency response actions to $2,000,000 unless the requirements of the statutory exemptions are met. Section 104(c)(1)(A) allows an emergency exemption if:

(i) there is an immediate risk to public health or welfare or the environment; and

(ii) continued response actions are immediately required to prevent, limit, or mitigate an emergency;

(iii) such assistance will not otherwise be provided on a timely basis.

The Old ATC Refinery Site meets the requirements for an emergency exemption of Section 104(c)(1)(A). The action that is proposed for this $2 million ceiling exemption is consistent with CERCLA and the SARA amendments in that:

1. There is an immediate risk to public health or welfare or the environment.

There exists a direct contact threat from contaminants and waste on site. Some materials stored at this Site pose a threat of fire. An air release would potentially affect a substantial portion of the local population and surrounding area. Runoff from a fire response would jeopardize and threaten the nearby waterway. Such a release would contaminate local environmental resources.

The Site conditions constitute an immediate risk to the public and the environment based on the known hazardous substances. Site contaminants identified such as adulterated oil and sludge, lead, chromium, vanadium, asbestos, tetraethyl lead, and PAHs are the most prevalent waste identified at this time. Approximately 12,000 cubic yards of contaminated soil exists within the tank farm and refractory areas. Severe weather conditions with heavy rains present a constant threat of increasing the area of contamination through flooding. Prolonging or suspending site activities would increase the likelihood of site deterioration. Threats to the public and environment would increase. Migration of heavy metals contamination would continue to impact the surface waters of the Cape Fear River and the groundwater.

The ATSDR has been consulted regarding the known hazardous substances and current conditions on-site. ERRB's preparations and actions taken are consistent with the views and recommendations by ATSDR.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

The conditions that exist on site require continued response actions to prevent, limit or mitigate an emergency. These conditions are documented and will be monitored until all waste is removed. The volume of contaminated soil is much greater than originally anticipated. A direct contact threat continues to exist. Threat of fire or flooding will cause migration of contaminants and severely impact water quality and the local population. Human health could be impacted as the hazardous wastes identified include known or suspected human carcinogens and other toxic substances. Continued response actions are necessary to prevent potential contamination from entering the food chain. In addition, prolonging removal actions will increase cleanup costs.

3. Assistance will not otherwise be provided on a timely basis.

Assistance from either the State or county government is not forthcoming. Due to the lack of funds and resources, Site maintenance or removal cannot be conducted properly or in a timely manner. EPA entered into a dispute resolution in March of 1997 as outlined within the Administrative Order of Consent. The identified PRP is not a viable option for completing this removal action at this time. There is no other entity or agency capable of addressing the immediate threats this Site poses for a timely removal.

Delaying or suspending removal actions will increase the direct contact and fire threat. In addition, the migration of contaminants into the soil and surface water continue to be a threat to the public and environment. Continued response actions on a timely basis is necessary for EPA to abate the potential for further releases of hazardous substances.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed actions for this $2 million exemption and ceiling increase Action Memorandum continue to be consistent with the May of 1997 Action Memorandum. The scope of work continues to outline specific tasks to abate the immediate threats this Site poses to public health and the environment.

Two of the 3.36 million gallon capacity tanks which contained adulterated oil/sludge have been dismantled and removed. These two tanks were previously leaking their contents onto the surface soil and has impacted the groundwater. This

increased spread of contamination was discovered upon removing the leaking floors and foundations in July of 1997. A third AST may require removal. There are indications of extensive soil and groundwater contamination around the storage tanks. The AST currently contains 400,000 gallons of oil, water and sludge that must be treated and removed prior to determining its need for removal.

Extensive pipelines are located throughout the facility. It is estimated that approximately five miles of pipelines connect the ASTs and transmission lines. These pipelines are being dismantled with the contents removed and temporarily contained.

Final transportation and disposal will be arranged after disposal approvals are completed.

The actions proposed will continue to consist of an extensive characterization of the waste streams. EPA protocol will continue to be observed for all waste material encountered on-site.

Asbestos containing material has been identified as wrapping on the pipelines in the tank farm and refractory/distillation tower. This material will be removed, contained and transported off-site in an approved landfill, as appropriate.

Material within the TEL pipeline will be addressed as outlined in the May 1997 Action Memorandum.

If the structural integrity of the ASTs is questionable and considered a health and safety threat to the response crew, or the public, appropriate actions will be taken to abate this threat. Some ASTs and piping may require dismantling and removal to allow access to identified contamination areas. Sound engineering practices will continue to be instituted and followed during the aforementioned removal activities.

Soil contamination has previously been identified by ERRB through two sampling efforts. With the identification of the leaking ASTs soil contamination has greatly increased. Specific vertical and horizontal sampling is necessary to determine the volume and extent of soil contamination. Preliminary estimates of soil contamination are estimated at approximately 12,000 cubic yards. On-site solidification and stabilization is one option under consideration for identified soil contamination. Off-site disposal at an approved landfill is a second option. For a thorough and complete assessment of alternatives a treatability study may be required.

Site disposal options will continue to include the best available and most cost effective method in accordance with EPA policy. All waste will continue to be considered for on site treatment prior to off-site disposal.

2. Contributions to remedial performance

This removal action will address the immediate threats identified in the preceding sections of this Action Memorandum. The removal actions outlined will be consistent with any future remedial actions proposed for this Site. At this time, the Site is not listed on the NPL. However, the proposed actions will not impede future response actions should Site conditions change.

3. Description of alternative technologies

Alternate technologies continue to be considered during this removal action. Alternate technologies considered and utilized will be dependent upon further characterization of the waste streams and treatment/disposal options.

4. Engineering Evaluation/Cost Analysis (EE/CA)

An EE/CA was conducted for this Site by EPA's Remedial Branch along with an EE/CA Approval Memorandum. The information included in the May of 1997 Action Memorandum has not changed.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal and State ARARs determined to be applicable to the activity at the Site will continue to be considered and observed as issues are encountered. There have been no significant changes in the ARARs since the May of 1997 Action Memorandum.

6. Proposed Schedule

Fund lead response actions at the Site have continued since June of 1997. Approval of this Action Memorandum will allow for the removal of all identified contamination at this time. Foregoing any unexpected delays, all planned actions are anticipated to be completed within six months.

B. Estimated Costs

Extramural Costs:	Current Ceiling	Proposed Ceiling
Regional Allowance Costs:		
ERCS	$1,555,000	$2,800,000
Non-Regional Allowance Costs:		
START	$ 50,000	$ 50,000
STRIKE TEAM	$ 75,000	$ 125,000
ERT/REAC	$ 30,000	$ 30,000
Subtotal, Extramural Costs	$1,710,000	$3,005,000
Contingency	$ 175,000	$ 300,000
TOTAL, EXTRAMURAL COSTS	$1,885,000	$3,305,000
Intramural Costs:		
Direct	$ 40,000	$ 80,000
Indirect	$ 60,000	$ 120,000
TOTAL, INTRAMURAL COSTS	$ 100,000	$ 200,000
TOTAL, REMOVAL PROJECT CEILING (rounded to nearest thousand)	$1,995,000	$3,505,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

This section remains consistent with the May of 1997 Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

There are no additional issues known for this removal action since the May of 1997 Action Memorandum.

IX. ENFORCEMENT

"Enforcement Sensitive"

X. RECOMMENDATION

This decision document represents the selected removal action for the Old ATC Refinery Site in Wilmington, New Hanover County, North Carolina. This memorandum was developed in accordance with CERCLA as amended, and consistent with the NCP. The document is based on the administrative record for the Site.

Conditions at the Site meet criteria for a CERCLA section 104(c) emergency exemption, and I recommend your approval of an exemption from the $2 million limitation and a ceiling increase of $1,510,000. The total projected ceiling if approved will be $3,505,000 of which an estimated $2,800,000 will come from the Regional removal allowance.

Approval: _____ Date: 8/21/97
Richard D. Green, Acting Director
Waste Management Division

Disapproval: _____ Date: _____
Richard D. Green, Acting Director
Waste Management Division

Attachment

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: July 31, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP visited the site, arriving at 14:30. SFP and Chris Militscher discussed application of State ARARs to the site. State guidelines indicated a cleanup goal of 400 ppm for lead in soil, while the EECA's goal was a less protective 1300 ppm. Mike Taylor telephoned during the discussion and joined in. SFP pointed out that the State goals were not "promulgated", but CM indicated that they would be "relevant and appropriate" if the State had used them at other NC sites.

The USCG personnel at the office trailer reported that the the primary on-going activity at the site was the removal of asbestos from the wraps around the product transfer pipes. Other activities included the changeout of carbon filtration media for the tank water treatment system, cleanup work on the 2 sumps for former tanks # 80002 and # 80003, and the removal of cleaned scrap metal from the decommissioning of the 2 tanks. SFP left the site at 15:40.

MEMORANDUM

To: File
From: Stuart F. Parker, SFP
Hydrogeologist
Date: July 28, 1997
Subject: Old ATC Refinery,
Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

On 7/28/97, SFP telephoned Chris Militscher at the EPA office trailer (910-251-1886). Mike Taylor was on another project during the last week of the month. SFP and CM discussed the availability of State ARARs for EPA to apply to the site. CM reported that the present site-specific cleanup goals were based on the EECA, and were developed by the risk assessment people at ATSDR. For example, the lead cleanup goal for soil was 1300 ppm. SFP agreed to furnish a copy of the State Inactive Hazardous Sites Branch's guidance on voluntary cleanups at the next site visit.

SFP expressed interest in obtaining documentation of 1) EPA's unilateral decision to make the project Fund-lead and 2) sampling results to date from the Removal investigation. CM said that the Administrative Record was under construction and would be available in approximately 1 week.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: July 16, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight Site Visit.

SFP arrived onsite at 15:30 and met Mike Taylor at the EPA field trailer.

Mike reported that water from Tank # 80001 was being processed through the new treatment system. Linda Carroll had hired Four Seasons Environmental to remove crude oil remnants from Tank # 55014. The oil was to be transferred to a railroad tank car prior to disposal. The DH Griffin company had been hired to demolish the tank after the EPA was done at the site.

During the week of this site visit, efforts were being focussed on scrap metal handling and residual soil removal from the area of Tanks # 80002 to # 80003. Mike reported that petroleum product was floating on the water table beneath # 80002.

SFP and MT toured the site on foot in level D protection, examining the new water treatment system first. The tank water was being transferred to a plastic holding tank, located outside the exclusion zone and adjacent to the site's former tank truck loading facility. From that location, the water was pumped to a series of carbon filtration drums located just inside the site's east fence, then through a sump and through transfer lines to storage in Tank # 50015.

SFP and MT proceeded past the former tetraethyl lead (TEL) blending shed toward Tanks # 80001, # 80002, and # 80003. Near the former location of the TEL storage tank, MT pointed out some visible product drips at a cut pipe fitting, the result of thermal expansion of product remnant in the transfer line. Similar back leakage of petroleum product was visible at a truncated transfer line on the south side of Tank # 80002. The tank sides had been cut down and the area of the tank base was partially covered with the scrap metal.

The sides of Tank # 80003 were down, and the removal contractor was excavating petroleum-contaminated fill from inside the western edge of tank's concrete foundation ring.
A 4-foot-deep, open excavation was visible outside the west edge of the same ring. The contaminated soil was being stockpiled (atop and beneath plastic sheeting) within the berm of the site's northwest corner. MT explained that the tanks had been periodically emptied, jacked up, and underfilled to compensate for settling over the decades of site operation.

SFP left the site at 17:00 after passing through the decon sequence. SFP reached the office at 19:30 after driving through sustained heavy thunderstorms.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: July 9, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight Site Visit.

SFP arrived onsite at 15:40 and met Todd Wolpert (USCG). Chris Militscher was in Selma, NC at the Gurley Pesticide site for the day. ETI had finished taking down the walls of Tanks 80002 and 80003. Work was presently focussed on setting up the wastewater treatment system for the tank waters (Tanks #80001 and #10008), and on grubbng and clearing vegetation at the site. ETI had finished cleaning out Tank 55015, which was to receive and contain treated water from the other tanks. The treated water was anticipated to be used for dust control when excavating soils contaminated by refractory metals. SFP left the site at 16:20.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: July 2, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP telephoned Mike Taylor at EPA Region IV (404-562-8762) for a site update. MT reported that the walls of Tanks #80002 and #80003 had been removed. ETI was working on the tank bottoms, and on cleaning out Tank #55015. Chris Militscher was at the site that week.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: June 19, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

Mike Taylor telephoned SFP on 6/4/97 to report that the site removal is now a Fund Lead project. Petroclean and Geraghty & Miller are off the site, as a result of health & safety violations and refusals to sample in areas of aditional contamination. ETI (Earth Tech, Inc.) is the Federal removal contractor. Work at the site was to commence on 6/9/97 and is now expected to take 3 to 4 months.

SFP visited the site on 6/19/97, arriving at 14:40. Mike Taylor was coming offsite at that time. He noted that ETI is the ERRS (Emergency Rapid Response Services) contractor at the site. The Stop Work order was a Section 14E letter for EPA Takeover, Admin. Record, (12 pp). Since the EPA takeover, the PRPs failed to complete their demobilization on the appointed date of June 2, however, Axel Johnson has not been onsite since March. The EPA and ETI trailers are in Area 4, where indoor containers were HazCatted and removed earlier.

ETI began work as scheduled on 6/9, taking over the task of removing Tanks #80002 and #80003. The tank walls are to be torch-cut down to 8 feet above base, then cold-cut below there, using a type of non-sparking shear. Next, Tank # 55015 is to be cleaned out (confined space entry), along with the facility's many transfer pipelines. After this, the refractory tower is to be removed, followed by contaminated soils. With Petroclean and G&M gone, owner Linda Carroll plans to use Four Seasons Environmental to remove Tank # 55014. She also plans to arrange for removal of scrap metal (considered non-hazardous) generated during decommissioning of the tanks.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30303-3104

MAY 29 1997

RECEIVED
Solid Waste
JUN 3 1997
MANAGEMENT DIV.

4WD-ERRB

Mike Kelley, Deputy Director
Solid Waste Management Division
North Carolina Division of
Solid Waste Management
P.O. Box 27687
Raleigh, North Carolina 27611-7687

Dear Mr. Kelley:

We are providing you with a copy of the Action Memorandum for the Old ATC Refinery Site located in Wilmington, New Hanover County, North Carolina. For further comments or questions regarding this document contact the On-Scene Coordinator at the following address:

Michael R. Taylor
U.S. Environmental Protection Agency
Waste Management Division
Emergency Response and Removal Branch
61 Forsyth Street, SW
Atlanta, Georgia 30303
(404) 562-8762

Sincerely,

Myron D. Lair, Chief
Emergency Response and Removal Branch

Enclosure

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30303-3104

MAY 29 1997

4WD-ERRB

MEMORANDUM

SUBJECT: Request for a Ceiling Increase and 12-Month Exemption for this Time Critical Removal at the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina

FROM: Michael Taylor, On-Scene Coordinator, Emergency Response and Removal Branch

TO: Richard D. Green, Acting Director
Waste Management Division

SITE ID# YR

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action ceiling increase and 12-month exemption described herein for the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina. The Site poses a threat to public health and the environment that meets the National Contingency Plan (NCP) Section 300.415(b)(2) criteria for a removal action.

This request for increased funding will include a total project ceiling of $1,995,000 of which $1,555,000 would be in extramural funding from the Regional allowance. This project ceiling funding includes $200,000 utilized by an emergency response action in July of 1995.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS identification number: NCD986186518

Removal category: Time Critical Removal

A. Site Description

1. Removal Site Evaluation

This Site is a former oil refinery that was established in the 1960's by Titan Petroleum. The facility processed and refined crude oil then stored the oil within several multi-million gallon aboveground storage tanks. Gasoline was one product refined within the confines of this facility. During the early stages of operations tetraethyl lead (TEL) was introduced

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into the gasoline as a lead additive and anti-knock agent. The use of this lead based chemical was discontinued. However, lead residuals and sludge remain in the facility's tanks and is suspected within the numerous pipelines. Furthermore, releases at the facility have resulted in soil contamination across the site.

This facility has been owned and operated by several companies since its inception. It is currently owned by Linda Carroll who foreclosed at auction and has been attempting to sell the site since 1996. There are currently no operations at this facility. Historical records show the refinery was in operation until 1986. The Site was abandoned with thousands of gallons of adulterated oil, sludge and waste material contained within more than a dozen aboveground storage tanks (ASTs). The ASTs range in size from 3.36 million gallons to approximately 10,000 gallons in total capacity. In addition to the ASTs, the facility contains extensive pipelines above and below ground. A large volume of the waste presents a direct contact as well as a fire and explosion threat to the public and environment.

During the course of operations by different owners and operators, this facility reportedly experienced several petroleum spills, leaks and on-site burial of waste material from the tanks and refractory distillation process.

The U.S. Coast Guard (USCG) responded to an oil spill in 1991. In addition, North Carolina's Division of Solid Waste Management completed a Site Screening Investigation in the early 1990's. The USCG conducted a second recovery operation in 1992. Their response was limited to strictly oil recovery and did not address the CERCLA threats.

In 1992 the USCG referred this Site to EPA. Initially the Site was considered a non-time critical removal and actions were conducted within EPA's Remedial Branch. An Engineering Evaluation/Cost Analysis (EE/CA) was completed in June of 1995. The EE/CA characterized the site surface and subsurface soil and did not involve the source material within the ASTs, pipelines, separators and scattered drums.

The Emergency Response and Removal Branch (ERRB) received notification of this Site from EPA's North Remedial Branch (NRB). The NRB referred this Site for potential releases of hazardous substances. Two multi-million gallon storage tanks were leaking and potentially threatening the Cape Fear River, a navigable waterway. An assessment was conducted in July of 1995 by ERRB accompanied by the USCG. During this site visit numerous releases were documented.

Two of the multi-million gallon tanks were leaking along their foundations. Further investigations revealed approximately

60 scattered 55-gallon drums of unknown contents and over 200 five gallon containers of flammable liquids that were leaking. Air monitoring conducted by EPA's Technical Assistance Team and the Emergency Response Contract Services contractor revealed a combustible atmosphere in the storage area housing these containers. Later sampling identified a variety of waste streams including cyanides, peroxides, acids, strong bases and flammable liquids.

In addition, a 5,000 gallon tetraethyl lead (TEL) tank was emitting strong vapors in close proximity to nearby residents. TEL is a highly toxic chemical through multiple exposure pathways including ingestion, inhalation and skin absorption.

Several laboratory containers were located within an attic inside a former laboratory. The majority of these containers were later discovered to be open and empty. There was no information available on the former contents of these containers.

Many areas on-site required immediate attention. The release of hazardous substances constituted a public health and environmental emergency. The State and local authorities were not able to respond in a timely manner to address the threats the site posed, including a potential fire and explosion, direct contact threat to hazardous substances, and exposure to toxic vapors.

The site also included more than 450 55-gallon drums staged and badly deteriorated from the USCG response in 1991. An estimated 1,000 cubic yards of excavated soil was stockpiled at the southwest corner of the facility. These stockpiles were a result of an excavation by the USCG. Both the 450 drums and 1,000 cubic yards of soil were removed and disposed of in November of 1995 by the USCG.

Several boilers and the refractory/distillation tower remain from the refining operation. Three oil/water separators are located around the facility on approximately 13 acres. These separators were full of oil/water and K051 listed waste through January 1997. Four butane tanks are located at the entrance of the facility. These tanks were found to be empty.

More than 20 ASTs remain on-site. These ASTs contained approximately 1.2 million gallons of adulterated oil/sludge until March of 1997. The adulterated oil/sludge material in numerous tanks contain elevated lead levels uncommon to crude oil.

Extensive pipelines located throughout the tank farm are suspected of containing refinery waste. A TEL pipeline remains in place with confirmed tetraethyl lead concentrations of 317 mg/l. Air monitoring from an organic vapor analyzer (OVA) and combustible gas indicator (CGI) revealed elevated levels

considered to be a health risk being emitted from one of the TEL pipelines.

A more extensive site assessment involving the ASTs and warehouse structures located at the main office was conducted by ERRB in March of 1996. Approximately 150 55-gallon drums and small quantity containers were observed. The fence surrounding the office was overrun and site access no longer restricted in November of 1996.

Extensive surface soil contamination has been identified from previous analytical data. The primary contaminants are lead, chromium, vanadium and Polycyclic Aromatic Hydrocarbons (PAHs). Stressed vegetation is highly visible and evident in specific locations at both the refinery area and along the Cape Fear River.

An Administrative Order on Consent (AOC) was signed in July of 1996. Site activities began in November of 1996. Three ASTs and two oil/water separators were addressed by the Potentially Responsible Party (PRP) over four months on-site. EPA issued a Stop Work Order on March 25, 1997.

2. Physical Location

The Old ATC Refinery Site (ATC) is located at 801 Surry Street in Wilmington, New Hanover County, North Carolina. The Site's geographic coordinates are 34° 13′ 27" North latitude and 77° 56′ 59" West longitude. Land use of properties directly adjacent to ATC is primarily heavy industrial. The Site is bordered by a Unocal 76 oil terminal facility to the north, a battery recycling facility to the northeast, Surry Street to the east, the JLM oil terminal to the south, and the Cape Fear River to the west. A shipyard is located across the river. Residential, commercial, and light industrial areas are located on the eastern side of Front Street, within one half mile of the Site.

Approximately 50,000 people reside within a four mile radius of the ATC facility. The nearest residence is located approximately 0.1 mile east of the Site. The east and west connector bridge for highway 17/74 is approximately 0.2 miles north of this facility.

3. Site Characteristics

The ATC Site is an abandoned petroleum refinery located on approximately 13 acres of land on the eastern bank of the Cape Fear River. Structures present at the ATC Refinery, after the emergency response by the ERRB, include:

* Three 3,360,000 gallon capacity aboveground oil storage tanks.

* Two 2,310,000 gallon capacity aboveground oil storage tanks.
* Five 1,580,000 gallon capacity aboveground oil storage tanks
* Five 420,000 gallon capacity aboveground oil storage tanks.
* Two 20,000 gallon capacity aboveground oil storage tanks.
* Two 15,000 gallon capacity aboveground oil storage tanks.
* Four 300-500 gallon capacity aboveground storage tanks.
* Four aboveground butane storage tanks.
* Piping from one aboveground tetraethyl lead storage tank.
* A cracking/refractory tower.
* A furnace.
* A boiler shack.
* Three partially buried oil/water separators.
* Two pump houses.
* One pump pit.
* Extensive above and below ground pipelines ranging from 4 to 16 inches in diameter.
* A laboratory building.
* Two metal warehouse buildings.
* One brick office building.

The Site is located almost entirely within the 100-year floodplain. The local area is susceptible to tidal surges and hurricanes. Flooding is a significant concern for migration of current site contaminants.

The area immediately surrounding the Site is zoned industrial/commercial. A public boat ramp is located 0.2 mile north of the facility. The Dram Tree public park is adjacent to this boat ramp. Vehicular access to ATC is from Surry Street and is minimally restricted by a fence and gate. The site is fenced on three sides. Asphalt drives parallel the northern and northeastern boundaries and extend from the eastern main gate to a tidal ditch (inlet) of the Cape Fear River located near the center of the Site's western boundary. Overhead power lines traverse the Site from the main gate to an electric meter and switch box near the eastern end of the river inlet.

The Site slopes westward from Surry Street toward the Cape Fear River. Elevations across the property range from 0 feet with respect to the National Geodetic Vertical Datum (NGVD) along the Cape Fear River to 22 feet NGVD near the Site's eastern boundary.

Most of the Site is covered with a heavy growth of weeds and shrubs. Thick vegetation, including small trees and brush, is located between tanks in the northern half of the Site and on the

northern end of the furnace refractory burial area. Additionally, an area of dense hydrophilic vegetation is located in the western end of the bermed area between the north oil/water separator and the tank #80003 lead area.

The surface soil is derived from the Kureb-Baymeade-Rimini soil association, which consists of nearly level to sloping soils which are well drained and have a fine sand subsoil. However, surface soil at the Site has been cut, graded, filled or paved to the extent that the original soils cannot be identified. It is now classified as part of the Urban land complex.

Three principal aquifers underlie the Old ATC Site: the upper sandy aquifer (unconfined surficial aquifer), the limestone aquifer, and the lower sandy aquifer. Potable water supply is obtained from the upper sandy aquifer in a few areas along barrier island beaches; however, the area around the Site is used as an industrial water source in northwestern New Hanover and southern Pender Counties. Beneath the Site, the groundwater table is encountered at depths ranging from two to five feet with groundwater flow toward the Cape Fear River.

The Cape Fear River receives all of the site's surface runoff and drainage. The river has an average flow rate of 5,290 cubic feet per second at lock 1, upstream of Wilmington, North Carolina, at river mile number 67. Tidal flow occurs within the river at ATC. There are no drinking-water intakes located within the immediate area of the Site. However, the Cape Fear River is a commercial fishery and is widely used by the local population for recreational purposes as well as traffic from foreign and domestic shipping.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant.

Hazardous substances, such as tetraethyl lead, have been identified pursuant to CERCLA Section 104. Some of the hazardous wastes identified and addressed during the emergency response action consisted of the following Resource Conservation and Recovery Act (RCRA) waste codes: D001 (ignitable), D002 (corrosive), D003 (reactive), D006 (cadmium), D007 (chromium), D008 (lead), D018 (benzene), D039 (tetrachloroethylene), D040 (trichloroethylene), and K051.

In December of 1995 the PRP hired a contractor to determine the tank volumes and collect representative samples. Split samples were collected by the State of North Carolina on behalf of EPA's Remedial Branch. Approximately 1.2 million gallons of adulterated oil and sludge material remained within the storage tanks as of December of 1996. Approximately half of this volume was reported by the PRP as containing elevated levels of lead.

EPA's investigation revealed approximately 90 percent to contain adulterated oil and sludge.

In addition to the ASTs, there were also two of three oil/water separators with K051 waste oil, sludge and water mixture. These separators are inoperable and were not being maintained by the PRP. The contents were found to be overflowing and seeping into their surroundings after local flooding and seasonal hurricanes, prior to March of 1997. Continuous sheening is observed on surface water and runoff from the Site. Some of this sheening was attributed to these separators.

The five thousand gallon TEL tank and its contents were removed during the emergency response action by ERRB in 1995. During this removal the piping and pipeline connecting the TEL tank to the ASTs was sheared and capped. Since the emergency response the cap over the pipeline was removed. In March of 1996, during ERRB's characterization of the ASTs, air monitoring utilizing an OVA and CGI revealed elevated organic readings at the TEL pipeline. TEL was suspected and confirmed by ERRB through laboratory analysis.

In November of 1996, approximately twenty-four (24) 55-gallon drums of unknown waste and dozens of small quantity containers five (5) gallons and less remained at the main office and warehouse. These containers were badly deteriorated and threatened to release their contents into the environment. The majority of these containers were identified as hazardous waste and removed by January of 1997.

The ASTs #2 and #3 continue to leak around the foundation. The tank floors were discovered to have holes allowing adulterated oil to seep underneath. Sampling and analysis of these releases showed elevated lead levels.

Soil contamination has been identified throughout the facility. Surface contamination is highly visible at both the refractory/distillation area and along the Cape Fear River. Surface soil samples were collected during the EE/CA that document the existence of hazardous substances within the soil. Elevated levels of lead and chromium continue to be a direct contact threat. Contaminants will continue to migrate in surface soils as well as to surface waters, and possibly groundwater, if left uncontrolled.

The Site is located in the 100-year floodplain. This area is susceptible to tidal surges and hurricanes. Restricted access has been a constant concern. Vandalism has been a continuous threat since the emergency response action.

5. NPL status

The site is not listed on the NPL.

6. Maps, pictures and other graphic representations.

Available upon request.

B. Other Actions to Date

1. Previous and Current Actions

In March of 1991, the USCG began addressing oil leaching into the Cape Fear River from deteriorated pipes and tanks. Approximately 3,000 gallons of oil was removed and temporarily placed in one of the Site's storage tanks.

In June of 1991, recovery operations were discontinued by the USCG and oil was later detected seeping from the inlet banks. Consequently, the USCG resumed recovery operations. In July of 1991, 18,000 gallons of oil were removed from the south bermed area and pumped to a storage tank by the USCG. The suspected source of the oil was a leaking transmission line. The leaking transmission lines were capped to eliminate the risk of future discharge. In May of 1992, storage tank #13 was suspected as the source of another discharge. The tank contents were removed. During the summer of 1992, a leaking valve was identified as the source. The leak was addressed and an interception trench was installed north of the river inlet. Approximately 50,000 gallons of oil and contaminated groundwater were removed from the trench and pumped to an on-site storage tank.

In 1991, a Site Sampling Investigation (SSI) was performed by the North Carolina Department of Environment, Health and Natural Resources (NCDEHNR). As a result of this investigation, EPA initiated an Expanded Site Investigation (ESI). The ESI was completed in 1993. It identified several potential source areas and recommended further investigative action. In April of 1994, an EE/CA was initiated. Field activities for the EE/CA were conducted between April and August of 1994.

On July 19, 1995, the ERRB conducted an assessment of the facility accompanied by the USCG 5th District. The OSC deemed a limited emergency situation existed for specific areas on-site and activated ERRB's Emergency Response Cleanup Services (ERCS) contractor. ERCS was tasked to address the TEL tank, leaking drums and five gallon containers, as well as potential laboratory waste. The leaking drums were overpacked or transferred into new containers awaiting treatment or disposal. Hazardous categorization was performed on 56 drums and representative samples from the five gallon lots.

ERRB arranged for transportation and disposal of the hazardous substances and wastes outlined in the emergency response action. These actions were completed in September of 1995. EPA's North Remedial Branch (NRB) continued negotiations with a known PRP. The PRP collected samples from the ASTs and reported tank volumes to the NRB in January of 1996. At this time no additional removal action was initiated by EPA since ERRB conducted the limited emergency response action in 1995.

The site was referred back to ERRB from the NRB in March of 1996. There were discrepancies in analytical data and tank volumes reported to EPA. Additional samples were collected from the ASTs and the oil/water separators in March of 1996. Additionally, the suspected TEL pipe was sampled for further analysis. A site assessment included the facility across from the main refinery which consists of the former office and maintenance building.

Analytical data was received in May of 1996 from ERRB's sampling event. The tank contents revealed elevated lead levels in all ASTs sampled except one.

Negotiations with the PRP continued through July of 1996 with an Administrative Order on Consent (AOC) which became effective on August 2, 1996. Multiple work plans were reviewed by EPA through October 1996. EPA approved a work plan on November 5, 1996. Site activities were initiated by the PRP on November 12, 1996. Removal actions continued with EPA oversight of the PRP's contractors until March 25, 1997. Due to multiple violations of the AOC and consistent health and safety violations the PRP was issued a "Stop Work Order" by the OSC. A formal dispute resolution was initiated by the PRP. This memo is the result of the ERRB prevailing in the dispute.

C. State and Local Authorities' Role

1. State and Local Actions to Date

The State of North Carolina has been involved, for inspection purposes, with this facility from previous actions conducted by the former owners and operators. The North Carolina Division of Environmental Management has not taken an active role in the cleanup of this Site since the involvement of the USCG in 1991 or actions by EPA's Remedial and Removal Branches. ERRB is not aware of any other actions being undertaken by the State or local authorities at this time.

NCDEM collected split samples of the ASTs from the PRP in December of 1995. The split samples were analyzed by North Carolina and reported to NRB. Additional actions by the State or local authorities are anticipated to be as a support function during removal actions.

2. Potential for Continued State/Local Response

The response capabilities of the State of North Carolina and local government are limited. It is unlikely that the State or any other political subdivision will undertake response activity on this Site in the future due to the lack of available funding.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

ERRB has determined that a threat of release as defined by Section 101 of CERCLA, exists at the Site. The Site meets the requirements for initiating a time-critical removal in accordance with criteria listed in Section 300.415 of the NCP. The removal action criteria outlined in the NCP will continue to exist until all removal response actions are completed. The Site meets the following NCP criteria as outlined in 300.415:

(b)(2)(i) Actual or potential exposure to nearby human population, animals, or the food chain from hazardous substances or pollutants or contaminants;

(ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

(iii) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;

(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

(vi) Threat of fire or explosion;

(vii) The availability of other appropriate federal or state response mechanisms to respond to the release; and

(viii) Other situations or factors that may pose threats to public health or welfare or the environment.

Two of the 3.36 million gallon capacity ASTs are leaking at the base of the tanks. A total of more than 120,000 gallons of waste oil and sludge was contained within these two tanks. The bulk of the waste from these two tanks has been grossly removed

by the PRP in January and February of 1997. The two tanks were discovered with holes in the floor. Analytical results from the leaking waste showed adulterated oil/sludge with elevated lead levels at 590 mg/kg. This level is well above typical crude oil levels.

Several oil transfer pipelines are routed throughout the property. Two pipelines, one 16 inch and one 8 inch, run parallel to the Cape Fear River along the western side of the Site. These pipelines connect with the ASTs and are suspected to contain adulterated petroleum waste. These lines have been capped. However, the threat of a release into the Cape Fear River is possible. There are no site controls in place, such as containment berms to prevent such a release. There is evidence the 16 inch capped line has been tampered with, increasing the threat of release. The pipelines are capable of holding several hundred barrels of adulterated oil from the storage tanks. The lack of security and documented occurrence of vandalism at this site cause concerns over public health and welfare if this site is allowed to go unaddressed over an extended period of time.

In addition to these items, oil/water separators and 9 of 20 ASTs were known to contain listed waste and adulterated oil/ sludge. Some of these ASTs have been addressed by the PRP during the removal action under the AOC.

Another threat to the public is the confirmed presence of highly toxic TEL within the pipelines. TEL is toxic by ingestion, inhalation, and skin absorption. The threshold limit value is 0.1 mg per cubic meter. It is Immediately Dangerous to Life and Health (IDLH) at a concentration of approximately 3 ppm. Concentrations well above this human health threat level were found in the pipelines on-site.

The maintenance building contains approximately 5 drums of petroleum and wastewater as identified by the PRP. Three boxes of asbestos rope remain in the maintenance building. Asbestos wrapping is identified around select pipelines in the tank farm.

Soil contamination is known to exist throughout the Site. Elevated lead levels are reported at 93,000 mg/kg in the soil. If left uncontrolled, migration of hazardous substances, pollutants and contaminants to adjacent soil and eventually to surface waters is inevitable.

B. Threats to the Environment

Continuous oil sheening is observed on surface waters and in runoff from the Site after substantial rainfall. Surface waters lead directly to the Cape Fear River. The release of hazardous substances, pollutants and contaminants into the

surface waters would affect aquatic life locally and downstream from the Site.

Runoff from a potential fire response would affect the local surface water and possibly groundwater. An air release from a fire could cause environmental damage to the surrounding area.

Migration of known contaminated surface and subsurface soil further threatens adjacent surface soil and eventually surface waters of the U.S.

The threat of a potential spill or large release of hazardous substances or adulterated oil/sludge from the ASTs and pipelines would significantly affect surface soil and water. The Cape Fear River would potentially be severely impacted due to its proximity to the Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, pollutants, and contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to the public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed actions for this removal under this ceiling increase and 12-month exemption Action Memorandum are consistent with the NCP. The scope of work outlines specific tasks to abate the immediate threats this Site poses to public health and the environment.

Currently, two of the ASTs contain more than 750,000 gallons of adulterated oil, water and sludge material. Two of the 3.36 million gallon capacity tanks have adulterated oil/sludge under the floors and are leaking around the foundations. It is likely that a large quantity of adulterated oil/sludge has leaked through the holes within the tank floors over the past ten years, resulting in a substantial accumulation of waste under the tanks. A large quantity of this material has been identified by the PRP in the initial stages of the removal as containing lead contamination. ERRB has confirmed the majority of this material contains elevated lead levels.

In addition, the facility contains extensive pipelines connecting the ASTs and transmission lines. These pipelines are suspected of containing adulterated oil and sludge. Pipelines

that were previously connected to the former TEL tank have been confirmed to contain TEL.

Approximately two petroleum and three wastewater drums located within the maintenance building were not transported off-site by the PRP with other drums in February of 1997.

The immediate actions proposed will consist of an extensive characterization of the waste streams. Solicitations for recycling and/or disposal of the AST material will be obtained from vendors. The waste material will be disposed of in accordance with EPA protocol. All proposed actions currently include transporting the material off-site to a fixed facility for treatment, recycling and/or disposal. The ASTs will be decommissioned in accordance with API and NFPA recommended standards.

The extensive pipelines will be addressed during the removal action. The pipelines may be flushed, vacuum extracted, dismantled, or cleaned as appropriate, so they no longer pose a threat as outlined in this Action Memorandum. The asbestos wrapping on the pipelines will be addressed after further sampling and identification is conducted. Off-site disposal will be the most appropriate disposal method for this waste stream.

Material within the TEL pipeline will be collected and contained separate from the ASTs. There are two options to address the TEL. Preliminary disposal research indicates this chemical is not readily disposable at a CERCLA approved off-site facility. Most approved facilities can handle only limited quantities. Additionally, there are a limited number of facilities permitted to accept this waste. The second option involves on-site treatment through chemical decomposition that ultimately reduces the TEL into a lead salt. Final treatment and disposal options will be dependent upon the total volume, cost comparison and off-site facility availability and compliance status.

If the structural integrity of the ASTs is questionable and considered a health and safety threat to the response crew, or the public, appropriate actions will be taken to abate this threat. Some ASTs and piping may require dismantling and removal to allow access to contamination under the ASTs. Sound engineering practices will be instituted and followed during the aforementioned removal activities.

The 55-gallon drums in the Maintenance building and any small quantity containers will require identification. This identification process will involve sampling and hazard categorization. Once these waste streams are identified, these containers will be bulked with compatible waste or disposed of individually.

The Site contains extensive soil contamination revealed in previous sampling events. Visual contamination and confirmed analytical data has identified hazardous substances within the surface and subsurface soil. Three specific areas identified at the site contain contaminated soil that include elevated lead, chromium, vanadium, and PAH levels. Currently there is no estimated total volume due to the lack of horizontal and vertical samples to determine extent of contamination. Additional soil sampling will be required to determine the volume and appropriate action for the contaminated soil. On-site solidification and stabilization is one option for predominantly lead contaminated soil. Off-site disposal at an approved landfill is a second option. For a thorough and complete assessment of alternatives a treatability study may be required.

Site disposal options will continue to include the best available and most cost effective method in accordance with EPA policy. All waste will be considered for on-site treatment prior to off-site disposal.

2. Contributions to remedial performance

This removal action will reduce and potentially eliminate the immediate threats identified in the preceding sections of this Action Memorandum. The removal actions outlined will be consistent with any future remedial actions proposed for this Site. At this time, the Site is not listed on the NPL. However, the proposed actions will not impede future responses should Site conditions change.

3. Description of alternative technologies

Alternate technologies continue to be considered during this removal action. Several alternatives have been considered and ruled out, due to their impracticality for this Site. Many of the technologies utilized will be dependent upon further characterization of the wastestreams and treatment/disposal options.

4. Engineering Evaluation/Cost Analysis (EE/CA)

An EE/CA has been conducted for this Site by EPA's Remedial Branch along with an EE/CA Approval Memorandum. The EE/CA conducted in 1993 does not document all of the threats posed by this Site. The study did not include all contaminants that have been recently identified. Lead contamination is deemed to be widespread in the ASTs, pipelines, and the surface soil. Specific areas of soil contamination are identified at the refinery. The ASTs, waste material in these tanks, the waste addressed in the emergency response and newly discovered drums at the main office were not included in the EE/CA. The evaluation did not distinguish soil data that identifies specific "hot

spots" with elevated lead, chromium, vanadium, and PAH levels that require a removal based upon health threats. The EE/CA is incomplete for purposes of this time-critical removal action as currently known. All applicable site factors were not taken into consideration.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs determined to be applicable to the activity at the Site are the Resource Conservation and Recovery Act (RCRA) regulations for off-site treatment and disposal. EPA's Off-site Disposal Rule as referenced in 53 FR 48218-48234 dated September 22, 1993, will also apply.

6. Proposed Schedule

Response actions at the Site will be initiated upon approval of this Action Memorandum and subsequent funding approval. Foregoing any unexpected delays, all planned actions are expected to be completed within one year.

B. Estimated Costs

Extramural Costs:	Current Ceiling	Proposed Ceiling
Regional Allowance Costs:		
ERCS	$155,000	$1,555,000
Non-Regional Allowance Costs:		
START	$ 25,000	$ 50,000
STRIKE TEAM		$ 75,000
ERT/REAC		$ 30,000
Subtotal, Extramural Costs	$175,000	$1,710,000
Contingency	$ 10,000	$ 175,000
TOTAL, EXTRAMURAL COSTS	$190,000	$1,885,000
Intramural Costs:		
Direct	$ 5,000	$ 40,000
Indirect	$ 5,000	$ 60,000
TOTAL, INTRAMURAL COSTS	$ 10,000	$ 100,000
TOTAL, REMOVAL PROJECT CEILING (rounded to nearest thousand)	$200,000	$1,995,000

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

The Site will continue to present a fire and explosion threat. A toxic air release resulting in local exposure to the public living adjacent to the Site and in nearby communities is also a concern. A direct contact threat and a threat of release

of hazardous substances into the environment from the leaking ASTs, as well as open ASTs will persist. The known TEL pipelines contain toxic tetraethyl lead. Soil contamination is widespread and is a continuous threat of migration. A release, such as that which triggered the Coast Guard's response in 1991, would impact the Cape Fear River, and the environment from surface and subsurface migration. Unrestricted access and vandalism is a major concern and poses an ongoing risk to the public from uncontrolled releases. There would be an increased risk from hazardous substance migration to the groundwater. Should action be delayed or not taken, the Site will continue to be an imminent threat to the public health, welfare and the environment.

VII. OUTSTANDING POLICY ISSUES

The Site is located within the USCG 5th District. The USCG referred this facility to EPA in 1992. Jurisdictional boundaries identify the USCG as the predesignated federal official for response activities (i.e. On-Scene Coordinator). For this response action, the USCG has relinquished this designation to the EPA On-Scene Coordinator as the federal official for removal actions deemed necessary.

A second issue involves funding and response authorities appropriate for this Site. Funding for the outlined removal actions will consist of both CERCLA and Oil Pollution Act (OPA) monies. Most of the identified threats at the site involve hazardous substances. Removal actions to address these threats will be funded by CERCLA. However, a small percentage of the overall volume of the material is an oil and does not contain identified hazardous substances. The most appropriate funding mechanism to abate these threats will be OPA.

VIII. ENFORCEMENT

"Enforcement Sensitive"

IX. RECOMMENDATION

This decision document represents the selected removal action for the Old ATC Refinery Site in Wilmington, New Hanover County, North Carolina. This memorandum was developed in accordance with CERCLA as amended, and consistent with the NCP. The document is based on the administrative record for the Site.

Conditions at the Site meet the NCP section 300.415(b)(2) criteria for a removal, and I recommend your approval of the proposed removal action. The total projected ceiling is $1,995,000 of which $1,555,000 will come from the Regional Removal allowance.

Approval: _____ Date: 29 MAY 97
Richard D. Green, Acting Director
Waste Management Division

Disapproval: _____ Date: _____
Richard D. Green, Acting Director
Waste Management Division

Attachment

A dispute resolution meeting was held April 1, 1997 between EPA and the PRP. Two additional meetings were scheduled. The first meeting was cancelled at the request of the PRP, and the second was cancelled by Axel Johnson the day prior to the scheduled meeting. A third dispute resolution meeting was held May 9, 1997 with the EPA Acting Division Director as the dispute resolution official to hear arguments from the PRP and EPA. On May 27, 1997, the dispute resolution official provided a written determinination that it was appropriate to conduct this removal under a fund-lead action.

"ENFORCEMENT SENSITIVE"

This Site is a former oil refinery for processing crude oil. Operations were initiated in the 1970s and ceased in 1986. Several owners and operators have been involved with this facility. The USCG initiated and conducted response actions under OPA in 1991 and 1992. This Site was referred to EPA in 1992. The North Remedial Branch conducted activities under a non-time critical removal action. In July of 1995 an emergency response action was initiated to stabilize specific areas on-site. A time-critical action exists due to assessments of the Site and additional analytical data from leaking storage tanks revealing the presence of adulterated oil/sludge and hazardous substances (i.e. TEL).

Pace Oil Company (Pace) owned the refinery from 1970 to 1986. From 1970 to 1980 A. Johnson & Company, Inc. (Axel) operated this refinery. Primary Oil & Energy Corporation (Primary) along with Pace operated this facility through a joint venture called Republic Oil from January 1985 through February 1986. City Gas & Transmission (CG&T) operated during the late 1980s. The Wyandotte Indian Tribe (Wyandotte) considered the purchase and operation of the refinery in 1990. The transaction was never completed. Axel is currently the only viable PRP identified by EPA.

Linda Carroll, a west coast developer, purchased the note on the real and personal property for the refinery. Ms. Carroll solicited EPA for a Prospective Purchaser Agreement. In April of 1996, an auction for the deed of trust was held due to the statute of limitations, and both Ms. Carroll and Axel bid on the facility. Ms. Carroll currently holds the deed to the property, but is not operating the facility. Ms. Carroll has not operated the facility and has attempted to sell the property. She has agreed to access for this removal action.

An Administrative Order on Consent (AOC) was negotiated with Axel Johnson in 1996. The AOC was signed by Axel and EPA late July 1996 and became effective August 2, 1996. A removal order, under OPA, is being contemplated to be issued to Linda Carroll for the non-CERCLA wastes found on-site. Currently, Ms. Carroll has agreed to a voluntary removal of the pending OPA issues concurrent with the CERCLA issues.

The AOC has been reviewed for concurrence, regarding the Covenant Not To Sue, by DOJ from August 1996 through March 1997. On March 25, 1997 the OSC issued a Stop Work Order to Axel Johnson due to continuous violations of the AOC. The PRP ceased implementation for part of the work; was seriously and repeatedly deficient or late in performing the work; and implemented the work in a manner causing endangerment to human health and the environment. A formal dispute resolution, as outlined in the AOC, was invoked by the PRP on March 26, 1997.

MEMORANDUM

To: File
From: Stuart F. Parker, SFP
Hydrogeologist
Date: March 7, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight Site Visit.

SFP met with Mike Taylor at the site to discuss progress in recent weeks. MT reported one incident where a hauler transported waste from the site to Shamrock in Greensboro, but then returned to the site with an unmanifested quantity of "scraps" from the waste shipment. RCRA was handling the matter.

Drums from Area 4 were transported offsite on 2/24/97. LWD took most of the material, while Laidlaw Environmental took the remainder. Tank (80003) was being washed and would continue to be so during next week, at which time tank wastewater treatment and the cleanup of the transfer pipelines was to begin.

Analytical results for soils from the tower area indicated lead (27,000 ppm), chromium (3000 ppm), and Vanadium (<1000 ppm). MT reported that the oil/water separators, the presence of asbestos, and conditions at Area 5 were all still issues at the site. In Area 5, contamination has been detected at depths of up to 18 inches , so MT wants to go to 2.5 feet .

SFP and MT toured the plant interior in Level D protection. Tank 55015 was being washed. Of 80,000 gallons of sludge material, 40,000 was being heated and then vacuumed while the remainder was being scraped up - completion was anticipated the next day. MT noted deteriorating asbestos wraps on outdoor transfer pipes.

(next page)

MT reported preliminary analytical results from 1 soil sample he collected near the waterfront outside the Geraghty & Miller (G&M) work areas. The reported lead concentration was 93,000 ppm. Past employees at the refinery reported historical dumping of sludges in the area to depths of 18 in. By contrast, G&M had not reported lead levels in excess of 13,000 ppm there from previous sampling.

Attempts to purge API Separator # 2 of water had proven ineffective due to water leakage from outside the separator. The nearby piping area SW of Tank # 40013 was planned for use as a staging area during the pipeline cleanup. MT noted asbestos wrapping around several of the pipes. MT had sampled the berm adjacent to Tank # 40013, but results has not been received yet.
He noted that the site's Old Furnace contained 998 ppm of vanadium pentoxide.

SFP photographed oily seepage coming from the base of Tank # 80003. MT had seen stains under rocks in the same area. Rainwater was accumulating inside the tank. SFP photographed the rolloff box at Tank # 80002, plus continuing oily seepage from that tank as well. Tank # 80001 reportedly still contained 400,000 gallons of water.

SFP left site at 15:45 after passing through the decon sequence.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: March 4, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

OSC Mike Taylor telephoned SFP to report the following:

- Tank # 55015 was being power washed. "Baked-on" sludges were proving more difficult to remove.

- The pipeline diagrams were being reviewed - no flushing had occurred yet.

- One API separator had been cleaned out.

- The bottoms of Tanks #80002 and #80003 had both been determined to be leaking product to the subsurface. The subfloors had yet to be addressed.

- The transporter had returned some K051 waste (originally removed from one of the site's API separators) to the site unmanifested. The driver had been fired, and EPA was in contact with the RCRA program.

- Arsenic levels in some TCLP samples had exceeded levels acceptable to IPC in Delaware. PRP was seeking alternatives for disposal.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: February 18, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP called the site trailer (919-762-1851). Chief Thomas of USCG reported that no OSC was on duty that week. Petroclean was removing sludge from Tank #55015 and product from the API separators. This same activity was anticipated to continue through next week. SFP opted not to visit the site due the limited activity and to time constraints and the absence of an OSC.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: January 30, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight Site Visit

SFP arrived onsite at 15:20. Chris Militscher as on duty. He reported that holes had been detected in the bottoms of Tanks # 80002 and # 80003. The interior of Tank # 80003 was being power washed. Mike Taylor was at EPA Region IV, writing to the PRP's attorneys to address previously described concerns about site operations.

CM reported that surface soil sampling by EPA had detected high lead concentrations near the waterfront, outside the established work areas. The preliminary reported concentration was 94,000 ppm. Lead contamination was also detected at the site's refractory tower, and together these discoveries indicated the need to expand the workplan. Citing the old EE/CA, Axel Johnson was resisting this step, although the EE/CA had addressed only soils.

To date, the drums and containers located in structures within Area 4 had not been removed. The product remaining in Tanks # 10009 and # 55015 was too viscous to pump out without being pre-heated. Heat blanket systems for the tanks were to be arranged in weeks to come. The cleaning of the facility's product transfer lines has not commenced as scheduled.
CM cited continuing problems of non-compliance with the health and safety plan by Petroclean personnel.

The AOC contains no Covenant Not To Sue. The Department of Justice has concerns about clauses in the AOC, especially in the event of the discovery of additional areas of contamination (see above). They don't want to set precedents, especially if the site is not completely characterized, so with the discovery of lead contamination, they might reject the AOC, requiring a renegotiation, and the likely suspension of work on the site. Currently the site owner and PRP Axel Johnson are reportedly engaged in litigation, the owner alleging scrap salvage by the PRP and the PRP alleging bidding collusion by the owner.

SFP left the site at 17:00.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: January 10, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight Site Visit

SFP arrived onsite at 14:30, Friday, 1/10. Coast Guard personnel Dave Thomas and Grant Weldin were present at the site, but EPA personnel had already left for the weekend. Petroclean reportedly was removing the top of one of the 2 aboveground storage tanks, #80002 and #80003, and was expected to begin removing tank sludges the following week. No other activity was reported at the site.

USCG personnel required additional documentation of SFP's OSHA HAZWOPR certification, so SFP did not enter the site this visit.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: January 3, 1997
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP telephoned Mike Taylor at the site (919-762-1851). Work was continuing on Tanks #80002 and #80003. The transfer pipes were now to be sampled in another 2-3 weeks, followed by the removal of the tank and the API separator contents. Sprague Energy, another PRP consultant, was assisting G&M at the site.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: December 19, 1996
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight Site Visit

SFP visited the site on 12/19/96, arriving at 15:10. Matt Lasecki of Geraghty & Miller (G&M) was performing administrative work in the contractor's office trailer. Petroclean personnel had left the site and were expected to remobilize on 1/2/97.

Chris Militscher (EPA Region IV) was on duty, subbing/alternating for Mike Taylor. He reported that 2 additional USTs had been discovered onsite, in the area designated "Area 4", across from the refinery, on the east side of Surry Street. If these tanks turn out to be a lead source, then PRP Axel Johnson will be responsible for their removal; otherwise, they are owner Linda Carroll's responsibility.

CM reported only intermittent site visits by Bill Doucet of G&M, and noted that most of the key personnel in the G&M workplan, including their project safety engineer, had not been onsite to date. Field personnel were being rotated in/out from other G&M locations, and the company had collected 12 composite soil samples inthe past 3 weeks. 875 gallons of waste product had been removed from the site to date, with approximately 1 million gallons remaining.
CM expressed concern that the contractor's attorneys had been limiting their procedural flexibility. He also expressed concern over contractor compliance with health and safety procedures.

CM requested information on State regulation of potential on-site treatment for contaminated water from the aboveground tanks. He asked whether the NPDES permit application process could be expedited in cases of short-term operation with limited treatment and discharge - within the site's containment dikes. SFP to look into this.

Federal
Trip Notification & Authorization

Prepared by: Stuart Parker

Today's Date: 12/13/96

*Use Black Ink or Typewriter only-Staff to fill out first 2 blocks only.

Site Trip

Date of Trip: 12/16/96 - 2/1/97

If trip date changed or cancelled note below:
Trip Date Changed To: _____ Cancelled: ___

NCD#: 986 186 518 Site Name: OLD ATC REFINERY
City: Wilmington County: NEW HANOVER

Reason for Trip: Removal Oversight : Site Visit

Name of Hotel (Overnight Trip): — Hotel Telephone Number: ( ) — - —

Authorized by: [signature]
Industrial Hygienist

Project Team Leader: Stuart Parker

Assistants: —, —, —

Attach To Notification Form: 1 copy each:
Submit to the
Industrial Hygienist

- Preliminary Assessment Form (First page only)
- Site Map
- PA Transmittal Letter

(Please list appropriate County Health Department contact person to call to advise of trip)
Environmental Supervisor or Health Director to call: Mr. Tom Stich Title: Env. Health Supervisor
(Note if Dr., M.P., etc.)
Telephone Number: (910) 343 - 6666

Notes: Health Department Official Contacted: Tom Stich's phone mail
Back Up Letter Required: Yes ___ No X
Notified Mr. Stich via phone mail on 12-13-96 (DBC)

Note: Signed original to Data Manager

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: December 12, 1996
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP telephoned Chris Militscher (EPA Region IV) at the site (919-762-1851). He reported the following progress:

- Geraghty and Miller had completed soil sampling in Area I
- Packaging of drummed material in the Maintenance Building (Area IV) was to be completed the next day.
- Product in Tank #55015 was being pumped out for recycling at International Petroleum in Delaware
- Product transfer lines were to be sampled beginning within the next couple of days.
- Tanks #80002 and #80003 had been cut above their floating tops to test their structural condition. One to two more weeks would be required to remove the tops before the product could be removed.
- Samples from the rolloff containers had been sent for lab analysis.

Old ATC Refinery file

Carolina CLIPPING SERVICE
1115 HILLSBORO
RALEIGH, NC 27603
TEL. (919) 833-2079

STAR NEWS
WILIMINGTON, N. C.

DEC 10 96

A-3

Not its fault

EDITOR: Chris Davis' Nov. 23 article on the CG&T refinery makes a number of references to Axel Johnson Inc., the company conducting the cleanup at the Surry Street site.

We want to make it clear to your readers that until the cleanup began last month, Axel Johnson had no presence on the site since it ceased operations there in 1984. New operators continued refining . . . until the site was abandoned by its owner in the late 1980s.

Most of the problems reported in the article, particularly petroleum leakage, stemmed from the deterioration of the pipes, tanks and infrastructure subsequent to that abandonment. Nevertheless, Axel Johnson Inc. has acknowledged that as a prior owner/operator, we are, under the law, a potentially responsible party, and we are cooperating with the EPA. . . .

Axel Johnson Inc. is a diversified U.S. corporation, owned by an individual who resides outside of the U.S.A. Further, Axel Johnson's oil business, which does not include refining, amounts to a fraction of 1 percent of the U.S. market, and we do not operate outside of the U.S.A. and Canada. Axel Johnson Inc. is not a "foreign oil giant." . . .

PAUL E. GRAF
President
Axel Johnson Inc.
Stamford, Conn.

MEMORANDUM

To: File
From: Stuart F. Parker, SFP
Hydrogeologist
Date: December 5, 1996
Subject: Old ATC Refinery,
Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

SFP called the site trailer (919-762-1851) and left a message. Frank Garcia (EPA Region IV) called back. Mike Taylor was on another project. Petroclean's efforts to clean out the site's product transfer lines had been postponed until next week. Geraghty & Miller was still sampling soils in Area I, the SW portion of the site.

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: November 22, 1996
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight Site Visit.

SFP returned to the Old ATC Refinery site for a second State Oversight visit on Thursday, 11/21/96. Arriving at 15:15, SFP checked with Todd Wolpert, US Coast Guard, and then met with Mike Taylor, EPA Region IV ERRB. MT explained the current site status and the various sampling and removal operations planned for the site, using a mounted oblique color aerial photograph of the site to illustrate the various sampling areas and site features.

SFP and MT toured the secured interior of the terminal in level D protective gear. Geraghty & Miller Staff Scientist Mark Radecke and a co-worker, working in Level C protection, were collecting composite soil samples from Area 1, located adjacent to the Cape Fear River on the SW corner of the site. MT and MR discussed G & M 's interpretation of the workplan and EPA's composite sampling requirements for the area. Approximately 1000 cu yd of contaminated soil from the Coast Guard's 1991-1992 recovery trench, excavated south of Tank 40013, were previously stockpiled in Area 1.

MT led SFP to the Pump Area, SE of Tank 40013, which is the designated collection point for removal of product lines at the site. The lines are to be flushed, first by vacuum and then by hot water, then dismantled. MT then showed SFP Area 5, east of the # 55014 and # 55015 tanks, where stored drums had been removed.

MT and SFP examined the area around Tank # 10008. MT pointed out an apparent overflow sump projecting about a foot above grade adjacent to the tank. MT did not know where the sumps, which are present at every tank, empty out. SFP and MT then walked past the former tetraethyl lead tank location and the transport lines which run between the # 8000_ series tanks and the empty # 4000_ series tanks. The lines were to be cut up and stored in rolloff boxes.

An unmarked monitoring well, covered by a locked protective outer casing, was visible on the north side of Tank # 80002. This monitoring well has not been identified by EPA, but appears to have been installed during the past year. The visible oil spills on the ground at the north side of Tank # 80002 (Area 2) and the west side of Tank # 80003 (Area 3) had been scraped up and the denuded areas covered with secured clear plastic sheeting. Two additional, less visible spills to the ground surface have occurred on the SW and S sides of Tank # 80003. These 2 spills are not designated in the workplan as portions of Area 3. However, Mike Taylor plans to sample these spill areas as part of the EPA's planned sampling throughout the site. Based on risk assessment, the established soil cleanup goal for lead at this site is 1300 ppm.

Tank # 80001 reportedly contained mostly water with low lead concentration, But material from Tanks 80002 and 80003 contained several hundred ppm of lead. MT reported that the site contains an estimated 1.2 million gallons of petroleum waste material, not including the contents of the product lines.

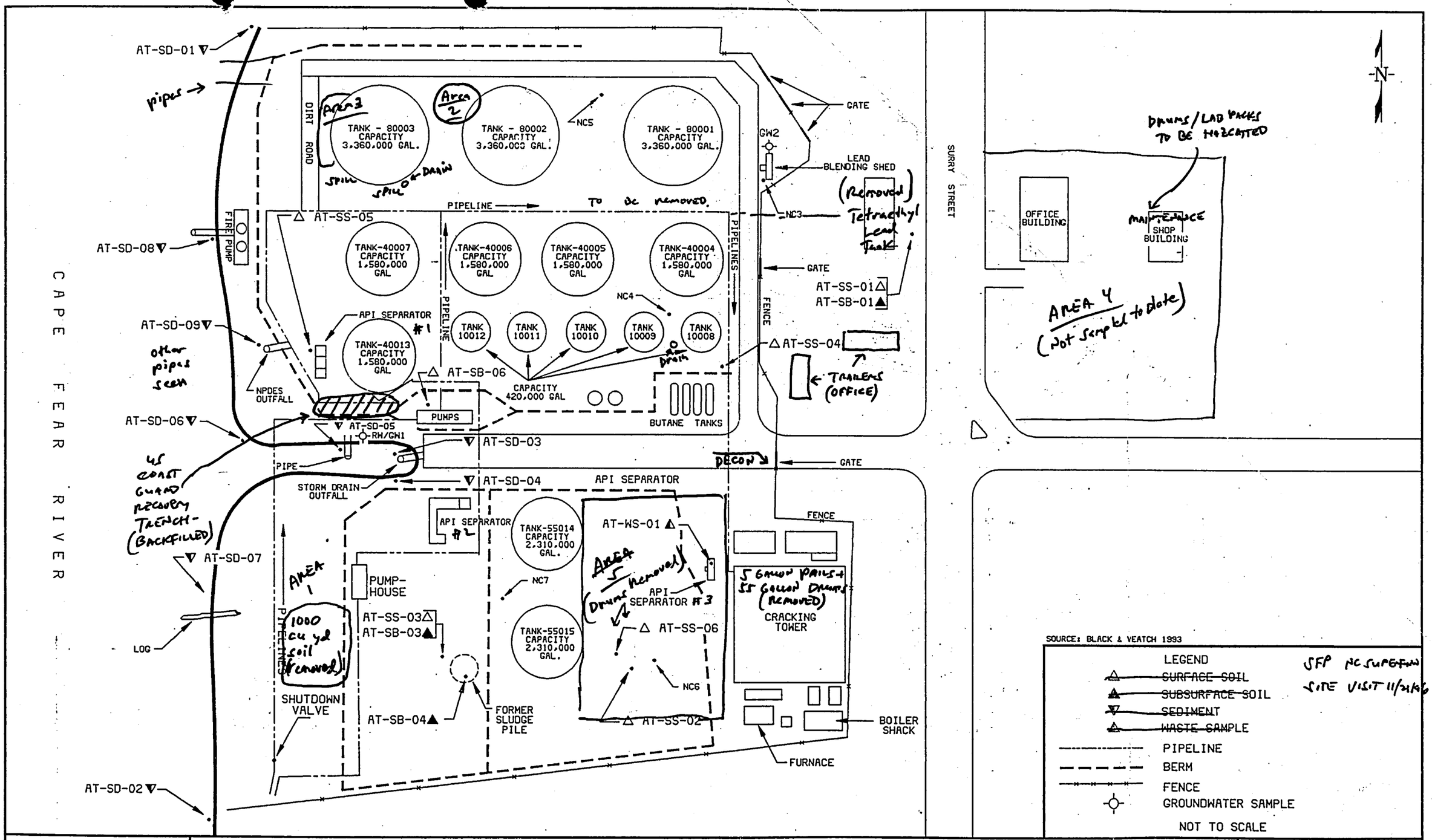
Along the berm between the tanks and the Cape Fear River, Mike Taylor pointed out several unidentified pipelines which run beneath the berm from the site to the riverbed. Some of the pipes appeared to come from the site's API separators, while others remained unidentified. Additional pipes were visible along the north side of the inlet channel south of Tank # 40013. At the same location, MT pointed out the former location of the Coast Guard's recovery trench, now backfilled with gravel.

MT reported that Area 4 of the site consisted of the former maintenance shop in the NE corner of the site. More than 100 lab packs and 55-gallon drums, variously labelled as flammable liquids, acids, pentachlorophenol, and chlorinated solvants, are stored in the building. The surrounding area has not been sampled by the EPA, however, field HAZCAT screening of the containers was scheduled to begin on 11/23-24.

MT did not have a photocopier at the site's office trailors, however, he said that copies of the workplan and the AOC for the project would be sent from Atlanta to the NC Superfund Section. SFP left the site at 17:00 after completing boot decontamination at the workzone's decontamination area.

ORIGINAL DWG SIZE 8.5 x 11

CAD DWG NO: OARSAMP
DATE: 02-17-94 GUS
PLOT SCALE: 1=1



~~SAMPLE LOCATION MAP~~

OLD ATC REFINERY

WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

~~FIGURE 2~~3

MEMORANDUM

To: File
From: Stuart F. Parker, Hydrogeologist
Date: November 19, 1996
Subject: Old ATC Refinery, Wilmington, NC
NCD 986 186 518
Removal Action: State Oversight.

On Friday, 11/15/96, SFP spoke with Tony Best, who was filling in for Mike Taylor (EPA Region IV ERRB) at the site. Mike had been temporarily diverted to an emergency residential relocation in Mississippi. Tony reported that the contractor (Geraghty & Miller) had set up at ATC that week and had begun sampling tanks and soil at the site. Tony was about to leave for Atlanta. He reported that the US Coast Guard was monitoring the contractor's activities in his absence.

SFP drove to the site that afternoon, after visiting the nearby Southern Wood Piedmont site. At Old ATC, SFP met with Todd Wolpert, Response Supervisor (Coast Guard Gulf Strike Team, Mobile, Alabama). He reported that the contractor was sampling the 80,000 and 20,000 gallon tanks and taking some soil samples. Petroclean was charged with sampling the tanks, and G & M was charged with sampling the soils, as outlined in the work plan. Soil was also being excavated, based on visible staining, at the oil/sludge spill site at the north end of the site. Todd Wolpert indicated that sampling would be done by Thanksgiving holiday, and that sludge and tank removal would begin after TG, when the analytical work was complete.

SFP telephoned Mike Taylor (404-562-8762) on 11/19/96, to clarify the regulatory status of the site. The site had been assigned to the remediation group (Beverly Hudson), but was rerouted when an AOC was signed with the PRP, Axel Johnson, a former operator onsite. The current property owner, Linda Caroll, was not named on the AOC, but Mike was going to check her liability under the Oil Pollution Act (OPA).

ERRB is leading a removal at this site. The Coast Guard reportedly is present whenever a contractor is on this site. The soil excavated on Friday was being kept in a rolloff box onsite. G & M will be gridding off 5 areas onsite which were specified in the workplan for sampling. A copy of the workplan was to be provided to the NC Superfund Section this week. Mike will be onsite all this week, beginning PM today. SFP probably will return to visit the site on Thursday, 11/21.

GERAGHTY
& MILLER, INC.
Environmental Services

a heidemij company

October 23, 1996

Mr. Michael Taylor
On Scene Coordinator
U.S. Environmental Protection Agency
100 Alabama Street
Atlanta, GA 30303

Re: Former ATC Refinery Removal Action, Wilmington, NC.

Dear Mr. Taylor:

Enclosed please find two copies of the 3rd revision of the removal action work plan (RAP) for the former ATC Refinery Removal Action as requested. Geraghty & Miller and Petroclean have addressed each of the comments provided in your October 14, 1996, letter. A copy of our responses to your comments is also enclosed to further ensure that your comments have been addressed. Sections of the RAP previously approved by USEPA have not been submitted, except that page substitutions are provided for Appendix B. The RAP components submitted are 3-hole punched such that they can be inserted into the binder provided with the previous RAP submittal.

As before, all communications concerning this submittal should be directed to the undersigned. In order to expedite approval of the RAP, Geraghty & Miller is available to confer or meet concerning any further questions you may have.

Sincerely,

GERAGHTY & MILLER, INC.

William H. Doucette

William H. Doucette, Jr., Ph.D.
Associate and Project Coordinator

WHD/mre

Enclosures

cc: Don Frost
Signe Gates
Brian Kowalsky

g:\aproject\skaddnar.p\nc0250.002\report\cvrltr.doc

CrossPointe II, 2840 Plaza Place, Suite 350 • Raleigh, North Carolina 27612 • (919) 571-1662 • FAX (919) 571-7994

October 23,1996

To: File

From: Jack Butler

Subject: Old ATC Refinery
NCD 986 186 518

Mr. Glen Phillips (713/268-7811) was contacted on this date concerning his Freedom of Information Act request of October 8, 1996. Mr. Phillips agreed to contact Mr. Scott Ross of our staff at (919)733-2801 ext.328 to arrange an appointment to review the files for the subject site.

cc: Stuart Parker
David Lown

The Travelers Indemnity Company
The Aetna Casualty and Surety Company
Members of TravelersGroup

Special Liability Coverage Unit

10800 Richmond Avenue, Suite 123
Houston, TX 77042
FAX: 713 268-7815

October 8, 1996

North Carolina Department of Environment,
Health and Natural Resources
Attention Ms. Lois Walker, Director
Solid Waste Management Division
SuperFund Branch
P.O. Box 27687
Raleigh, NC 27611-7687

RE : C.H. SPRAGUE & SON, LEXA INTERNATIONAL CORP., ATC PETROLEUM, AND AXEL JOHNSON, INC.
SITE : OLD ATC REFINERY
LOCATION : 801 SURRY STREET
NEW HANOVER COUNTY, WILMINGTON, NORTH CAROLINA

Dear Ms. Walker:

Under the Freedom of Information Act 5, U.S.C. 552, I am requesting access to and copies of information regarding the Old ATC Refinery located at 801 Surry Street in Wilmington, North Carolina. I would ask that you have a department-wide search for all material that is public record and that you allow me access to those documents for my review. I am especially interested in all information and documents pertaining to the above named individuals' or companies' involvement at the site.

I am interested in obtaining answers to the following questions as it relates to my investigation.

1) For each of the companies listed above information regarding the nature and extent of their operations at the site.

2) History of site ownership and occupancy, including chain of title, leases, and usage, etc.

3) Source, nature, and extent of contamination.

4) Timing and details of discovery of contamination at or around the site.

5) Timing of waste disposal or other releases of pollutants by the companies named above, or other PRPs at the site.

6) Provide copies of correspondence between the USEPA and the above named companies as it relates to questions and answers regarding their involvement, manifest and shipping records, or witness statements.

If you deny any or all parts of this request, please cite each specific exemption you think justifies your refusal to release the information and notify me of appeal procedures available under the law.

After this letter has been assigned to the appropriate project manager, please ask that manager to contact me as soon as possible so that arrangements can be made for me to visit your office to review the file. If there are questions concerning this request, please contact me at (713) 268-7811.

Sincerely,

Glenn D. Phillips

Glenn D. Phillips
SLCU/Houston, TX

VMW/ncddehnr.gpw

counselor Laurie Souders had just attended a workshop about youth gangs when a parent asked to organize a Halloween party at school to keep kids safe from gangs.

"We have seen the beginnings of gang activity," Ms. Souders said. "Some of our parents in Monterey Heights are scared to let their children go trick-or-treating. They are afraid there might be a lot of activity Halloween night."

Instead of organizing a party, Ms. Souders decided to arrange a workshop to help parents keep their kids from joining gangs. It will be at 7 p.m. Oct. 22 at Bellamy Elementary School. To register, call 350-2039.

Earlier this year, folks in Monterey Heights and along the Carolina Beach Boardwalk complained of graffiti, vandalism and petty crimes committed by groups of teen-agers wearing same color bandannas in the gang fashion.

"What we're seeing is not only graffiti and vandalism, but we are also seeing some assaults," said Sgt. M.T. Benson of the New Han-

as 21.

In Monterey Heights, many people are so afraid of retaliation by young thugs they wouldn't allow their names to be used.

Though they say things have improved since the Sheriff's Department stepped up patrols this past summer, they worry about possible property damage or even physical harm if they complain publicly.

The mother of a teen-ager called the gangs "ruthless and mean" and said she was worried her son might be harmed if she spoke out. She and others in the neighborhood welcomed the idea of a workshop to help parents look for signs their children might be involved in gangs.

"Monterey Heights resident Rose Paul said she won't let her 14-year-old son out of her sight when he's visiting from Florida. "We find things to do together."

She and other residents say some of the groups stand in the road or behind block driveways, almost daring someone to run over them.

There have been cases of spray-

after midnight on school nights.

Bellamy parent Tammy Kennedy lives in the Belmont subdivision in Wilmington but says she's just as worried about gang activity as folks in Monterey Heights. She'll be going to the workshop.

"As a parent, I just want to get some ideas of what to look for," she said. "I'm sure my children won't do anything like that. But then again, we all say that."

Her oldest daughter attends Myrtle Grove and has reported that some kids there dress and use language imitating gang style.

Local law officers aren't seeing pre-teens in gangs, but some cities have seen gang members as young as 5 or 7. Children that age see what their older siblings or neighbors do, Sgt. Benson said. Some also may see belonging to a gang as exciting, he said.

Parental supervision and support are the keys to keeping kids away from gangs and other bad influences, Sgt. Benson said. Often, children attracted to gangs long for recognition or a family "bond" they don't feel at home, he said.

The Thompsons were released from jail after each posted $25,000 bond. Mr. Huff was released after posting a $40,000 bond. Mrs. Huff remains in the Brunswick Count Jail in lieu of $100,000.

county's Board of Elections.

- **Bladen:** county courthouse, Room 215, Courthouse Square, Elizabethtown.
- **Brunswick:** government complex off old U.S. 17 at Supply.
- **Columbus:** Miller Building, 304 Jefferson St., Whiteville.
- **Duplin:** county courthouse, Room 104, Courthouse Square, Kenansville.
- **New Hanover:** old courthouse, Room 101, Third and Princess streets, Wilmington.
- **Onslow:** old courthouse, Room 106, 625 Court St., Jacksonville.
- **Pender:** county courthouse, third floor, Wilmington Street entrance.

New troubles tax old oil refinery

By CHRIS DAVIS
Staff Writer

Amid environmental questions and disputes over ownership, a defunct oil refinery on the Cape Fear River now faces tax problems.

Wilmington and New Hanover County are trying to have the old CG&T refinery sold in an attempt to recoup nearly $213,000 in property taxes owed from about 10 years.

They sued Wednesday in New Hanover County Superior Court.

"We've just waited long enough and have been patient," said Assistant County Attorney Kemp Burpeau. "The new owner has not paid the taxes."

The property was foreclosed on in April by Linda Carroll, who had CG&T never made any payments on the debt, so Ms. Carroll put the refinery on the auction block.

The auction failed to attract any serious bidders, so Ms. Carroll wound up owning the 15-acre property.

Ms. Carroll did not own the refinery when it stopped paying taxes for nearly a decade. But as its new owner, she is legally responsible for the bill.

Since foreclosing on the property, Ms. Carroll has taken some responsibility for cleaning up the site, which was soaked with oil and other fuels spilled by leaky containers under previous owners. She has worked with the Environmental Protection Agency to try to force previous owners to clean up their mess.

Ms. Carroll referred questions the complaint, and does not normally comment on pending cases.

The legal action could ultimately lead to a sale of the property to pay back taxes.

Ms. Carroll could keep that from happening by paying the bill, Mr. Burpeau said.

She also could try to buy the property back herself at auction.

Mr. Burpeau said others are interested in the property, but he would not name them.

The refinery property has changed hands or operating agents at least five times since it was bought to process oil in 1970.

The operation came under fire when a former employee blew the whistle on environmental violations, and the refinery was cited by the state in 1987 for allowing fuel to leak.

SHALLOTTE

About 50 seek manager post

The Shallotte aldermen have begun reviewing about 50 applications for the town's first administrator position.

The applicants are from all over the country, including Florida, Michigan, New Jersey, New York and Utah, and a few have experience in municipal government, said Alderman Roney Cheers.

Although he opposed hiring an administrator when the board discussed it during budget workshops earlier this year, Mr. Cheers said he's determined to find the most qualified person for the job. He would like someone with experience in town administration.

The aldermen decided to hire an administrator to handle an increased workload, a $1.5 million yearly budget and the town's 22 employees. They budgeted $34,000, including benefits, for the position they expected to begin Oct. 1.

The board is looking for a person with a bachelor's degree in business administration or a related field and at least three years' experience in local government. Mr. Cheers said the board likely will begin interviewing applicants soon.

NEW HANOVER

Seminars can get you surfing

Are you lost on the Net? Do you still think that's a device used by fishermen?

Wilmington Area Internet Advocates is holding a free lecture Sunday to teach people about the Inter-

services, will teach two sess
— one for beginners and the o
for job hunting.

The beginners class will be f
1:15 to 3 p.m., and the job-hun
class will run from 3 to 5 p.m. I
classes will meet at the n
branch of the New Hanover Co
Library at Third and Ches
streets.

For information about the
search seminar, call Sandy Sal
at 395-5500. Internet Advoc
can be reached using e-mail
waia@wilmington.net or by ca
Jon de Faut at 452-4301.

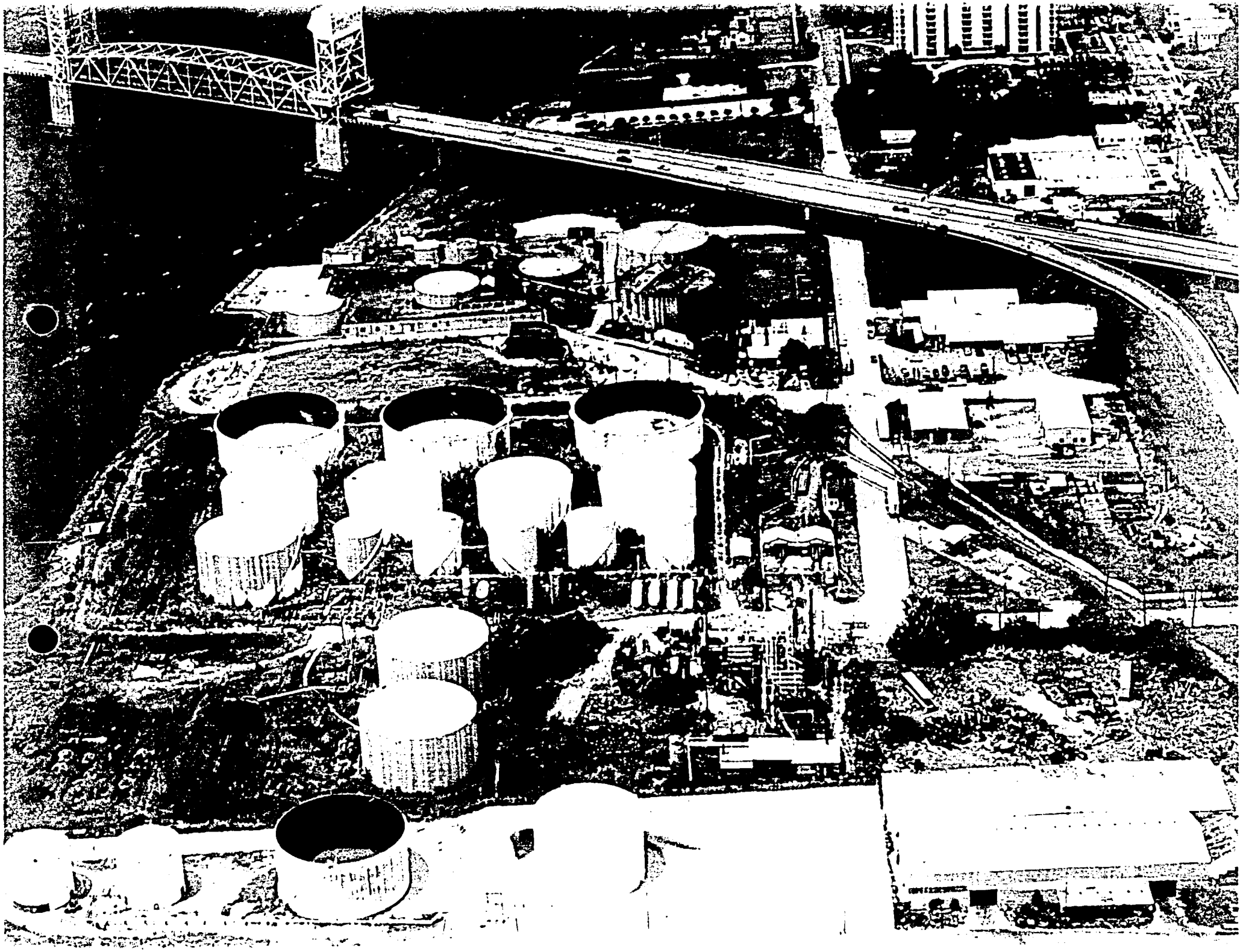
UNITED WAY

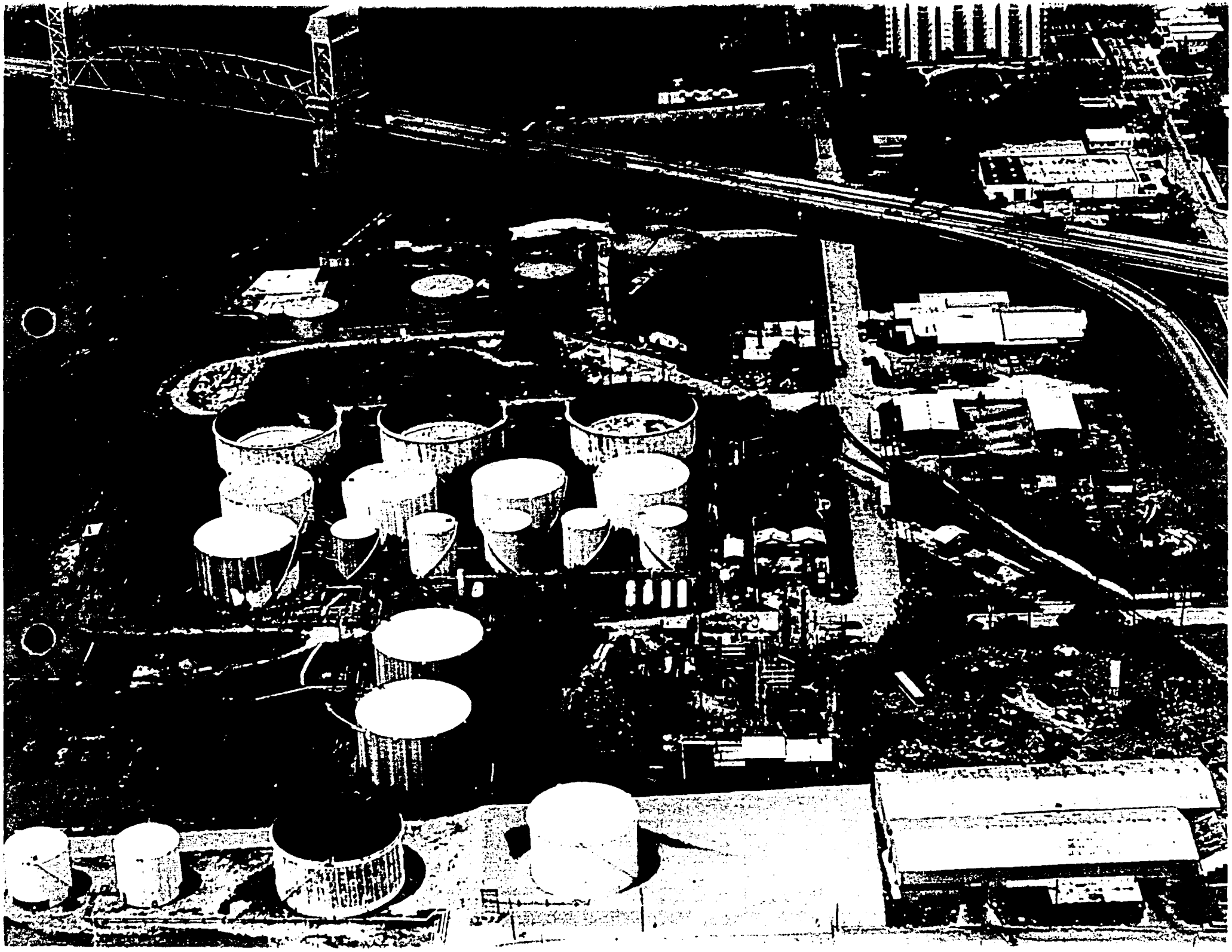
Red Cross gets extra donation

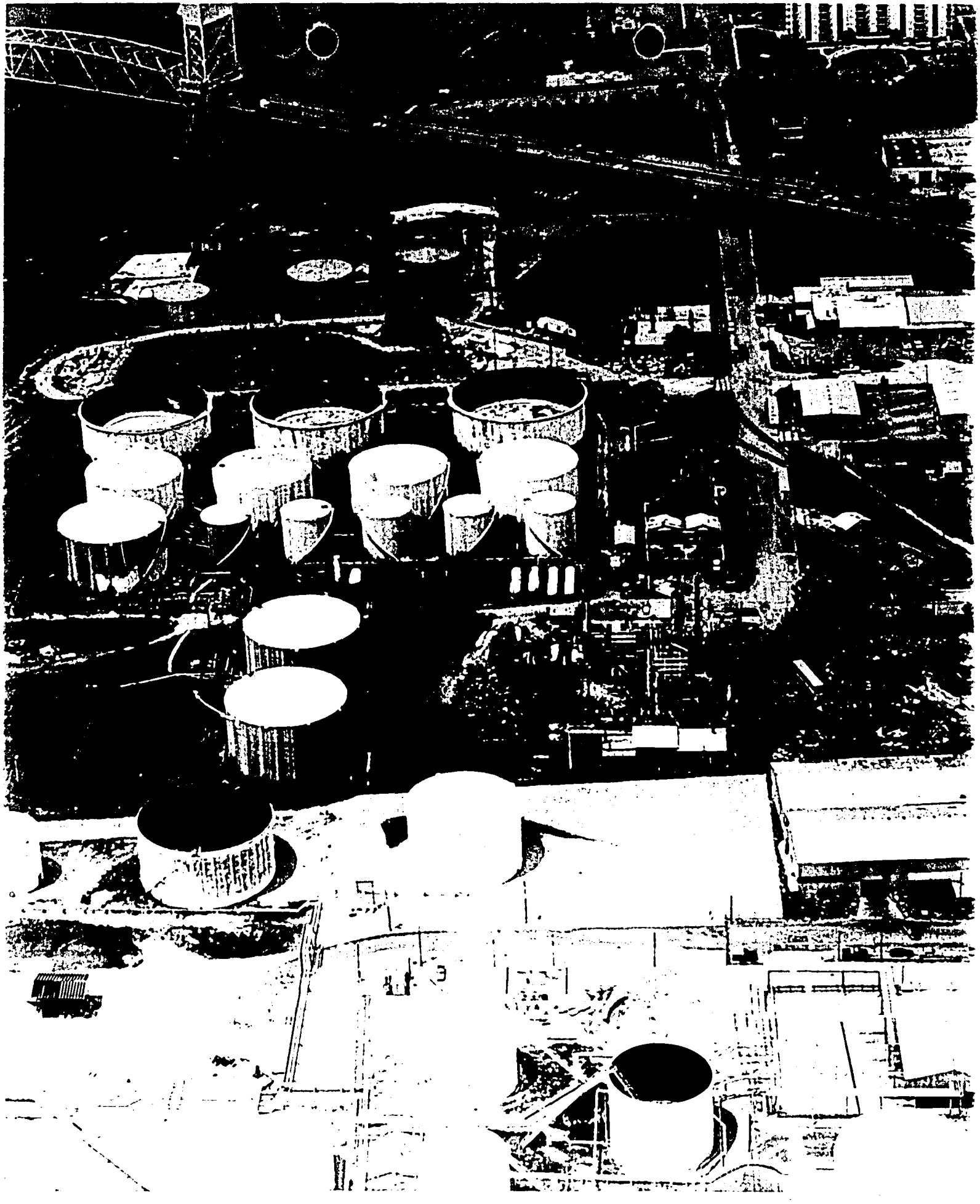
The Cape Fear Area United
has donated an additional $40
to the American Red Cross to
in the aftermath of Hurricane I

The amount is in additio
$10,000 given to the Red C
after Hurricane Bertha. A
United Way member agency,
Cape Fear chapter of the
Cross also got $160,000 for ro
expenses during the year.

The Red Cross estimates n
28,000 families were affecte
Hurricane Fran. The agency s
tered 4,000 people and se







State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

October 8, 1996

Memorandum

TO: Grover Nicholson

FROM: David J. Lown

RE: Personnel for Oversight of Removal Activities at
Old ATC Refinery Site
Wilmington, New Hanover County
and the Cristex Drum Dump (JFD/Channel Master Site)
Oxford, Granville County

EPA will be doing removal activities at these two facilities sometime during the next two months. At Old ATC Refinery, Mike Taylor, EPA OSC, has requested that the NC Superfund Section have someone available for oversight activities, no sampling involved, beginning early in November. At the Cristex Drum Dump, Tony Moore, the EPA OSC, will begin trenching a drum dump sometime during this month. We should have someone present during the trenching.

In reference to Old ATC Refinery, Mike Taylor called me yesterday and told me that an AOC was signed on for this site on August 2. The PRP is Axel Johnson, Inc. Geraghty and Miller (G&M) has been selected to prepare a workplan for the removal of tanks, pipes, and drums. The tank and pipe removal has been subcontracted out to PetroClean (?) out of Pennsylvania. Two workplans have been prepared by G&M and rejected by EPA. Mike predicts that the removal activities will begin early in November. He has requested that the Superfund Section have personnel available, on a contingency basis, to do oversight during the removal.

A geophysical survey was conducted at the Cristex Drum Dump in July 1996. Tony Moore talked to me on the phone yesterday. He said that the survey was inconclusive that trenching would be done sometime during this month. Tony is in the process of arranging for a backhoe to do the work and will contact me when he is ready to proceed. Because of my work load, I will not be able to be in the field during the trenching.

cc: Pat DeRosa

P.O. Box 27687,
Raleigh, North Carolina 27611-7687
Voice 919-733-4996

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

MAY 09 1996

4WD-NSRB

David Lown
North Carolina Department of Environment
Health & Natural Resources
401 Oberlin Road
Raleigh, North Carolina 27605

RE: Old ATC Refinery Site, Wilmington, North Carolina

Dear Mr.Lown:

This letter notifies you that Luis Flores has been assigned as the Remedial Project Manager for the Old ATC Refinery Site during my absence on maternity leave. All correspondence and further communications should be directed to him. No address or telephone changes will be required. Please contact me or Luis if you have any questions concerning this notification. Richard Leahy will continue as the Regional attorney for this Site.

Sincerely,

Beverly J. Hudson

Beverly Hudson
Regional Project Manager
North Superfund Remedial Branch

cc: Curt Fehn, NCS
Richard Leahy

Printed on Recycled Paper

March 21, 1996

Memorandum

TO: File

FROM: David J. Lown

RE: Planned Site Visit by EPA Removal Branch
Old ATC Refinery
Wilmington, New Hanover County

Michael Taylor telephoned me today. Mr. Taylor is the new OSC for this site. He will be inspecting the site beginning on Wednesday, March 27 and anticipates being there through the end of the week. He will determine the amount of oil in tanks 55014 and 55015. These tanks were found to be essentially empty when sampled by Geraghty and Miller in December 1995. Recently, during AOC negotiations that are now under way, the PRPs said that the tanks contain over 100 thousand gallons of oil.

Mr. Taylor is also interested in resampling tanks 80001 through 80003. Previous EPA sampling suggested that these tanks contained oil contaminated with greater than 100 ppm lead. Sampling by Geraghty and Miller in December 1995, and the split sampling by NC Superfund, did not detect high levels of lead in samples from these tanks.

Mr. Taylor will also be looking for pipes containing tetraethylead. He suspects that these may be the source of lead in the oil.

cc: Grover Nicholson
Jack Butler

March 20, 1996

Memorandum

TO: File

FROM: David J. Lown

RE: Phone Conversation with Beverly Hudson
Old ATC Refinery
Wilmington, New Hanover County

Today I received a phone call from Beverly Hudson, Remedial Project Manager for this site. Ms. Hudson has been negotiating with the PRPs to get a non-time critical removal for a series of tanks on the site. Apparently negotiations with the PRPs have broken down. EPA has decided to take the project out the remediation program and put it back under the control of the Removal Branch. Mike Taylor will be the OSC for the site.

According to Ms. Hudson, the negotiations broke down because of confusion involving the amount of oil in tanks 80001, 80002, 80003, 55014, and 55015. With exception of tank 80002, all of these tanks were sampled by Geraghty and Miller with NC Superfund Section oversight during December 1995. Geraghty and Miller found 5 feet of water in tank 80002. The other tanks, 80003, 55014, and 55015, were found to be empty, with exception of some oily material in the bottom of the standpipes. Lawyers for the PRPs claim that tanks 55014 and 55015 contain greater than 100,000 gallons of oil with a high lead concentration.

cc: Grover Nicholson

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

COPY

DEHNR

February 13, 1996

Ms. Beverly Hudson
Superfund Branch, Waste Management Division
US EPA Region IV
345 Courtland Street
Atlanta, Georgia 30365

RE: Inorganic Chemistry Results and BTU Test Results
Sampling Event 12/7-8/96
Old ATC Superfund Site
Wilmington, New Hanover County

Dear Ms. Hudson:

Enclosed are the results of the inorganic chemistry lab and BTU testing for the split-samples collected from Geraghty & Miller at the Old ATC Refinery in December. A description of the samples is given in Table 1. This completes the data report for this sampling event. Please call me at (919) 733-2801, extension 349 if you have any questions.

Sincerely,

David J. Lown
Environmental Engineer
Superfund Section

Enclosures

cc: Jack Butler

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-4996 FAX 919-715-3605
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Table 1. Tanks examined and samples taken during sampling events 12/7-8/1995 and 12/15/1995, Old ATC Refinery, Wilmington, New Hanover County, North Carolina

Tank Number	NC Superfund Sample Number	Media Sampled	Sample Description	Comments
80001	19604, 19605, 16904	Water	Clear water with brownish suspended solids	Sample collected through standpipe. Standpipe contains 5 feet of water.
80003	NA	None	NA	Standpipe contains a few inches of water with a thin layer of black oily material at top. No sample taken.
10009	19608, 19609, 16906, 16915	Hydrocarbon	Black tarry oil.	Tank is empty. Standpipe contains a few inches of black oily material. Sample collected from standpipe.
40005	NA	None	NA	Tank is empty.
10010	NA	None	NA	Tank is empty. Standpipe contains 1 inch of black oily material. No sample collected.
10011	19606, 19607, 16905, 16914	Hydrocarbon	Black tarry oil.	Sample collected from standpipe. Oil is in standpipe at a depth of 20 ft. Standpipe may be half full.
API-1	19610, 19611, 16907, 16916	Water	Pond water from wetland.	API separator located west of Tank 40013.
API-2	19612, 19613, 16908, 16917	Water	Water collected from under a paper-thin layer of tarry oil.	API separator located west of Tank 55014.
API-2	19616, 16910, 16919	Hydrocarbon	Black oily sludge skimmed from the top of water. About half of oil removed by sampling.	API separator located west of Tank 55014.
API-3	19614, 19615, 16909, 16918	Water	Water collected from under a layer of oil 1/2 thick.	API separator located east of Tank 55014 and west of refinery.
API-3	19617, 16911, 16920	Hydrocarbon	Black oily sludge collected from top of water.	API separator located east of Tank 55014 and west of refinery.
55015	No split taken	Hydrocarbon	Black tarry oil.	Tank is empty. Standpipe contains 1 foot of oil.
55014	No split taken.	Hydrocarbon	Black tarry oil.	Tank is empty. Sample is from bottom of standpipe.
Trip Blank	19618			

NA - Not applicable.

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij Company

Laboratory Task Order No. —

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number NCO 250-001

Project Location OLD ATC REFINERY WILMINGTON NC

Laboratory

Sampler(s)/Affiliation AMY PINPHO G+M
RICHARD HILLHOUSE G+M

RECEIVED FEB 08 1996 SUPERFUND SECTION

RECEIVED FEB 7 1996 HAZARDOUS WASTE

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION: BTM METAL JAR									TOTAL
10011		11/8/95 0930		1									1
10009		" 1315		1									1
APF-1		" 1520		1									1
APF-2		" 1630		1									1
APF-3		" 1800		1									1
APF-2		" 1630		1									1
APF-3		" 1800		1									1

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 7

Relinquished by: [signature]	Organization: Geraghty and Miller	Date 11/8/95	Time 1900	Seal Intact? Yes No N/A
Received by: [signature]	Organization: DENR SUPERFUND	Date 11/8/95	Time 19:00	
Relinquished by: [signature]	Organization: NC Superfund Sect	Date 12/12/95	Time 10:12 AM	Seal Intact? Yes No N/A
Received by: [signature]	Organization: N.C. State Lab. of Pub. Health	Date 12/12/95	Time 10:12 AM	

Special Instructions/Remarks: Relinquished to Stewart Parker and David Lunn (NCDENR)

REPORT RESULTS TO SUPERFUND SECTION

Results Reported: 5 Feb 96 [signature]

Delivery Method: ☐ In Person ☐ Common Carrier _____ (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij Company

Laboratory Task Order No. ____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number NCD 250 001

Project Location OLD ASC REFINERY WILMINGTON NC

Laboratory ____

Sampler(s)/Affiliation ALAN PINNIX G&M
RICHARD HILL BROWN G&M

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	750 ml HDPE BOTTLE	125 ml TEFLON GLASS JAR								TOTAL
80001	L	12/1/95		1	—								1
10011	L	12/8/95 1950		—	1								1
10009	L	12/6/95 1815		—	1								1
API-1 W1	L	" 1520		1	—								1
API-2 W1	L	" 1630		1	—								1
API-3 W1	L	" 1800		1	—								1
API-2	L	" 1630		—	1								1
API-3	L	" 1800		—	1								1

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 8

Relinquished by: [signature]	Organization: Geraghty and Miller	Date 12/8/95 Time 1900	Seal Intact? Yes No N/A
Received by: [signature]	Organization: DENR SUPERFUND	Date 12/8/95 Time 1900	
Relinquished by: [signature]	Organization: NC SUPERFUND Sect	Date 12/12/95 Time 10:12 AM	Seal Intact? Yes No N/A
Received by: [signature]	Organization: N.C. State Lab of Pub. Health	Date 12/12/95 Time 10:12 AM	

Special Instructions/Remarks: Relinquished to David Lowe and Stewart Porter (NC DEHNR)

REPORT RESULTS TO SUPERFUND SECTION

Results Reported: 5 Feb 96 [signature]

Delivery Method: ☐ In Person ☐ Common Carrier ____ (SPECIFY) ☐ Lab Courier ☐ Other ____ (SPECIFY)

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij Company

Laboratory Task Order No. ____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number NCD 250 001

Project Location Old ASC Refinery Wilmington NC

Laboratory ____

Sampler(s)/Affiliation Alan Pinnix G&M
Richard Tillman Brown G&M

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION: 750 ml HDPE Bottle	125 ml Teflon Lined Glass Jar								TOTAL
80001	L	12/7/95		1	—								1
10011	L	12/8/95 1430		—	1								1
10009	L	12/8/95		—	1								1
API-1 W	L	" 1520		1	—								1
API-2 W	L	" 1630		1	—								1
API-3 W	L	" 1800		1	—								1
API-2	L	" 1630		—	1								1
API-3	L	" 1800		—	1								1

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 8

Relinquished by: [signature]	Organization: Geraghty and Miller	Date 12/8/95 Time 1900	Seal Intact? Yes No N/A
Received by: [signature]	Organization: DENR Superfund	Date 12/8/95 Time 1900	
Relinquished by: [signature]	Organization: NC Superfund Sect	Date 12/12/95 Time 10:12 Am	Seal Intact? Yes No N/A
Received by: [signature]	Organization: NC State Lab of Pub. Health	Date 12/12/95 Time 10:12 Am	

Special Instructions/Remarks: Relinquished to David Lowe and Stewart Porter (NC DENR)

Report results to Superfund Section

Results Reported: 5 Feb 96 [signature]

Delivery Method: ☐ In Person ☐ Common Carrier ____ (SPECIFY) ☐ Lab Courier ☐ Other ____ (SPECIFY)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number ~~019604~~ 016904

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAP / SF PARKER ID# — Date Collected 12/7/95 Time 12:45

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	TANK # 8000 (WATER)
X ~~Surface~~ water (2)	___ Liquid (6)	
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l) (~~mg/kg~~)
X Arsenic	<0.01
X Barium	0.11
X Cadmium	<0.002
Chloride	
X Chromium	<0.01
Copper	
Fluoride	
Iron	
X Lead	<0.005
Manganese	
X Mercury	<0.0005
Nitrate	
X Selenium	<0.005
X Silver	<0.005
Sulfates	
Zinc	
pH	
Conductivity	
TDS	
TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed ____ Lab Number 016456 DEC 1495

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory o u ic ea t
P.O. Box 25047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016907

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PIRNIE / SF PARKER ID# — Date Collected 12/8/95 Time 15:20

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	API-1-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results(mg/l) ~~(mg/kg)~~
X Arsenic	<0.01
X Barium	0.07
X Cadmium	<0.002
____ Chloride	
X Chromium	<0.01
____ Copper	
____ Fluoride	
____ Iron	
X Lead	<0.005
____ Manganese	
X Mercury	<0.0005
____ Nitrate	
X Selenium	<0.005
X Silver	<0.005
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

015457 DEC 14 95

Date Analyzed ____ Lab Number ____

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 25047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016908

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAN / SF PARKER ID# — Date Collected 12/8/95 Time 16:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	APF-2-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results(mg/l) (~~mg/kg~~)
X Arsenic	<0.01
X Barium	0.24
X Cadmium	<0.002
____ Chloride	
X Chromium	<0.01
____ Copper	
____ Fluoride	
____ Iron	
X Lead	<0.005
____ Manganese	
X Mercury	<0.0005
____ Nitrate	
X Selenium	<0.005
X Silver	<0.005
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

016458 DEC 1495

Date Analyzed ____ Lab Number ____

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016909

Name of Site OLD. ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAP / SF PARKER ID# — Date Collected 12/8/95 Time 18:00

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	APF-3-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results (mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results (mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results (mg/l) (~~mg/kg~~)
X Arsenic	<0.01
X Barium	0.05
X Cadmium	<0.002
____ Chloride	
X Chromium	<0.01
____ Copper	
____ Fluoride	
____ Iron	
X Lead	0.007
____ Manganese	
X Mercury	<0.0005
____ Nitrate	
X Selenium	<0.005
X Silver	<0.005
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results (mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed ____ Lab Number 015459 DEC 1495

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQ__S

State Laboratory of Public Health
P.O. Box 25047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016905

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAP / SF PARKER ID# — Date Collected 12/8/95 Time 09:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	TANK # 10011
____ Surface water (2)	X Liquid (6)	(PRODUCT)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	
✓ Barium	
✓ Cadmium	
✓ Chromium	
✓ Lead	
✓ Mercury	
✓ Selenium	
✓ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
X Arsenic	<4
X Barium	40
X Cadmium	<20
____ Chloride	
X Chromium	<20
____ Copper	
____ Fluoride	
____ Iron	
X Lead	300
____ Manganese	
X Mercury	<0.25
____ Nitrate	
X Selenium	<2
X Silver	<20
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

016460 DEC 1495

Date Analyzed ____ Lab Number ____

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQ

State Laboratory of Public Health
P.O. Box 25047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number: NCD 986 186 518 Field Sample Number: 016906

Name of Site: OLD ATC REFINERY Site Location: WILMINGTON NC

Collected By: J. ALAN / SF PARKER ID#: — Date Collected: 12/8/95 Time: 13:15

Agency: ___ Hazardous Waste ___ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	TANK # 10009
___ Surface water (2)	X Liquid (6)	(product)
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results (mg/l)
✓ Arsenic	
✓ Barium	
✓ Cadmium	
✓ Chromium	
✓ Lead	
✓ Mercury	
✓ Selenium	
✓ Silver	

Organic Chemistry

Parameter	Results (mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
X Arsenic	<4
X Barium	<4
X Cadmium	<20
___ Chloride	
X Chromium	<20
___ Copper	
___ Fluoride	
___ Iron	
X Lead	440
___ Manganese	
X Mercury	<0.22
___ Nitrate	
X Selenium	<2
X Silver	<20
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results (mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received: ___ Reported by: ___

Date Extracted: ___ Date Reported: ___

Date Analyzed: ___ Lab Number: 016461 DEC 14 95

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUE

State Laboratory of Public ea th
P.O. Box 25047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016910

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAP / SF PARKER ID# — Date Collected 12/8/95 Time 16:30

Agency: ___ Hazardous Waste ___ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	API-2
___ Surface water (2)	X Liquid (6)	(product)
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	
✓ Barium	
✓ Cadmium	
✓ Chromium	
✓ Lead	
✓ Mercury	
✓ Selenium	
✓ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
X Arsenic	<4
X Barium	<4
X Cadmium	<20
Chloride	
X Chromium	<20
Copper	
Fluoride	
Iron	
X Lead	40
Manganese	
X Mercury	<0.25
Nitrate	
X Selenium	<2
X Silver	<20
Sulfates	
Zinc	
pH	
Conductivity	
TDS	
TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ___ Reported by ___

Date Extracted ___ Date Reported ___

015462 DEC 14 95

Date Analyzed ___ Lab Number ___

DHS 3191 (Revised 2/91)

N.C. Department of Environment,
Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS

P.O. Box 25047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016911

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 18:00

Agency: ___ Hazardous Waste ___ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	API - 3
___ Surface water (2)	X Liquid (6)	(product)
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	
✓ Barium	
✓ Cadmium	
✓ Chromium	
✓ Lead	
✓ Mercury	
✓ Selenium	
✓ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
X Arsenic	<8
X Barium	24
X Cadmium	<20
___ Chloride	
X Chromium	<20
___ Copper	
___ Fluoride	
___ Iron	
X Lead	100
___ Manganese	
X Mercury	<0.22
___ Nitrate	
X Selenium	<2
X Silver	<20
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ___ Reported by ___

Date Extracted ___ Date Reported ___

015463 DEC 1495

Date Analyzed ___ Lab Number ___

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016914

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 09:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	TANK #10011
____ Surface water (2)	X Liquid (6)	(PRODUCT)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	
X BTU ANALYSIS BY ASTM D 240.87	
	14,621 BTU/lb

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed ____ Lab Number 016464 DEC 14 95

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory o u ic ea th
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016915

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 13:15

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	TANK # 10009
____ Surface water (2)	X Liquid (6)	(PRODUCT)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	
X BTU ANALYSIS BY ASTM D 240.87	
	13,337 BTU/lb

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported 015465 DEC 14 95

Date Analyzed ____ Lab Number ____

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQ

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016916

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAP / SF PARKER ID# — Date Collected 12/8/95 Time 15:20

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	API-1-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	
X BTU ANALYSIS BY ASTM D 240.87	
____ Request cancelled	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

015466 DEC 14 95

Date Analyzed ____ Lab Number ____

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory o u ic ea t
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016917

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 16:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	APF - 2 - W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	
X BTU ANALYSIS BY ASTM D 240.87	
____ Request Cancelled	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed ____ Lab Number 015467 DEC 14 95

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016918

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAP / SF PARKER ID# — Date Collected 12/8/95 Time 18:00

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	API-3-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	
X BTU ANALYSIS BY ASTM D 240.87	
____ Request cancelled	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported 016468 DEC 14 95

Date Analyzed ____ Lab Number ____

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSI

P.O. Box 25047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016919

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAP / SF PARKER ID# — Date Collected 12/8/95 Time 16:30

Agency: ___ Hazardous Waste ___ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	API-2
___ Surface water (2)	X Liquid (6)	(PRODUCT)
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	
X BTU ANALYSIS BY ASTM D 240.87	
	13,491 BTU/lb

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ___ Reported by ___

Date Extracted ___ Date Reported ___

Date Analyzed ___ Lab Number 015469 DEC 14 95

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 016920

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 18:00

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	API-3
___ Surface water (2)	X Liquid (6)	PRODUCT
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	
X BTU ANALYSIS BY ASTM D 240.87	
	16,782 BTU/lb

Organic Compounds

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ____ Reported by ____

Date Extracted ____ Date Reported ____

015470 DEC 14 95

Date Analyzed ____ Lab Number ____

DHS 3191 (Revised 2/91)

SURRY STREET REFINERY

Oil broker takes step on foreclosure

1-30-96

By JOSIAH CANTWELL
Business Editor

Linda Carroll is moving a step closer to either operating an oil-tank farm on the Surry Street site of the old CG&T refinery or selling the property.

But she still faces significant hurdles before the site can be used for anything.

Ms. Carroll is working to foreclose on the property at 801 Surry St., near the Cape Fear Memorial Bridge. She has worked out an agreement with the Environmental Protection Agency allowing her to take possession of the property by Feb. 11 — when the statute of limitations runs out on a loan agreement — without becoming immediately liable for past and future environmental cleanup costs on the property.

Joan Sasine, an Atlanta lawyer and former chief of the EPA's regional hazardous waste law branch who represents Ms. Carroll on environmental affairs, said Ms. Carroll can foreclose on the property under EPA rules that allow lenders to protect their investment.

The catch is that she is required to then try to sell the property, Ms. Sasine said last week.

If Ms. Carroll wants to change from a lender to an operator, Ms. Sasine explained, she will need a prospective purchaser agreement with the government at that time. That "clears the way for somebody who did not cause the problems to operate the facility without fear of liability," Ms. Sasine said.

Richard Leahy, chief of the section office of regional counsel in charge of Superfund enforcement, said the EPA wants to work out a deal with Ms. Carroll.

"We're eager ... to return this old industrial site, once it's cleaned up, to productive use," said Rick Leahy. But he said uncertainty over Ms. Carroll's plans for the land is one factor delaying negotiations.

Ms. Carroll has long said she would entertain offers for uses of connected with the site.

Mr. Leahy said the EPA is negotiating with the global energy company Axel Johnson Inc., whose U.S. headquarters is in Stamford, Conn., concerning pollution on the site.

According to an Engineering Evaluation/Cost Analysis prepared for the EPA by Black & Veatch Waste Science Inc. last year, a subsidiary of Axel Johnson leased the site from Pace Oil Co., owned by Winston-Salem businessman Roger Page, from 1970 until 1980 or '81.

William T. Reynolds, vice president and general counsel for Axel Johnson in Stamford, confirmed his company is negotiating over environmental cleanup at the site.

"We are cooperating fully with the EPA and hope to bring this to some resolution in the not-too-distant future," Mr. Reynolds said Monday.

Last summer, the EPA spent about $200,000 to remove some 35,240 pounds of waste, both solid and liquid, from the site, including tetraethyl lead, sulfuric acid, flammable liquids, reactive solids, strong base compounds and related paint wastes, according to a release from the EPA.

According to Beverly Hudson, the EPA's remedial project manager for the site, there are two areas on the south side of the property that still have some contamination in the soil: one where waste jackhammered out of the refinery furnace was buried and another that was a former sludge pile near the Cape Fear River.

When City Gas & Transmission of Lexington, Ky., bought the small refinery in 1986, it signed a promissory note to Mr. Page for $6.5 million. Ms. Carroll, a longtime oil broker, bought that note along with a deed of trust from Mr. Page. She won't disclose the price, but said the value of the note has grown to $12 million because of interest on the unpaid balance.

If CG&T or various related corporate entities don't pay the $12 million, Ms. Carroll said, she will

more stringent for non-industrial uses for the land, such as for condominiums.

Ms. Carroll is also negotiating with the Department of Justice, which wants to recoup cleanup costs incurred by the Coast Guard.

Part of the hangup in the negotiations is working out who is responsible for all the cleanup costs

public Refinery was fined $1[illegible] for releasing sulfurous odors from the plant. The city later passed a law ensuring that the refinery would never reopen.

Ms. Carroll has proposed using the storage tanks on the property to store and distribute petroleum and chemical products. The refinery itself would probably be dismantled and its parts sold.

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

COPY

January 24, 1996

Ms. Beverly Hudson
Superfund Branch, Waste Management Division
US EPA Region IV
345 Courtland Street
Atlanta, Georgia 30365

RE: Organic Chemistry Results - Sampling Event 12/7-8/96
Old ATC Superfund Site
Wilmington, New Hanover County

Dear Ms. Hudson:

Enclosed are the results of the organic chemistry lab for the split-samples collected from Geraghty & Miller at the Old ATC Refinery in December. A description of the samples is given in Table 1. I will forward the results of the inorganic chemistry lab and the BTU test when they are available. Please call if you have any questions.

Sincerely,

David J. Lown
Environmental Engineer
Superfund Section

Enclosures

cc: Jack Butler

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-4996 FAX 919-715-3605
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Table 1. Tanks examined and samples taken during sampling events 12/7-8/1995 and 12/15/1995, Old ATC Refinery, Wilmington, New Hanover County, North Carolina

Tank Number	NC Superfund Sample Number	Media Sampled	Sample Description	Comments
80001	19604, 19605	Water	Clear water with brownish suspended solids	Sample collected through standpipe. Standpipe contains 5 feet of water.
80003	NA	None	NA	Standpipe contains a few inches of water with a thin layer of black oily material at top. No sample taken.
10009	19608, 19609	Hydrocarbon	Black tarry oil.	Tank is empty. Standpipe contains a few inches of black oily material. Sample collected from the standpipe.
40005	NA	None	NA	Tank is empty.
10010	NA	None	NA	Tank is empty. Standpipe contains 1 inch of black oily material. No sample collected.
10011	19606, 19607	Hydrocarbon	Black tarry oil.	Sample collected from standpipe. Oil is in standpipe at a depth of 20 ft. Standpipe may be half full.
API-1	19610, 19611	Water	Pond water from wetland.	API separator located west of Tank 40013.
API-2	19612, 19613	Water	Water collected from under a paper-thin layer of tarry oil.	API separator located west of Tank 55014.
API-2	19616	Hydrocarbon	Black oily sludge skimmed from the top of water. About half of oil removed by sampling.	API separator located west of Tank 55014.
API-3	19614, 19615	Water	Water collected from under a layer of oil 1/2 thick.	API separator located east of Tank 55014 and west of refinery.
API-3	19617	Hydrocarbon	Black oily sludge collected from top of water.	API separator located east of Tank 55014 and west of refinery.
55015	No split taken	Hydrocarbon	Black tarry oil.	Tank is empty. Standpipe contains 1 foot of oil.
55014	No split taken.	Hydrocarbon	Black tarry oil.	Tank is empty. Sample is from bottom of standpipe.
Trip Blank	19618			

NA - Not applicable.

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019604

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAN PARKER / SF PARKER ID# — Date Collected 12/7/95 Time 12:45

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

RECEIVED
JAN 23 1996
SUPERFUND SECTION

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	TANK # 80001
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by John L. Neal

Date Extracted ____ Date Reported 1/19/96

Date Analyzed 12-21-95 nw Lab Number 956123

DHS 3191 (Revised 2/91)

#956123 - 956136

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019605

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAP / SF PARKER ID# — Date Collected 12/7/95 Time 12:45

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	TANK # 80001
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
X Acid:B/N Ext.	
____ MTBE	
X TOTAL PETROL.	
X PETROL. ID	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by

Date Extracted 12-14-95 SA, DB BNA Date Reported

Date Analyzed 12-14-95 BQ Lab Number 956124

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019606

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAN / SF PARKER ID# — Date Collected 12/8/95 Time 09:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	TAPIC # ~~019606~~ 10011
____ Surface water (2)	X Liquid (6)	(PRODUCT)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed 1-2-96 MW Lab Number 956125

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019607

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAP / SF PARKER ID# — Date Collected 12/8/95 Time 09:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	TANK # Comments
___ Ground water (1)	___ Solid (5)	100 11 (PRODUCT)
___ Surface water (2)	X Liquid (6)	
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
X Acid:B/N Ext.	
___ MTBE	
X TOTAL PETROL.	
X PETROL. ID	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by

Date Extracted 12-14-95 BD BNA Date Reported

Date Analyzed 12-15-95 BD Lab Number 956126

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019608

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 13:15

Agency: ___ Hazardous Waste ___ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	TANK # 10009
___ Surface water (2)	X Liquid (6)	(PRODUCT)
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results (mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results (mg/l)
X P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results (mg/l) (mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results (mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by

Date Extracted Date Reported

Date Analyzed 1-2-96 MW Lab Number 956127

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019609

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN ARNTK / SF PARKER ID# — Date Collected 12/8/95 Time 13:15

Agency: ___ Hazardous Waste ___ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	TANK # 10009
___ Surface water (2)	X Liquid (6)	(PRODUCT)
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
X Acid:B/N Ext.	
___ MTBE	
X TOTAL PETROL.	
X PETROL. I.D.	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by

Date Extracted 12-14-95 BNA BD Date Reported

Date Analyzed 12-15-95 BD Lab Number 956128

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019610

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PIRKLE / SF PARKER ID# — Date Collected 12/8/95 Time 15:20

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	APW-1-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received 12-12-95 VP Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed 12-21-95 MW Lab Number 956129

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019611

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PIRATTE / SF PARKER ID# — Date Collected 12/8/95 Time 15:20

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	~~Tank~~ # ~~[illegible]~~
X ~~Surface~~ water (2)	____ Liquid (6)	APF-1-W
____ Soil (3)	____ Sludge (7)	(WATER)
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
X Acid:B/N Ext.	
____ MTBE	
X TOTAL PETROL.	
X PETROL. I.D.	

Inorganic Chemistry

Parameter	Results(mg/l) (mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received 12-12-95 VP Reported by ____

Date Extracted 12-14-95 SA, AB Date Reported ____

Date Analyzed BNA 12-15-95 BD Lab Number 956130

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019612

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN / SF PARKER ID# — Date Collected 12/8/95 Time 16:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	API-2-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed 12-21-95 MW Lab Number 956131

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019613

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 16:30

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	API-2-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
X Acid:B/N Ext.	
____ MTBE	
X TOTAL PETROL.	
X PETROL. ID	

Inorganic Chemistry

Parameter	Results(mg/l) (mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received 12-12-95 VP Reported by ____

Date Extracted 12-14-95 SA, AB Date Reported ____

Date Analyzed BNA 12-15-95 BD Lab Number 956132

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019614

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PIRTLE / SF PARKER ID# — Date Collected 12/8/95 Time 18:00

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	API : 3-W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed 12-22-95 MW Lab Number 956133

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019615

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PAINTER / SF PARKER ID# — Date Collected 12/8/95 Time 18:00

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	APF - 3W
X ~~Surface~~ water (2)	____ Liquid (6)	(WATER)
____ Soil (3)	____ Sludge (7)	
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
X Acid:B/N Ext.	
____ MTBE	
X TOTAL PETROL.	
X PETROL. I.D.	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by ____

Date Extracted 12-14-95 SA, AB BNA Date Reported ____

Date Analyzed 12-15-95 BO Lab Number 956134

DHS 3191 (Revised 2/91)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019616

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 16:30

Agency: ___ Hazardous Waste ___ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	APF-2
___ Surface water (2)	___ Liquid (6)	(PRODUCT)
___ Soil (3)	✓ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	
X TOTAL PETROLEUM	
X PETROL. ID	

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received 12-12-95 VP Reported by

Date Extracted 12-14-95 BD Date Reported

Date Analyzed 12-15-95 BNA 1-2-96 PT Lab Number 956135

DHS 3191 (Revised 2/91) BD TWS

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number 019617

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By J. ALAN PARKER / SF PARKER ID# — Date Collected 12/8/95 Time 18:00

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	API-3
____ Surface water (2)	____ Liquid (6)	(PRODUCT)
____ Soil (3)	✓ Sludge (7)	
____ Other (4)	____ Other (8)	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	
X TOTAL PETROLEUM	
X PETROL FR.	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by

Date Extracted 12-14-95 BQ (BNA) PT Date Reported

Date Analyzed 12-15-95 BQ 1-2-96 TLW Lab Number 956136

DHS 3191 (Revised 2/91)

STATE LABORATORY OF PUBLIC HEALTH

P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	956124	956126	956128	956130	956132	956134
	FIELD #	19605	19607	19609	19611	19613	19615
COMPOUND	TYPE	(2)	(6)	(6)	(2)	(2)	(2)
	UNITS	PPb	PPM	PPM	PPb	PPb	PPb
N-nitrosodimethylamine	10/330	U	U	U	U	U	U
bis(2-chloroethyl)ether							
2-chlorophenol							
phenol							
1,3-dichlorobenzene							
1,4-dichlorobenzene							
1,2-dichlorobenzene							
bis(2-chloroisopropyl)ether							
hexachloroethane							
N-nitroso-di-n-propylamine							
nitrobenzene							
isophorone							
2-nitrophenol							
2,4-dimethylphenol							
bis(2-chloroethoxy)methane							
2,4-dichlorophenol							
1,2,4-trichlorobenzene							
naphthalene		10K	800	550		10K	10K
hexachlorobutadiene		U	U	U		U	U
4-chloro-m-cresol							
hexachlorocyclopentadiene							
2,4,6-trichlorophenol							
2-chloronaphthalene							
acenaphthylene		10K	100	40			
dimethyl phthalate		U	U	U			
2,6-dinitrotoluene		U	U	U			
acenaphthene		10K	300	100		10K	
2,4-dinitrophenol	50/1650	U	U	U	50K	50K	50K
2,4-dinitrotoluene	10/330				U	U	U
4-nitrophenol	50/1650				50K	50K	
fluorene	10/330	10K	200	200	U	10K	
4-chlorophenylphenylether		U	U	U		U	
diethyl phthalate						U	10K
4,6-dinitro-o-cresol	50/1650				50K	50K	U
diphenylamine	10/330				U	U	
azobenzene							
4-bromophenylphenylether							
hexachlorobenzene							
pentachlorophenol	50/1650				50K	50K	50K
phenanthrene	10/330	10K	800	500	U	10K	10K
anthracene		10K	100	100	U	10K	10K
dibutyl phthalate		10K	U	U	10K	10K	10K
fluoranthene		U	U	100	U	10K	U

MDL
H_2O/SOIL

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
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NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

(2)

STATE LABORATORY OF PUBLIC HEALTH

P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	956124	956126	956128	956130	956132	956134
	FIELD #	19605	19607	19609	19611	19613	19615
COMPOUND	TYPE	(2)	(6)	(6)	(2)	(2)	(2)
	UNITS	PPb	PPM	PPM	PPb	PPb	PPb
pyrene	10/330	10K	750	300	U	10K	10K
benzidine	50/1650	U	U	U		U	U
butyl benzyl phthalate	10/330						
benz(a)anthracene							
chrysene							
3,3-dichlorobenzidine	50/1650						
bis(2-ethylhexyl)phthalate	10/330	10K				10K	10K
di-n-octyl phthalate	10/330	U				U	U
benzo(b)fluoranthene	50/1650						
benzo(k)fluoranthene							
benzo(a)pyrene							
indeno(1,2,3-cd)pyrene							
dibenzo(a,h)anthracene							
benzo(g,h,i)perylene							
aniline	50/1650	U	U	U	U	U	U
benzoic acid							
benzyl alcohol							
4-chloroaniline							
dibenzofuran	10/330	10K				10K	
2-methylnaphthalene		10K	3,000	1,700		10K	10K
2-methylphenol		U	U	U		U	U
4-methylphenol							
2-nitroaniline	50/1650						
3-nitroaniline							
4-nitroaniline							
2,4,5-trichlorophenol							
HYDROCARBONS (SIMILAR TO DIESEL FUEL)	+/-	+	+	+	-	+	+

MDL
H_2O/SOIL

J - Estimated value.
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L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. (MDL)
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

STATE LABORATORY OF PUBLIC HEALTH

P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	956135	956136				
	FIELD #	19616	19617				
COMPOUND	TYPE	(7)	(7)	( )	( )	( )	( )
	UNITS	PPM	PPM				
N-nitrosodimethylamine	10/330	u	u				
bis(2-chloroethyl)ether							
2-chlorophenol							
phenol							
1,3-dichlorobenzene							
1,4-dichlorobenzene							
1,2-dichlorobenzene							
bis(2-chloroisopropyl)ether							
hexachloroethane							
N-nitroso-di-n-propylamine							
nitrobenzene							
isophorone							
2-nitrophenol							
2,4-dimethylphenol							
bis(2-chloroethoxy)methane							
2,4-dichlorophenol							
1,2,4-trichlorobenzene							
naphthalene		10K					
hexachlorobutadiene							
4-chloro-m-cresol							
hexachlorocyclopentadiene							
2,4,6-trichlorophenol							
2-chloronaphthalene							
acenaphthylene		20					
dimethyl phthalate		u					
2,6-dinitrotoluene		u					
acenaphthene		100					
2,4-dinitrophenol	50/1650	u					
2,4-dinitrotoluene	10/330						
4-nitrophenol	50/1650						
fluorene	10/330	100					
4-chlorophenylphenylether		u					
diethyl phthalate							
4,6-dinitro-o-cresol	50/1650						
diphenylamine	10/330						
azobenzene							
4-bromophenylphenylether							
hexachlorobenzene							
pentachlorophenol	50/1650						
phenanthrene	10/330	200					
anthracene		150					
dibutyl phthalate		u					
fluoranthene		100					

MDL
H_2O/SOIL

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1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

(4)

STATE LABORATORY OF PUBLIC HEALTH

P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	956135	956136				
	FIELD #	19616	19617				
COMPOUND	TYPE	(7)	(7)	( )	( )	( )	( )
	UNITS	PPM	PPM				
pyrene	10/330	500	u				
benzidine	50/1650	u					
butyl benzyl phthalate	10/330						
benz(a)anthracene							
chrysene							
3,3-dichlorobenzidine	50/1650						
bis(2-ethylhexyl)phthalate	10/330						
di-n-octyl phthalate	10/330						
benzo(b)fluoranthene	50/1650						
benzo(k)fluoranthene							
benzo(a)pyrene							
indeno(1,2,3-cd)pyrene							
dibenzo(a,h)anthracene							
benzo(g,h,i)perylene							
aniline	50/1650	u	u				
benzoic acid							
benzyl alcohol							
4-chloroaniline							
dibenzofuran	10/330						
2-methylnaphthalene		100					
2-methylphenol		u					
4-methylphenol							
2-nitroaniline	50/1650						
3-nitroaniline							
4-nitroaniline							
2,4,5-trichlorophenol							
HYDROCARBONS (SIMILAR TO DIESEL FUEL)	+/-	+	+				

MDL
H_2O/SOIL

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L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. (MDL)
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	956123	956125 ✓	956127 ✓	956129	956131	956133
	FIELD NO	19604	19606	19608	19610	19612	19614
COMPOUND	TYPE	(2)	(6)	(6)	(2)	(2)	(2)
	MDL'S (ppb)	(ppb) ppm	ppb (ppm)	ppb (ppm)	(ppb) ppm	(ppb) ppm	(ppb) ppm
CHLOROMETHANE	20	u	u	u	u	u	u
VINYL CHLORIDE	10	↓	↓	↓	↓	↓	↓
BROMOMETHANE	20	↓	↓	↓	↓	↓	↓
CHLOROETHANE	10	↓	↓	↓	↓	↓	↓
TRICHLOROFLUOROMETHANE	10	↓	↓	↓	↓	↓	↓
ACETONE	20	42 J	↓	↓	↓	5 J	↓
1,1-DICHLOROETHENE	5	u	↓	↓	↓	u	↓
IODOMETHANE	↓	↓	↓	↓	↓	↓	↓
METHYLENE CHLORIDE	↓	↓	19 C	↓	↓	↓	5 C
CARBON DISULFIDE	↓	↓	u	↓	↓	↓	trace
TRANS-1,2-DICHLOROETHENE	↓	↓	↓	↓	↓	↓	u
ACRYLONITRILE	20	↓	↓	↓	↓	↓	↓
1,1-DICHLOROETHANE	5	↓	↓	↓	↓	↓	↓
2-BUTANONE	20	↓	↓	↓	↓	↓	↓
CIS-1,2-DICHLOROETHENE	5	↓	↓	↓	↓	↓	↓
CHLOROFORM	↓	↓	↓	↓	↓	↓	↓
1,1,1-TRICHLOROETHANE	↓	↓	↓	↓	↓	↓	↓
CARBON TETRACHLORIDE	↓	↓	↓	↓	↓	↓	↓
BENZENE	↓	↓	3	42	↓	↓	22
1,2-DICHLOROETHANE	↓	↓	u	u	↓	↓	u
TRICHLOROETHENE	↓	↓	↓	↓	↓	↓	↓
1,2-DICHLOROPROPANE	↓	↓	↓	↓	↓	↓	↓
BROMODICHLOROMETHANE	↓	↓	↓	↓	↓	↓	↓

C - POSSIBLE LAB CONTAMINATION OR BACKGROUND.
J - Estimated value
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - COMPOUND RELIABLY DETECTABLE ONLY IN HIGH CONCENTRATIONS.
✓ - SAMPLE HIGHLY DILUTED. MDL'S DO NOT APPLY.

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	956123	956125 ✓	956127 ✓	956129	956131	956133
	FIELD NO	19604	19606	19608	19610	19612	19614
COMPOUND	TYPE	(2)	(6)	(6)	(2)	(2)	(2)
	MDL's (ppb)	(ppb) ppm	ppb (ppm)	ppb (ppm)	(ppb) ppm	(ppb) ppm	(ppb) ppm
DIBROMOMETHANE	5	u	u	u	u	u	u
4-METHYL-2-PENTANONE	10		1 ✓				trace ✓
CIS-1,3-DICHLOROPROPENE	5		u				u
TOLUENE			13 K	223		trace	trace
TRANS-1,3-DICHLOROPROPENE			u	u		u	u
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE	✓						✓
2-HEXANONE	10						trace ✓
TETRACHLOROETHENE	5						u
DIBROMOCHLOROMETHANE							
ETHYLENE DIBROMIDE							
CHLOROBENZENE							
1,1,1,2-TETRACHLOROETHANE			✓	✓		✓	✓
ETHYL BENZENE		✓	16	103		trace	2 J
XYLENES		2 J	89	587		trace	2 J
STYRENE	✓	u	u	u		trace	u
BROMOFORM	10					u	
2/ TRANS-1,4-DICHLORO-2-BUTENE	80						
1,2,3-TRICHLOROPROPANE	5						
1,4-DICHLOROBENZENE							
1,2-DICHLOROBENZENE	✓						
1,2-DIBROMO-3-CHLOROPROPANE	20						
2/ VINYL ACETATE	200	✓	✓	✓	✓	✓	✓
Methyl-t-butyl-ether	5	37	13	9	✓	2 J	6
other compounds	(+)/(−)	(+)	(+)	(+)	(−)	(+)	(+)
↳ (hydrocarbons, substituted benzenes)							

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L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - COMPOUND RELIABLY DETECTABLE ONLY IN HIGH CONCENTRATIONS.
✓ - SAMPLE HIGHLY DILUTED. MDL'S DO NOT APPLY.

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	956135 ✓	956136 ✓	956137			
	FIELD NO	19616	19617	19618			
COMPOUND	TYPE	(7)	(7)	(2)	( )	( )	( )
	MDL'S (ppb)	ppb (ppm)	ppb (ppm)	(ppb) ppm	ppb ppm	ppb ppm	ppb ppm
CHLOROMETHANE	20	u	u	u			
VINYL CHLORIDE	10						
BROMOMETHANE	20						
CHLOROETHANE	10						
TRICHLOROFLUOROMETHANE	10						
ACETONE	20						
1,1-DICHLOROETHENE	5						
IODOMETHANE							
METHYLENE CHLORIDE							
CARBON DISULFIDE							
TRANS-1,2-DICHLOROETHENE							
ACRYLONITRILE	20						
1,1-DICHLOROETHANE	5						
2-BUTANONE	20						
CIS-1,2-DICHLOROETHENE	5						
CHLOROFORM							
1,1,1-TRICHLOROETHANE							
CARBON TETRACHLORIDE							
BENZENE							
1,2-DICHLOROETHANE							
TRICHLOROETHENE							
1,2-DICHLOROPROPANE							
BROMODICHLOROMETHANE							

C - POSSIBLE LAB CONTAMINATION OR BACKGROUND.
J - Estimated value
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - COMPOUND RELIABLY DETECTABLE ONLY IN HIGH CONCENTRATIONS.
✓ - SAMPLE HIGHLY DILUTED. MDL'S DO NOT APPLY.

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	956135 ✓	956136 ✓	956137			
	FIELD NO	19616	19617	19618			
COMPOUND	TYPE	(7)	(7)	(2)	( )	( )	( )
	MDL's (ppb)	ppb (ppm)	ppb (ppm)	(ppb) ppm	ppb ppm	ppb ppm	ppb ppm
DIBROMOMETHANE	5	u	u	u			
4-METHYL-2-PENTANONE	10						
CIS-1,3-DICHLOROPROPENE	5						
TOLUENE							
TRANS-1,3-DICHLOROPROPENE							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE	✓						
2-HEXANONE	10						
TETRACHLOROETHENE	5						
DIBROMOCHLOROMETHANE							
ETHYLENE DIBROMIDE							
CHLOROBENZENE							
1,1,1,2-TETRACHLOROETHANE							
ETHYL BENZENE							
XYLENES							
STYRENE	✓						
BROMOFORM	10						
2/ TRANS-1,4-DICHLORO-2-BUTENE	80						
1,2,3-TRICHLOROPROPANE	5						
1,4-DICHLOROBENZENE							
1,2-DICHLOROBENZENE	✓						
1,2-DIBROMO-3-CHLOROPROPANE	20						
2/ VINYL ACETATE	200	✓	✓	✓			
Methyl-t-butyl ether	5	u	u	u			
other compounds	(+)/(−)	(−)	(−)	(−)			
(hydrocarbons, substituted benzenes)							

C - POSSIBLE LAB CONTANINATION OR BACKGROUND.
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L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - COMPOUND. RELIABLY DETECTABLE ONLY IN HIGH CONCENTRATIONS.
✓ - SAMPLE HIGHLY DILUTED. MDL'S DO NOT APPLY.

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986 186 518 Field Sample Number TMP BLANK 019618

Name of Site OLD ATC REFINERY Site Location WILMINGTON NC

Collected By S. ALAN PARKER / SF PARKER ID# — Date Collected 12/—/95 Time — : —

Agency: ____ Hazardous Waste ____ Solid Waste X Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	LAB BLANK
X ~~Surface~~ water (2)	___ Liquid (6)	
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
X P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 12-12-95 VP Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed 12-22-95 MW Lab Number 956137

DHS 3191 (Revised 2/91)

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij Company

Laboratory Task Order No. ____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number NCD 250-001

Project Location OLD ATC REFINERY WILMINGTON N.C.

Laboratory ____

Sampler(s)/Affiliation ALAN PINDIX G+M
RICHARD MILLIGAN G+M

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	40-ml VOCs	1 L AMBER GLASS	125 ml SUPER GLASS	125 ml PLASTIC BOTTLE						TOTAL
80001	L	11/8/95		1	1	+SPP	–						3
10011	L	11/8/95 0930		–	–	1	1						2
10009	L	11/8/95 1530		–	–	1	1						2
AP2-1 W	L	" 1530		1	1	–	–						2
AP2-2 W	L	" 1630		1	1	+SPP	–						2
AP2-3 W	L	" 1800		1	1	+SPP	–						2
AP1-2	L	" 1630		–	–	1	–						1
AP1-3	L	" 1800		–	–	1	–						1

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 15 15

Relinquished by: [signature]	Organization: Geraghty & Miller	Date 12/8/95 Time 1900	Seal Intact? Yes No (N/A)
Received by: Alan Parker	Organization: DOWN SUPERFUND SECT	Date 12/8/95 Time 1900	
Relinquished by: [signature]	Organization: NC SUPERFUND SECTION	Date 12/12/95 Time 10:00 AM	Seal Intact? Yes No (N/A)
Received by: Vicki Painter	Organization: STATE LAB OF PUBLIC HEALTH	Date 12/12/95 Time 10:00 AM	

Special Instructions/Remarks: Relinquished to David Lucas and Sloan Price (NCDEHNR)

REPORT RESULTS TO SUPERFUND SECTION

Delivery Method: ☐ In Person ☐ Common Carrier ____ SPECIFY ☐ Lab Courier ☐ Other ____ SPECIFY

GERAGHTY & MILLER, INC.
Environmental Services
A Heidemij Company

Laboratory Task Order No. ____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number NCD 210-001

Project Location OLD ATC [illegible] [illegible] ME

Laboratory ____

Sampler(s)/Affiliation ALAN PINDIX G&M
RICHARD [illegible] G&M

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	[illegible]	[illegible]	[illegible]	[illegible]						TOTAL
80001	L	[illegible]		1	1	[illegible]	–						3
10011	L	12/15/95 [illegible]		–	–	1	1						2
10009	L	[illegible]		–	–	1	1						2
AP1-1 W	L	[illegible] 0830		1	1	–	–						2
AP1-2 W	L	[illegible] 1030		1	1	[illegible]	–						2
AP1-3 W	L	[illegible] 1600		1	1	[illegible]	–						2
AP1-1	L	[illegible] 1030		–	–	1	–						1
AP1-3	L	[illegible] 1630		–	–	1	–						1

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 13 bt

Relinquished by: [illegible]	Organization: [illegible]	Date 12/15/95	Time 1900	Seal Intact? Yes No N/A
Received by: [illegible]	Organization: BOWER SURVEYING [illegible]	Date 12/18/95	Time [illegible]	
Relinquished by: [illegible]	Organization: NC SUPERFUND SECTION	Date 12/12/95	Time 10:00 AM	Seal Intact? Yes No N/A
Received by: Vicki Chandler	Organization: STATE LAB OF PUBLIC HEALTH	Date 12/12/95	Time 10:00 AM	

Special Instructions/Remarks: [illegible] (NO OF INK)

REPORT RETURN TO SUPERFUND SECTION

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GERAGHTY & MILLER, INC.
Environmental Services

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December 14, 1995

Ms. Beverly Hudson
Remedial Project Manager
USEPA Region IV
Waste Management Division
345 Courtland Street, NE
Atlanta, GA 30365

Mr. Michael Taylor
On-Scene Coordinator
USEPA Region IV
Waste Management Division
345 Courtland Street, NE
Atlanta, GA 30365

Re: Old ATC Refinery
Project No. 250.001

Dear Ms. Hudson and Mr. Taylor:

Geraghty & Miller will sample the remaining three tanks at the former ATC Refinery site on Friday, December 15, 1995. Attempts to sample the viscous materials in tanks 80003, 55014, and 55015 were not successful during the event last week. The re-sampling effort will be conducted with either a stainless steel bailer or a stainless steel drop/push probe equipped with a butterfly valve. The drop/push probe also has a Teflon™ liner which will be removed, capped and sent to the laboratory. Again, samples will be split in the field with a representative from the State of North Carolina. Sampling will be conducted in accordance with the approved Health and Safety Plan and Sampling and Analysis Plan. It is our understanding that no formal amendment to the Sampling and Analysis Plan or Health and Safety Plan is required. In the event this understanding is incorrect, please contact me immediately.

Very truly yours,

GERAGHTY & MILLER, INC.

William H Doucette

William H. Doucette, Jr., Ph.D., P.G.
Associate and Project Officer

WHD\jbw

cc: David Lown, NCDEHNR
Don Frost, Skadden, Arps
Stacy D. Lovdahl, Geraghty & Miller

CrossPointe II, 2840 Plaza Place, Suite 350 • Raleigh, North Carolina 27612 • (919) 571-1662 • FAX (919) 571-7994

Old ATC removal talks near

EPA expects to soon ask PRPs to do a second removal action at the Old ATC Refinery site in Wilmington, N.C.

Under an engineering evaluation/cost analysis (EE/CA) action memorandum, all containerized waste from the site will be removed and disposed off-site.

Also, EPA wants all failing or leaking aboveground storage tanks and API separators at the site hauled off-site for disposal, along with the butane tanks and about 1,000 cubic yards of contaminated soil from sludge burial areas. The soil either will be treated or disposed off-site.

The EE/CA did not address contaminated groundwater.

Following approval of the remedy selection document, EPA will issue special notice letters to the PRPs and begin PRP talks. The issue of past costs also will be addressed during the negotiations.

The prime contaminants have been polycyclic aromatic hydrocarbons, tetraethyl lead, sulfuric acid, flammable liquids, reactive solids, strong base compounds and related paint wastes.

OHM Corp.'s Norcross, Ga., office recently completed a $200,000 removal at the site as EPA's Emergency Response Cleanup Services (ERCS) contractor.

The three-month project included identifying unknown wastes, bulking compatible materials and incinerating 76 drums and containers of hazardous wastes off-site.

A total of 35,240 pounds of solids and liquids were hauled off-site for burning and disposal at a permitted facility.

Contact: Michael Taylor, EPA on-scene coordinator, 404-347-3555, ext. 6112; Beverly Hudson, EPA project manager, 404-347-5059, ext. 2080.

Marion to get limited action ROD

PRPs installed a cap at the Marion Brag Dump NPL site in Marion, Ind., where EPA expects to sign a limited action ROD for groundwater next year.

The ROD likely will set alternate concentrations and call for some groundwater monitoring. The Mississinewa River runs along two sides of the site.

Low levels of benzene and arsenic were detected in the groundwater, and EPA said it needs to review recent sampling results and write the ROD. The ROD is expected this fiscal year.

Six PRPs participated in the capping project and have been monitoring groundwater. The **City of Marion** will maintain the cap.

The 72-acre site is a former gravel pit in which various wastes were disposed. It operated as a solid waste landfill from 1975 to 1977. The dump contained 1.1 million cubic yards of wastes.

Contact: Bernie Schorle, EPA project manager, 312-886-4746.

dollars) for capital costs, and $2[illegible] million in lifecycle costs.

In the Safe Interim Storage of Hanford Tank Wastes Final Environmental Impact Statement (SIS EIS), DOE said a cross-site transfer system is needed to move wastes between the 200 West and East areas because there are far less useable double-shell tanks in the west area.

The existing transfer system is coming to the end of its design life, DOE said. Four of six lines are out of service and unavailable to for transfers due to plugging.

The other two lines do not meet engineering standards — including double containment and leak detection — required for waste management facilities, DOE said.

The SIS EIS requires DOE to:

- remove salt well liquids from the older single shelled tanks to reduce the likelihood of liquid waste escaping from the corroded tanks into the environment;
- provide transfer capabilities for the tank waste;
- provide adequate tank waste storage capacity for waste volumes associated with tank farm operations and other Hanford operations; and
- mitigate the flammable gas safety issue in the 200 West Area tanks.

Under the ROD, DOE will:

- build and operate the cross-site transfer system to transfer salt well liquids and 200 West Area wastes from Tank 102-SY to double-shelled tanks in the 200 East Area;
- build a waste retrieval system in Tank 102-SY to retrieve solids;
- continue operation of a mixer pump in Tank 101-SY;
- and transfer liquid waste through the existing transfer system until the proposed system is operational in 1998.

Contact: Carolyn Haass, DOE Richland Operations Office, 509-372-2731; Geoff Tallent, Washington Dept. of Ecology, 360-407-7112.

Pagel's Pit cap, p/t to get spring bid

PRPs are likely to solicit bids next spring for construction of a landfill cap and groundwater pump-and-treatment system at the Pagel's Pit NPL site in Rockford, Ill.

The PRPs, led by the landfill operator, **Winnebago Reclamation Service**, have submitted a preliminary design to EPA for approval. **GeoTrans Inc.** of Sterling, Va., is designing the groundwater system and **Andrews Environmental Engineering** of Springfield, Ill., is the consultant for the cap and leachate and gas extraction systems.

The 60-acre site is now capped with tar but needs to be upgraded. The preliminary design calls for a composite cap of clay and geomembrane. The cap will be installed as the landfill reaches final elevation.

Leachate and gas extraction wells also are needed. Landfill gas is being used to dry sludge at the landfill.

Under the 1991 ROD, groundwater will be extracted, treated via air stripping and discharged to Killbuck Creek. Groundwater is contaminated with VOCs and ammonia. The design calls for a treatment rate of between 450 and 750 gallons per minute.

The cap will cost about $1 million, the gas and leachate collection wells, $500,000, and the pump-and-treatment system, $3.1 million.

However, EPA is considering a PRP request to use air sparging

GERAGHTY
& MILLER, INC.
Environmental Services

a heidemij company

December 6, 1995

Mr. Don J. Frost, Jr.
Skadden, Arps, Slate, Meagher & Flom
1440 New York Ave., NW
Washington, DC 20005-2111

Re.: Revised Addressing USEPA Comments dated December 6, 1995. Sampling and Analysis Plan for Aboveground Storage Tank and Vessel Sampling, at the Old ATC Refinery Site, Wilmington, North Carolina.

Dear Mr. Frost:

Geraghty & Miller, Inc., (Geraghty and Miller) is pleased to submit this sampling and analysis plan for the sampling of material contained in various aboveground storage tanks (ASTs) and vessels at the Old ATC Refinery at 801 Surry Street, Wilmington, North Carolina. This plan contains the comments received on December 6, 1995 by Geraghty & Miller from Ms. Beverly of the United States Environmental Protection Agency (USEPA).

REVISED SAMPLING AND ANALYSIS PLAN

Geraghty & Miller understands that the Old ATC Refinery stored both crude oil and refined petroleum products in a series of large aboveground storage tanks (ASTs). Currently, it is estimated that approximately 775,000 gallons of liquid materials remain in eight ASTs at the site. To assess final disposal options, samples from eight ASTs and 3 API separators will be collected and analyzed. This plan provides details regarding the proposed sampling event and the laboratory analytical methods. The USEPA Standard Operating Procedures (SOPs) contained in the Environmental Compliance Branch Standard Operating Procedures and quality Assurance Manual, February 1, 1991 will be followed where applicable. The specific SOPs are referenced, as applicable, in each section of this plan.

Based on previously collected measurements by SGS Control Services, Inc., Geraghty & Miller understands that eight ASTs contain various amounts of liquid materials and that some sludge may be present. Table 1 contains a summary of the ASTs to be sampled and the estimated volume of liquid materials remaining in each. The volume of liquid contained in the API separators is unknown.

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SAMPLING METHODOLOGY

One sample of liquid material will be obtained from the six smaller ASTs and the three API separators. Two samples of liquid material may be collected each from ASTs 80001 and 10011. If sludges are encountered in any of the eight ASTs or three API separators, one additional sample of such material will be collected, if possible. Samples will be split with the USEPA representative on site. Tables 2 and 3 contain a summary of the sampling program for liquids and sludges, respectively.

Sampling will be conducted consistent with USEPA SOPs 4.12.4 Open and Closed Container Sampling. First a decontaminated oil/water interface probe will be lowered into the tank or separator to determine if a water layer is present. If water is present in the smaller ASTs and the three separators, the sample will be collected near the bottom of the vessel to collect both water and petroleum. If water is not detected, the sample will be collected from the middle of the liquid column. Samples will be collected using disposable Teflon bailers. If it can be done safely, VOC samples will be transferred into the laboratory containers directly from the sampling device at the top of the access ladder/stairway. To be considered safe, the access ladder/stairway must have room to maneuver safely, with only one hand holding on to the railing, for two personnel, equipment and laboratory containers. It is anticipated that most samples will be transferred into the sampling containers at the bottom of the access ladder/stairway. In this situation, the contents of the bailer will transferred into a stainless steel or glass container and taken to the bottom of the access ladder or stairway. The VOC sample will be transferred into the laboratory container immediately. If additional sample volume is needed, the sampler will return to the top of the access ladder/stairway, and additional bailers of material will be removed from the AST or vessel and placed in the stainless steel or glass container. When sufficient sample volume has been collected to fill the remaining containers, the stainless steel or glass container will be taken to the bottom of the access ladder and the laboratory containers will be filled.

For the two large ASTs, one sample will be collected from the top of the liquid using a disposable Teflon bailer. The second sample from each large AST will be collected from the bottom of the liquid using a decontaminated, stainless steel bomb sampler. Sample collection procedures will be similar to the procedure described in the preceding paragraph.

Samples of any sludge material found in the ASTs or API separators will be collected, if possible, using a decontaminated PVC pipe equipped with a section of stainless steel pipe at the bottom. The stainless steel pipe is intended to trap the sludge. The pipe will be removed from the tank and the sludge will be pushed out of the stainless steel section of pipe. The stainless steel pipe will be decontaminated between tanks.

Samples will be placed in laboratory-supplied containers, placed on ice and shipped via Federal Express to Savannah Laboratories in Savannah, Georgia, for analysis. USEPA SOPs found in Section 3.3 Chain-of-Custody Procedures and Section C.3 Shipment of Environmental Samples will be followed.

New disposable Teflon bailers, stainless steel bowls and glass containers will be used for sampling each AST or vessel. The oil/water interface probe, the stainless steel bomb sampler and the PVC/stainless steel sludge sampling rod will be decontaminated on site. Decontamination will be conducted following USEPA SOPs found in Section B.3 and B.8. Decontamination will consist of an initial rinse with pesticide-grade isopropyl alcohol, if necessary[1] , scrub with Alconox™ brand detergent, followed by rinses with drinking water, then isopropyl alcohol and then three rinses organic free deionized water. Following the final rinse, sampling equipment will be allowed to air dry and then will be wrapped in aluminum foil. Nitric acid will not be used in decontamination in the field.

LABORATORY ANALYSIS

Liquid samples will be analyzed for total Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) using Contract Laboratory Program (CLP) 3/90 Methods (Reporting Level III). In addition, samples of liquid material will be analyzed for total petroleum hydrocarbons (TPH) for complete petroleum identification as per USEPA Method 8015 using both 5030 and 3550 preparation methods (Reporting Level II) and for British Thermal Unit (BTU) value by ASTM method D240-87 (Reporting Level I). Quality control samples for liquid samples includes two trip blanks (one per day) for VOC analysis only, and one set of matrix spike/matrix spike duplicate samples.

Samples of sludge material will be analyzed using Toxicity Characteristic Leaching Procedure (TCLP) for RCRA metals, VOCs and SVOCs. Quality control samples for TCLP analysis of sludge samples, if necessary, will include one set of matrix spike/matrix spike duplicate samples.

HEALTH AND SAFETY

Health and safety procedures and information have been provided to the sampling crew in a separate Health and Safety Plan. The Health and Safety Plan has been reviewed by USEPA personnel and has been revised as requested. An updated copy was transmitted to Mr. Andrew Harrison and Ms. Beverly Hudson of USEPA and Mr. David Lown of NC Superfund via facsimile on December 4, 1995. All sampling personnel will be fully trained and medically monitored in accordance with 29 CFR 1910.120 Hazardous Waste Site Operations and Emergency Response regulations.

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[1] When sampling equipment is used to collect samples that contain oil or other hard to remove materials, it may be necessary to rinse the equipment several times with pesticide -grade isopropyl alcohol to removed the materials before proceeding with the initial wash with Alconox.

Please feel free to contact the undersigned should you have any questions or comments concerning this plan.

Respectfully submitted,

GERAGHTY & MILLER, INC.

Stacy D. Lovdahl
Project Scientist

William H. Doucette, Jr., Ph.D.
Associate and Project Officer

cc: Mr. Andrew Miles, USEPA
Ms. Beverly Hudson, USEPA
Mr. David Lown, NC Superfund

Attachment

sdl

Table 1. Summary of Aboveground Storage Tank Contents*, ATC Refinery, Wilmington, North Carolina.

Tank ID	Contents
55014	3-4 ft sludge
55015	3-4 ft sludge
10008	empty
10009	unknown
10010	unknown
10011	50,000 gallons oil and water
10012	unknown
40013	empty
40004	empty
40005	unknown
40006	unknown
40007	2 ft sludge
80001	2-3 ft sludge
80002	2-3 ft sludge
80003	2-3 ft sludge

* Based on verbal report from Mr. Mike Taylor, USEPA Region IV.

Table 2. Summary of Sampling Program.

AST/Vessel ID	Liquid Samples					Sludge Samples		
	Total RCRA Metals	VOCs	SVOCs	TPH Gasoline and Diesel Ranges	BTU	TCLP RCRA Metals	TCLP VOCs	TCLP SVOCs
80001	2	2	2	2	2	1	1	1
80003	1	1	1	1	1	1	1	1
40005	1	1	1	1	1	1	1	1
10009	1	1	1	1	1	1	1	1
10010	1	1	1	1	1	1	1	1
10011	2	2	2	2	2	1	1	1
55014	1	1	1	1	1	1	1	1
55015	1	1	1	1	1	1	1	1
API-1	1	1	1	1	1	1	1	1
API-2	1	1	1	1	1	1	1	1
API-3	1	1	1	1	1	1	1	1
TB-1[1]	---	1	---	---	---	---	1	---
TB-2[1]	---	1	---	---	---	---	1	---
MS/MSD-1	2	2	2	2	2	2	2	2
MS/MSD-2	2	2	2	2	2	2	2	2
TOTAL	19	19	19	19	19	17	17	17

[1] Trip blank.

Table 3. Sample Container, Preservative, and Holding Time Specification.

Parameter	Sample Container	Preservative	Holding Time
LIQUIDS			
CLP 3/90 Volatile Organic Compounds	Three 40-mL glass VOC vials, Teflon™-lined septa, no headspace.	1:1 HCL 3-4 drops to pH <2 Cool to 4°C	14 days with preservative added
CLP 3/90 Semi-Volatile Organic Compounds	Two 1-liter glass bottles, amber, Teflon™-lined cap.	Cool to 4°C	7 days to extraction, 40 days after extraction
CLP 3/90 Total RCRA Metals	500-mL polyethylene bottle, polyethylene lid. 250-mL amber glass for mercury.	HNO_3 to pH <2 Cool to 4°C	6 months; mercury, 28 days
M-8015/5030- TPH Gasoline Range Organic Compounds	Three 40 ml glass VOC vials, Teflon™-lined septa, no headspace.	1:1 HCL 3-4 drops to pH <2 Cool to 4°C	14 days with preservative added
M-8015/3550 - TPH Diesel Rnge Organic Compounds	Two 1-liter amber glass bottles, Teflon™-lined cap.	Cool to 4°C	7 days to extraction, 40 days after extraction
ASTM D240-87 BTU	500 ml polyethylene	Cool to 4°C,	
SOLID			
ZHE 1311/Method 8240 TCLP Volatile Organic Compounds	125-mL amber glass bottle, Teflon-lined cap, no headspace	Cool to 4°C	14 days to TCLP Extraction, 14 days to analysis
ZHE 1311/Method 8270 Semi-Volatile Organic Compounds	500-mL wide-mouth amber glass bottle, Teflon-lined cap	Cool to 4°C	7 days to TCLP extraction, 7 days to extraction and 40 days to analysis
TCLP Metals - 1311/GFAA ICP CV	500-mL wide-mouth polyethylene jar, Teflon-lined lid; for mercury, 250-mL glass	Cool to 4°C	180 days to TCLP extraction and 180 days to analysis, except mercury; mercury, 28 days to TCLP extraction and 28 days to analysis

mL Milliliter.
TCLP Toxicity characteristics leaching procedures.
TPH Total petroleum hydrocarbons.
RCRA Resource Conservation and Recovery Act.
ZHE Zero headspace extraction.

[a] These are total holding times for TCLP that cover sampling through analysis. The holding times are broken down as follows: extractable organics - 7 days from collection to TCLP extraction plus 7 days to solvent extraction of leachate plus 40 days to analysis of extract; mercury - 28 days from collection to TCLP extraction plus 28 days to analysis; metals except mercury - 180 days from collection to TCLP extraction plus 180 days to analysis.

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SUPERFUND EE/CA FACT SHEET UPDATE

Region 4

OLD ATC REFINERY SITE

Wilmington, North Carolina

December 1995

This fact sheet is not to be considered a technical document but has been prepared in order to provide the public with a better understanding of current information.

INTRODUCTION

A lot of activities have occurred at the Site since our last fact sheet issued in May 1995. This fact sheet provides a recap of what has happened to date, and what is proposed for future activities.

BRIEF BACKGROUND

Titan Petroleum built and operated this facility in the 1960's refining Venezuelan crude oil and kerosene, as well as storing petroleum. Ownership of this Site has been held by several companies. Historical information indicates that this facility operated until 1986, and has been abandoned since that time.

It has been reported by past employees that while the facility was operating, OSHA (Occupational Safety & Health Act) and NIOSH (National Institute of Occupational Safety & Health) regulations were not observed by owners of the facility.

PREVIOUS AND CURRENT ACTIONS

Since the 60's and as recent as this year spills and leaks have occurred contaminating the soil and groundwater. An on-site burial area has also contributed to further contamination.

The U.S. Coast Guard conducted two removal actions (March 1991 and May 1992) at the Site to prevent oil seeping/leaking from deteriorating tanks and pipes from getting into the Cape Fear River, and to remove oil from a bermed area. Approximately 53,000 gallons of product and contaminated groundwater were removed and placed in a storage tank on Site. Approximately 18,000 gallons of oil were removed from the bermed area and pumped to a storage tank on Site awaiting future handling.

In July 1995 the Agency received a call from a citizen stating that oil was leaking from the foundation of two of the multi-million gallon storage tanks. EPA's Emergency Response & Removal Branch (EERB) was sent to the Site to investigate the report. The U.S. Coast Guard also participated in this assessment of the Site. While there the EERB observed several hazardous situations that needed to be addressed which presented a fire and explosion threat, as well as a direct contact threat and exposure threat to toxic vapors. EERB initiated cleanup actions on July 20, 1995 for disposal of the tank bottoms being released from the 2 multi-million gallon tanks, removal of the tetraethyl lead tank, 76 leaking 55-gallon drums with unknown contents, 300 5-gallon containers of potentially explosive/flammable/corrosive liquid substances, plus laboratory waste. A variety of wastes were identified including: cyanide, peroxides, acids, strong base and flammable liquids. Approximately 35,240 pounds of solid and liquid hazardous substances were transported to a permitted facility for disposal. These activities were completed by the end of September 1995. The Coast Guard has removed the 450 55-gallon drums of oily wastes which they collected during their previous response actions in March 1991 and May 1992 at the Site.

FUTURE ACTIONS

The remainder of the necessary work to be conducted at the Site concerning soil contamination will be handled through the EE/CA Approval Action Memorandum under a non-time critical action. Following approval of this memorandum, EPA will issue notice letters accompanied by an Administrative Order on Consent for Removal Action to the Potentially Responsible Parties (PRPs). Liability of each of these PRPs is based on their past ownership or operation at the time of disposal of hazardous substances. EPA will enter negotiations with the PRPs to determine reimbursement to EPA for its past costs, and paying for future clean up activities.

The removal action recommended by the EE/CA calls for removal of all containerized waste from the Site and proper disposal at an off-site facility. Since failure or leaking of ASTs and API separators present an additional risk,it is recommended that the contents of these tanks and piping

be removed and disposed of at an off-site facility. It is recommended that the butane tanks and the sludge burial areas be removed and disposed of at an off-site facility. The 1,000 cubic yards of excavated soil needs to be either treated or removed to an off-site facility.

Contaminated groundwater is not being addressed through this EE/CA process.

The anticipated schedule of activities in sequence of time is as follows:

- Negotiations between EPA & PRPs - 2-3 months
- Work Plan preparation - 2-4 months
- Physical clean up of Site - 6-8 months

Notification will be given to the public as activities progress.

MORE INFORMATION

If you need more information please contact the following:

Ms. Beverly Hudson, Remedial Project Manager
Ms. Diane Barrett, Community Relations Specialist
North Superfund Remedial Branch
U.S. E.P.A., Region 4
345 Courtland Street, NE
Atlanta, GA 30365
Phone: 1-800-435-9233

Copies of documents developed during the Superfund process are available for public reading in the Reference Section of the information repository located at the:

New Hanover County Public Library
201 Chestnut Street
Wilmington, North Carolina
Phone: (910) 341-4390

U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Region 4

North Superfund Remedial Branch
Diane Barrett, Community Relations Coord.
Beverly Hudson, Remedial Project Manager

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NC DEPARTMENT OF ENVIRONMENT, HEALTH
& NATURAL RESOURCES
P.O. BOX 27687
RALEIGH NC 27611-7687

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

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NOTICE OF POTENTIAL LIABILITY AND OFFER TO NEGOTIATE FOR REMOVAL ACTION
URGENT LEGAL MATTER -- PROMPT REPLY NECESSARY
CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Axel Johnson, Inc.
c/o Don Frost, Esq.
Skadden, Arps, Slate, Meagher & Flom
1440 New York Ave., N.W.
Washington, D.C. 20005-2111

SUBJ: Old ATC Refinery, Wilmington, New Hanover County, North Carolina (the "Site")

Dear Mr. Frost:

This letter notifies you, on behalf of Axel Johnson, Inc. (Axel), of the potential liability, as defined by Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9607(a), as amended (CERCLA), that Axel may have incurred with respect to the above-referenced Site. This letter also notifies Axel of forthcoming removal activities at the Site which, by this letter, EPA is requesting Axel to perform or finance.

The Site was operated as a refinery from 1971 to 1986. During this time, spills, leaks and on-site burial of wastes resulted in contamination of soils and groundwater. The United States Environmental Protection Agency (EPA) has documented the release or threatened release of hazardous substances, pollutants or contaminants at the Site, including lead, cyanide, chromium, copper, mercury and polyaromatic hydrocarbons. EPA completed an Engineering Evaluation/Cost Analysis (EE/CA) in June of 1995. The results demonstrate the need for an additional removal action. In July 1995, the Emergency Response and Removal Branch (ERRB) conducted a site assessment due to new reports of leaking hazardous substances. The assessment confirmed that hazardous substances were leaking and circumstances at the Site required an emergency response which is now complete. Additional removal activities are, however, necessary.

EPA has spent and is considering spending additional public funds on actions to investigate and control such releases or threatened releases at the Site. Unless EPA reaches an agreement under which a potentially responsible party (PRP) or parties will properly perform or finance such actions, EPA may perform these actions pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604.

PRPs under CERCLA include: current and former owners and operators of the Site as well as persons who arranged for disposal or treatment of hazardous substances sent to the Site, and persons who accepted hazardous substances for transport to the Site. Under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. § 9606(a) and 9607(a), Section 7003 of the Resource Conservation and Recovery Act, 42 U.S.C. § 6973 (RCRA), and other laws, PRPs may be obligated to implement response actions deemed necessary by EPA to protect health, welfare or the environment. PRPs may also be liable for all costs incurred by the United States Government in responding to any release or threatened release at the Site. Such costs include, but are not limited to, expenditures for investigations, planning, response, oversight and enforcement activities. In addition, PRPs may be required to pay for damages for injury to natural resources or for their destruction or loss, together with the cost of assessing such damages. Where the Site conditions present an imminent and substantial endangerment to human health, welfare or the environment, EPA may also issue an administrative order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), to require PRPs to commence cleanup activities. Failure to comply with an administrative order issued under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), may result in a fine of up to $25,000 per day or imposition of treble damages under Section 107(c)(3), 42 U.S.C. § 9607(c)(3).

Based on information received during preliminary investigations of the Site, EPA believes that Axel, as a past operator of the Site, may be a responsible party. Before the United States government undertakes further response actions, EPA requests that the PRPs voluntarily perform the planned response actions described below.

SITE RESPONSE ACTIVITIES

At present, EPA is planning to conduct the following activities at the Site:

- Removal and proper off-site disposal of all containerized waste
- Removal and proper off-site disposal of all contents of the ASTs and API separators, including the tetraethyl lead tank and associated piping
- Removal and off-site disposal of the butane tanks
- Excavation and off-site disposal of the sludge burial area
- Treatment and proper off-site disposal of the approximately 1,000 cubic yards of stockpiled soil

WORKPLAN AND DRAFT ADMINISTRATIVE ORDER

A copy of the EPA Action Memorandum and draft Administrative Order on Consent are enclosed. The EPA Action Memorandum and draft Administrative Order on Consent are provided to assist Axel and Pace Oil Company, Inc. (Pace) in negotiations with EPA. Pace is receiving an identical notice letter. Pace's address is enclosed for your convenience.

Work conducted by PRPs must be conducted according to a signed Administrative Order on Consent and an EPA-approved workplan.

DECISION NOT TO USE SPECIAL NOTICE

Pursuant to CERCLA Section 122(a), 42 U.S.C. § 9622(a), EPA decided that, in this instance, it is unnecessary and inappropriate to invoke the discretionary CERCLA Section 122(e), 42 U.S.C. § 9622(e), special notice procedures to facilitate an agreement between EPA and the PRPs for three reasons. First, it is EPA's policy not to use the special notice procedures for a removal action unless there is a six (6) month planning lead time after the decision to respond and prior to the initiation of the action. In this case, an EE/CA and an emergency response have already been performed. The final removal actions must be commenced in the near future. Second, as one of only two recipients of this notice letter, it will be unnecessary for Axel to communicate and coordinate with a large number of other PRPs prior to submission of a good faith offer. Third, by providing EPA and the PRPs an opportunity to expedite implementation of the response actions, EPA's proposed schedule advances the public's interest in protecting the environment and conserves resources of both EPA and the PRPs. Thus, the lengthier special notice procedures are inappropriate in this case.

Nonetheless, EPA is willing to discuss settlement opportunities without invoking a moratorium, but will initiate the response action as planned if such discussions do not lead to settlement expeditiously.

INFORMATION TO ASSIST RESPONSIBLE PARTIES

EPA would like to encourage good faith negotiations between the PRPs and EPA, and between Axel and Pace. To assist PRPs in negotiations, EPA is providing the following information as an enclosure to this letter:

1. A list of names and addresses of PRPs to whom this notification is being sent. This list represents EPA's preliminary findings on the identities of PRPs. Inclusion on, or exclusion from, the list does not constitute a final determination by EPA concerning the

liability of any party for the release or threat of release of hazardous substances at the Site.

2. A draft Administrative Order on Consent.

DEMAND FOR PAYMENT

In accordance with CERCLA, EPA has already undertaken certain actions and incurred costs in response to conditions at this Site. Those response actions include sampling and analysis, preparation of an Engineering Evaluation/Cost Analysis (EE/CA) and performance of an emergency removal action. The cost to date of all response actions performed at the Site through EPA funding is approximately $723,045.34. A Summary of Costs, excluding the costs of the emergency removal, is enclosed. EPA estimates that it incurred costs of approximately $161,000 to conduct the emergency removal; however, this estimate does not include either EPA personnel costs or indirect costs and is not final. EPA expects to obtain a final accounting of the costs in the near future. Pursuant to Section 107 of CERCLA, 42 U.S.C. § 9607, EPA hereby demands payment of the above-stated amount, together with any and all interest recoverable by law.

As stated above, EPA anticipates expending additional funds to conduct the remaining removal response at this Site. Whether EPA funds the entire removal response or simply incurs costs in overseeing the parties conducting these response activities, Pace is potentially liable for these expenditures plus interest.

ADMINISTRATIVE RECORD

Pursuant to CERCLA Section 113(k), EPA will establish the administrative record that will contain documents that will form the basis of EPA's decision on the selection of a response action for the Site. This administrative record will be open to the public for inspection and comment.

PRP RESPONSE AND CONTACT

Pace is encouraged to contact EPA no later than November 7, 1995 to indicate its willingness to participate in future negotiations regarding response actions at the Site. Pace may respond individually or with Axel. If EPA does not receive a timely response, EPA will assume that Pace does not wish to negotiate a resolution of its liabilities in connection with the response action and that Pace has declined any involvement in performing the response activities. Moreover, if Pace does not contact EPA to indicate its willingness to participate in the response actions at the Site and/or does not participate in the negotiations, Pace may be issued an administrative order under Section 106 of CERCLA, 42 U.S.C. § 9606, or be held liable under Section 107 of CERCLA, 42 U.S.C. § 9607, for the cost of the

response activities EPA performs at the Site and for any damages to natural resources.

Axel's response to this notice letter should be sent to:

Andrew J. Harrison, Jr.
Assistant Regional Counsel
U.S. Environmental Protection Agency
345 Courtland Street
Atlanta, Georgia 30365

If Axel's technical personnel have any technical questions relating to this matter, please direct them to Beverly Hudson, On-Scene Coordinator, at 404/347-3555, extension 2080. All legal questions should be directed to Andrew J. Harrison, Jr. at 404/347-2641, extension 2241.

Due to the seriousness of the problem at the Site and the legal ramifications of failure to respond properly, EPA strongly encourages Axel to give this matter its immediate attention.

The factual and legal discussions contained in this letter are intended solely for notification and information purposes. They are not intended to be and cannot be relied upon as final EPA positions on any matter set forth herein.

Sincerely,

for Robert Jourdan
Chief
North Superfund
Remedial Branch

Enclosures

cc: Patrick Watters, NCDEHNR
James Lee, USDOI

LIST of PRPs and CONTACTS

Axel Johnson, Inc.
c/o Don Frost, Esq.
Skadden, Arps, Slate, Meagher & Flom
1440 New York Ave., N.W.
Washington, D.C. 20005-2111

Pace Oil Company, Inc.
c/o Mr. F. Roger Page
150 Stratford Court, S.W.
Winston-Salem, NC 27113

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

OCT 26 1995

NOTICE OF POTENTIAL LIABILITY AND OFFER TO NEGOTIATE FOR REMOVAL ACTION
URGENT LEGAL MATTER -- PROMPT REPLY NECESSARY
CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Pace Oil Company, Inc.
c/o Mr. F. Roger Page
150 Stratford Court, S.W.
Winston-Salem, NC 27113

SUBJ: Old ATC Refinery, Wilmington, New Hanover County, North Carolina (the "Site")

Dear Mr. Page:

This letter notifies you, on behalf of Pace Oil Company, Inc. (Pace), of the potential liability, as defined by Section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9607(a), as amended (CERCLA), that Pace may have incurred with respect to the above-referenced Site. This letter also notifies Axel of forthcoming removal activities at the Site which, by this letter, EPA is requesting Pace to perform or finance.

The Site was operated as a refinery from 1971 to 1986. During this time, spills, leaks and on-site burial of wastes resulted in contamination of soils and groundwater. The United States Environmental Protection Agency (EPA) has documented the release or threatened release of hazardous substances, pollutants or contaminants at the Site, including lead, cyanide, chromium, copper, mercury and polyaromatic hydrocarbons. EPA completed an Engineering Evaluation/Cost Analysis (EE/CA) in June of 1995. The results demonstrate the need for an additional removal action. In July 1995, the Emergency Response and Removal Branch (ERRB) conducted a site assessment due to new reports of leaking hazardous substances. The assessment confirmed that hazardous substances were leaking and circumstances at the Site required an emergency response which is now complete. Additional removal activities are, however, necessary.

EPA has spent and is considering spending additional public funds on actions to investigate and control such releases or threatened releases at the Site. Unless EPA reaches an agreement under which a potentially responsible party (PRP) or parties will properly perform or finance such actions, EPA may perform these actions pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604.

PRPs under CERCLA include: current and former owners and operators of the Site as well as persons who arranged for disposal or treatment of hazardous substances sent to the Site, and persons who accepted hazardous substances for transport to the Site. Under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. § 9606(a) and 9607(a), Section 7003 of the Resource Conservation and Recovery Act, 42 U.S.C. § 6973 (RCRA), and other laws, PRPs may be obligated to implement response actions deemed necessary by EPA to protect health, welfare or the environment. PRPs may also be liable for all costs incurred by the United States Government in responding to any release or threatened release at the Site. Such costs include, but are not limited to, expenditures for investigations, planning, response, oversight and enforcement activities. In addition, PRPs may be required to pay for damages for injury to natural resources or for their destruction or loss, together with the cost of assessing such damages. Where the Site conditions present an imminent and substantial endangerment to human health, welfare or the environment, EPA may also issue an administrative order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), to require PRPs to commence cleanup activities. Failure to comply with an administrative order issued under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), may result in a fine of up to $25,000 per day or imposition of treble damages under Section 107(c)(3), 42 U.S.C. § 9607(c)(3).

Based on information received during preliminary investigations of the Site, EPA believes that Pace, as a past owner and operator of the Site, may be a responsible party. Before the United States government undertakes further response actions, EPA requests that the PRPs voluntarily perform the planned response actions described below.

SITE RESPONSE ACTIVITIES

At present, EPA is planning to conduct the following activities at the Site:

- Removal and proper off-site disposal of all containerized waste
- Removal and proper off-site disposal of all contents of the ASTs and API separators, including the tetraethyl lead tank and associated piping
- Removal and off-site disposal of the butane tanks
- Excavation and off-site disposal of the sludge burial area
- Treatment and proper off-site disposal of the approximately 1,000 cubic yards of stockpiled soil

WORKPLAN AND DRAFT ADMINISTRATIVE ORDER

A copy of the EPA Action Memorandum and draft Administrative Order on Consent are enclosed. The EPA Action Memorandum and draft Administrative Order on Consent are provided to assist Pace and Axel Johnson, Inc. (Axel) in negotiations with EPA. Axel is receiving an identical notice letter. Axel's address is enclosed for your convenience.

Work conducted by PRPs must be conducted according to a signed Administrative Order on Consent and an EPA-approved workplan.

DECISION NOT TO USE SPECIAL NOTICE

Pursuant to CERCLA Section 122(a), 42 U.S.C. § 9622(a), EPA decided that, in this instance, it is unnecessary and inappropriate to invoke the discretionary CERCLA Section 122(e), 42 U.S.C. § 9622(e), special notice procedures to facilitate an agreement between EPA and the PRPs for three reasons. First, it is EPA's policy not to use the special notice procedures for a removal action unless there is a six (6) month planning lead time after the decision to respond and prior to the initiation of the action. In this case, an EE/CA and an emergency response have already been performed. The final removal actions must be commenced in the near future. Second, as one of only two recipients of this notice letter, it will be unnecessary for Pace to communicate and coordinate with a large number of other PRPs prior to submission of a good faith offer. Third, by providing EPA and the PRPs an opportunity to expedite implementation of the response actions, EPA's proposed schedule advances the public's interest in protecting the environment and conserves resources of both EPA and the PRPs. Thus, the lengthier special notice procedures are inappropriate in this case.

Nonetheless, EPA is willing to discuss settlement opportunities without invoking a moratorium, but will initiate the response action as planned if such discussions do not lead to settlement expeditiously.

INFORMATION TO ASSIST RESPONSIBLE PARTIES

EPA would like to encourage good faith negotiations between the PRPs and EPA, and between Pace and Axel. To assist PRPs in negotiations, EPA is providing the following information as an enclosure to this letter:

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Sincerely,

for Robert Jourdan
Chief
North Superfund
Remedial Branch

Enclosures

cc: Patrick Watters, NCDEHNR
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

MEMORANDUM

DATE: OCT 04 1995

SUBJECT: Request for a Non-Time Critical Removal Action at the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina

FROM: Beverly T. Hudson, BTH
Remedial Project Manager, Waste Division

Michael Taylor, MKT
On-Scene Coordinator, Waste Division

TO: Richard D. Green, Associate Director
Waste Management Division

SITE ID# NCD986186518

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action described herein for the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina. The site poses a threat to public health and the environment that meets the NCP Section 300.415(b)(2) criteria for a removal action.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal Site Evaluation

Titan Petroleum built and operated this facility in the 1960's for refining Venezuelan crude and petroleum storage. Historical information indicated that the refinery operated until 1986. During this period, spills, leaks and on-site burial allegedly occurred, contaminating the soils and groundwater. The United States Coast Guard (USCG) performed two removal actions under authority of the Clean Water Act at the site in 1991 to stop seepage of oil from the site's banks into a river inlet and to remove oil from a bermed area. Also, the North Carolina Division of Solid Waste Management completed a Preliminary Assessment and a Site Screening Investigation in 1991. EPA contracted Black & Veatch to conduct an Expanded Site Inspection (ESI) in 1992. The ESI recommended further action at the Old ATC Site..

In March of 1991 the USCG began addressing oil leaching into the Cape Fear River from deteriorated pipes and tanks. The USCG responded until 1992 when a referral to EPA was initiated. This Site was deemed non-time critical during the referral from the USCG to EPA's Remedial Branch. Black & Veatch conducted a phase I sampling investigation in April 1994 and a phase II sampling investigation in June 1994. On-site soil screening and laboratory confirmation identified 11 areas of soil contamination. Contamination consisted of polyaromatic hydrocarbons and metals. An Engineering Evaluation/Cost Analysis (EE/CA) was completed in June of 1995.

A Streamlined Risk Evaluation (SRE) was performed to determine risks posed by soil contamination. The SRE did not identify any unacceptable risks to human health.

In July of 1995 two multi-million gallon storage tanks were reported leaking. The Emergency Response and Removal Branch (ERRB) dispatched an OSC to assess the situation. During this site visit several hazards were observed on-site and deemed to be an emergency.

The ERRB received notification of this Site from EPA's North Remedial Branch (NRB). The NRB requested a removal assessment for potential releases of hazardous substances. This assessment was conducted on July 19, 1995.

On July 19, 1995 ERRB conducted an assessment of this facility accompanied by the USCG Wilmington Marine Safety Office (MSO). The facility contains more than 17 storage tanks ranging in size from 10,000 to 3,000,000 gallons. Two of the multi-million gallon tanks were leaking along their foundations. Further investigations revealed approximately 60 scattered 55 gallons drums of unknown contents and over 300 five gallon containers of flammable liquids that were leaking. A combustible atmosphere was identified from the storage area of these containers. A variety of waste streams were identified including: cyanide, peroxides, acids, strong base and flammable liquids.

In addition, a 5,000 gallon Tetraethyl Lead (TEL) tank was emitting strong vapors in close proximity to nearby residents. TEL is identified as being toxic by ingestion, inhalation and skin absorption and has an extremely low Threshold Limit Value (TLV) for exposure.

Several laboratory containers were located within an attic inside a former laboratory on-site. This discarded laboratory waste may include unstable chemicals of unknown origin.

There are more than 450 55-gallon drums staged and badly deteriorated from the USCG response in 1991. Several boilers and distillation towers remain from the refining operation. Three oil/water separators are located around the tank farm on approximately 13 acres. Four butane tanks are placed at the entrance of the facility. An estimated 1,000 cubic yards of excavated soil is stockpiled at the southwest corner of the facility. These stockpiles are a result of an excavation by the USCG.

Several areas on-site required immediate attention and were addressed under an emergency response action. The release of hazardous substances constituted a public health and environmental emergency. The State and local authorities would not respond in a timely manner. This incident presented a fire and explosion threat in addition to a direct contact threat and exposure of toxic vapors. Vandalism continues to be a major concern for this Site.

2. Physical Location

The Old ATC Refinery site (ATC) is located at 801 Surry Street in south Wilmington, New Hanover County, North Carolina. The Site's geographic coordinates are 34° 13′ 27" North latitude and 77° 56′ 59" West longitude. Land use of properties directly adjacent to ATC is primarily heavy industrial. The site is bordered by a Unocal 76 oil facility to the north, a battery recycling facility to the northeast, Surry Street to the east, a JLM Terminals oil facility to the south, and the Cape Fear River to the west. A shipyard is located across the river from the site. Residential, commercial, and light industrial areas are located on the eastern side of Front Street, within 1 mile of the site.

Approximately 46,000 people reside within 4 miles of the ATC facility. This population is radially distributed as follows: 1 - 1/4 mile, 373 people; 1/4 - 1/2 mile, 389 people; 1/2 - 1 mile, 5, 890 people; 1 - 2 miles, 14,960 people; 2 - 3 miles, 13,982 people; and 3 - 4 miles, 10,074 people. The nearest residence to the site is located approximately 0.1 mile east of the site. Because the facility is abandoned, there are no workers on-site.

3. Site Characteristics

The ATC site is an abandoned petroleum refinery located on an approximately square, 13-acre parcel of land on the eastern bank of the Cape Fear River. Structures present at the ATC include:

- Three 3,360,000 gallon capacity aboveground oil storage tanks.

- Two 2,310,000 gallon capacity aboveground oil storage tanks.
- Five 1,580,000 gallon capacity aboveground oil storage tanks
- Five 420,000 gallon capacity aboveground oil storage tanks.
- Four aboveground butane storage tanks.
- One aboveground tetraethyl lead storage tank.
- A cracking tower facility.
- A laboratory building
- A furnace
- A boiler shack
- Three partially buried oil/water separators
- Two pump houses
- One pump pit
- Above ground pipelines
- Spill containment berms

The area immediately surrounding the site is industrial. Vehicular access to ATC is from Surry Street and is restricted by a fence and locked gate, but pedestrian entry is possible through an opening in the fence. Asphalt drives parallel the northern and northeastern boundaries of the site and extend from the eastern main gate to a tidal ditch (inlet) of the Cape Fear River located near the center of the site's western boundary. Overhead power lines traverse the site from the main gate to an electric meter and switch box located on a power pole near the eastern end of the river inlet.

The site slopes westward from Surry Street toward the Cape Fear River. Elevations across the property range from 0 feet with respect to the National Geodetic Vertical Datum (NGVD) along the Cape Fear River to 22 feet NGVD near the site's eastern boundary.

Most of the site is covered with grass. Thicker vegetation, including small trees and brush, is located between some tanks in the northern half of the site and on the northern end of the furnace refractory burial area. Additionally, an area of dense hydrophilic vegetation is located in the western end of the north bermed area between the north oil/water separator and the tank 80003 lead area.

Surface soil at the site is derived from the Kureb-Baymeade-Rimini soil association, which consists of nearly level to sloping soils which are well drained and have a fine sand subsoil. However, surface soil at the site has been cut, graded, filled or paved over to the extent that the original soils cannot be identified. It is now classified as part of the Urban land complex.

Locally, subsurface soils include clay, sand, and marl, which vary in thickness across New Hanover County. These soils are estimated to range from 0 to 35 feet in the thickness beneath the site. Beneath the refinery, the deposits may include 5 to 20 feet of fine to medium grained sand containing minor amounts of interstitial dark-gray to blue-gray clay.

Three principal aquifers underlie the Old ATC site: the upper sandy aquifer (unconfined surficial aquifer), the limestone aquifer, and the lower sandy aquifer. The upper sandy aquifer is between 15 and 75 feet thick. It contains fresh water at most locations in New Hanover County, except those locations which are immediately adjacent to brackish surface water. Potable water supply is obtained from the upper sandy aquifer in a few areas along barrier island beaches; however, the area around the OLD ATC is used as an industrial water source in northwestern New Hanover and southern Pender Counties. Sediments similar to those which comprise the upper sandy aquifer have been shown to have hydraulic conductivity value ranging from 2×10^{-5} to 5×10^{-2} cm/sec. Beneath the site, the groundwater table is encountered at depths ranging from 1.5 to 5 feet bls with groundwater flow toward the Cape Fear River (west) and south.

The limestone aquifer is the chief source of groundwater in New Hanover County. Depending upon the composition of the overlying deposits, the limestone aquifer may or may not be confined beneath the Old ATC Refinery. Recharge to the limestone aquifer occurs by percolation of precipitation through the overlying sediments directly into the aquifer, seepage from surface water bodies, and direct infiltration of precipitation into outcrops.

The cavernous nature of the limestone allows high transmissivities, with some wells in the County yielding more than 400 gallons per minute, and specific capacity ranging from 3 to 80 gallons per minute per foot of drawdown. The hydraulic conductivity of the limestone aquifer is estimated to range from 1×10^{-4} to 1.0 cm/sec.

The Cape Fear River receives all runoff and drainage from the site. The river has an average flowrate of 5,290 cubic feet per second at lock 1, upstream of Wilmington, North Carolina, at river mile 67. Tidal flow occurs within the river at ATC. No drinking-water intakes are located within 15 miles of the site. but the Cape Fear River is a commercial fishery.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant.

Hazardous substances have been identified pursuant to CERCLA Section 104. The hazardous wastes currently identified consist

of the following Resource Conservation and Recovery Act (RCRA) waste codes: D001 (ignitable), D002 (corrosive), D003 (reactive) D006 (cadmium), D007 (chromium), D008 (lead), D018 (benzene), D039 (tetrachloroethylene), D040 (trichloroethylene), K051 and K052.

5. NPL status

The site is not listed on the NPL.

6. Maps, pictures and other graphic representations.

Available upon request.

B. Other Action to Date

1. Previous and Current Actions

In March 1991, the United States Coast Guard began addressing oil leaching into the Cape Fear River from deteriorated pipes and tanks. Approximately 3000 gallons of free product was removed to an unidentified storage tank on-site.

In June 1991, recovery operations were discontinued and oil again began seeping from the inlet banks. Consequently, the USCG resumed recovery operations. In May 1992, an on-site storage tank suspected as the source was drained. During the summer of 1992, a leaking valve was identified as another suspected source. The leak was addressed and a interception trench was installed north of the river inlet. Approximately 50,000 gallons of product and contaminated groundwater were removed from the trench and pumped to an on-site storage tank. In April 1994, EPA contractors noted that recovery operations at the site had been discontinued.

In July 1991, 18,000 gallons of oil were removed from the south bermed area and pumped to a storage tank on-site. The suspected source of the oil was a leaking transmission line shared with the adjacent refinery. The leaking transmission lines were capped to eliminate the risk of future release.

In 1991, a Site Sampling Investigation (SSI) was performed by the North Carolina Department of Environment, Health and Natural Resources (NCDEHNR). As a result of the investigation, NCDEHNR recommended to EPA that an ESI be initiated. The ESI was completed in 1993. It identified several potential source areas and recommends further investigative action for the site. In April 1994, an EE/CA was initiated. Field activities for the EE/CA were conducted between April and August of 1994.

On July 19, 1995, the Emergency Response Removal Branch (ERRB) conducted an assessment of the facility accompanied by the

USCG Wilmington MSO. The ERRB's Emergency Response Cleanup Services (ERCS) contractor was contacted to respond to the site. ERCS was tasked to address the TEL tank, leaking drums and five gallon containers, as well as potential laboratory waste. The leaking drums were overpacked or transferred into new containers awaiting treatment or disposal. Hazardous categorization was performed on 56 drums and representative samples of the five gallon lots.

ERRB is arranging for transportation and disposal of the hazardous substances and waste outlined in the emergency response action. These actions are expected to be completed by September of 1995.

C. State and Local Authorities' Role

1. State and Local Actions to Date

The State of North Carolina has been involved, for inspection purposes, with this facility from previous actions conducted by the former owners and operators. The North Carolina Division of Environmental Management has not taken an active role in the cleanup of this Site since the involvement of the USCG in 1991 or actions by EPA's Remedial and Removal Branches. No legal action has been undertaken by the State or local authorities at this time.

2. Potential for Continued State/Local Response

The response capabilities of the State of North Carolina and local government are limited. It is unlikely that the State or any other political subdivision will undertake response activity on this Site in the future due to the lack of available funding.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

The EPA Region IV North Superfund Remedial Branch and ERRB has determined that a threat of release as defined by Section 101 of CERCLA, exists at the site. The site meets the requirements for initiating a non-time critical removal action according to criteria listed in Section 300.415 of the National Contingency Plan (NCP). The removal action criteria outlined in the NCP continue to exist until the proposed action described below in Section V are completed. Potential contaminate exposure to nearby human population, contaminate migration to surface and potential drinking water supplies, release of toxic fumes, weather conditions, and the threat of fire and explosion are major threats to be addressed on this site.

There are approximately 300 5-gallon buckets containing solvent stored in a building on-site. Additionally, there are approximately 56-55 gallon drums containing flammable liquids, acids, strong bases, peroxides, microbicides and petroleum waste. There are also more than 400-55 gallon drums of used sorbent material and recovered product from past removal actions. Four butane tanks are placed at the entrance of the facility. An estimated 1,000 cubic yards of excavated soil is stockpiled at the southwest corner of the facility. These stockpiles are a result of an excavation by the USCG.

Several oil transfer pipelines are routed throughout the property. Sixteen and eight inch pipelines parallel the Cape Fear River along the western side of the site. These pipelines connect with the above-ground storage tanks and are known to contain petroleum. These lines have been capped. However, the threat of a release into the Cape Fear River is possible. There are no site controls in place, such as containment berms to retain such a release. The pipelines are capable of holding several barrels of oil from the storage tanks. Due to the fact this site is unattended and vandalism is a problem this is a concern if allowed to go unaddressed over an extended period of time.

In addition to these items, there are 3 oil/water separators and 16 above ground storage tanks, one known to contain tetraethyl lead, on site. Two of the multi-million storage tanks (designated 80002 and 80003) are leaking. Hazard Categorization and analytical data from the containers and tanks indicates a large volume of flammable, corrosive, reactive and toxic waste are identified at the site.

B. Threats to the Environment

Runoff from a fire response would affect the local surface water and possibly groundwater. Surface waters lead directly to the Cape Fear River, which borders the western side of the facility. The release of hazardous and toxic chemicals into the surface water would affect aquatic life locally and downstream. An air release from a fire could cause environmental damage to the surrounding area.

The threat of a spill or release of oil and sludge from storage tanks and pipelines would affect surface soil and water. The Cape Fear River would be directly impacted due to its proximity to the site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and

substantial endangerment to the public health, or welfare, or the environment.

V. NON-TIME CRITICAL REMOVAL ACTION

A. Proposed Action

1. Proposed action description

The removal action recommended by the EE/CA calls for removal of all containerized waste from the site and proper disposal at an off-site facility. Since failure or leaking of ASTs and API separators present an additional risk, it is further recommended that the contents of these tanks and piping associated with the ASTs be removed and disposed of at an off-site facility. Potential contents of the ASTs include leaded tank bottoms, a regulated waste (K052). API separator sludge is also a regulated waste (K051). It is recommended that the butane tanks and the sludge burial areas be removed and disposed at an off-site facility. Also, the 1000 cubic yards of excavated soil should be treated or removed to an off-site facility.

2. Contributions to remedial performance

Based on the information available at this time, the proposed removal action will abate the immediate threats identified in Section III of this document. If further remedial actions are necessary due to the presence of groundwater or other contamination, implementation of the proposed action will have served the purpose of removing an identified source of contamination and will have the immediate effect of reaching long term goals.

3. Description of alternative technologies

The EE/CA formally reviewed three alternatives for clean-up at the site. The EE/CA recommends removal of containerized waste and treatment or destruction at an off-site facility. No on-site alternative technologies are proposed for this site.

4. Engineering Evaluation/Cost Analysis (EE/CA)

An EE/CA has been conducted for this site along with an EE/CA Approval Memorandum. Both are attached to this document, which outlines relevant factors that further justify the need for a removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs determined to be applicable to the activity at the site are the Resource Conservation and Recovery Act (RCRA) regulations for off-site treatment and disposal. EPA's Off-site Disposal Rule as referenced in 53 FR 48218-48234 dated September 22, 1993 will also apply. Other state and federal ARARs are identified in the EE/CA.

6. Proposed Schedule

Response actions at the site will be initiated upon approval of this Action Memorandum and subsequent funding approval. The need for funding is contingent upon negotiations with Potentially Responsible Parties (PRPs) to perform the work outlined in this document. Foregoing any unexpected delays, all actions are to be completed within one year.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

The Site would continue to present a fire and explosion threat. A toxic air release resulting in local exposure to the public is a concern. There would continue to be a direct contact threat and release into the environment from surface runoff. There would be an increased risk to the groundwater. Should action be delayed or not taken, this site would pose an imminent threat to the public health and welfare.

VII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues that are related to this Site.

VIII. ENFORCEMENT

"Enforcement Sensitive" - See Attached Enforcement Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Old ATC Refinery site in Wilmington, New Hanover County, North Carolina. This was developed in accordance with CERCLA as amended, and not inconsistent with the NCP. The document is based on the administrative record for the site.

Conditions at the site meet the NCP section 300.415(b)(2) criteria for a removal, and I recommend your approval of the proposed removal action.

Approval: Richard D. Green Date: 10/4/93
Richard D. Green, Associate Director
Office of Superfund & Emergency Response

Disapproval: _____ Date: _____
Richard D. Green, Associate Director
Office of Superfund & Emergency Response

Attachment

ENFORCEMENT ADDENDUM

After completion of the EE/CA, EPA was notified of two on-going releases of petroleum tank bottoms. Upon inspection of the Site, ERRB found two (2) active releases of tank bottoms, approximately 300 five (5) gallon containers of potentially explosive and corrosive substances and a large number of deteriorating 55 gallon drums containing caustic substances. ERRB immediately conducted an emergency response which is expected to be completed by September 30, 1995. EPA is not presently conducting any further response action. The United States Coast Guard is, however, currently removing and disposing of approximately 400 drums of oily wastes collected during a response to a previous oil spill and staged on-site.

The remainder of the necessary work is defined in this EE/CA Approval Action Memorandum. Further response includes both time critical and non-time critical removal action.

Following approval of this memorandum, EPA will issue notice letters accompanied by a draft Administrative Order on Consent for Removal Action ("AOC") to A. Johnson & Company, Inc. ("Axel"), Pace Oil Company, Inc. ("Pace") and Primary Oil & Energy Corporation ("Primary"). Liability of each of these PRPs is based on their past ownership or operation at the time of disposal of hazardous substances. 42 U.S.C. § 9607(a)(3). Axel operated the refinery from 1970-80. Pace owned the refinery from 1970 to 1986, and both Pace and Primary operated the refinery through a joint venture, Republic Oil, from January 1985 through February 1986.

EPA expects the PRPs to voluntarily perform the necessary removal actions and to reimburse EPA for its past costs. Notwithstanding this expectation, due to the interest of a prospective purchaser, EPA enjoys an additional opportunity to obtain any work or past costs the PRPs are unwilling to perform or pay. The prospective purchaser, Linda Carroll, holds a deed of trust on the real and personal property which constitutes the refinery. Ms. Carroll plans to institute foreclosure proceedings and to refurbish the facility as a bulk storage facility. Carroll Carolina Oil, Inc. will operate the refurbished facility. Of course, to implement her course of action without incurring liability for response costs, Ms. Carroll must negotiate a prospective purchaser agreement with EPA. These discussions will occur once EPA is comfortable with the scope of work and costs to be covered by the PRPs. Assuming a prospective purchaser agreement is provided to Ms. Carroll, a separate and complete briefing package will describe all benefits to be obtained by EPA.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV

IN THE MATTER OF: OLD ATC REFINERY Wilmington, New Hanover County, North Carolina Axel Johnson, Inc., Pace Oil Company, Inc., Respondents	ADMINISTRATIVE ORDER ON CONSENT FOR REMOVAL ACTION U.S. EPA Region CERCLA Docket No. Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622

I. JURISDICTION AND GENERAL PROVISIONS

This Administrative Order on Consent ("Order") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and Axel Johnson, Inc. ("Axel") and Pace Oil Company, Inc. ("Pace") ("Respondents"). This Order provides for the performance of the removal action by Respondents and the reimbursement of response costs incurred by the United States in connection with the property located at 801 Surry Street in Wilmington, New Hanover County, North Carolina (the "Site"). This Order requires Respondents to conduct the removal action described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site.

This Order is issued pursuant to the authority vested in the President of the United States by Sections 104, 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607, and 9622, as amended ("CERCLA"), and delegated to the Administrator of EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2,923, and further delegated to the EPA Regional Administrators by EPA Delegation Nos. 14-14-A, 14-14-C and 14-14-D. This authority is further delegated through the Director, Waste

Management Division, to the Chiefs of the Emergency Response and Removal Branch and the Superfund Remedial Branches.

EPA has notified the State of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

Respondents' participation in this Order shall not constitute or be construed as an admission of liability or of EPA's findings or determinations contained in this Order except in a proceeding to enforce the terms of this Order. Respondents agree to comply with and be bound by the terms of this Order. Respondents further agrees that they will not contest the basis or validity of this Order or its terms.

II. **PARTIES BOUND**

This Order applies to and is binding upon EPA and upon Respondents. Any change in ownership or corporate status of Respondents including, but not limited to, any transfer of assets or real or personal property shall not alter Respondents' responsibilities under this Order. Respondents are jointly and severally liable for carrying out all activities required by this Order. Compliance or noncompliance by one or more Respondent with any provision of this Order shall not excuse or justify noncompliance by any other Respondent.

Respondents shall ensure that its contractors, subcontractors, and representatives receive a copy of this Order and comply with this Order. Respondents shall be responsible for any noncompliance with this Order.

III. **FINDINGS OF FACT**

For the purposes of this Order, EPA finds that:

A. The Old ATC Site ("Site") is an abandoned petroleum refining facility located on an approximately thirteen (13) acre parcel of land on the eastern bank of the Cape Fear River in Wilmington, New Hanover County, North Carolina.

B. Sunrise Energy Corporation, formerly City Gas & Transmission Corporation, is the current owner of the Site.

C. Titan Petroleum, Inc., a predecessor of Axel Johnson, Inc. ("Axel"), owned portions of the Site from 1971 to 1974. The Old ATC Refinery (the "Refinery") was constructed during Titan's ownership. Operation of the Refinery also began during Titan's ownership.

D. Axel's predecessors, Titan, Atlantic Terminal Corporation, ATC Petroleum, Inc. ("ATC") and A. Johnson Energy Marketing, Inc.,

operated the Refinery from 1972 until 1982, at which time operations ceased. From cessation of operations, Axel's predecessor, ATC, used a number of the tanks at the Site to store petroleum.

E. Pace Oil Company, Inc. ("Pace") owned all or portions of the Site from 1971 to 1986.

F. Republic Refining Company ("Republic"), a joint venture of Pace and Primary Oil and Energy Corporation operated the Site from January 1985 to February 1986.

G. City Gas & Transmission Corporation ("City Gas") purchased the Refinery in March 1986. City Gas never operated the Site; yet, it remains the current owner.

H. The United States Coast Guard ("USCG") responded to releases of oil during 1991 and again in 1992. In March 1991, the USCG removed approximately 3,000 gallons of petroleum which was leaching into the Cape Fear River. In July 1991, 18,000 gallons of oil were captured. During 1992, approximately 50,000 gallons of petroleum and contaminated groundwater were intercepted and removed from the Site.

I. Numerous releases of hazardous substances have been reported over the years. Hazardous wastes recently identified at the Site include the following waste codes: D001 (ignitable), D002 (corrosive), D003 (reactive), D006 (cadmium), D007 (chromium), D008 (lead), D018 (benzene), D039 (tetrachloroethylene), D040 (trichloroethylene), K051 and K052.

J. The North Carolina Department of Environment, Health and Natural Resources ("NCDEHNR") conducted a Site Screening Investigation in 1991 and recommended that an Expanded Site Investigation be instituted.

K. EPA conducted an Expanded Site Investigation ("ESI") in 1991. As a result of the findings of the ESI, EPA recommended further action.

L. EPA conducted sampling during April and June 1994. Eleven areas containing contaminated soils were identified. Contaminants included metals and polyaromatic hydrocarbons ("PAHs").

M. EPA conducted an Engineering Evaluation/Cost Analysis ("EE/CA") which was completed in June of 1995.

N. EPA received a report during July 1995 that two multi-million gallon storage tanks were leaking. An On-Scene Coordinator ("OSC") from the Emergency Response and Removal Branch ("ERRB") investigated and discovered conditions which necessitated an emergency response. The two multi-million gallon storage tanks were leaking. Approximately sixty (60) scattered fifty-five (55)

gallon drums were found. Over 300 five (5) gallon containers of flammable liquids were on-site and leaking. The 5,000 tetraethyl lead tank was emitting strong vapors in close proximity to nearby residents. During the investigation and corresponding emergency response, a variety of waste streams were identified, including, cyanide, peroxides, acids, strong bases and flammable liquids.

O. The above ground storage tanks contain contaminated tank bottoms. Lead is found in these tank bottoms at 68 ppm. Total halogens are found at 230 ppm.

P. The xylene spill area, located in the northcentral portion of the refinery, contains contaminated soils with PAHs at 68 ppm and lead at 20 ppm.

Q. The tetraethyl lead tank was determined to be leaking.

R. Surface soils in the furnace refractory burial area contain lead (350 ppm), vanadium (2,100 ppm), mercury (1.1 ppm), chromium (22 ppm), barium (40 ppm), nickel (16 ppm) and total PAHs (5.5 ppm).

S. Approximately 450 55 gallon drums are staged on-site and contain petroleum product and petroleum sorbent material.

T. The south bermed area contains lead at 200 ppm.

U. Leaded tank bottoms (K052 waste) were disposed of in the former sludge pile area.

V. The Cape Fear River receives all runoff and drainage from the Site.

W. Three principal aquifers underlie the Site.

IV. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA has determined that:

1. The Old ATC Refinery Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

2. The contaminants found at the Site, as identified in the Findings of Fact above, include "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). Hazardous substances found at the Site include, but are not limited to, lead, cyanide, chromium, copper, mercury and polyaromatic hydrocarbons.

3. Each Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

4. Each Respondent may be liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

A. Respondents Axel Johnson, Inc. and Pace Oil Company, Inc. were the "owners" and/or "operators" of the Site at the time of disposal of hazardous substances at the Site, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

5. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the Site as defined by Sections 101(22) of CERCLA, 42 U.S.C. § 9601(22).

6. The conditions present at the Site constitute an imminent and substantial endangerment to public health, welfare, or the environment. Factors that may be considered are set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan, as amended, 40 CFR Part 300 ("NCP").

These factors include, but are not limited to, the following:

a. actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; this factor is present at the Site due to the existence of lead, barium, chromium, mercury, nickel, PAHs and vanadium in soils;

b. actual or potential contamination of drinking water supplies or sensitive ecosystems; this factor is present at the Site due to the existence of hazardous substances, including lead, in soils and in leaking tanks, piping and containers;

c. hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release; this factor is present at the Site due to the existence of lead and flammable liquids in tanks and containers;

d. high levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate; this factor is present at the Site due to the existence of lead, PAHs;

e. weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released; this factor is present at the Site due to the existence of lead in leaking tanks adjacent to the Cape Fear River;

f. threat of fire or explosion; this factor is present at the Site due to the existence of flammables and petroleum products;

g. the unavailability of other appropriate federal or state response mechanisms to respond to the release; and

h. other situations or factors that may pose threats to public health or welfare or the environment; this factor is present at the Site due to the existence of leaking hazardous substances immediately adjacent to the Cape Fear River.

7. The actual or threatened release of hazardous substances at or from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

8. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment, and are not inconsistent with the NCP or CERCLA.

V. **ORDER**

Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, and the Administrative Record for this Site, it is hereby ordered and agreed that Respondents shall comply with the following provisions, including but not limited to all attachments to this Order, and all documents incorporated by reference into this Order, and perform the following actions:

1. Designation of Contractor, Project Coordinator, and On-Scene Coordinator

Respondents shall perform the removal action required by this Order themselves or retain a contractor(s) to perform the removal action. Respondents shall notify EPA of Respondents' qualifications or the name(s) and qualification(s) of such contractor(s) within five (5) business days of the effective date of this Order. Respondents shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the removal action under this Order at least ten (10) days prior to commencement of such removal action. EPA retains the right to disapprove of any, or all, of the contractors and/or subcontractors retained by the Respondents, or of Respondents' choice of themselves to do the removal action. If EPA disapproves of a selected contractor or the Respondents, Respondents shall retain a different contractor or notify EPA that it will perform the removal action itself within five (5) business days following EPA's disapproval and shall notify EPA of that contractor's name or Respondents and qualifications within five (5) business days of EPA's disapproval.

Within five (5) business days after the effective date of this Order, Respondents shall designate a Project Coordinator who shall be responsible for administration of all the Respondents' actions required by the Order. Respondents shall submit the designated coordinator's name, address, telephone number, and qualifications to EPA. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of any Project Coordinator named by Respondents. If EPA disapproves of a selected Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within five (5) business days following EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by all Respondents.

EPA has designated Michael Taylor of the EPA, Region IV Emergency Response and Removal Branch as its On-Scene Coordinator ("OSC") and Beverly Hudson as its OSC Representative. Respondents shall direct all submissions required by this Order to the OSC Representative at 345 Courtland St., NE, Atlanta, Georgia 30365. EPA and Respondents shall have the right, subject to the immediately proceeding paragraph, to change their designated OSC or OSC Representative or Project Coordinator. Respondents shall notify EPA five (5) business days before such a change is made. The initial notification may be orally made but it shall be promptly followed by a written notice.

2. Work to Be Performed

Respondent(s) shall perform, at a minimum, the following removal action:

A. Removal and off-site disposal of all containerized waste;

B. Removal and proper off-site disposal of all contents of the above ground storage tanks ("ASTs") and API separators, including the tetraethyl lead tank and associated piping;

C. Removal and off-site disposal of the butane tanks;

D. Excavation and off-site disposal of the sludge burial area;

E. Treatment and proper off-site disposal of the approximately 1,000 cubic yards of stockpiled soil

2.1 Work Plan and Implementation

Within thirty (30) days after the effective date of this Order, Respondents shall submit to EPA for approval a draft Work Plan for performing the removal action set forth above. The draft Work

Plan shall provide a description of, and an expeditious schedule for, the actions required by this Order.

EPA may approve, disapprove, require revisions to, or modify the draft Work Plan. If EPA requires revisions, Respondents shall submit a revised draft Work Plan within fourteen (14) days of receipt of EPA's notification of the required revisions. Respondents shall implement the Work Plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondents shall notify EPA at least 48 hours prior to performing any on-Site work pursuant to the EPA-approved Work Plan. Respondents shall not commence or undertake any removal action on-Site without prior EPA approval.

2.2 Health and Safety Plan

Within thirty (30) days after the effective date of this Order, the Respondents shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-Site work under this Order. This plan shall be prepared in accordance with EPA's current Standard Operating Safety Guide, dated November 1984, and currently updated July 1988 (but see latest version if different). In addition, the plan shall comply with all current applicable Occupational Safety and Health Administration (OSHA) regulations found at 29 CFR Part 1910. Respondents shall incorporate all changes to the plan recommended by EPA and implement the plan during the pendency of the removal action.

2.3 Quality Assurance and Sampling

All sampling and analyses performed pursuant to this Order shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondents shall follow the following documents, as appropriate, as guidance for QA/QC and sampling: "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures," OSWER Directive Number 9360.4-01, dated January 1990; "Compendium of ERT Procedures," OSWER Directives Numbered 9360.4-04 through 9360.4-08; [and the representative Sampling Guidance for soil, air, ecology, waste, and water as this information becomes finalized and available.]

Upon request by EPA, Respondents shall have such a laboratory analyze samples submitted by EPA for quality-assurance monitoring. Respondents shall provide to EPA the quality assurance/quality

control procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

Upon request by EPA, Respondents shall allow EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondents while performing work under this Order. Respondents shall notify EPA not less than two (2) days in advance of any sample collection activity. EPA shall have the right to take any additional samples that it deems necessary.

2.4 Post-Removal Site Control

In accordance with the Work Plan schedule, or as otherwise directed by EPA, Respondents shall submit a proposal for post-removal Site control consistent with Section 300.415(k) of the NCP and OSWER Directive 9360.2-02. Upon EPA approval, Respondents shall implement such controls and shall provide EPA with documentation of all post-removal Site control arrangements.

2.5 Reporting

Respondents shall submit a written progress report to EPA concerning actions undertaken pursuant to this Order every thirtieth (30) day after the date of receipt of EPA's approval of the Work Plan until termination of this Order, unless otherwise directed by the OSC in writing. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

2.6 Final Report

Within fourteen (14) days after completion of all removal actions required under this Order, the Respondents shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Order. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports". The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is 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.

3. Access to Property and Information

Respondents shall provide, and/or obtain access to the Site and off-Site areas to which access is necessary to implement this Order, and provide access to all records and documentation related to the conditions at the Site and the actions conducted pursuant to this Order. Such access shall be provided to EPA employees, contractors, agents, consultants, designees, representatives, and State of North Carolina representatives. Such access provided and/or obtained by Respondent shall permit these individuals to move freely on-Site and at appropriate off-Site areas in order to conduct actions which EPA determines to be necessary. Respondents shall submit to EPA, upon receipt, the results of all sampling or tests and all other data generated by Respondents or their contractors, or on the Respondents' behalf during implementation of this Order.

Where action under this Order is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within ten (10) days after the effective date of this Order, or as otherwise specified in writing by the OSC. Respondents shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements. Respondents shall describe in writing their efforts to obtain access. EPA may then assist Respondents in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondents shall reimburse EPA for all costs and attorneys' fees incurred by the United States in obtaining such access.

4. Record Retention, Documentation, Availability of Information

Respondents shall preserve all documents and information relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for ten (10) years following completion of the removal actions required by this Order. At the end of this ten year-period and thirty (30) days before any document or information is destroyed, Respondents shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to EPA. In addition, Respondents shall provide documents and information retained under this section at any time before expiration of the ten (10) year period at the written request of EPA.

Respondents may assert a business confidentiality claim pursuant to 40 CFR § 2.203(b) with respect to part or all of any information submitted to EPA pursuant to this Order, provided such claim is allowed by Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7). Analytical and other data specified in Section 104(e)(7)(F) of CERCLA shall not be claimed as confidential by the Respondents. EPA shall disclose information covered by a business confidentiality claim only to the extent permitted by, and by means of the procedures set forth at, 40 CFR Part 2, Subpart B. If no such claim accompanies the information when it is received by EPA, EPA may make it available to the public without further notice to Respondents.

"Respondents shall maintain a running log of privileged documents on a document-by-document basis, containing the date, author(s), addressee(s), subject, the privilege or grounds claimed (e.g., attorney work product, attorney-client), and the factual basis for assertion of the privilege. Respondents shall keep the "privilege log" on file and available for inspection. EPA may at any time challenge claims of privilege."

5. Off-Site Shipments

All hazardous substances, pollutants, or contaminants removed off-Site pursuant to this Order for treatment, storage, or disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, pursuant to Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and the Revised Off-Site Policy, (50 Fed. Reg. 49,200 (September 22, 1993)). EPA will provide information on the acceptability of a facility under Section 121(d)(3) of CERCLA and the above regulation.

Unless impracticable, prior notification of out-of-state waste shipments should be given consistent with OSWER Directive 9330.2-07.

6. Compliance With Other Laws

Respondents shall perform all actions required pursuant to this Order in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA Section 121(e) and 40 CFR Section 300.415(i). In accordance with 40 CFR Section 300.415(i), all on-Site actions required pursuant to this Order shall, as determined by EPA, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws. (See "The Superfund Removal Procedures: Guidance on the Consideration of ARARs During Removal Actions," OSWER Directive No. 9360.3-02, August 1991). Respondents shall identify ARARs in the Work Plan subject to EPA approval.

7. Emergency Response and Notification of Releases

If any incident, or change in Site conditions, during the actions conducted pursuant to this Order causes or threatens to cause an additional release of hazardous substances from the Site or an endangerment to the public health, welfare, or the environment, Respondents shall immediately take all appropriate action. Respondents shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the OSC Representative at 404/347-3555, extension 2080, or, in the event of her unavailability, shall notify the EPA Hotline at (800) 424-8802 or (404) 347-4062 of the incident or Site conditions. If Respondents fail to respond, EPA may respond to the release or endangerment and reserve the right to pursue cost recovery.

In addition, in the event of any release of a hazardous substance from the Site, Respondents shall immediately notify EPA's OSC Representative and the National Response Center at telephone number (800) 424-8802. Respondents shall submit a written report to EPA within seven (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, not in lieu of, reporting under CERCLA Section 103(c) and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. §§ 11001 et seq.

VI. AUTHORITY OF THE EPA ON-SCENE COORDINATOR

The OSC and the OSC Representative shall be responsible for overseeing the Respondents' implementation of this Order. The OSC and the OSC Representative shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any work required by this Order, or to direct any other removal action undertaken at the Site. Absence of the OSC or the OSC Representative from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

VII. REIMBURSEMENT OF COSTS

Within thirty (30) days after the effective date of the Order, as provided for in Section XXII, Respondents shall pay $723,045.34, in the manner detailed below, for reimbursement of past response costs paid by the United States. Past response costs are all costs, including, but not limited to, direct and indirect costs and interest, that the United States, its employees, agents, contractors, consultants, and other authorized representatives

incurred and paid with regard to the Site prior to September 30, 1995. In addition, Respondents shall reimburse EPA for all future response costs, not inconsistent with the NCP, incurred by the United States.

Future response costs are all costs, including, but not limited to, indirect and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this AOC, verifying the Work, or otherwise implementing, overseeing, or enforcing this AOC. Future response costs shall also include all costs, including direct and indirect costs, paid by the United States in connection with the Site between September 30, 1995 and the effective date of this AOC and all interest on the Past Response Costs from September 30, 1995 to the date of payment of the Past Response Costs.

On a periodic basis, EPA shall submit to Respondents a bill for future response costs that includes a SCORES report. Respondents shall, within thirty (30) days of receipt of the bill, remit a cashier's or certified check for the amount of the bill made payable to the "Hazardous Substance Superfund," to the following address:

U.S. Environmental Protection Agency
Region IV
Superfund Accounting
P.O. Box 100142
Atlanta, Georgia 30384
ATTENTION: Collection Officer for Superfund

Respondents shall simultaneously transmit a copy of the check to the EPA Project Coordinator. Payments shall be designated as "Response Costs-Old ATC Refinery Site) Site" and shall reference the payor's name and address, the EPA site identification number (*number*), and the docket number of this Order.

In the event that the payment for past response costs is not made within thirty (30) days of the effective date of this AOC or the payments for future response costs are not made within thirty (30) days of the Respondents' receipt of the bill, Respondents shall pay interest on the unpaid balance. Interest is established at the rate specified in Section 107(a) of CERCLA. The interest to be paid for Respondents' failure to make timely payments on Past Response Costs shall begin to accrue on the effective date of the Order. The interest for Respondent's failure to make timely payments on Future Response costs shall begin to accrue on the date of the Respondents' receipt of the bill. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section.

Respondents may dispute all or part of a bill for Future Response Costs submitted under this Order, if Respondents allege that EPA has made an accounting error, or if Respondents allege that a cost item is inconsistent with the NCP.

If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondents shall pay the full amount of the uncontested costs into the Hazardous Substance Fund as specified above on or before the due date. Within the same time period, Respondents shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondents shall simultaneously transmit a copy of both checks to the OSC. Respondents shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within thirty (30) days after the dispute is resolved.

VIII. **DISPUTE RESOLUTION**

The parties to this Order shall attempt to resolve, expeditiously and informally, any disagreements concerning this Order.

If the Respondents object to any EPA action taken pursuant to this Order, including billings for future response costs, the Respondents shall notify EPA in writing of their objections within ten (10) days of receipt of notice of such action, unless the objections have been informally resolved.

EPA and Respondents shall within fourteen (14) days from EPA's receipt of the Respondents' written objections attempt to resolve the dispute through formal negotiations (Negotiation Period). The negotiation period may be extended at the sole discretion of EPA. EPA's decision regarding an extension of the Negotiation Period shall not constitute an EPA action subject to dispute resolution or a final agency action giving rise to judicial review.

Following resolution of the dispute, as provided by this section, Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs. No EPA decision made pursuant to this section shall constitute a final agency action giving rise to judicial review prior to a judicial action brought by the United States to enforce the decision.

IX. **FORCE MAJEURE**

Respondents agree to perform all requirements under this Order within the time limits established under this Order, unless the performance is delayed by a force majeure. For purposes of this Order, a force majeure is defined as any event arising from causes

beyond the control of Respondents or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, that delays or prevents performance of any obligation under this Order despite Respondents' best efforts to fulfill the obligation. Force majeure does not include financial inability to complete the work or increased cost of performance.

Respondents shall notify EPA orally within twenty-four (24) hours after the event, and in writing within five (5) days after Respondents become or should have become aware of events which constitute a force majeure. Such notice shall: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay, including necessary demobilization and re-mobilization; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures. Respondents shall take all reasonable measures to avoid and minimize the delay. Failure to comply with the notice provision of this section shall waive any claim of force majeure by the Respondents.

If EPA determines a delay in performance of a requirement under this Order is or was attributable to a force majeure, the time period for performance of that requirement shall be extended as deemed necessary by EPA. Such an extension shall not alter Respondents' obligation to perform or complete other tasks required by the Order which are not directly affected by the force majeure.

X. STIPULATED AND STATUTORY PENALTIES

For each day, or portion thereof, that Respondents fail to perform, fully, any requirement of this Order in accordance with the schedule established pursuant to this Order, Respondents shall be liable as follows:

Days of Noncompliance	Penalty
1st through 7th day	$500
8th through 14th day	$1,000
15th through 30th day	$3,000

Upon receipt of written demand by EPA, Respondents shall make payment to EPA within thirty (30) days. Interest shall accrue on late payments as of the date the payment is due which is the date of the violation or act of non-compliance triggering the stipulated penalties.

Even if violations are simultaneous, separate penalties shall accrue for separate violations of this Order. Penalties accrue and are assessed per violation per day. Penalties shall accrue

regardless of whether EPA has notified Respondents of a violation or act of noncompliance. The payment of penalties shall not alter in any way Respondents' obligation to complete the performance of the work required under this Order.

Violation of any provision of this Order may subject Respondents to civil penalties of up to twenty-five thousand dollars ($25,000) per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondents may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondents violate this Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

XI. RESERVATION OF RIGHTS

Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not reimbursed by Respondents.

XII. OTHER CLAIMS

By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. Neither the United States nor EPA shall be deemed a party to any contract entered into by the Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

Except as expressly provided in Section XIV - Covenant Not To Sue, nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against the Respondents or any person not a party to this Order, for any liability such person

may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(a).

This Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). The Respondents waive any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Order.

No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XIV. **COVENANT NOT TO SUE**

Except as otherwise specifically provided in this Order, upon issuance of the EPA notice referred to in Section XIX - Notice of Completion, EPA covenants not to sue Respondents for judicial imposition of damages or civil penalties or to take administrative action against Respondents for any failure to perform removal actions agreed to in this Order except as otherwise reserved herein.

Except as otherwise specifically provided in this Order, in consideration and upon Respondents' payment of the response costs specified in Section VIII of this Order, EPA covenants not to sue or to take administrative action against Respondents under Section 107(a) of CERCLA for recovery of past and future response costs incurred by the United States in connection with this removal action or this Order. This covenant not to sue shall take effect upon the receipt by EPA of the payments required by Section VIII - Reimbursement of Costs.

These covenants not to sue are conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Order. These covenants not to sue extend only to the Respondents and do not extend to any other person.

XV. **CONTRIBUTION PROTECTION**

With regard to claims for contribution against Respondents for matters addressed in this Order, the Parties hereto agree that the Respondents are entitled to protection from contribution actions or claims to the extent provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4). Nothing in this Order precludes the United States or the Respondents from asserting any claims, causes of action or demands

against any persons not parties to this Order for indemnification, contribution, or cost recovery.

XVI. **INDEMNIFICATION**

Respondents agree to indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action: (A) arising from, or on account of, acts or omissions of Respondents, Respondents' officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to this Order; and (B) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between (any one or more of) Respondents, and any persons for performance of work on or relating to the Site, including claims on account of construction delays. In addition, Respondents agree to pay the United States all costs incurred by the United States, including litigation costs arising from or on account of claims made against the United States based on any of the acts or omissions referred to in the preceding paragraph.

Respondents waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between (any one or more of) Respondents and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XVII. **INSURANCE**

At least seven (7) days prior to commencing any on-Site work under this Order, Respondents shall secure, and shall maintain for the duration of this Order, comprehensive general liability insurance and automobile insurance with limits of one million dollars ($1,000,000), combined single limit. Within the same time period, Respondents shall provide EPA with certificates of such insurance and a copy of each insurance policy. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XVIII. **MODIFICATIONS**

Modifications to any plan or schedule may be made in writing by the OSC (or OSC Representative) or at the OSC's (or OSC

Representative's) oral direction. If the OSC or OSC Representative makes an oral modification, it will be memorialized in writing within five (5) days; provided, however, that the effective date of the modification shall be the date of the OSC's or OSC Representative's oral direction. Any other requirements of the Order may be modified in writing by mutual agreement of the parties.

If Respondents seek permission to deviate from any approved Work Plan or schedule, Respondents' Project Coordinator shall submit a written request to EPA for approval outlining the proposed Work Plan modification and its basis.

No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless it is formally modified.

XIX. **NOTICE OF COMPLETION**

When EPA determines, after EPA's review of the Final Report, that all removal actions have been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, EPA will provide notice to the Respondents. If EPA determines that any removal actions have not been completed in accordance with this Order, EPA will notify Respondents, provide a list of the deficiencies, and require that Respondents modify the Work Plan if appropriate in order to correct such deficiencies. Respondents shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondents to implement the approved modified Work Plan shall be a violation of this Order.

XX. **PUBLIC COMMENT**

Final acceptance by EPA of Section VIII (Reimbursement of Costs) of this Order shall be subject to Section 122(i) of CERCLA, 42 U.S.C. Section 9622(i), which requires EPA to publish notice of the proposed settlement in the Federal Register, to provide persons who are not parties to the proposed settlement an opportunity to comment, solely, on the cost recovery component of the settlement, and to consider comments filed in determining whether to consent to the proposed settlement. After consideration of any comments submitted during the thirty (30) day public comment period held pursuant to Section 122(i) of CERCLA, EPA may withhold consent to all or part of Section VIII of this Order if comments received disclose facts or considerations which indicate that Section VIII of this Order is inappropriate,

improper, or inadequate. Otherwise, Section VIII shall become effective when EPA issues notice to Axel Johnson, Inc. and Pace Oil Company, Inc.

XXI. **SEVERABILITY**

If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

XXII. **EFFECTIVE DATE**

This Order shall be effective five (5) days after the Order is signed by the Regional Administrator of EPA, Region IV.

The undersigned representative of Respondent, Axel Johnson, Inc., certifies that he/she is fully authorized to enter into the terms and conditions of this Order and to bind the party he/she represents to this document.

Agreed this _____ day of _____, 199__.

By _____

Title _____

The undersigned representative of Respondent, Pace Oil Company, Inc., certifies that he/she is fully authorized to enter into the terms and conditions of this Order and to bind the party he/she represents to this document.

Agreed this _____ day of _____, 199__.

By _____

Title _____

It is so ORDERED and Agreed this _____ day of _____, 199__.

BY:_____ DATE:_____

Robert Jourdan
Chief
North Superfund Remedial Branch
Waste Management Division
Region IV
U.S. Environmental Protection Agency

EFFECTIVE DATE:_____

EPA orders Buckingham cap

EPA ordered PRPs to design and build a landfill cap at the Love Container-Buckingham County Landfill NPL site in Dillwyn, Va., following failed negotiations.

The agency ordered **Thomasville Furniture Industries Inc.** to do the cleanup. **Prillaman Chemical Corp. Inc.** and **Buckingham County** were ready to accept a consent decree proposed by EPA during negotiations and are expected to enter a separate settlement with EPA.

The September 1994 ROD calls for a multi-layer RCRA cap with a synthetic liner to be constructed over two acres of the landfill where hazardous waste was disposed.

EPA prefers source removal along with capping, which will cost about $7.3 million. There are two source removal options to address about 675 cubic yard of sludge contaminated with volatiles (*Superfund Week 8/25*).

The PRPs might decide on capping and monitoring only, however, which will cost about $4.3 million.

Prillaman allegedly transported and disposed of 570 drums, or 11.5% of the waste, to the site. Thomasville allegedly disposed of 4,237 drums and is responsible for about 85% of the cleanup costs.

Buckingham County bought the landfill, which was closed in 1983. The county will provide no money for the work.

Three other parties, **Champion International Corp., Westinghouse Electric Corp. and Buffalo Air Handling** agreed to pay EPA $400,000 in a *de minimis* cash-out Sept. 12.

Contact: Melissa Whittington, EPA project manager, 215-597-9800; Karen Carey, PRP attorney at Wonbyle, Carlyle, Sandridge & Rice, 910-721-3536.

EPA finishes ATC removal in N.C.

EPA completed a removal action at the ATC Refinery site in Wilmington, N.C., where no further remedial action is anticipated.

OHM Corp.'s Norcross, Ga., office, as EPA's Emergency Response Cleanup Services (ERCS) contractor, did the $200,000 cleanup.

The three-month project included the identification of unknown wastes, bulking of compatible materials and the off-site incineration of 76 drums and containers of hazardous wastes.

A total of 35,240 pounds of solids and liquids were hauled off-site for burning and disposal at a permitted facility.

The 13-acre site was contaminated with polycyclic aromatic hydrocarbons, tetraethyl lead, sulfuric acid, flammable liquids, reactive solids, strong base compounds and related paint wastes.

Black & Veatch Waste Services of Atlanta completed an EE/CA for EPA.

Contact: Michael Taylor, EPA on-scene coordinator, 404-347-3555, ext. 6112; Beverly Hudson, EPA project manager, 404-347-5059, ext. 2080.

Hydrometrics is owned by Asa[illegible] **Kleinfelder** of Bellevue, Wash., did a risk assessment.

Soil is contaminated with arsenic but also has lead and cadmium. Soil contamination extends to depths of more than 18 feet in the immediate vicinity of the smelter. Peripheral contamination caused by airborne deposition at other areas is usually confined to a depth of about three or four feet.

The most expensive option being considered is excavation and off-site disposal. If all soil above the state's cleanup standard of seven parts per million (ppm) for arsenic is dug up, more than 2.4 million cubic yards of soil will have to be excavated, at a cost of more than $333 million.

A state official said the Ecology Dept. rarely selects the most expensive alternative, but as with the federal Superfund program, the state statute maintains a preference for treatment and permanence over containment.

Site groundwater has also been effected but the source of contamination has not been determined. Arsenic has been detected as high as 17 ppm; lead as high as 700 ppm. There are no drinking water wells near the site.

Contact: Dave Nazy, state project manager, 206-649-7258; Tom Aldrich, Asarco project manager, 206-756-0201.

Old Southington cap settlement could be near

EPA is negotiating with PRPs for the design and construction of a landfill cap and soil gas collection system at the Old Southington Landfill NPL site in Southington, Conn., where an agreement could be reached this winter.

EPA has identified more than 320 PRPs. Some most likely will agree to *de minimis* cash-outs.

Even if the PRPs agree to the work, progress at the site will be contingent on EPA getting oversight funding in its fiscal year 1996 budget.

The September 1994 ROD calls for 11 acres to be capped with - from top to bottom — a vegetative layer, a drainage layer to divert water off-site, a low-permeable layer and a permeable material to allow gas to be vented for collection.

Also, about 1,100 cubic yards of hot spot soil will need to be excavated and placed under the cap.

Soil is contaminated at depths of up to 20 feet with volatile organic compounds and semi-volatiles. Volatiles of concern include toluene, ethylbenzene, xylene and tetrachloroethane.

The ROD estimated the remedy to cost $16.4 million.

Pre-design studies will be required to determine whether air emissions need to be treated or can be vented naturally.

Design could begin as early as next spring or summer, with construction to begin about 18 months later.

Groundwater contamination will be addressed under a separate ROD, after the plume has been delineated. The plume is migrating toward the Quinnipiac River and extends at least 800 feet into Chuck & Eddie's junkyard (*Superfund Week 6/3/94*).

The **Pratt & Whitney Aircraft Division of United Technologies Corp., General Electric Co.,** and the **Town of Southington** hired **Environmental Science and Engineering** of Amherst, N.H., to do the RI/FS.

Metal, solvents, fuels and thinners were dumped at the site.

Contact: Almerinda Silva, EPA project manager, 617-573-9627; David Motney, Pratt & Whitney, 203-565-3459; Carol Lear, Southington town attorney, 203-293-3500; Andrew Raubvogel, EPA enforcement attorney, 617-565-3169.

United States
Environmental Protection
Agency

Region IV
Office of Public Affairs
345 Courtland St. NE
Atlanta, Georgia 30365

FYI

Environmental News

(404) 347-3004

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EPA COMPLETES CLEANUP OF HAZARDOUS WASTE AT THE ATC REFINERY SITE IN WILMINGTON, NORTH CAROLINA

The U.S. Environmental Protection Agency announced today that it has completed hazardous waste cleanup at the ATC Refinery site in Wilmington, New Hanover County, North Carolina. The cleanup took place under the authority and direction of the Agency's Emergency Response and Removal Branch at an estimated cost of $200,000.

EPA has determined that all appropriate emergency response cleanup measures have been completed. Additionally, EPA believes that the cleanup is effective and fully protective of human health and the environment. Long term cleanup goals will be addressed by EPA's remedial Branch.

Cleanup, initiated on July 20, 1995, included on-site identification of unknown wastes, bulking of compatible wastes, and off-site transportation of seventy-six drums and containers of hazardous waste totalling 35,240 pounds of solids and liquids for treatment and disposal at a permitted facility.

The ATC Refinery site is located at 801 Surry Street in Wilmington. The contaminants of concern were tetraethyl lead, sulfuric acid, flammable liquids, reactive solids, strong base compounds, and related paint wastes. The site is not on the National Priorities List (NPL) of hazardous waste sites.

Persons interested in obtaining additional site information are encouraged to call Michael Henderson, Community Relations Coordinator, toll-free at 1-800-564-7577.

-0- October 3, 1995

CONTACT: Michael Taylor, On-Scene Coordinator, 404/347-3555, ext. 6112
Carl Terry, Press Office, 404/347-3555, ext. 6755

Dave Lowry — Beverly - FYI

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION IV
EMERGENCY RESPONSE AND REMOVAL BRANCH

WEEKLY ACTIVITY REPORT

For additional information contact H. Michael Henderson or Houston Ellis, 347-3931

Week of September 29, 1995

Emergency Response:

Norfolk Southern Railroad Spill - Adel, GA. (De'Lyntoneus Moore)
On September 24, 1995, OSC Moore responded to a spill of 200 gallons of diesel fuel in the Norfolk Southern Rail Yard, which was contained by an earthen berm. Contractors conducted the cleanup.

Lenzing Fibers Corp. - Lowland, TN. (Mary Jo Bragan)
On September 23, 1995, a ruptured pipeline at this location released 375,000 gallons of water containing approximately 1,562 pounds of sulfuric acid and 1,020 pounds of zinc sulfate into the Nolichucky River.

The responsible party checked the pH in the river, which was only 7.22 one mile downstream of the release point. No OSC was sent, but the Department of Interior Natural Resource Trustee, Greg Houge, was notified.

The Ashly Jones Tow Boat Diesel Fuel Leak - Savannah, GA.
On September 22, 1995, the tow boat, after hitting a rock, began leaking diesel fuel near mile marker 109 North on the Tennessee River. With the tow carrying approximately 3,000 gallons, the owner pumped fuel into another compartment.

A cleanup contractor was hired to respond to any release on to the river. The Tennessee Department of Water Quality, Jackson office, and a TAT responded to the scene, with the TAT reporting little fuel on the water. The spill was estimated to be only 300 gallons, and no OSC was sent to the scene.

On-Going Removal Activity:

Final Report: ATC Refinery - Wilmington, New Hanover County, NC. (Michael Taylor)
On September 18, 1995, the OSC and ERCS had mobilized to the site to complete the actions outlined in the emergency response action memorandum.

A 30 yard roll of box of non-hazardous debris was loaded and shipped to Waste Management's landfill in Kernersville, NC. Total waste shipped off the site during the emergency response included 76 drums and 3 cubic yard containers of hazardous waste, resulting in 35,240 pounds of hazardous waste solids and liquids. Non-hazardous debris totalled 60 cubic yards.
ERRB completed all actions on the site as outlined within the emergency response action memorandum on September 19, 1995. ERRB is working with the EPA Remedial Branch to address the non-time critical issues remaining. Negotiations continue with EPA and the responsible parties.

Late in 1995, the U. S. Coast Guard will remove approximately 450 drums and 1,000 cubic yards of soil created from their response in 1992 and 1993.

Carolina Creosoting Corp. - Leland, Brunswick Co., NC. (Samantha Urquhart-Foster)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

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OCT 16 1995
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MEMORANDUM

DATE: SEP 04 1995

SUBJECT: Request for a Non-Time Critical Removal Action at the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina

FROM: Beverly T. Hudson, BTH
Remedial Project Manager, Waste Division

Michael Taylor, MKT
On-Scene Coordinator, Waste Division

TO: Richard D. Green, Associate Director
Waste Management Division

SITE ID# NCD986186518

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action described herein for the Old ATC Refinery Site, Wilmington, New Hanover County, North Carolina. The site poses a threat to public health and the environment that meets the NCP Section 300.415(b)(2) criteria for a removal action.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal Site Evaluation

Titan Petroleum built and operated this facility in the 1960's for refining Venezuelan crude and petroleum storage. Historical information indicated that the refinery operated until 1986. During this period, spills, leaks and on-site burial allegedly occurred, contaminating the soils and groundwater. The United States Coast Guard (USCG) performed two removal actions under authority of the Clean Water Act at the site in 1991 to stop seepage of oil from the site's banks into a river inlet and to remove oil from a bermed area. Also, the North Carolina Division of Solid Waste Management completed a Preliminary Assessment and a Site Screening Investigation in 1991. EPA contracted Black & Veatch to conduct an Expanded Site Inspection (ESI) in 1992. The ESI recommended further action at the Old ATC Site.

In March of 1991 the USCG began addressing oil leaching into the Cape Fear River from deteriorated pipes and tanks. The USCG responded until 1992 when a referral to EPA was initiated. This Site was deemed non-time critical during the referral from the USCG to EPA's Remedial Branch. Black & Veatch conducted a phase I sampling investigation in April 1994 and a phase II sampling investigation in June 1994. On-site soil screening and laboratory confirmation identified 11 areas of soil contamination. Contamination consisted of polyaromatic hydrocarbons and metals. An Engineering Evaluation/Cost Analysis (EE/CA) was completed in June of 1995.

A Streamlined Risk Evaluation (SRE) was performed to determine risks posed by soil contamination. The SRE did not identify any unacceptable risks to human health.

In July of 1995 two multi-million gallon storage tanks were reported leaking. The Emergency Response and Removal Branch (ERRB) dispatched an OSC to assess the situation. During this site visit several hazards were observed on-site and deemed to be an emergency.

The ERRB received notification of this Site from EPA's North Remedial Branch (NRB). The NRB requested a removal assessment for potential releases of hazardous substances. This assessment was conducted on July 19, 1995.

On July 19, 1995 ERRB conducted an assessment of this facility accompanied by the USCG Wilmington Marine Safety Office (MSO). The facility contains more than 17 storage tanks ranging in size from 10,000 to 3,000,000 gallons. Two of the multi-million gallon tanks were leaking along their foundations. Further investigations revealed approximately 60 scattered 55 gallons drums of unknown contents and over 300 five gallon containers of flammable liquids that were leaking. A combustible atmosphere was identified from the storage area of these containers. A variety of waste streams were identified including: cyanide, peroxides, acids, strong base and flammable liquids.

In addition, a 5,000 gallon Tetraethyl Lead (TEL) tank was emitting strong vapors in close proximity to nearby residents. TEL is identified as being toxic by ingestion, inhalation and skin absorption and has an extremely low Threshold Limit Value (TLV) for exposure.

Several laboratory containers were located within an attic inside a former laboratory on-site. This discarded laboratory waste may include unstable chemicals of unknown origin.

There are more than 450 55-gallon drums staged and badly deteriorated from the USCG response in 1991. Several boilers and distillation towers remain from the refining operation. Three oil/water separators are located around the tank farm on approximately 13 acres. Four butane tanks are placed at the entrance of the facility. An estimated 1,000 cubic yards of excavated soil is stockpiled at the southwest corner of the facility. These stockpiles are a result of an excavation by the USCG.

Several areas on-site required immediate attention and were addressed under an emergency response action. The release of hazardous substances constituted a public health and environmental emergency. The State and local authorities would not respond in a timely manner. This incident presented a fire and explosion threat in addition to a direct contact threat and exposure of toxic vapors. Vandalism continues to be a major concern for this Site.

2. Physical Location

The Old ATC Refinery site (ATC) is located at 801 Surry Street in south Wilmington, New Hanover County, North Carolina. The Site's geographic coordinates are 34° 13′ 27" North latitude and 77° 56′ 59" West longitude. Land use of properties directly adjacent to ATC is primarily heavy industrial. The site is bordered by a Unocal 76 oil facility to the north, a battery recycling facility to the northeast, Surry Street to the east, a JLM Terminals oil facility to the south, and the Cape Fear River to the west. A shipyard is located across the river from the site. Residential, commercial, and light industrial areas are located on the eastern side of Front Street, within 1 mile of the site.

Approximately 46,000 people reside within 4 miles of the ATC facility. This population is radially distributed as follows: 1 - 1/4 mile, 373 people; 1/4 - 1/2 mile, 389 people; 1/2 - 1 mile, 5, 890 people; 1 - 2 miles, 14,960 people; 2 - 3 miles, 13,982 people; and 3 - 4 miles, 10,074 people. The nearest residence to the site is located approximately 0.1 mile east of the site. Because the facility is abandoned, there are no workers on-site.

3. Site Characteristics

The ATC site is an abandoned petroleum refinery located on an approximately square, 13-acre parcel of land on the eastern bank of the Cape Fear River. Structures present at the ATC include:

- Three 3,360,000 gallon capacity aboveground oil storage tanks.

- Two 2,310,000 gallon capacity aboveground oil storage tanks.
- Five 1,580,000 gallon capacity aboveground oil storage tanks
- Five 420,000 gallon capacity aboveground oil storage tanks.
- Four aboveground butane storage tanks.
- One aboveground tetraethyl lead storage tank.
- A cracking tower facility.
- A laboratory building
- A furnace
- A boiler shack
- Three partially buried oil/water separators
- Two pump houses
- One pump pit
- Above ground pipelines
- Spill containment berms

The area immediately surrounding the site is industrial. Vehicular access to ATC is from Surry Street and is restricted by a fence and locked gate, but pedestrian entry is possible through an opening in the fence. Asphalt drives parallel the northern and northeastern boundaries of the site and extend from the eastern main gate to a tidal ditch (inlet) of the Cape Fear River located near the center of the site's western boundary. Overhead power lines traverse the site from the main gate to an electric meter and switch box located on a power pole near the eastern end of the river inlet.

The site slopes westward from Surry Street toward the Cape Fear River. Elevations across the property range from 0 feet with respect to the National Geodetic Vertical Datum (NGVD) along the Cape Fear River to 22 feet NGVD near the site's eastern boundary.

Most of the site is covered with grass. Thicker vegetation, including small trees and brush, is located between some tanks in the northern half of the site and on the northern end of the furnace refractory burial area. Additionally, an area of dense hydrophilic vegetation is located in the western end of the north bermed area between the north oil/water separator and the tank 80003 lead area.

Surface soil at the site is derived from the Kureb-Baymeade-Rimini soil association, which consists of nearly level to sloping soils which are well drained and have a fine sand subsoil. However, surface soil at the site has been cut, graded, filled or paved over to the extent that the original soils cannot be identified. It is now classified as part of the Urban land complex.

Locally, subsurface soils include clay, sand, and marl, which vary in thickness across New Hanover County. These soils are estimated to range from 0 to 35 feet in the thickness beneath the site. Beneath the refinery, the deposits may include 5 to 20 feet of fine to medium grained sand containing minor amounts of interstitial dark-gray to blue-gray clay.

Three principal aquifers underlie the Old ATC site: the upper sandy aquifer (unconfined surficial aquifer), the limestone aquifer, and the lower sandy aquifer. The upper sandy aquifer is between 15 and 75 feet thick. It contains fresh water at most locations in New Hanover County, except those locations which are immediately adjacent to brackish surface water. Potable water supply is obtained from the upper sandy aquifer in a few areas along barrier island beaches; however, the area around the OLD ATC is used as an industrial water source in northwestern New Hanover and southern Pender Counties. Sediments similar to those which comprise the upper sandy aquifer have been shown to have hydraulic conductivity value ranging from 2×10^{-5} to 5×10^{-2} cm/sec. Beneath the site, the groundwater table is encountered at depths ranging from 1.5 to 5 feet bls with groundwater flow toward the Cape Fear River (west) and south.

The limestone aquifer is the chief source of groundwater in New Hanover County. Depending upon the composition of the overlying deposits, the limestone aquifer may or may not be confined beneath the Old ATC Refinery. Recharge to the limestone aquifer occurs by percolation of precipitation through the overlying sediments directly into the aquifer, seepage from surface water bodies, and direct infiltration of precipitation into outcrops.

The cavernous nature of the limestone allows high transmissivities, with some wells in the County yielding more than 400 gallons per minute, and specific capacity ranging from 3 to 80 gallons per minute per foot of drawdown. The hydraulic conductivity of the limestone aquifer is estimated to range from 1×10^{-4} to 1.0 cm/sec.

The Cape Fear River receives all runoff and drainage from the site. The river has an average flowrate of 5,290 cubic feet per second at lock 1, upstream of Wilmington, North Carolina, at river mile 67. Tidal flow occurs within the river at ATC. No drinking-water intakes are located within 15 miles of the site. but the Cape Fear River is a commercial fishery.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant.

Hazardous substances have been identified pursuant to CERCLA Section 104. The hazardous wastes currently identified consist

of the following Resource Conservation and Recovery Act (RCRA) waste codes: D001 (ignitable), D002 (corrosive), D003 (reactive) D006 (cadmium), D007 (chromium), D008 (lead), D018 (benzene), D039 (tetrachloroethylene), D040 (trichloroethylene), K051 and K052.

5. NPL status

The site is not listed on the NPL.

6. Maps, pictures and other graphic representations.

Available upon request.

B. Other Action to Date

1. Previous and Current Actions

In March 1991, the United States Coast Guard began addressing oil leaching into the Cape Fear River from deteriorated pipes and tanks. Approximately 3000 gallons of free product was removed to an unidentified storage tank on-site.

In June 1991, recovery operations were discontinued and oil again began seeping from the inlet banks. Consequently, the USCG resumed recovery operations. In May 1992, an on-site storage tank suspected as the source was drained. During the summer of 1992, a leaking valve was identified as another suspected source. The leak was addressed and a interception trench was installed north of the river inlet. Approximately 50,000 gallons of product and contaminated groundwater were removed from the trench and pumped to an on-site storage tank. In April 1994, EPA contractors noted that recovery operations at the site had been discontinued.

In July 1991, 18,000 gallons of oil were removed from the south bermed area and pumped to a storage tank on-site. The suspected source of the oil was a leaking transmission line shared with the adjacent refinery. The leaking transmission lines were capped to eliminate the risk of future release.

In 1991, a Site Sampling Investigation (SSI) was performed by the North Carolina Department of Environment, Health and Natural Resources (NCDEHNR). As a result of the investigation, NCDEHNR recommended to EPA that an ESI be initiated. The ESI was completed in 1993. It identified several potential source areas and recommends further investigative action for the site. In April 1994, an EE/CA was initiated. Field activities for the EE/CA were conducted between April and August of 1994.

On July 19, 1995, the Emergency Response Removal Branch (ERRB) conducted an assessment of the facility accompanied by the

USCG Wilmington MSO. The ERRB's Emergency Response Cleanup Services (ERCS) contractor was contacted to respond to the site. ERCS was tasked to address the TEL tank, leaking drums and five gallon containers, as well as potential laboratory waste. The leaking drums were overpacked or transferred into new containers awaiting treatment or disposal. Hazardous categorization was performed on 56 drums and representative samples of the five gallon lots.

ERRB is arranging for transportation and disposal of the hazardous substances and waste outlined in the emergency response action. These actions are expected to be completed by September of 1995.

C. State and Local Authorities' Role

1. State and Local Actions to Date

The State of North Carolina has been involved, for inspection purposes, with this facility from previous actions conducted by the former owners and operators. The North Carolina Division of Environmental Management has not taken an active role in the cleanup of this Site since the involvement of the USCG in 1991 or actions by EPA's Remedial and Removal Branches. No legal action has been undertaken by the State or local authorities at this time.

2. Potential for Continued State/Local Response

The response capabilities of the State of North Carolina and local government are limited. It is unlikely that the State or any other political subdivision will undertake response activity on this Site in the future due to the lack of available funding.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

The EPA Region IV North Superfund Remedial Branch and ERRB has determined that a threat of release as defined by Section 101 of CERCLA, exists at the site. The site meets the requirements for initiating a non-time critical removal action according to criteria listed in Section 300.415 of the National Contingency Plan (NCP). The removal action criteria outlined in the NCP continue to exist until the proposed action described below in Section V are completed. Potential contaminate exposure to nearby human population, contaminate migration to surface and potential drinking water supplies, release of toxic fumes, weather conditions, and the threat of fire and explosion are major threats to be addressed on this site.

There are approximately 300 5-gallon buckets containing solvent stored in a building on-site. Additionally, there are approximately 56-55 gallon drums containing flammable liquids, acids, strong bases, peroxides, microbicides and petroleum waste. There are also more than 400-55 gallon drums of used sorbent material and recovered product from past removal actions. Four butane tanks are placed at the entrance of the facility. An estimated 1,000 cubic yards of excavated soil is stockpiled at the southwest corner of the facility. These stockpiles are a result of an excavation by the USCG.

Several oil transfer pipelines are routed throughout the property. Sixteen and eight inch pipelines parallel the Cape Fear River along the western side of the site. These pipelines connect with the above-ground storage tanks and are known to contain petroleum. These lines have been capped. However, the threat of a release into the Cape Fear River is possible. There are no site controls in place, such as containment berms to retain such a release. The pipelines are capable of holding several barrels of oil from the storage tanks. Due to the fact this site is unattended and vandalism is a problem this is a concern if allowed to go unaddressed over an extended period of time.

In addition to these items, there are 3 oil/water separators and 16 above ground storage tanks, one known to contain tetraethyl lead, on site. Two of the multi-million storage tanks (designated 80002 and 80003) are leaking. Hazard Categorization and analytical data from the containers and tanks indicates a large volume of flammable, corrosive, reactive and toxic waste are identified at the site.

B. Threats to the Environment

Runoff from a fire response would affect the local surface water and possibly groundwater. Surface waters lead directly to the Cape Fear River, which borders the western side of the facility. The release of hazardous and toxic chemicals into the surface water would affect aquatic life locally and downstream. An air release from a fire could cause environmental damage to the surrounding area.

The threat of a spill or release of oil and sludge from storage tanks and pipelines would affect surface soil and water. The Cape Fear River would be directly impacted due to its proximity to the site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and

substantial endangerment to the public health, or welfare, or the environment.

V. NON-TIME CRITICAL REMOVAL ACTION

A. Proposed Action

1. Proposed action description

The removal action recommended by the EE/CA calls for removal of all containerized waste from the site and proper disposal at an off-site facility. Since failure or leaking of ASTs and API separators present an additional risk, it is further recommended that the contents of these tanks and piping associated with the ASTs be removed and disposed of at an off-site facility. Potential contents of the ASTs include leaded tank bottoms, a regulated waste (K052). API separator sludge is also a regulated waste (K051). It is recommended that the butane tanks and the sludge burial areas be removed and disposed at an off-site facility. Also, the 1000 cubic yards of excavated soil should be treated or removed to an off-site facility.

2. Contributions to remedial performance

Based on the information available at this time, the proposed removal action will abate the immediate threats identified in Section III of this document. If further remedial actions are necessary due to the presence of groundwater or other contamination, implementation of the proposed action will have served the purpose of removing an identified source of contamination and will have the immediate effect of reaching long term goals.

3. Description of alternative technologies

The EE/CA formally reviewed three alternatives for clean-up at the site. The EE/CA recommends removal of containerized waste and treatment or destruction at an off-site facility. No on-site alternative technologies are proposed for this site.

4. Engineering Evaluation/Cost Analysis (EE/CA)

An EE/CA has been conducted for this site along with an EE/CA Approval Memorandum. Both are attached to this document, which outlines relevant factors that further justify the need for a removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs determined to be applicable to the activity at the site are the Resource Conservation and Recovery Act (RCRA) regulations for off-site treatment and disposal. EPA's Off-site Disposal Rule as referenced in 53 FR 48218-48234 dated September 22, 1993 will also apply. Other state and federal ARARs are identified in the EE/CA.

6. Proposed Schedule

Response actions at the site will be initiated upon approval of this Action Memorandum and subsequent funding approval. The need for funding is contingent upon negotiations with Potentially Responsible Parties (PRPs) to perform the work outlined in this document. Foregoing any unexpected delays, all actions are to be completed within one year.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

The Site would continue to present a fire and explosion threat. A toxic air release resulting in local exposure to the public is a concern. There would continue to be a direct contact threat and release into the environment from surface runoff. There would be an increased risk to the groundwater. Should action be delayed or not taken, this site would pose an imminent threat to the public health and welfare.

VII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues that are related to this Site.

VIII. ENFORCEMENT

"Enforcement Sensitive" - See Attached Enforcement Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Old ATC Refinery site in Wilmington, New Hanover County, North Carolina. This was developed in accordance with CERCLA as amended, and not inconsistent with the NCP. The document is based on the administrative record for the site.

Conditions at the site meet the NCP section 300.415(b)(2) criteria for a removal, and I recommend your approval of the proposed removal action.

Approval: Richard D. Green Date: 10/4/95
Richard D. Green, Associate Director
Office of Superfund & Emergency Response

Disapproval: _____ Date: _____
Richard D. Green, Associate Director
Office of Superfund & Emergency Response

Attachment

ENFORCEMENT ADDENDUM

After completion of the EE/CA, EPA was notified of two on-going releases of petroleum tank bottoms. Upon inspection of the Site, ERRB found two (2) active releases of tank bottoms, approximately 300 five (5) gallon containers of potentially explosive and corrosive substances and a large number of deteriorating 55 gallon drums containing caustic substances. ERRB immediately conducted an emergency response which is expected to be completed by September 30, 1995. EPA is not presently conducting any further response action. The United States Coast Guard is, however, currently removing and disposing of approximately 400 drums of oily wastes collected during a response to a previous oil spill and staged on-site.

The remainder of the necessary work is defined in this EE/CA Approval Action Memorandum. Further response includes both time critical and non-time critical removal action.

Following approval of this memorandum, EPA will issue notice letters accompanied by a draft Administrative Order on Consent for Removal Action ("AOC") to A. Johnson & Company, Inc. ("Axel"), Pace Oil Company, Inc. ("Pace") and Primary Oil & Energy Corporation ("Primary"). Liability of each of these PRPs is based on their past ownership or operation at the time of disposal of hazardous substances. 42 U.S.C. § 9607(a)(3). Axel operated the refinery from 1970-80. Pace owned the refinery from 1970 to 1986, and both Pace and Primary operated the refinery through a joint venture, Republic Oil, from January 1985 through February 1986.

EPA expects the PRPs to voluntarily perform the necessary removal actions and to reimburse EPA for its past costs. Notwithstanding this expectation, due to the interest of a prospective purchaser, EPA enjoys an additional opportunity to obtain any work or past costs the PRPs are unwilling to perform or pay. The prospective purchaser, Linda Carroll, holds a deed of trust on the real and personal property which constitutes the refinery. Ms. Carroll plans to institute foreclosure proceedings and to refurbish the facility as a bulk storage facility. Carroll Carolina Oil, Inc. will operate the refurbished facility. Of course, to implement her course of action without incurring liability for response costs, Ms. Carroll must negotiate a prospective purchaser agreement with EPA. These discussions will occur once EPA is comfortable with the scope of work and costs to be covered by the PRPs. Assuming a prospective purchaser agreement is provided to Ms. Carroll, a separate and complete briefing package will describe all benefits to be obtained by EPA.

SUPERFUND EE/CA REMOVAL PROPOSED PLAN FACT SHEET

Region 4

OLD ATC REFINERY SITE

Wilmington, New Hanover County, North Carolina

May 1995

This fact sheet is not to be considered a technical document but has been prepared in order to provide the public with a better understanding of the possible treatment alternatives and site conditions.

INTRODUCTION

EPA has completed the Engineering Evaluation/Cost Analysis (EE/CA) at the Old ATC Refinery Site located in Wilmington, North Carolina. The EE/CA identified the nature and extent of possible contamination in soils above the groundwater table, determined the human risk associated with contamination present at the site, and looked at options for addressing any contamination found.

The Environmental Protection Agency (EPA), Region IV has concluded that the risk to human health posed by the Old ATC Refinery Site does not warrant an action under the Federal Superfund Program. A Streamlined Risk Evaluation (SRE) was performed to determine risks posed by soil contamination. The SRE did not identify any unacceptable risks to human health.

EPA is publishing this EE/CA Proposed Plan fact sheet to provide an opportunity for public review and comment on all clean-up options under consideration for the Site. EPA will host a public meeting on **June 1, 1995 at the New Hanover County Public Library at 7:00 p.m.** to present the results of the investigation and EPA's proposal for removing containerized wastes at the Site.

EPA encourages the public to review the Site documents that make up the Administrative Record. These documents include all the information used by EPA in making its decision. The Administrative Record is available at the following locations:

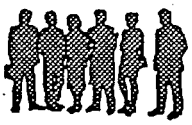
New Hanover County Public Library
201 Chestnut Street
Wilmington, North Carolina 28401
Phone: (910) 341-4390

and

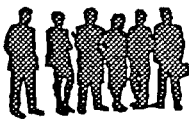
U.S. EPA Record Center
345 Courtland Street, NE.
Atlanta, Georgia 30365
Phone: (404) 347-0506

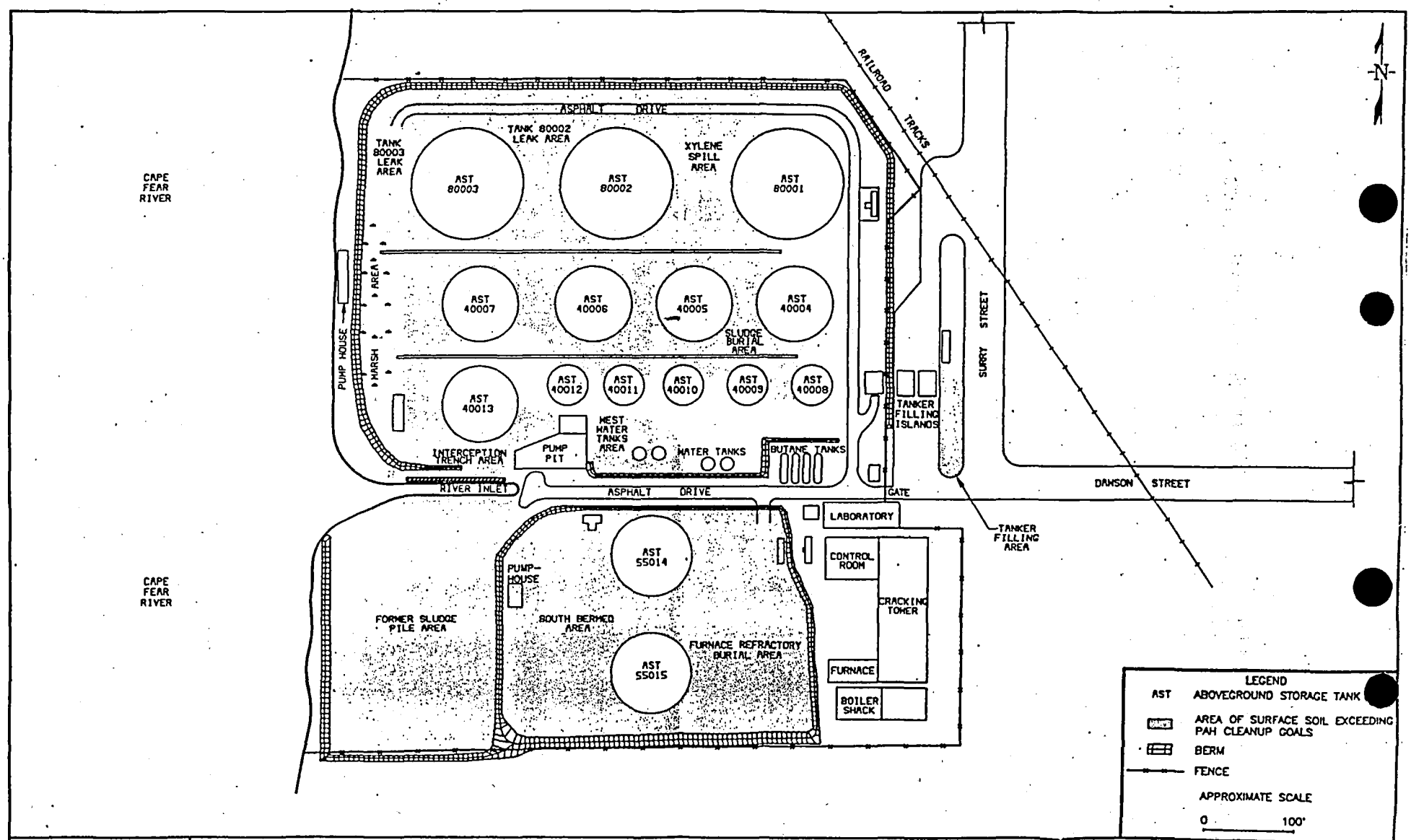
Fact Sheet Contents:

- Site Map
- Background
- Engineering Evaluation/Cost Analysis Summary
- Streamlined Risk Assessment
- Recommended Removal Action
- Places to Get Information
- EPA Address to Send Comments



PUBLIC MEETING
DATE: June 1, 1995
TIME: 7:00 pm - 9:00 pm
LOCATION: New Hanover County Public Library
201 Chestnut Street
Wilmington, North Carolina
(Small Meeting Room Upstairs)





OLD ATC REFINERY
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

BACKGROUND INFORMATION

The Old ATC Refinery is an abandoned facility located on Surry Street in Wilmington, North Carolina, that operated from 1971 to 1986. The refinery's operation included the production of naphtha fuel #2 and #6 oil as well as kerosene. The current owner, City Gas and Transmission (CG&T), of Lexington, Kentucky is in bankruptcy.

In July 1987, the company was given a Notice of Violation (NOV) from the North Carolina Department of Environmental, Health and Natural Resources (NCDEHNR), due to #6 fuel oil leaking from valves stemming from fuel storage tanks. The NOV ordered CG&T to "cease all discharges of petroleum products onto the lands of the State and to excavate all contaminated materials and/or soils."

In 1991, the U.S. Coast Guard became involved with the Site when oil was discovered leaching from the banks of the drainage canal. Responding under the authority of the Oil Pollution Act, the U.S. Coast Guard prevented the oil in the canal from entering into the Cape Fear River.

In April 1992, oil was discovered leaking from a failed gasket into the south bermed area of the site. Approximately 18,000 gallons of oil were removed form the bermed area. The U.S. Coast Guard suspected that the leak occurred during cargo transfers at the neighboring Sprague refinery. Sprague shared transmission lines with CG&T. The lines were capped to prevent a recurrence of the leak.

A Superfund Preliminary Assessment was conducted in 1991 and the Site Inspection was conducted in 1992. Based on the guidance "Setting Priorities for NPL Sites", dated October 28, 1992 and the Preliminary Hazardous Ranking System (HRS) score, the Old ATC Refinery is an NPL caliber site.

The Old ATC Refinery is located on approximately 13 acres of land adjoining the Cape Fear River and consists of a tank farm, refinery, laboratory, workshop and office building. The area surrounding the Site is industrial. There is evidence of stressed vegetation around some of the storage tanks and in the area of the former sludge pile. Access to the site is restricted by a fence and locked gate.

ENGINEERING EVALUATION/ COST ANALYSIS SUMMARY

The Field Investigation of the EE/CA was conducted at the Old ATC Refinery Site during the week of April 18, 1994, and during the week of June 21, 1994. This included the collection of surface soil, and subsurface soil samples. All samples were analyzed for metals and PAHs (polyaromatic hydrocarbons). The investigation also identified containerized wastes at the Site, including 450 55-gallon drums of petroleum sorbent material, 15-gallon drums of inknown material, and 300 5-gallon buckets of paint thinner.

STREAMLINED RISK EVALUATION

A Streamlined Risk Evaluation (SRE) was performed to determine risks posed by soil contamination. The SRE did not identify any uacceptable risks to human health. However, alternatives for removing containerized wastes were identified. Screening indicated that removal and destruction was most appropriate for addressing containerized wastes.

CONTAINERIZED WASTE

There are a number of containers on Site containing varying waste materials. The following alternatives are applicable for addressing containerized waste including petroleum wastes and solvents:

(1) No Action
(2) Disposal in RCRA Hazardous Waste Landfill
(3) Removal and estruction

Alternative (1). The "No Action" alternative would leave the Site as is and no funds would be used for monitoring, control or removal of containerized wastes. This alternative serves as a baseline for comparison with the other alternatives.

Alternative (2) - Disposal in a RCRA Hazardous Waste Landfill. Containerized wastes would be transported off site and disposed in a RCRA hazardous waste landfill. Pretreatment of wastes could be required prior to disposal.

Alternative (3) - Removal and Destruction. Containerized wastes would be transported to a commercial off site incinerator or fuel recycler for thermal destruction. The ash residue would be disposed in an appropriate landfill. Damaged

containers would be properly packed and secured prior to shipment to prevent a release during transport.

CONTAINERIZED WASTE

Removal and destruction is a common method for addressing containerized waste and has been demonstrated technically feasible. Alternative 3 would not pose significant difficulties during implementation. Waste removal transportation and disposal contractors are widely available and are capable of characterizing and removing wastes. Samples would be collected from a representative portion of the waste containers to characterize the chemical composition of each waste group. Destruction would consist of recycling or incineration, followed by land disposal of residue. Removal and destruction of all containerized wastes could be accomplished in less than one year.

COMMUNITY PARTICIPATION

The purpose of the Engineering Evaluation/Cost Analysis is to determine the extent of contamination and the best method of cleanup. Public participation is an integral part of this process in helping the Agency to determine the best treatment technology. The process provides the public an opportunity to comment on EPA's Proposed Removal Action at the Old ATC Refinery. **The public is provided a 30-day comment period (May 25 - June 24)** in which to submit written or oral comments regarding the Proposed Removal Action. All supporting information is located in the Administrative Record located in the New Hanover County Public Library.

If you cannot attend the public meeting on June 1st, please provide us with your written comments no later than midnight June 24, 1995, and mail to:

Beverly Hudson, Remedial Project Manager
or Diane Barrett, Community Relations Specialist
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365
Phone: 1-800-435-9233
or (404)347-7791 ext. 2037

All comments received from the public, both oral and written, and all technical data developed during the Superfund process will be considered in making the final selection. EPA will provide a written response to comments received and make the Responsiveness Summary available in the Action Memorandum which will be available in the information repository. Additional information may be obtained by contacting the above-mentioned officials.

USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Engineering Evaluation/Cost Analysis for the Old ATC Refinery Site is important in helping EPA select an Alternative to significantly reduce risk at the Site. Please use the space below to write you comments, then mail to Beverly T. Hudson or Diane Barrett. A response to your comments will be included in the Action Memorandum.

Comments Submitted By:

Name _____

Address _____

MAILING LIST

If you know of someone that would like to be added to the **Old ATC Refinery Site** mailing list, please have them complete this form and return to the EPA Atlanta office to the attention of Diane Barrett. If you have an address change or would like your name deleted from the mailing list, please indicate these changes below. Thank you.

NAME _____

ADDRESS _____

CITY, STATE, ZIP _____

ADDITION _____ CHANGE _____ DELETION _____

Region 4

U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

North Superfund Remedial Branch
Diane Barrett, Community Relations Coord.
Beverly Hudson, Remedial Project Manager

ATL GA 303 13-24 05-22-95 N7

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SUPERFUND SECTION, SOLID WASTE MGMT. DI
NC DEPARTMENT OF ENVIRONMENT, HEALTH
& NATURAL RESOURCES
P.O. BOX 27687
RALEIGH NC 27611-7687

NTC0064

27611-7687

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

April 19, 1995

RECEIVED
APR 24 1995
SUPERFUND SECTION

4WD-NSRB

Mr. David Lown
North Carolina Department of Environment
Health, and Natural Resources
401 Oberlin Road
Raleigh, North Carolina 27605

SUBJ: Review of Final Engineering Evaluation/Cost Analysis (EE/CA) for the Old ATC Refinery Site

Dear Mr. Lown:

Enclosed is an EE/CA for the Old ATC Refinery Superfund Site in Wilmington, North Carolina. Please review the EE/CA submittted on April 17, 1995 and provide comments ASAP.

Thank you for your cooperation. If you have any questions, please do not hesitate to contact me at (404)347-7791.

Sincerely,

Beverly T. Hudson

Beverly T. Hudson
Remedial Project Manager
Waste Management Division

Printed on Recycled Paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

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OCT 16 1995
SUPERFUND SECTION

March 17, 1994

4WD-NSRB

APPROVAL MEMORANDUM

SUBJECT: Request for an Engineering Evaluation/Cost Analysis at the OLD ATC Refinery, Cape Fear Terminal, Wilmington, New Hanover County, North Carolina

FROM: Beverly T. Hudson, Remedial Project Manager BTH
North Carolina Remedial Section

THRU: Curt Fehn, Chief
North Carolina Remedial Section

TO: Joseph R. Franzmathes, Director
Waste Management Division

I. PURPOSE

The purpose of this memorandum is to request and document your approval to conduct the proposed Engineering Evaluation/Cost Analysis (EE/CA) to support the selection and implementation of a non-time critical removal action at the OLD ATC Refinery in Wilmington, North Carolina.

II. BACKGROUND AND SITE CONDITIONS

A. Background

The Old ATC Refinery is an abandoned facility located in Wilmington, North Carolina that operated from 1971 to 1986. The refinery's operation included the production of naphtha fuel #2 and #6 oil as well as kerosene. The current owner, City, Gas and Transmission (CG&T), of Lexington, Kentucky is in bankruptcy.

In July 1987, the company was given a Notice of Violation (NOV) from the North Carolina Department of Environmental, Health and Natural Resources (NCDEHNR). due to #6 fuel oil leaking from valves. The NOV ordered CG&T to "cease all discharges of petroleum products onto the lands of the state and to excavate all contaminated materials and/or soils."

In 1991, the U.S. Coast Guard became involved with the site when oil was discovered leaching from the banks of the drainage canal. Responding under the authority of the Oil Pollution Act, the U.S. Coast Guard prevented oil pollution from entering into the Cape Fear River.

In April 1992, oil was discovered leaking from a failed gasket into the south bermed area of the site. Approximately 18,000 gallons of oil were removed from the bermed area. The U.S. Coast Guard suspected that the leak occurred during cargo transfers at the neighboring Sprague refinery. Sprague shared transmission lines with CG&T. The lines were capped to prevent a recurrence of the leak.

A Superfund Preliminary Assessment was conducted in 1991 and the Site Inspection was conducted in 1992. Based on the guidance "Setting Priorities for NPL Sites", dated October 28, 1992 and the Preliminary Hazardous Ranking System (HRS) score, the Old ATC Refinery is an NPL caliber site.

B. Physical Location

The OLD ATC Refinery is located on approximately 12 acres of land adjoining the Cape Fear River and consists of a tank farm, refinery, laboratory, workshop and office building. The area surrounding the site is industrial and is located directly north of the site (see Figure 1). There is evidence of stressed vegetation around some of the storage tanks and in the area of the former sludge pile. Access to the site is restricted by a fence and locked gate. The site layout is shown on Figure 2.

C. Site Characteristic

The site is also located in the Atlantic Coastal Plain Physiographic Province. The soil beneath the site is considered to be part of the Urban Land Complex and consists of soils which have been altered by cuts, fillings, grading, and the lower sandy aquifer. Groundwater flows toward the Cape Fear River which is used for fisheries, and commercial and recreational boating.

The surface water pathway is the primary pathway of concern at the site. Sediment samples were collected and analyzed to determine if contamination had migrated from the site into the surface water pathway. Arsenic, copper, lead and vanadium were detected in sediment samples collected in this pathway and also in the Cape

Fear River. A relatively high concentration of lead 990(mg/kg) was detected in the control sample at the mouth of the storm drainage discharge pipe.

Other materials and products associated with the petroleum refinery include: lead(350ppm), mercury(1.1ppm), arsenic(11ppm), vanadium(2100ppm), copper(50ppm), barium(52ppm) and nickel(16ppm). PAHs in concentration ranging from 667 to 43,000mg/kg were present at several source areas at the site.

Receptors include several federal and state endangered or threatened aquatic species found in the surface water pathway. Mostly notably, American alligators, a federally threatened species, have been observed on site and in the Cape Fear River adjacent to the site. Approximately 19.6 miles of wetlands frontage occurs along the surface water pathway within the 15-mile target distance limit.

D. Quantities and Types of Substances Present

The site is contaminated with several heavy metals such as lead, copper, nickel, mercury, barium, zinc, vanadium, arsenic, cadmium, manganese and high levels of PAHs. Level II contamination of the Cape Fear River has been documented. There are large volumes of waste onsite including tank bottom/waste oil in tanks; a 2,000 gallon tank of tetraethyl lead (leaking); an API separator with waste oil sludge; about 20 55-gallon drums of caustic chemicals; and other unknown chemicals in the boiler shack, sludge piles, waste soil sludges and the furnace refractory deposition area, leaking valves, alleged rusty scales and tank bottom burial pits near the river. Refractory wastes, tank bottoms, API sludge and rusty scales have been buried or raked into the soil on site.

III. Threat to Public Health, Welfare, or the Environment

The EPA Region IV NSRB has determined that a release threat, as defined by Section 101 of CERCLA, exists at the Site. The Site meets the requirements for initiating a non-time critical removal according to criteria listed in Section 300.415 of the National Contingency Plan (NCP). In evaluating the potential risks posed by the compounds listed in Section III of this EE/CA approval memorandum, the following factors cited from the National Contingency Plan must be considered in determining the appropriateness of a removal action:

Section 300.415 (b)(2)(i): " Actual or potential exposure to nearby human population, animals, or the food chain from hazardous substances or pollutants or contaminants."

Three state endangered or threatened species known as the American Alligator, Shortnose Sturgeon and the Barrel Floater are within four miles of the site. The American Alligator has been sighted on-site on several occasions, and is considered a level II target individual.

Section 300.415 (b)(2)(ii): " Actual or potential contamination of drinking water supplies or sensitive ecosystems."

There are extensive wetlands and tidal flats (over 19 miles of wetlands frontage and hundreds of acres of wetlands) at the site. The Cape Fear River is also a commercial fishery in the area of the site.

Section 300.415 (b)(2)(iii): "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release."

Large quantities of waste on the surface and buried on site create a continued threat of release. There are numerous drums containing caustics, microbicides, and unknown chemicals found on-site. Several of the drums appear to be leaking and collapsed. Other sources such as storage tanks containing waste oil sludge (tank bottoms) were found onsite. A reading of greater than 1000 parts per million of an unidentified organic compound exists in a pipeline from the tetraethyl lead tank. Also, a sweet fruity odor, characteristic of tetraethyl lead, was evident around the tank.

Section 300.415 (b)(2)(iv): "High levels of hazardous substances or pollutants or contaminants in soils largely at the surface, that may migrate."

Contaminated soil is prevalent throughout the parcel. Several metals, characteristic of refinery operations, were detected in the source/surface soil samples. A synopsis of soil contaminants concentration is available in Table 1.

Section 300.415 (b)(2)(vii): " Availability of other appropriate federal or state response mechanism to respond to a release."

The Potentially Responsible Party (PRP) has been identified for the Site. It is not expected that the PRP will respond and perform a removal in a timely manner. It is not expected that the State or any other governmental entity will conduct the necessary remediation activity. The Coast Guard will respond to releases of petroleum products into the river, but does not plan to remove or remediate on-site sources of contamination.

IV. Imminent and Substantial Endangerment

Actual or threatened releases of hazardous substances from this Site if not addressed by implementing a non-time critical removal action, as recommended in this Approval Memorandum, may present an imminent and substantial endangerment to the public health or welfare or the environment.

V. Enforcement Actions

The PRP has abandoned the site. EPA will perform an Engineering Evaluation/ Cost Analysis (EE/CA) as a fund-lead project. During the performance of the EE/CA, we will notify the PRP with a general notice letter and a 104(e) request. If positive responses are received, we may negotiate with the PRP for performance of the non-time critical removal and/or EE/CA.

VI. Proposed Project/Oversight and Cost

A. Objectives of the EE/CA: 1) The objective of the EE/CA will be to determine the volume of contaminated surface material and soils to be excavated and removed or treated, and 2) Determine the best method of remediation or disposal/treatment.

B. Estimated Cost: EPA proposes to perform an EE/CA. An Alternative Remedial Contract Strategy (ARCS) contractor will perform the field work, and the cost analysis. The estimated cost for the EE/CA is approximately $250,000.

C. EE/CA Schedule: The current plan is for the field work to be conducted by the ARCS contractor by early summer and the EE/CA to be released for public comment in the Fall/Winter 1994.

VII. RECOMMENDATION

Ongoing investigations have determined that there has been a release of hazardous substances into the environment. Consistent with Section 104(b) of CERCLA, further investigation is necessary to plan and direct future response actions.

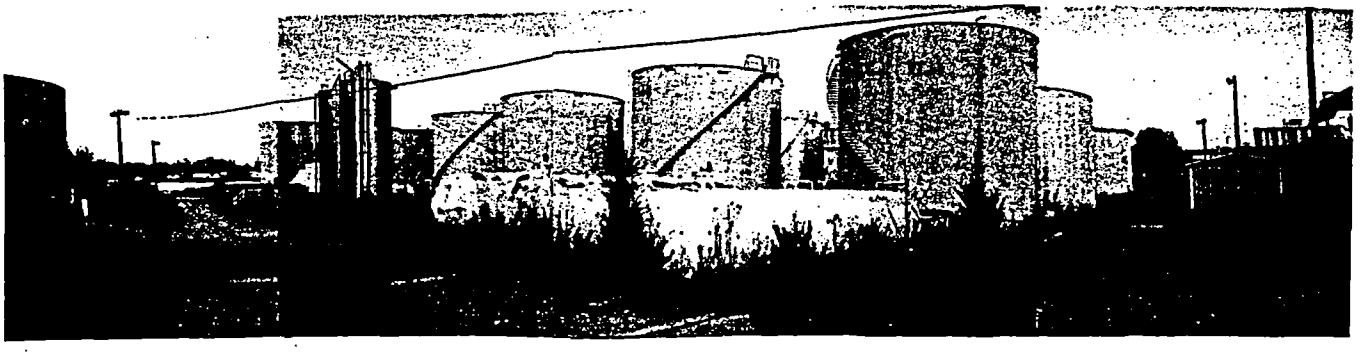
Conditions at the site meet the NCP Section 300.415 (b)(2) criteria for a non-time critical removal and I recommend your approval of the proposed engineering evaluation/cost analysis (EE/CA) request.

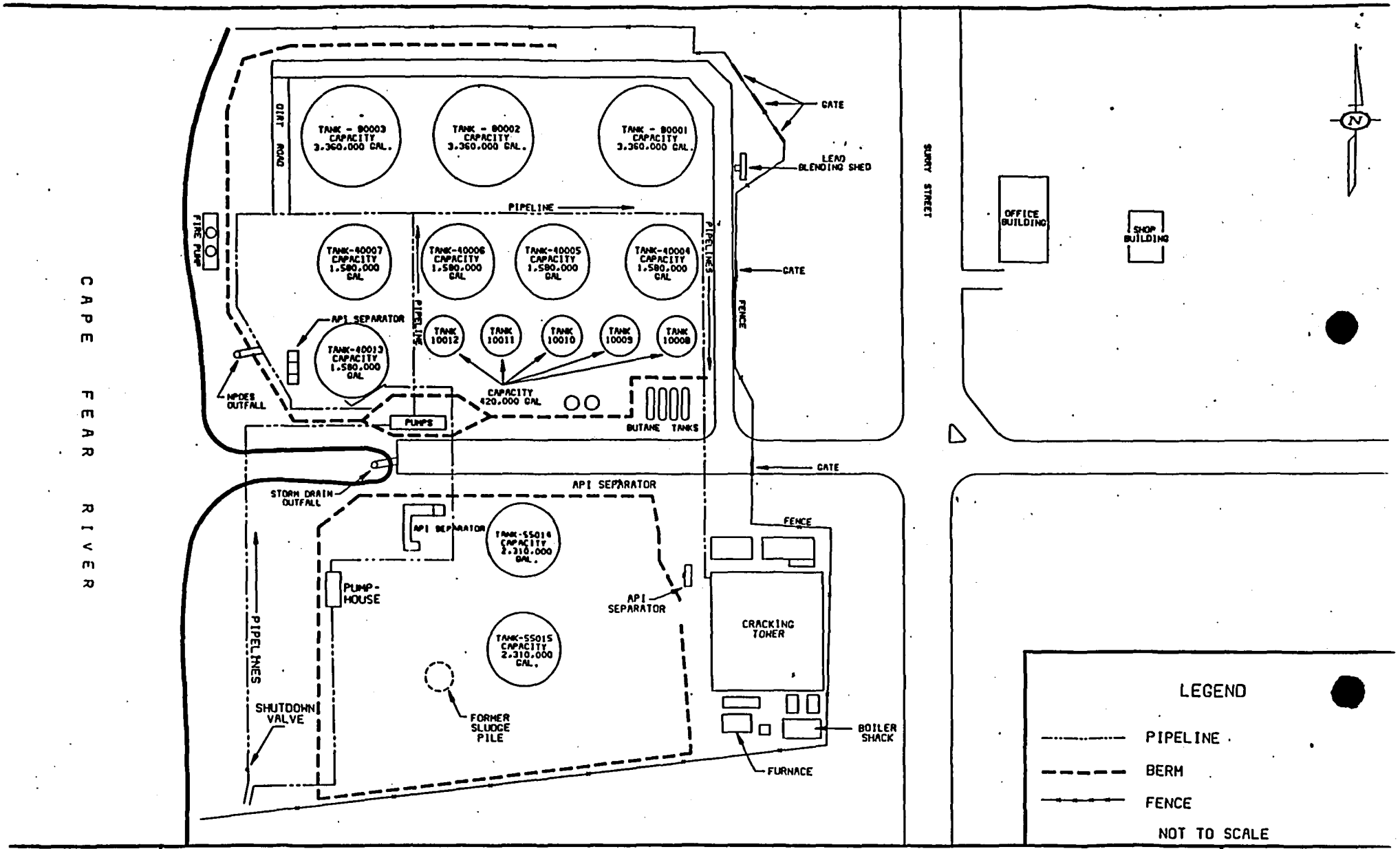
Approval: _____

Disapproval: _____

Date: 3/22/94

Joseph R. Franzmathes, Director
Waste Management Division
Environmental Protection Agency
Region IV





SITE LAYOUT MAP
OLD ATC REFINERY
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

FIGURE 2

Table 1
Summary of Inorganic Analytical Results
Surface Soil Samples
Old ATC Refinery
Wilmington, New Hanover County, North Carolina

Parameter (mg/kg)	Ranges of Naturally Occurring Metals in NC	AT-SS-01 Near Surry Street	AT-SS-02 area of Refractory Deposit	AT-SS-03 area of Sludge Pile	AT-SS-04 area around Lead Line	AT-SS-05 area around API Separator	AT-SS-06 area of Refractory Deposit	AT-SS-07 Dup. for SS05
Aluminum	700-20,000	1700	900	1500	1000	1500	NA	1400
Arsenic	4.1-8.5	--	--	11J	--	--	NA	--
Barium	10-200	46	--	51	--	33	NA	28
Beryllium	<1	0.22J	--	--	--	--	NA	--
Calcium	150-2300	1900	29000	5900	16000	25000	NA	23000
Chromium	1-20	5.6J	2.8J	7.3J	1.7J	5.2J	NA	6J
Copper	<1-18	35J	--	54J	--	14J	NA	--
Iron	100-10,000	4900	1700	5300	2000	4100	NA	4300
Lead	<10	140	37	230	33	66	NA	55
Magnesuim	50-1500	260	430	340	340	450	NA	440
Manganese	<2-150	81	29	74	30	110	NA	83
Mercury	0.032-0.061	0.15	--	0.16	--	--	NA	--
Nickel	<1-5	2.8	16	3.8	2.2	2.5J	NA	2.5J
Potassium	2,200-6,800	140	66J	140	90	140	NA	140
Vanadium	<1-20	11	22	--	--	--	NA	--
Zinc	Not given	98	76	100	47	100	NA	98

J – Estimated value.
U – Material was analyzed for but not detected. The number is the sample quantitation limit (SQL).
-- – Material was not detected above the SQL.
NA – Sample was not analyzed for metals
– Denotes sample concentrations greater than or equal to 3 times naturally occurring concentration.

Office of the Governor
Legislative Counsel
Administration Bldg. Room 1030

NORTH CAROLINA LEGISLATIVE INQUIRY REPORT

Department OF Environment, Health & Natural Resources

DATE: March 6, 1995

TELEPHONE X VERBAL X LETTER _____

SENATOR / REPRESENTATIVE Anthony Petty (Governers Office)

PERSON RECEIVING INQUIRY Jack Butler

REFERRED W/I DEPARTMENT _____

SUBJECT OF INQUIRY:

Cleanup of Old ATC Refinery site in Wilmington, New Hanover County.

ACTION TAKEN:
Informed that EPA Superfund removal section will remove a limited number of drums and that the Coast Guard is lead agency for petroleum related environmental issues at this site.

Return Copy of Blue Sheet to Legislative & Intergovernmental Affairs Suite 1425, Archdale Bldg. PO Box 27687, Raleigh, NC 27611 (919) 715-4148

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

February 2, 1995

COPY

Ms. Beverly Hudson
Superfund Branch, Waste Management Division
US EPA Region IV
345 Courtland Street
Atlanta, Georgia 30365

RE: Draft Streamlined Risk Evaluation
Old ATC Superfund Site
Wilmington, New Hanover County

Dear Ms. Hudson:

The Superfund Section received and reviewed this document. Mr. Dave Lilley, our Industrial Hygienist, offers the following comments:

1. Table 5: 2-Nitroaniline is not listed on Table 4 as a COPC; why is it in this table?

2. Table 5: the dermal RfD for mercury was calculated incorrectly, it should be 6.0E-05, not 6.0E-03.

3. Page E-21: The assumption is made that the site zoning will remain commercial. Unless there are restrictions placed on the rezoning of the property, risks posed under a residential exposure scenario must be calculated.

4. Page E-37: The risk accepted in the state of North Carolina is 1.0E-06.

Thank you for the opportunity to comment on this document. If you have any questions, please call us at (919) 733-2801.

Sincerely,

David J. Lown
Environmental Engineer
Superfund Section

cc: Jack Butler

February 1, 1995

Memorandum

TO: File

FROM: David J. Lown

RE: Risk Assessment - Proposed Non-Time Critical Removal
Old ATC Refinery
Wilmington, New Hanover County

I phoned Beverly Hudson to ask about the status of this site today. The following are her comments:

- Draft Streamline Risk Assessment completed by the EPA (12/20/94) shows that there is no significant risk to the public health from contamination from the entire site.
- When risk from only the Furnace Refractory area is considered, there is no significant increase in risk to public health.
- The EPA is still working with the PRPs trying to get them to remove drums at the site.
- Evaluating the contaminated groundwater is a low priority.
- No public meeting is planned, but the EPA will have a public meeting after issues with the PRPs are resolved.

cc: Jack Butler

January 17, 1995

TO: David Lown

FROM: David Lilley DBL

RE: Comments prepared on the Streamlined Risk Evaluation for the Old ATC Refinery

After reviewing the above mentioned document, I offer the following comments:

1. Table 5: 2-Nitroaniline is not listed on Table 4 as a COPC, why is it in this table?

2. Table 5: The dermal RfD for mercury was calculated incorrectly, it should be 6.0E-05, not 6.0E-03.

3. Page E-21: The assumption is made that the site zoning will remain commercial. Unless there are restrictions placed on the rezoning of the property, risks posed under a residential exposure scenario must be calculated.

4. Page E-37: The risk accepted in the state of North Carolina is 1.0E-06.

DL/dl/ra.com/4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

RECEIVED
JAN 12 1995
SUPERFUND SECTION

January 6, 1995

4WD-NSRB

Mr. David Lown
North Carolina Department of Environment
Health, and Natural Resources
401 Oberlin Road
Raleigh, North Carolina 27605

SUBJ: Review of Draft Streamlined Risk Evaluation
Old ATC Refinery Site

Dear Mr. Lown:

Enclosed is a Draft Streamlined Risk Evaluation for the Old ATC Refinery Superfund Site in Wilmington, North Carolina. Please review the Risk Evaluation submitted on December 20, 1994, and provide comments ASAP. Thank you for your cooperation.

If you have any questions regarding this site, please contact me at 404 347-7791 ext. 4116.

Sincerely,

Beverly T. Hudson

Beverly T. Hudson,
Remedial Project Manager

Enclosure:

Printed on Recycled Paper

January 6, 1994 5

Memorandum

TO: File

FROM: David J. Lown

RE: Old ATC Refinery
Wilmington, New Hanover County

I talked to Beverly Hudson on the phone about this site today. The following is her update:

1) A public meeting has not been planned, yet.

2) A risk assessment was recently completed by the EPA. The assessment was done by Julie Keller.

3) Based on the risk assessment, there is no danger to human health.

4) EPA is continuing to negotiate with the PRPs and wants them to remove 25 caustic drums in the boiler shack.

5) A public meeting will not be scheduled until the EPA decides what they want to do.

Ms. Hudson will send us a copy of the risk assessment.

cc: Jack Butler

Dave

Pat

RECEIVED
NOV 15 1994
SUPERFUND SECTION

RECEIVED
Solid Waste
NOV 14 1994
MANAGEMENT DIV.

c/o USEPA Waste Division (OHA)
345 Courtland Street, NE
Atlanta, Georgia 30365
404-347-5231

MEMORANDUM

Date: 2 November, 1994

To: Beverly Hudson, Remedial Project Manager, North Superfund Branch, Waste Management Division

From: Waynon Johnson
Coastal Resource Coordinator, NOAA, Region IV

Subject: Old ATC Refinery Superfund Site, Draft Engineering Evaluation/Cost Analysis

Review of the subject document for the Old ATC Refinery Superfund Site, Wilmington, New Hanover County, North Carolina was conducted by technical representatives of the Natural Resource Trustees for the National Oceanic and Atmospheric Administration (NOAA), U.S. Department Of Commerce. The following comments are offered for your consideration.

Document Reviewed:

1. Draft Engineering Evaluation/Cost Analysis, Old ATC Refinery. Wilmington, North Carolina. Prepared by: Black and Veatch Waste Science, Inc., Atlanta, Georgia

Site Summary:

Site Description and Background: The Old ATC Refinery site is located on a 13 acre parcel of industrial land on the eastern bank of the Cape Fear River. The site is bordered by a Unocal 76 oil facility to the north, a battery recycling facility to the northeast, a JLM Terminals oil facility to the south, Surry Street to the east, and the Cape Fear River to the west. Most of the site is covered with grass and some woody vegetation, including small trees and brush, on the northern half of the site. An area of dense hydrophilic vegetation is located on the northwestern edge of the site adjacent to the Cape Fear River.

The property was bought in 1970 by Pace Oil Company and leased to Titan Oil. Titan Oil built an oil refinery on the site and began operations in 1971. During the succeeding 10 year period, ending in 1980 or 1981, the facility name was changed to ATC Petroleum. In a joint venture with Pace Oil Company and Primary Oil, Republic Oil operated the facility from 1985 to 1986, following which the business went bankrupt.

The name of the refinery was changed to ATC Petroleum during the facility's 10 years of operation which ended in 1980 or 1981. Republic Oil then operated the refinery from January 1985 to

February 1986 before going into bankruptcy. The refinery was purchased by City Gas and Transmission (CG&T) in 1986, but was never operated. During 1990 and 1991, Wyandotte Tribal Petroleum Inc. (WTPI) attempted to purchase the property and reopen the refinery; these efforts were subsequently abandoned. Products of the refinery included gasoline, No. 2 naphtha, No 6 fuel oils, and kerosene.

Environmental concerns at the facility were brought to the attention of the North Carolina Department of the Environment, Health, and Natural Resources (DEHNR) by a former employee whose allegations included: disposal of leaded petroleum sludge in pits along the Cape Fear River; leaking lines and soil contaminated with tetraethyl lead; on-site soils saturated with gasoline; on-site burial of vanadium and sulfur contaminated refractory wastes; and on-site burial of processing sludge.

Violation notices from the DEHNR and U.S. Coast Guard (USCG) were issued to CG&T and WTPI in 1987 and 1991, respectively. Violations included oil leaking from valve lines, oil leaking into an inlet of the Cape Fear River, improper sludge disposal, use of an oil/water separator without a permit, and other related violations. CG&T reportedly complied with the notice and no further action was taken until 1991 when both companies were cited for oil leaking into an inlet of the Cape Fear River, improper oil sludge disposal, and use of an unpermited oil/water separator. Although WTPI assumed responsibility for cleaning up the site, no action was taken and the USCG initiated a cleanup.

Actions completed at the site include: a Preliminary Assessment (DEHNR, 1991), a Screening Site Investigation (DEHNR, 1991) which recommended further action at the ATC site, and an Expanded Site Inspection (Black & Veatch, 1993). Also two removal actions were conducted by the USCG:

- Interception Trench Area Removal (1991 - 1993). In response to oil seepage into the river, monitoring and recovery wells were installed to characterize a product plume and remove floating product; approximately 3,000 gallons of free product was recovered. Oil tanks thought to be leaking were removed and an interception trench was installed; approximately 5,000 gallons of free product and water were recovered.

- South Bermed Area Removal (1991). Approximately 18,000 gallons of oil was removed from the bermed area that had leaked from transmission lines during product transfers. The lines were capped to eliminate further releases.

Under contract to EPA, in April 1994, Black and Veatch initiated an Engineering Evaluation/Cost Analysis (EE/CA) for the ATC site. This included Phase I and Phase II sampling investigations during which surface soil (220), subsurface soil (51), and sediment (9) samples were collected. These investigations identified 11 areas of soil contamination and two areas where containerized wastes were disposed. Contamination consisted of polynuclear aromatic hydrocarbons (PAHs) and trace elements. The containerized wastes consisted of 430 drums of petroleum sorbent material, 15 drums of unknown material, and 300 buckets of paint thinner.

Transport Pathways: Land use of the property adjacent to the ATC site is primarily industrial, with residential and commercial areas located within one mile of the site. The population within three to four miles of the site is approximately 46,000 people. Because the ATC facility is currently abandoned, there are no workers on site.

The Cape Fear River receives all runoff and drainage from the site. Overland drainage from the southwestern portion of the site flows west toward the Cape Fear River or north toward an inlet of the Cape Fear River. The inlet is approximately 25 feet wide and extends approximately 95 yards into the western-central portion of the site.

Surface water runoff from the south-central and southeastern portions of the site (former sludge burial area) flows northwest to a marshy area near the south bermed area oil/water separator. Runoff from the northern portion of the site (xylene spill, tetraethyl lead, sludge burial, tank leak, and interception trench areas) flows into two concrete drainage flumes that empty into a tidal marsh at the western end of the north bermed area.

Topography in the region of the ATC site changes from flat, low-lying marshes one to two feet above mean sea level (msl) to rolling uplands 295 to 590 feet above msl. On-site topography ranges from roughly sea level on the western boundary adjacent to the Cape Fear River to 22 feet above msl on the eastern boundary.

Surface soils at the site are well drained, consisting of a fine sand surface layer with a sand, fine sandy loam, and loamy sand subsoil. Three principal aquifers underlie the site, including the upper sandy aquifer (unconfined surficial aquifer), the limestone aquifer, and the lower sandy aquifer. The intrusion of brackish water into the upper sandy aquifer prevents use for consumption. The groundwater table is found 1.5 to 5 feet below land surface. Groundwater flow is toward the Cape Fear River and the on-site river inlet.

Contaminants: Data collected during site investigations conducted prior to the 1994 Phase I and II studies were insufficient for characterization of the site for the EE/CA. Additional sampling and analysis subsequently were conducted to characterize the nature and extent of contamination. Except for three sediment samples from the river, only samples of surface soils and shallow subsurface soils were collected. Surface soil samples were collected from 0 to 1.0 foot below land surface (bls). Subsurface soil samples were collected from 1.0 to 2.5 feet bls. Analytical results are summarized in Table 1.

The portion of the ATC site with the highest concentrations of trace elements appears to be the Furnace Refractory Burial Area in the southeastern corner of the site, with concentrations at least ten times greater than that measured at any other location on site. Trace elements were found to be elevated and/or exceeding the U.S. average for soils in many areas of the site (Lindsey, 1979). Concentrations of lead exceeding the U.S. average were widespread across the entire site.

PAH screening showed many areas on the site as having concentrations ranging from 10 to 100 mg/kg or greater. Of these areas, the Former Sludge Pile Area (southwest corner of the site adjacent to Cape Fear River), Furnace Refractory Burial Area (southeastern corner), Tank Leak Areas (Northern and northwest portions of site), and Sludge Burial Area (Eastern edge of site) had soils with concentrations exceeding 100 mg/kg. The Former Sludge Pile Area, Furnace Refractory Burial Area, and Tank Leak Areas all contained PAHs at concentrations ranging from 10 to 100 mg/kg and above.

Pesticides were found in soils infrequently and at relatively low concentrations, although DDD, DDE, and DDT were present at elevated levels as shown by the following data:

Pesticide	Frequency of Detection	Maximum Concentration (mg/kg)
4,4'- DDD	12/29	110
4,4'- DDE	21/29	120
4,4'- DDT	10/29	82

NOAA Trust Habitats and Species: Habitats of concern to NOAA are surface waters and associated bottom substrates of the Cape Fear River. Wetland areas, largely comprised of saltmarsh cordgrass (*Spartina spp.*), fringe the river near the site. Salinity of the Cape Fear River in the vicinity of the site ranges from 0 to 5 parts per thousand (ppt) and fluctuates throughout the year depending on rainfall, saltwater intrusion, and upgradient terrestrial run-off. The range of tidal amplitude in this portion of the river commonly averages three to five feet. Bottom substrate composition of the estuary is mainly mud with areas of sand. From the site, the Cape Fear flows approximately 23 miles before discharging into the Atlantic Ocean.

In the vicinity of the site, the Cape Fear River supports diverse and abundant populations of NOAA trust resources (Table 2). Surface waters adjacent to the site provide significant nursery and adult forage habitat. Numerous species are known to migrate close to the site and reside for extended periods during sensitive live stages. Those species occurring in great numbers include Atlantic croaker, spot, and Atlantic menhaden. Atlantic menhaden, a schooling pelagic species, utilize surface waters near the site as rearing areas from late spring through late fall. Atlantic croaker and spot, both important game fish for North Carolina, are present near the site year-round as both adults and juveniles.

Anadromous populations of American shad, hickory shad, blueback herring, and alewife migrate past the site to access suitable upstream areas to spawn. Surface waters near the site serve as an important adult forage habitat and juvenile rearing area during these seasonal migrations. In general, shad and herring return to the estuary to spawn during the spring, while young-of-the-year juveniles outmigrate the following fall. Striped bass are considered residents in the Cape Fear system and demonstrate the same anadromous behavior as stocks present further north on the Atlantic seaboard. Striped bass typically will overwinter near the site and utilize the entire river during the rest of the year.

The catadromous American eel is ubiquitous throughout the estuary. Eels utilize intertidal habitats for juvenile and adult forage habitat and are likely to inhabit wetland areas associated with the site. Although sitings are rare, surface waters of the Cape Fear River estuary serve as forage habitat for adult Atlantic sturgeon and the shortnose sturgeon, a federally listed endangered species.

Bay anchovy, tidewater silverside, mummichog, and striped mullet represent important components of the forage base in the Cape Fear estuary; the latter three species are present year-round as both adults and juveniles. Bay anchovy utilize waters near the site from the spring through the fall, but move downstream during the winter.

Surface waters near the site provide important rearing habitat for white shrimp and brown shrimp. Juvenile white shrimp are abundant near the site from July through October, while brown shrimp are present from late March through mid-July. Adults and juvenile blue crab utilize surface waters near the site as a rearing, mating, and foraging habitat.

Lower portions of the Cape Fear River also provide habitat for two species of marine turtle. The loggerhead turtle (*Caretta caretta*), federally listed as threatened, and the Kemp's ridley turtle

(*Lepidochelys kempi*), federally listed as endangered, are commonly sited during the summer months.

Commercial fishing in Cape Fear River in the area of the site is directed toward harvesting of American shad, striped bass, American eel, and blue crab. An active shrimp fishery for white shrimp and brown shrimp is present in the lower portions of the river downstream from the site. The commercial blue crab fishery is most active during the summer months. Commercial drift gillnetting for American shad is common in the spring. Set gillnetting for American shad and striped bass occurs primarily from December through May. Commercial potting for eel is present year-round. The highest recreational fishing pressure near the site is directed toward striped bass, American shad, and red drum. Spot and Atlantic croaker also are commonly sought as recreational species.

Streamlined Risk Evaluation: The streamlined baseline ecological risk evaluation (SBERE) was developed using data collected during the EE/CA Sampling Investigation. The objectives of the SBERE were to:

- Identify and provide analysis of baseline risks(defined as risks that might exist if no removal or institutional controls were applied at the site);
- Establish cleanup levels for site-related chemicals that will provide adequate protection of the environment.

The exposure scenario of off-site organisms exposed to off-site sediments was evaluated. The Effects Range-Low (ER-L) screening guidelines were used as the endpoints in evaluating the effects of the ecological contaminants of possible concern (ECOPCs) on the viability of the aquatic receptors. The ER-L concentrations then were used to calculate hazard quotients (HQ) for the analysis of sediment contaminant levels.

For the purposes of this SBERE, a HQ of 1 was not considered to be indicative of unacceptable risk. Hazard quotients exceeding 1, but less than 10 indicated a small increase above acceptable risk levels. Hazard quotients exceeding 10 indicated a significant increase above acceptable risk levels. Hazard quotients exceeding 100 indicated a critically significant increased risk of ecological effects.

It was determined by using a habitat evaluation to identify aquatic receptors present and ER-L concentrations to denote adverse effects that adverse biological effects (reduced viability) are currently occurring in receptors located in aquatic habitats. Potential adverse effects may also occur at a future date due to the presence of contaminated surface soil and shallow groundwater. Cleanup concentrations based on these ecological concerns were developed for off-site sediments and on-site soils. Table 3 contains the HQs developed for aquatic species and recommended ecological cleanup goals.

The SBERE specified the maximum concentrations of contaminants of concern in surface soils that are protective of human health and the environment. The risk-based cleanup goals for organic contaminants, trace elements, and pesticides are summarized in Table 4. The majority of surface soils at the ATC site exceeded their respective selected cleanup goal. Therefore, most of the on-site surface soil will require treatment to reduce PAH or trace element concentrations.

The SBERE stated that most of the trace elements exceeding cleanup goals were detected in isolated locations, and were not anticipated to pose a threat to the surrounding receptor population or environment. Therefore, it was concluded that isolated detections of trace elements above cleanup goals would not be addressed. However, due to the extent of contamination in the Furnace Refractory Burial Area, this area will require cleanup to meet the selected cleanup goals.

Comments:

General Comments: Overall, the results of the EE/CA have not provided sufficient information to characterize the magnitude and extent of site-related contamination or to adequately evaluate ecological risk at the Old ATC Refinery site. In specific, it is highly likely that NOAA's trust resources, as described above, are being exposed, by prior and ongoing discharge, to site-related contaminants with resulting adverse biological effects. Primary contaminant exposure pathways leading into the adjacent aquatic receiving system as indicated by available data are soil erosion, surface water runoff, groundwater discharge, and contaminated sediments. Investigations thus far have minimally addressed these pathways, and have gathered no site-specific data on potential adverse biological effects. NOAA therefore recommends that a comprehensive Remedial Investigation/Feasibility Study (RI/FS) be conducted at the Old ATC Refinery site in combination with a thorough ecological risk assessment (ERA). Although the proposed removal action will reduce the potential for adverse human health and environmental effects resulting from exposure to site-related contaminants, limitations of the action, both in the areal extent of source control and the media cleanup concentrations, are such that residual contamination, both on- and off-site, will remain as a serious threat to exposed receptors.

NOAA further recommends that the ERA recommended (above) for the site be conducted using the approach presented in the draft guidelines prepared by the USEPA Environmental Response Team (USEPA ERT, 1994). These guidelines call for the performance of a preliminary assessment of ecological risks and, if deemed necessary by the preliminary assessment, proper design and conduction of a site-specific ERA. The "design" phase of the ERA is most essential in that it identifies all of the data needs for assessing ecological risk at a site, and should be completed prior to the preparation of an RI work plan. This allows for the inclusion of all ERA data needs into the data gathering process for the RI.

The SBERA presented in the EE/CA essentially represents a preliminary assessment for the ERA, and thus fulfills an important need for the site; the results clearly reveal that additional examination of all site source areas, potential on- and off-site contaminant exposure pathways, and biological effects is warranted. This now should be followed by initiation of a comprehensive ERA for the site as recommended, and the ERA should be developed as an integral component of overall site investigations.

Specific Comments:

A major omission in the data presented in the EE/CA is groundwater assessment. Previous data and removal actions conducted under authority of the U.S. Coast Guard have shown that groundwater is contaminated, including the presence of free product, and represents a primary exposure pathway into aquatic habitats. Probable sources of groundwater contamination include the furnace refractory burial area, sludge burial area, former sludge pile area, and tank leak areas. Until groundwater contamination has been fully characterized, including source areas and transport pathways, the threat to off-site, aquatic receptors cannot be evaluated.

The cleanup goals for copper and lead (4,330 mg/kg and 396 mg/kg, respectively) are extremely high when comparing these concentrations to the average for U.S. soils (30 mg/kg and 10 mg/kg), or the ER-Ls (34 mg/kg and 47 mg/kg). In fact, both these values exceed their respective Effects Range-Medium (ER-M) values (270 mg/kg and 218 mg/kg). Because soil contamination likely is a source for contaminant migration into aquatic habitats, cleanup to these concentrations may not be protective of aquatic receptors. In addition, no cleanup goals were developed for cadmium, mercury, silver, or zinc in surface soils. These trace elements all were found in surface soils at concentrations exceeding ten times the U.S. average for soils.

It should be noted that the ER-L values are only to be used as preliminary screening values for ecological risk assessment and, when used, are for the purpose of making an initial determination as to the presence of potential risk at levels of concern. Secondly, it should be recognized that the ER-L values are not, in themselves, considered as conservative values as they represent the presence of adverse biological effects at the 10th percentile. More appropriately, the "No Observed Adverse Effect Level" or "Lowest Observed Adverse Effect Level" are used as more conservative values for preliminary screening purposes. Finally, I can find no precident for the use of HQ values between 1 and 10 or between 10 and 100 as presented in the SBERA. The basis of this approach should be founded by data showing that endpoint receptors are being adequately protected by use of these guidelines.

The Furnace Refractory Burial Area was the only area specified by the EE/CA to require cleanup. There remains a concern that areas not chosen for removal represent a continuing threat to biota in the river, particularly in the event of heavy precipitation or flooding. NOAA recommends that the following areas also be considered for removal action in order to protect aquatic habitats and resources:

- Former Sludge Pile Area: Located in the southwest corner of the site, this area is adjacent to the Cape Fear River. PAHs detected in this area were determined to exceed 100 mg/kg. Lead concentrations ranged up to 650 mg/kg. Groundwater was encountered at approximately 3.5 feet bls.

- Tank Leak Areas: Located in the north and northwest portions of the site. Portions of this area are in extremely close proximity to the Cape Fear River. The photodocumentation log shows extensive standing pools of water within feet of the river edge near the Tank 80003 Leak Area. The shoreline along this edge of the river appears contaminated as well, indicating a pathway from the oil-stained leak area to the river. Sampling investigations detected PAHs in excess of 100 mg/kg in both the Tank 80002 and 80003 Leak Areas. Lead concentration ranged up to 300 mg/kg. Groundwater was encountered approximately 3 feet bls; less in some areas.

- South Bermed Area: Located just southeast of the inlet to the Cape Fear River. Sampling results indicated PAHs in many areas in excess of 100 mg/kg. Lead concentrations ranged up to 340 mg/kg. Groundwater was encountered at 2.5 feet bls.

- Sludge Burial Area: Located on the eastern edge of the site. This area also contained samples with PAHs concentrations exceeding 100 mg/kg. Lead concentrations ranged up to 73 mg/kg. Groundwater was encountered at less than 2 feet bls.

- Xylene Spill Area: Located in the northeastern portion of the site. PAH concentrations in excess of 100 mg/kg were detected in the northwest corner of the area. Lead concentrations ranged up to 49 mg/kg. The water table was encountered 1.5 feet bls.

Of the proposed Removal Action Alternatives (soil washing and in-situ bioremediation with soil stabilization), NOAA recommends the soil washing alternative. This alternative will remove contaminants from the soil, thus removing them from the site, whereas the soil stabilization alternative leaves metal contaminants on site, albeit in a bound form. Also, bioremediation is a less proven technology and will take a longer period of time to accomplish. In either case, treatability studies must be performed to assure that the selected technology will achieve clean-up goals. Completion of the treatability studies should precede a final removal action selection.

In summary, NOAA is encouraged that EPA is taking positive steps toward remediation of this site and support the proposed removal action as an interim step toward ultimate cleanup of the site. In addition, NOAA strongly urges EPA to initiate actions toward a comprehensive RI/FS for the site with a fully integrated ecological risk assessment. As previously stated, the guidelines currently being promulgated by EPA for ecological risk assessment should be used to plan and direct the accomplishment this objective.

Thank you for providing NOAA the opportunity to comment on this site, and for keeping me appraised of ongoing activities. I will be happy to discuss any questions or comments pertaining to this review that you may have. My telephone number is (404) 347-5231.

References

1. Lindsay, W. L. 1979. Chemical equilibria in soils. New York, New York, John Wiley & Sons. 449 p.

2. USEPA Environmental Response Team. (1994) *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Review Draft.* USEPA/ERT, Edison, NJ. September 26, 1994.

Table 1. Contaminants of concern in soil and sediments from the Old ATC Refinery.

	Soil		Sediment	
	Maximum Concentration (mg/kg)	U.S. Average Soil (mg/kg)	Maximum Concentration (mg/kg)	ER-L (mg/kg)
Trace elements:				
cadmium	2.4	0.06	NG	1.2
chromium	26,000	100	25	81
copper	4,900	30	65	34
lead	7,800	10	480	46.7
mercury	86	0.03	NG	0.15
silver	0.81	0.05	NG	1.0
zinc	1100	50	120	150
PAHs :	[surface/sub-surface]			
2-methylnaphthanlene	49/18	NA	NG	0.16
Acenaphthene	0.6/9.9	NA	NG	0.016
Acenaphthylene	0.23/2.2	NA	0.05	0.044
Anthracene	0.53/12	NA	0.04	0.085
Benz(A)-anthracene	4.1/9.0	NA	0.29	0.26
Benzo(b)-fluoranthene	0.96/12	NA	0.27	NA
Benzo(k)-fluoranthene	4.1/5.0	NA	NG	NA
Benzo(GHI)-perylene	1.3/5.8	NA	0.25	NA
Benzo(a)pyrene	2.4/9.1	NA	0.25	0.43
Chrysene	20/11	NA	0.35	0.38
Dibenz(A,H)-anthracene	0.28	NA	NG	0.063
Naphthalene	19/8.9	NA	NG	0.16
Phenolics:				
(3-and/or 4-) methylphenol	28/1.4	NA	NG	NA
Phenol	1.1	NA	NG	NA

NA: Screening concentration not available
NG: Not given

Table 2: NOAA trust species utilizing habitats associated with the Cape Fear River estuary in the vicinity of the ATC site.

Species		Habitat Use			Fisheries	
Common Name	Scientific Name	Spawning Ground	Nursery Ground	Adult Forage	Commercial Fishery	Recreation Fishery
ANADROMOUS/CATADROMOUS SPECIES						
Shortnose sturgeon	*Acipenser brevirostrum*			♦		
Atlantic sturgeon	*Acipenser oxyrhynchus*			♦		
Blueback herring	*Alosa aestivalis*		♦	♦		
Hickory shad	*Alosa mediocris*		♦	♦		
Alewife	*Alosa pseudoharengus*		♦	♦		
American shad	*Alosa sapidissima*		♦	♦	♦	♦
American eel	*Anguilla rostrata*		♦	♦	♦	
Striped bass	*Morone saxatilis*		♦	♦	♦	♦
MARINE/ESTUARINE SPECIES						
Bay anchovy	*Anchoa mitchilli*	♦	♦	♦		
Atlantic menhaden	*Brevoortia tyrannus*		♦			
Mummichog	*Fundulus heteroclitus*		♦	♦		
Spot	*Leiostomus xanthurus*		♦			♦
Tidewater silverside	*Menidia peninsulae*		♦	♦		
Atlantic croaker	*Micropogonias undulatus*		♦	♦		♦
Striped mullet	*Mugil cephalus*	♦	♦	♦		
Southern flounder	*Paralichthys lethostigma*		♦	♦		
Red drum	*Sciaenops ocellatus*		♦	♦		♦
INVERTEBRATE SPECIES						
Blue crab	*Callinectes sapidus*	♦	♦	♦	♦	♦
Brown shrimp	*Penaeus aztecus*		♦			
White shrimp	*Penaeus setiferus*		♦			

Table 3. Hazard Quotients for Aquatic Species and Recommended Ecological Cleanup Goals Devloped for the Old ATC Refinery Site, Wilmington, NC

	ER-L Hazard Quotient	Sediment Cleanup (mg/kg)	Selected Soil Cleanup (mg/kg)
PAHs:			
Chrysene	88	NG	NG
Fluoranthene	1.1	6	1.3
Phenanthrene	1.2	2.3	NG
Pyrene	1.6	3.5	0.8
Trace elements:			
chromium	NG	NG	39
copper	92.9	NG	4,330
lead	13.7	NG	396
zinc	1.0	NG	NG

NG: Cleanup goal not determined for this contaminant

Table 4. Cleanup Goals for Surface Soil at the Old ATC Refinery Site, Wilmington, NC

	Ecological Risk-Based Cleanup Goal (mg/kg)	Human-Health-Based Cleanup Goal (mg/kg)	Selected Cleanup Goal (mg/kg)
PAHs:			
Fluoranthrene	0.6	--	0.6
Phenanthrene	0.23	--	0.23
Pyrene	0.35	--	0.35
Total cPAHs	--	0.3	0.27
Trace elements:			
chromium	39	4,560	39
copper	4,330	33,800	4,330
lead	396	400	396

cPAHs: Carcinogenic PAHs incl. hydrocarbons [benzo(a)pyrene; benzo(a)anthracene; benzo(b and/or k)fluoranthene; chrysene; dibenzo(a,h)anthracene; and ideno(1,2,3-c,d)pyrene]

-- Not a contaminant of concern for this portion of the Streamlined Risk Evaluation

Old ATC/Rem. Action

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Post Office Box 33726
Raleigh, North Carolina 27636-3726

TAKE PRIDE IN AMERICA

October 27, 1994

RECEIVED Solid Waste OCT 31 1994 MANAGEMENT DIV.

RECEIVED NOV 1 1994 SUPERFUND SECTION

Ms. Beverly T. Hudson
North Superfund Remedial Branch
Waste Management Division
U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Ms. Hudson:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Engineering Evaluation / Cost Analysis (Draft EECA) for the Old ATC Refinery Site, Wilmington, North Carolina, in response to your October 11, 1994 letter to this office. Comments in this letter are intended to assist your investigations, assessments, and the planning process being conducted pursuant to a proposed non-time critical removal action at the Old ATC Refinery. These planning aid comments are provided on a technical assistance basis only and do not represent any position that the U.S. Department of the Interior (Department) may adopt concerning possible injury to natural resources under the Department's trusteeship.

The Service encourages the U.S. Environmental Protection Agency's (U.S. EPA) efforts to initiate remediation of this site. The Draft EECA presents sufficient evidence that hazardous materials exist at hazardous levels in soils and sediments at the Old ATC facility. Off-site migration of contamination has occurred which has necessitated emergency response actions by the U.S. Coast Guard. Clearly, expeditious treatment and / or removal of polycyclic aromatic hydrocarbons (PAHs) and elemental contaminants at the site is warranted.

Service review evidenced three concerns in the Draft EECA, including the inadequate characterization of off-site impacts, shortcomings in the streamlined ecological risk assessment, and lack of details on future remedial activities and restoration at the site.

Although the reduction of source material will reduce off-site impacts, the EECA does not adequately address the historic and current off-site impacts from this facility. Sediment sampling data are quite limited, and results of the Phase II sampling are

not presented. It appears from the information provided that depositional areas were not targeted in the evaluation. The greatest sediment contamination will occur in depositional areas adjacent and down-gradient of the source. Analysis of samples collected from the area nearest the site may not detect contaminants which have accumulated in sediments underlying depositional areas down-gradient from historic releases.

Additionally, interpretation of sediment chemistry data is hindered by a lack of information on physical parameters of the collected samples, particularly particle size and total organic carbon (TOC) content. Sediments are heterogeneous, and factors such as particle size and TOC greatly influence contaminant accumulation. If physical parameters of the sediments previously collected are known, they should be presented as was done for site soils. Also, additional sampling of Cape Fear River sediments should be conducted and include these physical parameters in addition to site-related contaminants.

The Streamlined Ecological Risk Evaluation (SERE) presents enough information to justify the removal action, but we are concerned with several parameters in the risk calculations used for the American robin, one of only two terrestrial organism evaluated in the SERE. Setting the water concentration of site contaminants to zero neglects a potentially significant pathway. The forage consumption rates used for vegetation and worms may need to be raised by an order of magnitude according to data presented in the recent Wildlife Exposure Factors Handbook (U.S. EPA, 1993). Also, the soil ingestion rate may be more appropriate at about 10 percent of the forage consumption rate based on woodcock studies (Beyer et al. 1994). We found no references for incidental soil ingestion rates by American robin. The U.S. EPA should consider re-running the risk calculations with these modified parameters. Also, we encourage a thorough risk assessment to address hazards to benthic and aquatic receptors which were not evaluated.

Although the characterization of site fauna and flora is rather cursory, the site appears to contain jurisdictional wetlands which imply the need for conformance with wetland Applicable or Relevant and Appropriate Requirements (ARARs). We encourage discussion of the extent of site wetlands and processes to ensure impacts to these areas are avoided, minimized or compensated.

The Service concurs with the planned removal and off-site disposal of containerized oiled debris, wastes and solvents. Although we have concerns for the efficacy of the proposed in-situ treatment, we understand that the planned treatment studies will address the practicality of meeting site clean-up objectives. While removal actions are a positive step in ameliorating the hazards from this site, we strongly recommend the U.S. EPA and responsible party commit to conducting a remedial investigation and expanded risk assessment concurrent with the removal. That assessment should include a characterization of off-site impacts due to the significant estuarine resources of the lower Cape Fear River.

Thank you for the opportunity to review the Draft EECA. If you have any questions regarding Service comments on the Old ATC Site, please contact Tom Augspurger of this office at (919) 856-4520 (ext. 21).

Sincerely yours,

L.K. Mike Gantt
Field Supervisor

References:

Beyer, W.N., E.E. Connor, and S. Gerould. 1994. Estimates of soil ingestion by wildlife. J. Wildl. Manage. 58: 375-382.

U.S. EPA. 1993. Wildlife exposure factors handbook: Volume I. EPA/600/R-93/187a. Office of Research and Development, Washington, D.C.

SUPERFUND EE/CA REMOVAL PROPOSED PLAN FACT SHEET

Region 4

OLD ATC REFINERY SITE

Wilmington, New Hanover County, North Carolina

October 1994

This fact sheet is not to be considerd a technical document but has been prepared in order to provide the public with a better understanding of the possible treatment alternatives and site conditions.

INTRODUCTION

The Environmental Protection Agency (EPA), Region IV has concluded that the risk of human health and the environment posed by the Old ATC Refinery Site warrants an action under the Federal Superfund Program.

EPA has completed the Engineering Evaluation/Cost Analysis (EE/CA) at the Old ATC Refinery Site located in Wilmington, North Carolina. The EE/CA identified the nature and extent of possible contamination in soils above the groundwater table, determined the human and ecological risk associated with contamination present at the site, and looked at options for addressing any contamination found.

EPA is publishing this EE/CA Proposed Plan fact sheet to provide an opportunity for public review and comment on all clean-up options under consideration for the Site. EPA will host a public meeting on **October 26, 1994 at the New Hanover County Public Library at 7:00 p.m.** to present the results of the investigation and EPA's proposal for in-situ (meaning "in place") bioremediation with stabilization for contaminants located at the Site.

EPA encourages the public to review the Site documents that make up the Administrative Record. These documents include all the information used by EPA in making its decision. The Administrative Record is available at the following locations:

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Wilmington, North Carolina 28401
Phone: (910) 341-4390

and

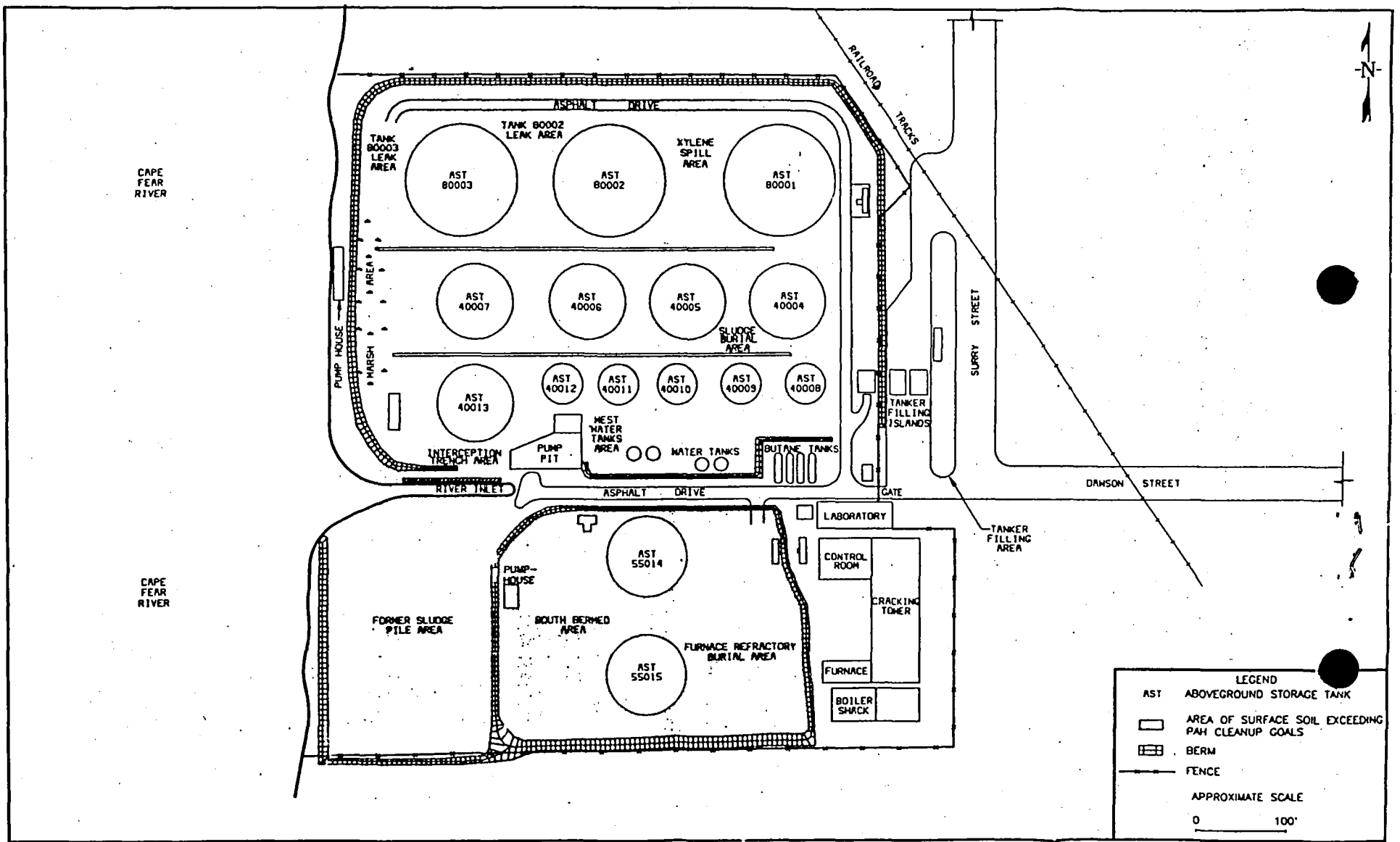
U.S. EPA Record Center
345 Courtland Street, NE.
Atlanta, Georgia 30365
Phone: (404) 347-0506

Fact Sheet Contents:

- Site Map
- Background
- Engineering Evaluation/Cost Analysis Summary
- Streamlined Risk Assessment
- Recommended Removal Action
- Places to Get Information
- EPA Address to Send Comments

PUBLIC MEETING

DATE: October 26, 1994
TIME: 7:00 pm - 9:00 pm
LOCATION: New Hanover County Public Library
201 Chestnut Street
Wilmington, North Carolina
(Meeting Room Upstairs in Library)



AREA OF ORGANIC-CONTAMINATED SOIL REQUIRING TREATMENT
OLD ATC REFINERY
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

BACKGROUND INFORMATION

The Old ATC Refinery is an abandoned facility located on Surry Street in Wilmington, North Carolina, that operated from 1971 to 1986. The refinery's operation included the production of naphtha fuel #2 and #6 oil as well as kerosene. The current owner, City Gas and Transmission (CG&T), of Lexington, Kentucky is in bankruptcy.

In July 1987, the company was given a Notice of Violation (NOV) from the North Carolina Department of Environmental, Health and Natural Resources (NCDEHNR), due to #6 fuel oil leaking from valves stemming from fuel storage tanks. The NOV ordered CG&T to "cease all discharges of petroleum products onto the lands of the State and to excavate all contaminated materials and/or soils."

In 1991, the U.S. Coast Guard became involved with the Site when oil was discovered leaching from the banks of the drainage canal. Responding under the authority of the Oil Pollution Act, the U.S. Coast Guard to preventative action preventing the oil in the canal from entering into the Cape Fear River.

In April 1992, oil was discovered leaking from a failed gasket into the south bermed area of the site. Approximately 18,000 gallons of oil were removed form the bermed area. The U.S. Coast Guard suspected that the leak occurred during cargo transfers at the neighboring Sprague refinery. Sprague shared transmission lines with CG&T. The lines were capped to prevent a recurrence of the leak.

A Superfund Preliminary Assessment was conducted in 1991 and the Site Inspection was conducted in 1992. Based on the guidance "Setting Priorities for NPL Sites", dated October 28, 1992 and the Preliminary Hazardous Ranking System (HRS) score, the Old ATC Refinery is an NPL caliber site.

The Old ATC Refinery is located on approximately 13 acres of land adjoining the Cape Fear River and consists of a tank farm, refinery, laboratory, workshop and office building. The area surrounding the Site is industrial. There is evidence of stressed vegetation around some of the storage tanks and in the area of the former sludge pile. Access to the site is restricted by a fence and locked gate.

ENGINEERING EVALUATION/ COST ANALYSIS SUMMARY

The Field Investigation of the EE/CA was conducted at the Old ATC Refinery Site during the week of April 18, 1994, and during the week of June 21, 1994. This included the collection of surface water, sediment, surface soil, and subsurface soil samples. All samples were analyzed for metals and PAHs (polyaromatic hydrocarbons). Lead and PAHs were detected in both the surface soil and the subsurface soil on-Site. Arsenic and Manganese are also contaminants of concern.

SOILS

Based on the results of the field sampling three clean-up alternatives for soil were evaluated in the EE/CA.

Alternative 1: No Action. By law, EPA is required to evaluate a "No Action" alternative to serve as a basis against which other alternatives can be compared. The "No Action" alternative does not reduce the risk calculated nor is any cleanup action taken.

Alternative 2: Soil Washing. With this alternative the soil would be excavated and fed into a washing unit. The washing fluid might be composed of a non-toxic, water-based detergent solution.

Alternative 3: In-Situ Bioremediation with Soil Stabilization. With this alternative, contaminated soil would be tilled to a depth of 2 feet (below land surface) and treated with oxygen, nutrients and possibly microbial bacteria. Soil stabilization will be implemented to immobilize metals-contaminated soil.

CONTAINERIZED WASTE

There are a number of containers on Site containing varying waste materials. The following alternatives are applicable for addressing containerized waste including petroleum wastes and solvents:

(1) No Action
(2) Disposal in a RCRA hazardous waste landfill
(3) Removal and destruction

Alternative (1). The "No Action" alternative would leave the Site as is and no funds would be used for monitoring, control or removal of containerzied wastes. This alternative serves as a baseline for comparison with the other alternatives.

Alternative (2) - Disposal in a RCRA Hazardous Waste Landfill. Containerized wastes would be transported off site and disposed in a RCRA hazardous waste landfill. Pretreatment of wastes could be required prior to disposal.

Alternative (3) - Removal and Destruction. Containerized wastes would be transported to a commercial off site incinerator or fuel recycler for thermal destruction. The ash residue would be disposed in an appropriate landfill. Damaged containers would be properly packed and secured prior to shipment to prevent a release during transport.

STREAMLINED RISK ASSESSMENT (SRE)

Risk assessment is older than EPA itself, and is a complex process by which scientists determine the harm that an individual substance can inflict on human health or the environment. For human health risk assessment, the process takes place in a series of steps that begins by identifying the particular hazard(s) of the substance. Subsequent steps examine "dose-response" patterns and human exposure pathways, and the conclusion is a "risk characterization" that is both quantitative and qualitative. The risk characterization then becomes one of the factors considered in deciding whether and how the substance will be regulated. In simple terms, a risk assessment estimates the degree of harm people will face if exposed to a particular level or quantity of a substance. A risk assessment evaluation is performed as part of the remedial activities to assess hazard conditions at all Superfund sites.

RECOMMENDED REMOVAL ACTION

SOILS

EPA staff, after careful evaluation and screening of possible treatment technologies, are **proposing the Alternative #3: In-Situ Bioremediation with Stabilization option as the preferred cleanup method for the Old ATC Refinery Site.** This remedy would treat and remove organics from the soil and would stop further movement/spreading of metals contaminating the soil. (In-situ means to treat in place.) Alternative #3 could be implemented within the 1-year and $2,000,000 statutory limits imposed on non-time critical removal actions by the National Contingency Plan.

Alternative #1: NO ACTION option was used as a baseline alternative, and would not be considered as a remedy since it would not reduce, remove or destroy contamination at the Site. This alternative is always considered when screening possible technologies.

Alternative #2 Soil Washing remedy would reduce surface soil contamination to levels below risk based cleanup goals, but would not encapsulate metals-contaminated soil. Due to the significant amount of excavation and earthmoving required to implement the soil washing alternative, its cost exceeds the statutory limit for removal action expenditure of $2,000,000.

CONTAINERIZED WASTE

Removal and disposal is a common method for addressing containerized waste and has been demonstrated technically feasible. Alternative 2 would not pose significant difficulties during implementation. Waste removal, transportation, and disposal contractors are widely available and are capable of characterizing and removing wastes. Removal of all containerized wastes could be accomplished in less than one year.

COMMUNITY PARTICIPATION

The purpose of the Engineering Evaluation/Cost Analysis is to determine the extent of contamination and the best method of cleanup. Public participation is an intregal part of this process in helping the Agency to determine the best treatment technology. It provides the public an opportunity to comment on EPA's Proposed Removal Action at the Old ATC Refinery. By law, the public is provided a 30-day comment period (**October 13 - November 10**) in which to submit written or oral comments regarding the Proposed Removal Action. All supporting information located in the Administrative Record located in the New Hanover County Public Library.

If you cannot attend the public meeting on October 26th, please provide us with your written comments no later than midnight November 1[illegible], 1994, and mail to:

Beverly Hudson, Remedial Project Manager
or Diane Barrett, Community Relations Specialist
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365
Phone: 1-800-435-9233
or (404)347-7791 ext. 4111

All comments received from the public, both oral and written, and all technical data developed during the Superfund process will be considered in making the final selection. EPA will provide a written response to comments received and make the Responsiveness Summary available in the Action Memorandum which will be available in the information repository. Additional information may be obtained by contacting the above-mentioned officials.

USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Engineering Evaluation/Cost Analysis for the Old ATC Refinery Site is important in helping EPA select an Alternative to significantly reduce risk at the Site. Please use the space below to write you comments, then mail to Beverly T. Hudson or Diane Barrett. A response to your comments will be included in the Action Memorandum.

Comments Submitted By:

Name _____

Address _____

MAILING LIST

If you know of someone that would like to be added to the **Old ATC Refinery Site** mailing list, please have them complete this form and return to the EPA Atlanta office to the attention of Diane Barrett. If you have an address change or would like your name deleted from the mailing list, please indicate these changes below. Thank you.

NAME _____

ADDRESS _____

CITY, STATE, ZIP _____

ADDITION ____ CHANGE ____ DELETION ____

Region 4

U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

North Superfund Remedial Branch
Diane Barrett, Community Relations Coord.
Beverly Hudson, Remedial Project Manager

U.S. OFFICIAL MAIL
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PENALTY FOR PRIVATE USE $300
U.S. POSTAGE 0.29
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Official Business
Penalty for Private Use $300

OATC0060
S/F
MICHAEL KELLY, DEPUTY DIRECTOR
SOLID WASTE MANAGEMENT DIVISION
NC DEPARTMENT OF ENVIRONMENT, HEALTH
& NATURAL RESOURCES
P.O. BOX 27687, 401 OBERLIN RD.
RALEIGH NC 27611-7687

File - Old ATC Refinery

16/10 Daily News

CARTERET COUNTY

Citizens watch permit review

A controversial development proposed at Spooner's Creek in Carteret County is now under official review by the state Division of Coastal Management.

Preston Pate, the division's assistant director, said a major development permit has been submitted by Larry Zucchino of Paton/Zucchino Associates of Raleigh. The state has 75 days to act on the permit, he said.

During that time, the permit is reviewed by federal and state environmental and fisheries agencies.

Meanwhile, citizens from the Spooner's Creek and Mitchell Village areas west of Morehead City continue to oppose the project, which calls for nine single-family lots and 66 multi-family buildings around a 35-slip upland marina.

Residents object to the high-density of the development. The impact on surrounding waters, existing residential wells, and traffic through the neighborhood are among their concerns.

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LEAK THREATENED RIVER

Microbes may get oil refinery cleanup job

Two other methods could be used at site

By TRICIA VANCE
Staff Writer

The Environmental Protection Agency wants to use microbes to eat oil contaminating the soil at an abandoned oil refinery in downtown Wilmington.

Agency officials will explain how the process works and discuss two other options for cleaning up the old ATC refinery at a public meeting Oct. 26. The refinery, on Surry Street near the Cape Fear Memorial Bridge, has had several owners and is better known as City Gas & Transmission Corp. Oil refining operations ceased in 1986 after the state fined CG&T's predecessor for foul-smelling fumes that drew complaints from across the city.

CG&T bought the refinery later in 1986 and began a long-running, controversial attempt to reopen it that ultimately failed in 1992.

In March 1991, an oil leak in a drainage canal leading to the Cape Fear River was traced to the refinery. The Coast Guard oversaw the cleanup after a contractor hired by CG&T pulled out because it hadn't been paid for the work. The Coast Guard spent four months and $1 million to keep the leak from getting to the river and has been monitoring the site ever since.

State environmental officials tested the site that fall and recommended that the EPA target the refinery for cleanup. The EPA, which has taken over responsibility for the cleanup, wants to get rid of all the contaminated soil.

At a meeting Oct. 26, officials will outline three possible courses of action: leaving the site as is; washing the soil to rid it of contaminants; and bioremediation, which uses microorganisms and nutrients to break down traces of petroleum.

The EPA is recommending the third alternative, which also includes the use of cement or some other material to trap metals in the soil and prevent them from spreading.

Agency officials estimate the cost of the cleanup at

Please see REFINERY *on page 6B*

Refinery

Continued from page 1B

less than $2 million.

Money for the project would come from a $1 billion fund for oil spill cleanups similar to the Superfund account, which is used primarily to clean up chemical contamination. The funds are administered separately, said Chief Petty Officer Jim Porter, who is in charge of the environmental protection division of the Coast Guard's Marine Safety Office in Wilmington.

A tax on chemical products fills the Superfund, while money in the Oil Spill Liability Trust Fund comes from a tax on petroleum products, he said.

Bioremediation is the same process used to clean up the *Exxon Valdez* oil spill in Alaska's Prince William Sound. The population of oil-eating microbes is increased to artificially high levels, and they continue to thrive until all traces of petroleum are gone, Chief Porter said.

"Then eventually, they run out of food when the oil's gone, and the population drops back to background levels," he said.

The Wilmington refinery opened in the early 1970s with the capacity to refine 15,000 barrels of oil per day. Its multiple changes in ownership left state environmental officials unable to establish who was responsible for the pollution found in the soil in 1991.

The Coast Guard and the EPA have enlisted the U.S. Justice Department to try to trace the blame and recoup the cleanup costs, Chief Porter said.

The refinery is for sale, but it won't ever be allowed to be used for that purpose. Wilmington no longer allows oil refining within the city limits. However, a company could use it to store oil, said Assistant City Attorney Robert Oast.

Want a say?

The Environmental Protection Agency seeks comments on its proposal to clean up contaminated soil at the old ATC refinery (at right), also known as City Gas and Transmission Corp., on Surry Street.

A public meeting will be at 7 p.m. Oct. 26 at the New Hanover County Public Library in downtown Wilmington. Documents related to the proposed cleanup can be inspected at the library.

by Written comments can be sent by Nov. 10 to: Diane Barrett, Community Relations Coordinator; North Superfund Remedial Branch; U.S.E.P.A., Region IV; 345 Courtland Street, N.E.; Atlanta, Ga.; 30365.

FILE PHOTO

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TOTAL P.02

SUPERFUND EE/CA REMOVAL PROPOSED PLAN FACT SHEET

Region 4

OLD ATC REFINERY SITE

Wilmington, New Hanover County, North Carolina

October 1994

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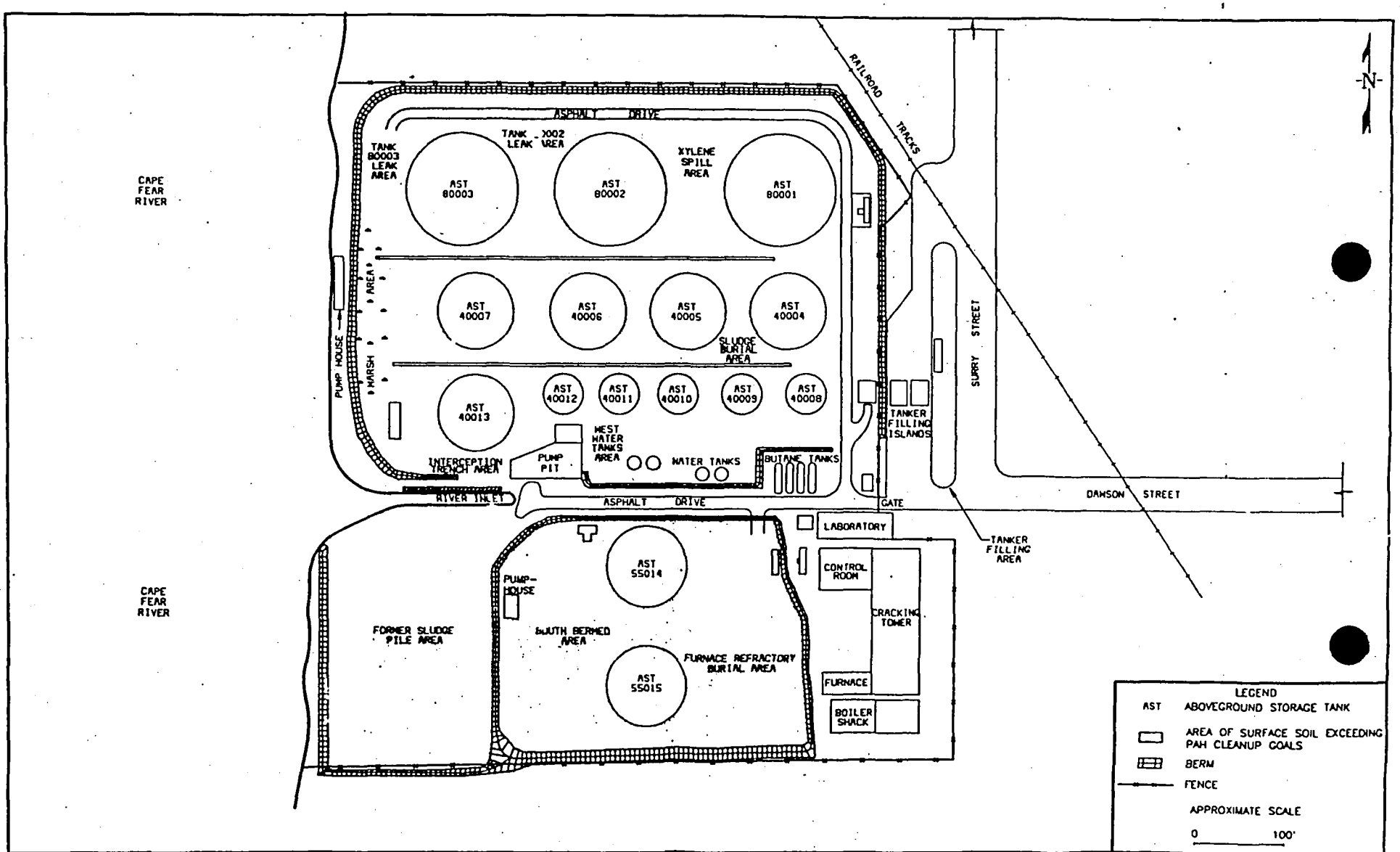
Wilmington, North Carolina
(Meeting Room Upstairs in Library)



AREA OF ORGANIC-CONTAMINATED SOIL REQUIRING TREATMENT
OLD ATC REFINERY
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

BACKGROUND INFORMATION

The Old ATC Refinery is an abandoned facility located on Surry Street in Wilmington, North Carolina, that operated from 1971 to 1986. The refinery's operation included the production of naphtha fuel #2 and #6 oil as well as kerosene. The current owner, City Gas and Transmission (CG&T), of Lexington, Kentucky is in bankruptcy.

In July 1987, the company was given a Notice of Violation (NOV) from the North Carolina Department of Environmental, Health and Natural Resources (NCDEHNR), due to #6 fuel oil leaking from valves stemming from fuel storage tanks. The NOV ordered CG&T to "cease all discharges of petroleum products onto the lands of the State and to excavate all contaminated materials and/or soils."

In 1991, the U.S. Coast Guard became involved with the Site when oil was discovered leaching from the banks of the drainage canal. Responding under the authority of the Oil Pollution Act, the U.S. Coast Guard to preventative action preventing the oil in the canal from entering into the Cape Fear River.

In April 1992, oil was discovered leaking from a failed gasket into the south bermed area of the site. Approximately 18,000 gallons of oil were removed form the bermed area. The U.S. Coast Guard suspected that the leak occurred during cargo transfers at the neighboring Sprague refinery. Sprague shared transmission lines with CG&T. The lines were capped to prevent a recurrence of the leak.

A Superfund Preliminary Assessment was conducted in 1991 and the Site Inspection was conducted in 1992. Based on the guidance "Setting Priorities for NPL Sites", dated October 28, 1992 and the Preliminary Hazardous Ranking System (HRS) score, the Old ATC Refinery is an NPL caliber site.

The Old ATC Refinery is located on approximately 13 acres of land adjoining the Cape Fear River and consists of a tank farm, refinery, laboratory, workshop and office building. The area surrounding the Site is industrial. There is evidence of stressed vegetation around some of the storage tanks and in the area of the former sludge pile. Access to the site is restricted by a fence and locked gate.

ENGINEERING EVALUATION/ COST ANALYSIS SUMMARY

The Field Investigation of the EE/CA was conducted at the Old ATC Refinery Site during the week of April 18, 1994, and during the week of June 21, 1994. This included the collection of surface water, sediment, surface soil, and subsurface soil samples. All samples were analyzed for metals and PAHs (polyaromatic hydrocarbons). Lead and PAHs were detected in both the surface soil and the subsurface soil on-Site. Arsenic and Manganese are also contaminants of concern.

SOILS

Based on the results of the field sampling three clean-up alternatives for soil were evaluated in the EE/CA.

Alternative 1: No Action. By law, EPA is required to evaluate a "No Action" alternative to serve as a basis against which other alternatives can be compared. The "No Action" alternative does not reduce the risk calculated nor is any cleanup action taken.

Alternative 2: Soil Washing. With this alternative the soil would be excavated and fed into a washing unit. The washing fluid might be composed of a non-toxic, water-based detergent solution.

Alternative 3: In-Situ Bioremediation with Soil Stabilization. With this alternative, contaminated soil would be tilled to a depth of 2 feet (below land surface) and treated with oxygen, nutrients and possibly microbial bacteria. Soil stabilization will be implemented to immobilize metals-contaminated soil.

CONTAINERIZED WASTE

There are a number of containers on Site containing varying waste materials. The following alternatives are applicable for addressing containerized waste including petroleum wastes and solvents:

(1) No Action
(2) Disposal in a RCRA hazardous waste landfill
(3) Removal and destruction

Alternative (1). The "No Action" alternative would leave the Site as is and funds would be used for monitoring, control or removal of containerzied wastes. This alternative serves as a baseline for comparison with the other alternatives.

Alternative (2) - Disposal in a RCRA Hazardous Waste Landfill. Containerized wastes would be transported off site and disposed in a RCRA hazardous waste landfill. Pretreatment of wastes could be required prior to disposal.

Alternative (3) - Removal and Destruction. Containerized wastes would be transported to a commercial off site incinerator or fuel recycler for thermal destruction. The ash residue would be disposed in an appropriate landfill. Damaged containers would be properly packed and secured prior to shipment to prevent a release during transport.

STREAMLINED RISK ASSESSMENT (SRE)

Risk assessment is older than EPA itself, and is a complex process by which scientists determine the harm that an individual substance can inflict on human health or the environment. For human health risk assessment, the process takes place in a series of steps that begins by identifying the particular hazard(s) of the substance. Subsequent steps examine "dose-response" patterns and human exposure pathways, and the conclusion is a "risk characterization" that is both quantitative and qualitative. The risk characterization then becomes one of the factors considered in deciding whether and how the substance will be regulated. In simple terms, a risk assessment estimates the degree of harm people will face if exposed to a particular level or quantity of a substance. A risk assessment evaluation is performed as part of the remedial activities to assess hazard conditions at all Superfund sites.

RECOMMENDED REMOVAL ACTION

SOILS

EPA staff, after careful evaluation and screening of possible treatment technologies, are **proposing the Alternative #3: In-Situ Bioremediation with Stabilization option as the preferred cleanup method for the Old ATC Refinery Site.** This remedy would treat and remove organics from the soil and would stop further movement/spreading of metals contaminating the soil. (In-situ means to treat in place.) Alternative #3 could be implemented within the 1-year and $2,000,000 statutory limits imposed on non-time critical removal actions by the National Contingency Plan.

Alternative #1: NO ACTION option was used as a baseline alternative, and would not be considered as a remedy since it would not reduce, remove or destroy contamination at the Site. This alternative is always considered when screening possible technologies.

Alternative #2 Soil Washing remedy would reduce surface soil contamination to levels below risk based cleanup goals, but would not encapsulate metals-contaminated soil. Due to the significant amount of excavation and earthmoving required to implement the soil washing alternative, its cost exceeds the statutory limit for removal action expenditure of $2,000,000.

CONTAINERIZED WASTE

Removal and disposal is a common method for addressing containerized waste and has been demonstrated technically feasible. Alternative 2 would not pose significant difficulties during implementation. Waste removal, transportation, and disposal contractors are widely available and are capable of characterizing and removing wastes. Removal of all containerized wastes could be accomplished in less than one year.

COMMUNITY PARTICIPATION

The purpose of the Engineering Evaluation/Cost Analysis is to determine the extent of contamination and the best method of cleanup. Public participation is an intregal part of this process in helping the Agency to determine the best treatment technology. It provides the public an opportunity to comment on EPA's Proposed Removal Action at the Old ATC Refinery. By law, the public is provided a 30-day comment period (**October 13 - November 10**) in which to submit written or oral comments regarding the Proposed Removal Action. All supporting information located in the Administrative Record located in the New Hanover County Public Library.

If you cannot attend the public meeting on October 26th, please provide us with your written comments no later than midnight November 10, 1994, and mail to:

Beverly Hudson, Remedial Project Manager
or Diane Barrett, Community Relations Specialist
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365
Phone: 1-800-435-9233
or (404)347-7791 ext. 4111

All comments received from the public, both oral and written, and technical data developed during the Superfund process will be considered in making the final selection. EPA will provide a written response to comments received and make the Responsiveness Summary available in the Action Memorandum which will be available in the information repository. Additional information may be obtained by contacting the above-mentioned officials.

USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Engineering Evaluation/Cost Analysis for the Old ATC Refinery Site is important in helping EPA select an Alternative to significantly reduce risk at the Site. Please use the space below to write you comments, then mail to Beverly T. Hudson or Diane Barrett. A response to your comments will be included in the Action Memorandum.

Comments Submitted By:

Name _____

Address _____

October 5, 1994

Memorandum

TO: File

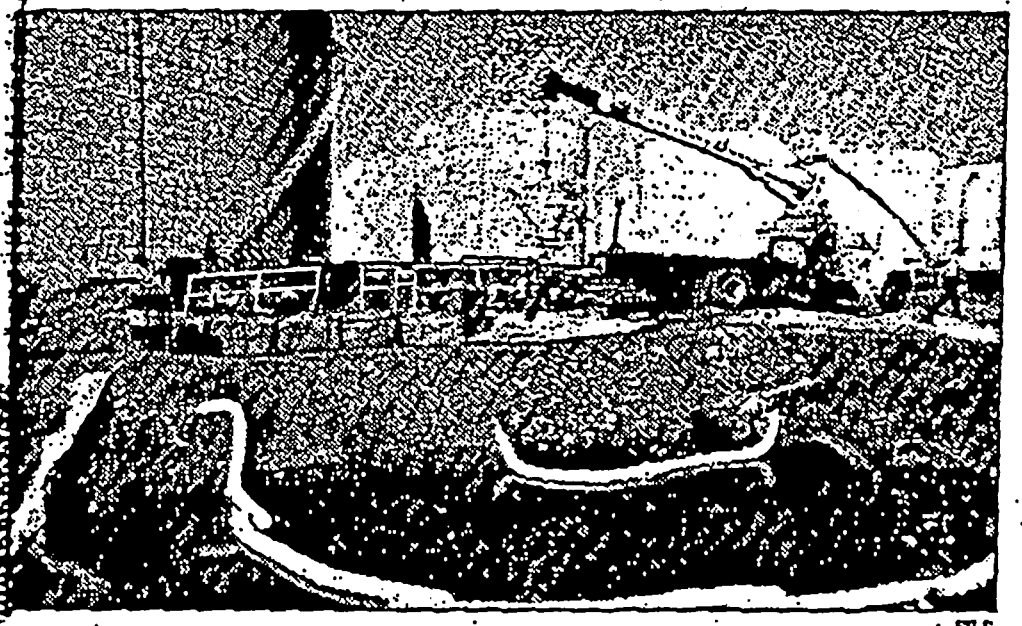
FROM: David J. Lown

RE: Public Meeting
Old ATC Refinery NPL Site (New Site)

Beverly Hudson phoned today. She says that a Public Meeting is scheduled for October 26, 1994 in Wilmington to present the results of an Engineering Evaluation/Cost Analysis (EE/CA). Ms. Hudson sent me a copy of the EE/CA and wants the State's views before the meeting.

cc: Jack Butler

Monday April 18, 1994 Old ATC Refinery



FILE

Why should taxpayers foot bills for somebody else's mess?

Refinery's owners should pay for cleanup

A lot of people have been willing to speculate on the ramshackle little oil refinery on Wilmington's waterfront, but none of them have rushed forward to keep it from leaking oil into the river. They've left that to you, the taxpayer.

The federal government already has spent nearly $1 million to mop up the refinery's toxic messes. Now there's talk that the U.S. Environmental Protection Agency might find more money to finish the cleanup.

If that doesn't work, the site may be put on the "Superfund" list. In that case, it probably would take years for the feds to get around to the cleanup.

Either way, the taxpayers would get the bill.

That's ridiculous. The owners ought to pay.

Unfortunately, the feds don't seem entirely sure who the owners are at this point; the refinery has been involved in more deals than an ace of spades.

If the feds can't find folks who have the assets to pay for cleaning up their messes, maybe the feds could, in effect, put a lien on this collection of leaky pipes.

One thing's for sure: If the place gets sold, the taxpayers should be first in line to collect the proceeds.

CG&T / Oil refinery leak

U.S. may pay cleanup costs

By SCOTT WHISNANT

Staff Writer

The federal government is considering cleaning up oil at an abandoned refinery in downtown Wilmington that has already cost taxpayers close to $1 million in cleanup costs.

City Gas & Transmission, which hasn't operated on Surry Street next to the Cape Fear River since 1986, has caused problems since March 1991, when an oily sheen was spotted on the surface of a drainage canal leading to the river.

The oil, a combination of home heating oil and oil commonly used in ship fuel, was coming from underground leaks at the refinery, said Lt. j.g. Karl Delooff of the Marine Safety Office in Wilmington. The Coast Guard worked through July to keep the oil leak from getting into the river, spending between $900,000 and $1 million, Lt. j.g. Delooff said.

Now the Environmental Protection Agency is considering using money set aside for the worst pollution areas to clean up the site. The EPA will meet with the public at 7 p.m. Monday at the New Hanover County Library to discuss possible cleanup at the site.

Beverly Hudson, remedial project manager for the EPA, said the site could qualify for the federal Superfund pollution cleanup program.

But she said that instead of waiting for the site to get on the Superfund list, the EPA might use money set aside to speed the cleanup of certain sites.

Ms. Hudson said the EPA doesn't know what needs to be cleaned up or how much it will cost.

"We need to go and do some kind of field investigation and see the best way to clean it out," she said.

Another question is who will pay for the cleanup.

Lt. j.g. Delooff said the National Pollution Fund Center, which he said manages Superfund and other pollution cleanup funds, fronted the Coast Guard money to pay for its cleanup work and is trying to get reimbursed by the refinery property's owners.

The company that owns the refinery is now trying to sell it.

Region 4

SUPERFUND FACT SHEET

OLD ATC REFINERY

Wilmington, New Hanover County, North Carolina

April 1994

INTRODUCTION

The purpose of this fact sheet is to introduce and explain the Superfund program, what activities will occur at the Site in the near future, and provide a brief history for the Old ATC Refinery in our effort to inform and keep the public involved.

Actions taken by the U.S. Environmental Protection Agency are in compliance with applicable laws and regulations governing the Superfund program. These laws and regulations governing EPA activities are: the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, Superfund Amendments and Reauthorization Act (SARA) of 1986, and the National Oil and Hazardous Substances Contingency Plan (NCP) of 1990.

SITE HISTORY

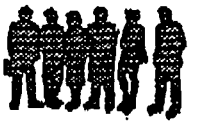
The 12± acre Old ATC Refinery is located at 601 Surry Street, Wilmington, North Carolina, on the east bank of the Cape Fear River. The facility consists of a tank farm, refinery, laboratory, workshop and office building. The area surrounding the Site is industrial and is located near downtown Wilmington.

The property was purchased in 1970 by Pace Oil of Winston-Salem, North Carolina. Pace Oil leased the property to Titan Oil in 1971 who built the refinery and operated the facility under a ten year lease. During that ten year period Titan Oil underwent a name change to ATC Petroleum. The refinery shut down in 1980 or 1981. Republic Oil was formed in January 1985 as a joint venture between Pace Oil and Primary Oil. The refinery operated for 13 months and went bankrupt in February 1986. In March 1986 City Gas and Transmission (CGT) of Lexington, Kentucky, purchased the property but never operated the refinery. In December 1990, Wyandotte Tribal Petroleum, Inc. began making arrangements to purchase the property and reopen the refinery. However, because of problems with on-site contamination at the facility, they decided in April 1991 not to purchase the property. The current owner, City Gas and Transmission has since filed for bankruptcy. The Site has not operated since 1986.

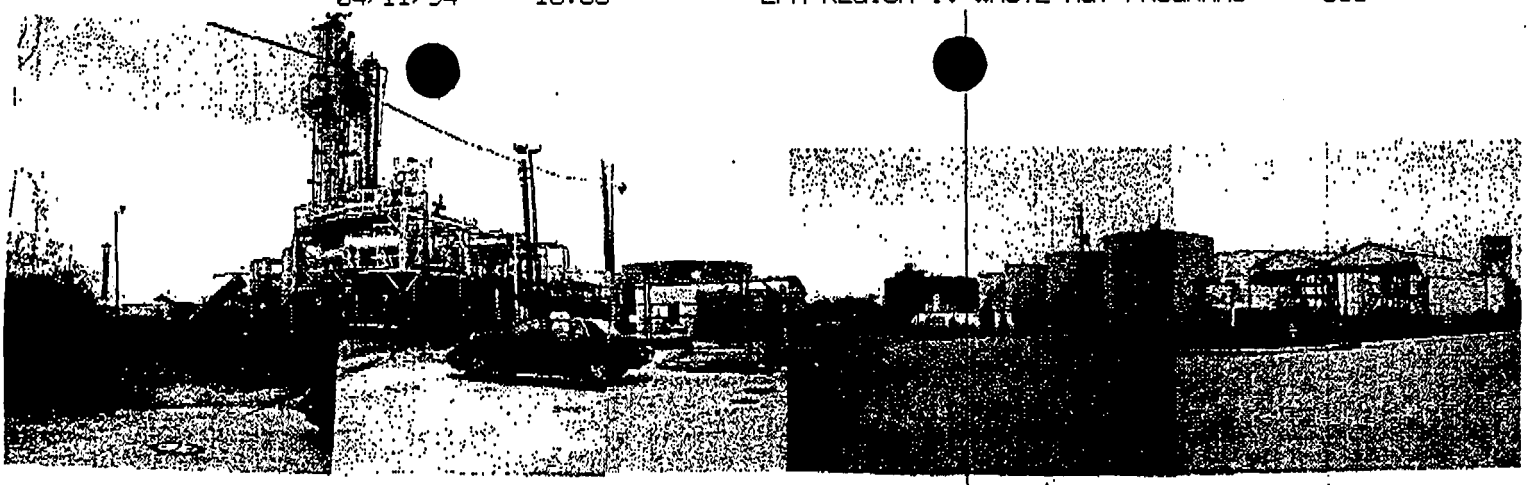
The refinery processed Venezuelan crude oil to produce naphtha #2, and #6 fuel oil, and a blending of products to produce Kerosene. The by-product of the production process created a sludge. Waste disposal practices in the past are not known. However, reports from past employees indicate wastes were improperly disposed of on Site. Such practices consisted of sludge buried in pits on Site along the river, lines running from various tanks leaked product onto the ground, two oil-water separators were contaminated, sludge was taken off site to other locations for burial or use, and other wastes were buried on-site. Reportedly, waste disposal practices were not properly managed.

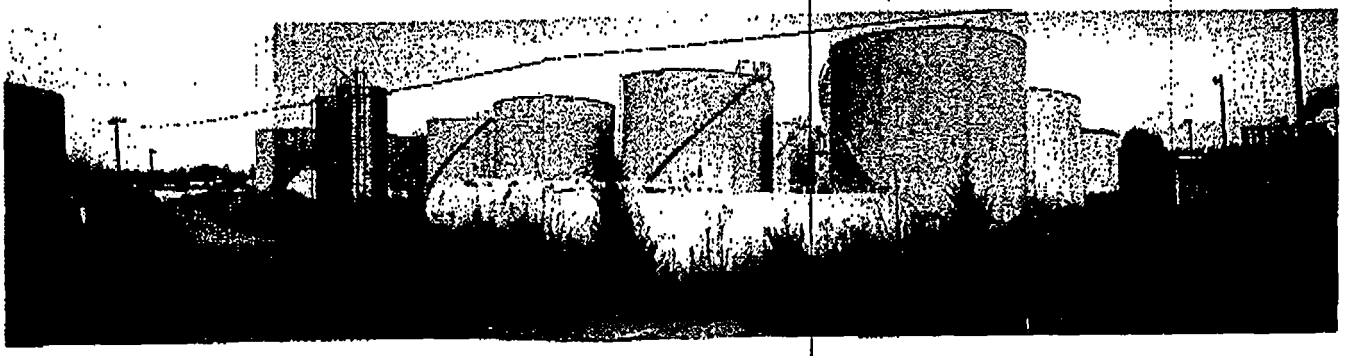
COME JOIN US FOR A KICK-OFF MEETING

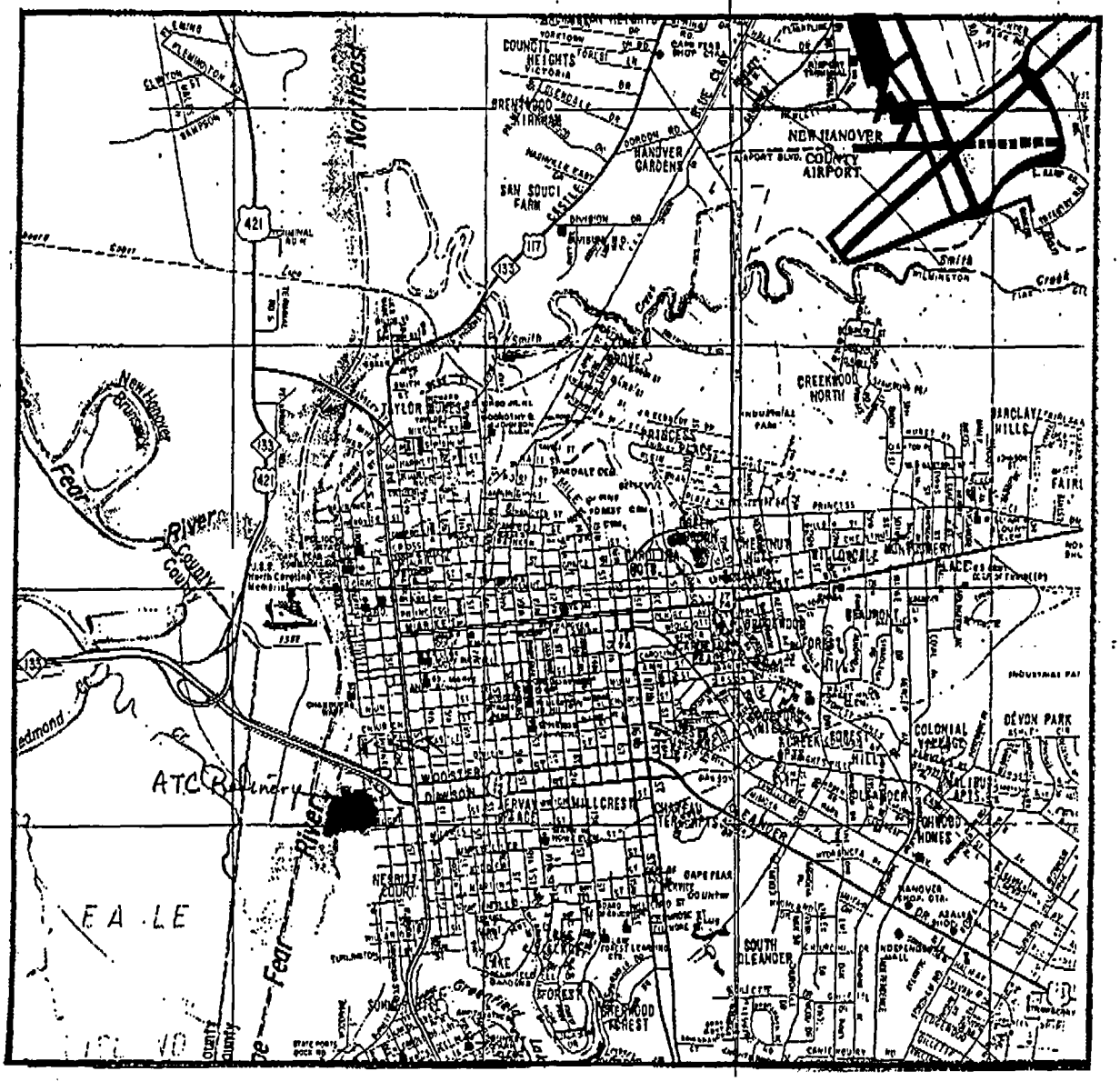
April 18, 1994
beginning at 7:00 P.M.



New Hanover County Public Library






COUNCIL HEIGHTS
BRENTWOOD
HANOVER GARDENS
SAN SOUCI FARM
NEW HANOVER COUNTY AIRPORT
Northeast
Swift Creek
CREEKWOOD NORTH
BARCLAY HILLS
TAYLOR HOMES
New Hanover
Brunswick
Fear
Rivers
County
ATC Refinery
MILLCREST
DEVON PARK
COLONIAL VILLAGE
SOUTH WILMINGTON
NORTH WILMINGTON
CAPE FEAR
SOUTH WILMINGTON
FOREST HILLS
EAGLE

CONTAMINANTS AND REGULATORY ACTIONS TAKEN

Contamination has been found in both the soil and groundwater. The contaminants of concern that we know of to date are: arsenic, barium, chromium, copper, lead, mercury, nickel, selenium, silver, vanadium and some volatile organic compounds. An investigation of the Site which includes taking numerous samples of the soil, subsurface soil, surface water, sediment, groundwater and air and then analyzing the data from the sampling needs to be conducted in order to verify the different contaminants present, their locations, and estimated quantities. It has already been determined that the contamination at the Site has gotten into the soil and groundwater which in turn has effected the Cape Fear River.

The U.S. Coast Guard has responded on four specific occasions to reported and visual pollution coming from the Old ATC Refinery Site. These incidences covered:

- #6 fuel oil leaking from a valve in a line between two tanks and the product saturating the soil in that area;
- the discovery of a 500-gallon sludge pile that because of heavy rain had created an oily sheen run-off that flowed into a drainage canal and then into the Cape Fear River;
- oil leaking from the banks of the drainage canal on Site into the river; and
- approximately 18,000 gallons of oil leaked from a failed gasket into a bermed land area on Site.

The State of North Carolina issued a Notice of Violation for each incident to the owners of the facility. The U.S. Coast Guard also implemented clean-up actions to stop the flow of contaminants from their sources.

The North Carolina Department of Environment, Health and Natural Resources (NCDEHNR) conducted a Screening Site Investigation in October 1991. Following compilation of all data gathered during the 1991 investigation, a contractor was hired by the EPA to conduct an expanded site inspection in September 1992. Since then EPA has been involved in efforts to locate past owners to solicit their cooperation in cleaning up the Site that they owned, leased and/or operated. The EPA Region IV Atlanta office has also conducted preliminary Site visits/inspections in order to prepare plans and documentation for cleaning up the Site.

WHAT IS SUPERFUND?

In 1980 Congress enacted the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, more commonly known as Superfund). This act authorizes EPA to investigate and respond to releases of hazardous substances that may endanger public health, welfare, and the environment. The 1980 law set up a trust fund of $1.6 billion to pay for the investigations and clean up sites where parties responsible for the problems are unable or unwilling to pay for or clean up the site. In October 1986, Congress amended and reauthorized the Superfund law and also increased the size of the fund to approximately $8.5 billion. This amendment is known as the Superfund Amendments and Reauthorization Act (SARA). For those sites where the responsible party(ies) are able and willing to pay for and conduct the steps to clean up the site, EPA is involved in the Superfund process in an enforcement capacity to ensure the responsible party(ies) conduct the clean up as agreed.

After a site is initially discovered, it is inspected, usually by the State. The State or EPA then scores the site using a numerical ranking system known as the Hazard Ranking System (HRS). The following criteria are used in this system to determine if a site should be added to the list of sites fundable by Superfund which are on the National Priorities List (NPL).

- possible health threats to the human population;
- possible hazards/risks (e.g., from direct contact, inhalation, fire or explosion) created by the substances at the site;
- potential for the substances at the site to contaminate the air or drinking water supplies; and
- potential for the substances to the site to pollute or harm the environment.

The State usually requests that a site be put on EPA's National Priorities List; however, EPA may also initiate and carry out these procedures at sites. Those sites with Hazard Ranking System scores of 28.5 or greater are recommended for placement on the National Priorities List (NPL). The NPL is a roster of the nation's worst hazardous waste sites posing a threat to human health or the environment. Every site on the NPL qualifies for Federal Superfund money. The Old ATC Refinery Site has not been placed on the National Priorities List (NPL) as yet, but is an NPL caliber site.

If a site or any portion of a site poses an imminent threat to public health or the environment at any time, EPA may

"emergency removal." consists of short-term immediate actions to remove and or treat the substances creating the threat, i.e., response to "classical emergencies" resulting from oil and hazardous substance spills and life threatening and environmental emergencies such as a fire and/or explosion at hazardous waste sites. EPA has categorized removal actions in three ways: emergency, time-critical and non-time-critical, based on the type of situation, the urgency and threat of the release or potential release, and the subsequent time frame in which the action must be initiated. Emergency and time-critical removal actions respond to releases requiring action within six months; non-time-critical removal actions respond to releases requiring action that can start later than six months after the release. These types of removal actions are taken by the Superfund Emergency Response and Removal Branch, and in many cases precede the long-term remedial action which can take 5-7 years or longer.

SUPERFUND ACCELERATED CLEANUP MODEL (SACM) NON-TIME CRITICAL ACTION

The EPA has recently developed and is implementing (1994) a streamlined way to clean up hazardous waste sites known as **SACM**. The purpose of **SACM** is to make Superfund cleanups more timely and efficient. This is being accomplished through more focus on the front end of the process and better integration of all Superfund program components. This approach involves:

- a continuous process for assessing site-specific conditions and the need for action;
- cross-program coordination of response planning;
- prompt risk reduction through early action (removal or remedial);
- appropriate cleanup of long-term environmental problems;
- early public notification and participation; and
- early initiation of enforcement activities.

Since the Superfund program began in 1980, EPA has learned through experience what works. The accelerated cleanup model incorporates five essential elements:

- one-step site screening and risk assessment,
- Regional Decision Teams to "traffic cop" all sites,
- early action to reduce immediate risk,
- long-term cleanup to restore the environment,
- enforcement, community relations, and public involvement throughout the process.

Traditionally, Superfund cleanups are performed after long periods of site studies and assessments have been conducted. The heart of **SACM** is an approach that fosters immediate action at a site, at the same time that necessary studies and assessments are being conducted. Regional Decision Teams of site managers, risk assessors, community relations coordinators, regional attorneys and other experts decide whether a site requires early action (taking less than five years), long-term action (5 years and longer), or a combination of both. Any short-term work required to correct immediate public health or environmental threats will be done while a site is studied. Besides removing hazardous materials to prevent human contact, these early actions include taking precautions to keep contaminants from moving off site and restricting access to the site. The goals of SACM are (1) to accelerate response, (2) improve cost-effectiveness, and (3) achieve rapid risk reduction in a manner consistent with "enforcement first."

For this Site, the Agency will be implementing the **SACM** approach to remediate contamination at the Site. The diagram for **SACM** is featured following this section outlining steps in the process. The following major steps are for non-time critical removal actions:

- A "**removal site evaluation**" is conducted to identify the source and nature of the release or threatened release of hazardous materials, and to assess the threat to public health, the magnitude of the threat and the factors necessary to determine the need for a removal action.

- An **EE/CA (Engineering Evaluation/Cost Analysis) Approval Memorandum** is prepared after the site evaluation has been completed. This memorandum serves three functions: 1) secure EPA management approval and funding to conduct the EE/CA, 2) documentation that the situation meets the National Contingency Plan criteria for initiating a removal action and that the proposed action is non-time-critical, and 3) it includes detailed information pertaining actual or threatened releases of hazardous substances or pollutants from the site that may present an imminent and/or substantial endangerment; general information pertaining to the site background; threats to public health, welfare, or the environment posed by the site which includes expected changes in the situation if no action is taken; enforcement activities related to the site; and estimated project costs. This is a preliminary documents outlining the possibility of contamination.

- Then the **EE/CA** must be completed which identifies the objectives of the removal action and an analysis of the various alternatives that may be used to meet the objectives for cost, effectiveness, and implementability. The **EE/CA** should provide <u>definitive</u> information on the locations of hazardous substances/contaminants; quantity, volume, size or magnitude of the

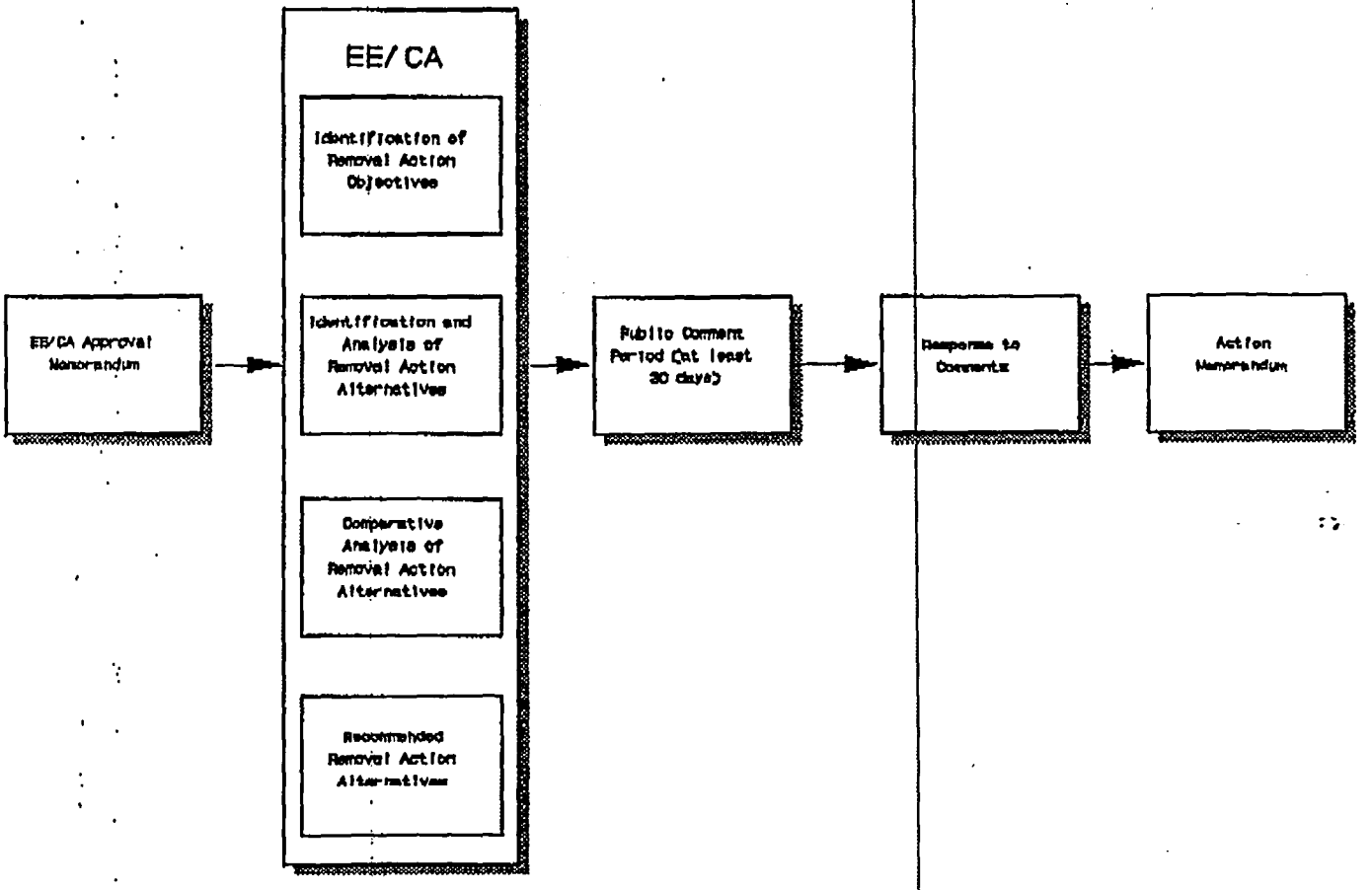
contamination; physical chemical characteristics of the contaminants; and risks presented by the site; and various alternatives available for treating the contaminants. Recommendations made during this phase are based upon: past engineering reports; early State and local government involvement reports; a preliminary assessment of the site; past removal actions; health-based risk assessment; any Environmental Impact Statements; past enforcement actions taken by either local, state or federal agencies; employee interviews; newspaper articles; and any company documents available that reflect past plant operating procedures, manufacturing processes, product and waste disposal practices; reports from the U.S. Geological Survey; and reports from the U.S. Coast Guard pertinent to this site and actions that they have taken.

- A public notice describing the **EE/CA** and its availability to the public, and a 30-day public comment period must be published in a major local newspaper. EPA will respond to all comments received.

- An **Action Memorandum** is prepared providing a concise, written record of the decision for selecting the remedy. This document along with others developed during the process are placed in an information repository for public viewing. The documents for this site will be housed in the New Hanover County Public Library.

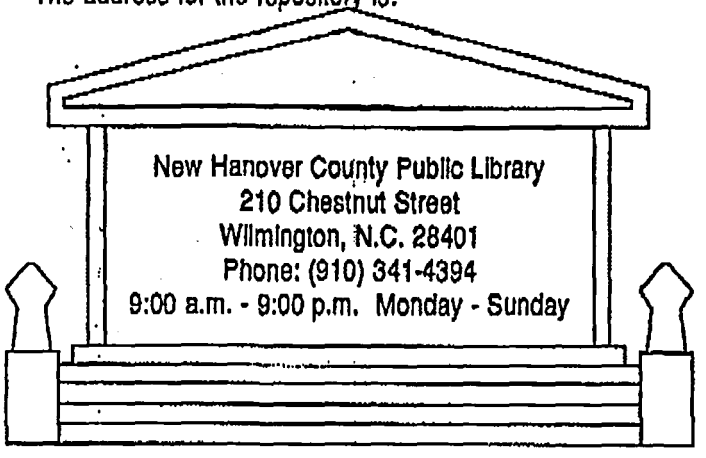
Ongoing community relations activities during the process include interviews, public meetings, updated fact sheets, continual updating of mailing list, newspaper notices, and other activities intended to keep citizens and officials informed and involved and to encourage public input. These activities are scheduled throughout the course of the cleanup process. Specific activities vary from site to site depending upon the level and nature of concern of the public. For easy access to this office we have set up the **1-800-435-9233 telephone number** to enable citizens to contact the office at any time there is a question, incident or some questionable action that needs to be reported.

EE/CA Development Process



INFORMATION REPOSITORY

EPA has established an **Information repository** at the New Hanover County Public Library which will house copies of the documents developed during the Superfund process. The public is encouraged to read this information. The address for the repository is:



PUBLIC INVOLVEMENT

We encourage citizens that are interested in this Site to become involved by attending meetings, reading available documents about the Site and providing the Agency with your comments. After the Site has been thoroughly sampled and the data documented, EPA will provide the public with a fact sheet stating the results of the sampling and what the possible options are for treating/cleaning up the Site. At that time we will conduct another public meeting to discuss these results. A 30-day public comment period will be held to receive your comments concerning which cleanup alternative is preferred.

EPA has developed a community relations program under Superfund to respond to citizens' concerns and needs for information as well as to enable residents and officials of a site community to participate in decision-making. At the beginning of the SACM/Superfund process a Community Relations Plan (CRP) is prepared that identifies interested parties and their concerns and questions about the Site. The Plan is prepared based upon discussions with local leaders, government officials, media, environmental groups, and private citizens. In response to their concerns and the level of interest present in the community, the Plan identifies techniques EPA will use to communicate effectively with the public as action at the Site progresses. These communication efforts include telephone contacts, informal and/or formal meetings, news releases, display ads in area newspaper(s), public notices, fact sheets and providing documents for public reading which are kept in the information repository. Once completed a copy of the Community Relations Plan will be placed in the repository.

GLOSSARY

This glossary defines terms often used by the U.S. Environmental Protection Agency (EPA) when describing activities occurring in the Superfund process though not necessarily used in this document. These definitions apply specifically to the Superfund program and may have other meanings when used in different circumstances. Underlined words included in various definitions are defined separately in the glossary.

Administrative Record: A file which is maintained and contains all information used by the lead agency to make its decision on the selection of a response action under CERCLA. This file is to be available for public review and a copy is to be established at or near the site, usually at one of the <u>information repositories</u>. Also, a duplicate file is held in a central location, such as a Regional or State office.

Aquifer: An underground rock formation composed of materials such as sand, soil, or gravel that can store and supply <u>ground water</u> to wells and springs. Most aquifers used in the United States are within a thousand feet of the earth's surface.

Carcinogen: Any substance that can cause or contribute to the production of cancer.

Cleanup: Actions taken to deal with a release or threatened release of <u>hazardous substances</u> that could affect public health and/or the environment. The term "cleanup" is often used broadly to describe various <u>response actions</u> or phases of <u>remedial responses</u> such as the <u>remedial investigation/feasibility study</u>.

Comment Period: A time period during which the public can review and comment on various documents and EPA actions.

Community Relations Plan (CRP): Formal plan for EPA community relations activities at a <u>Superfund</u> site. The CRP is designed to ensure citizen opportunities for public involvement at the site, determine those activities which will provide for such involvement, and allow citizens the opportunity to learn about the site.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal law passed by Congress in 1980 and modified

in 1986 by the Superfund Amendments and Reauthorization Act. The Acts created a special tax that goes into a Trust Fund, commonly known as Superfund, to investigate and clean up abandoned or uncontrolled hazardous waste sites. Under the program, EPA can either:

- Pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work; or
- Take legal action to force parties responsible for site contamination to clean up the site or pay back the Federal government for the cost of the cleanup.

Contaminant: Any physical, chemical, biological, or radiological substance or matter that has an adverse affect on air, water or soil.

Cost Recovery: A legal process where potentially responsible parties can be required to pay back the Federal government for money it spends on any cleanup actions.

Downgradient: The direction that groundwater flows, similar in concept to 'downstream' for surface water, such as a river.

Ground Water: The supply of fresh water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, ground water occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

Hazard Ranking System (HRS): A scoring system used to evaluate potential relative risks to public health and the environment from releases or threatened releases of hazardous substances. EPA and States use the HRS to calculate a site score, from 0 to 100, based on the actual or potential release of hazardous substances from a site through air, surface water, or ground water. This score (28.5 or higher) is the primary factor used to decide if a hazardous waste site should be placed on the National Priorities List.

Hazardous Substance: Any material that poses a threat to public health and/or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive, or chemically reactive.

Hydrology: The science dealing with the properties, movement, and effects of water found on the earth's surface, in the soil and rocks below, and in the atmosphere.

Information Repository: A file containing current information, technical reports, reference documents, and TAG application information regarding a Superfund site. The information repository is usually located in a public building that is convenient for local residents -- such as a public school, city hall, or library.

Monitoring Wells: Special wells drilled at specific locations on or off a hazardous waste site where ground water can be sampled at selected depths and studied to determine such things as the direction in which ground water flows and the types and amounts of contaminants are present.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP): The Federal regulation that guides determination of the sites to be corrected under the Superfund program and the program to prevent or control spills into surface waters or other portions of the environment. (NCP revised in February 1990.)

National Pollutant Discharge Elimination System (NPDES): A provision of the Clean Water Act which prohibits the discharge of pollutants into waters of the United States unless a special permit is issued by EPA, a state or (where delegated) a tribal government on an Indian reservation allowing a controlled discharge of liquid after it has undergone treatment.

National Priorities List (NPL): EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial response using money from the Trust Fund. The list is based primarily on the score a site receives on the Hazard Ranking System (HRS). EPA is required to update the NPL at least once a year.

Parts Per Billion (ppb)/Parts per Million (ppm): Units commonly used to express low concentrations of contaminants. For example, 1 ounce of trichloroethylene (TCE) in 1 million ounces of water is 1 ppm; 1 ounce of TCE in 1 billion ounces of water is 1 ppb. If one drop of TCE is mixed in a competition-size swimming pool, the water will contain about 1 ppb of TCE.

Plume: A visible or measurable discharge of a contaminant from a given point of origin; can be visible or thermal in water, or visible in the air as, for example, a plume of smoke. A three dimensional zone within the groundwater that contains contaminants and generally moves in the direction of, and with groundwater flow.

Potentially Responsible Party (PRP): An individual(s) or company(ies) (such as owners, operators, transporters, or generators of hazardous waste) potentially responsible for, or contributing to, the contamination problems at a Superfund site. Whenever possible, EPA requires PRPs, through administrative and legal actions, to clean up hazardous waste sites they have contaminated.

Preliminary Assessment: The process of collecting and reviewing available information about a known or suspected hazardous waste site or release. EPA or States use this information to determine if the site requires further study. If further study is needed, a site inspection is undertaken.

Remedial Project Manager (RPM): The EPA or State official responsible for overseeing the long-term remedial response activities.

Remedial Response: A long-term action that stops or substantially reduces a release or threatened release of hazardous substances that is serious, but does not pose an immediate threat to public health and/or the environment.

Removal Action: An immediate action taken over the short-term to address a release or threatened release of hazardous substances.

Resource Conservation and Recovery Act (RCRA): A Federal law that established a regulatory system to track hazardous substances from the time of generation to disposal. The law requires safe and secure procedures to be used in treating, transporting, storing, and disposing of hazardous substances. RCRA is designed to prevent new, uncontrolled hazardous waste sites.

Response Action: A CERCLA-authorized action at a Superfund site involving either a short-term removal action or a long-term remedial response that may include, but is not limited to, the following activities:

- Removing hazardous materials from a site to an EPA-approved, licensed hazardous waste facility for treatment, containment, or destruction.
- Containing the waste safely on-site to eliminate further problems.
- Destroying or treating the waste on-site using incineration or other technologies.
- Identifying and removing the source of ground water contamination and halting further movement of the contaminants.

Responsiveness Summary: A summary of oral and/or written public comments received by EPA during a comment period on key EPA documents, and EPA's responses to those comments. The responsiveness summary is a key part of the Record of Decision, highlighting community concerns for EPA decision-makers.

Risk Assessment: Estimating the degree of harm people will face if exposed to a particular level or quantity of a substance.

Sediment: The sand or mud found at the bottom and sides of bodies of water, such as creeks, rivers, streams, ponds, lakes and swamps. Sediments typically consist of soil, clay, silt, plant matter, and sometimes gravel.

Site Inspection (SI): The collection of information from a Superfund site to determine the extent and severity of hazards posed by the site. It follows and is more extensive than a preliminary assessment. The information is used to score the site with the Hazard Ranking System to determine whether response action is needed.

Superfund: The program operated under the legislative authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also referred to as the Trust Fund, to carry out the EPA solid waste emergency removal and long-term remedial activities.

Superfund Accelerated Cleanup Model (SACM): A program developed by EPA to streamline and speed

up the cleanup process of hazardous waste sites. It is designed to decrease the number of years to treat contamination as well as get the cleanup process started more quickly.

Superfund Amendments and Reauthorization Act (SARA): Modifications to CERCLA enacted on October 17, 1986.

Surface Water: Bodies of water that are above ground, such as rivers, lakes, and streams.

Treatment, Storage, and Disposal Facility (TSD Facility): Any building, structure, or installation where a hazardous substance has been treated, stored, or disposed. TSD facilities are regulated by EPA and States under the Resource Conservation and Recovery Act.

Volatile Organic Compound: A group of chemical compounds composed primarily of carbon and hydrogen that are characterized by their tendency to evaporate (or volatilize) into the air from water or soil. VOCs are substances that are contained in common solvents and cleaning fluids. Some VOCs are know to cause cancer.

MORE INFORMATION?

For more information about the Site and future activities that will occur on site, please contact the following:

Beverly Hudson, Remedial Project Manager
Diane Barrett, Community Relations Specialist
U.S. E.P.A., Region 4
North Superfund Remedial Branch
345 Courtland Street, NE
Atlanta, GA 30365
Phone: 800-435-9233

MAILING LIST

Your name has been added to this Site mailing list because you live within the vicinity of the Old ATC Refinery or your name has been provided as someone that might have an interest in the Site. If you know of someone that would like to have their name added to this list, please have them complete this form and return to the EPA office in Atlanta attention Diane Barrett, Community Relations Specialist at the above address. There are also spaces provided below for change of address and deletion notification.

NAME _____

ADDRESS _____

CITY, STATE, ZIP CODE _____

PHONE _____

ADDITION_____ **CHANGE**_____ **DELETION**_____

Region 4

U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

North Superfund Remedial Branch
Diane Barrett, Community Relations Coord.
Beverly Hudson, Remedial Project Manager

Official Business
Penalty for Private Use $300

ANNOUNCEMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

The U. S. Environmental Protection Agency is holding a public meeting on April 18th beginning at 7:00 p.m. to be held at the
New Hanover County Public Library
210 Chestnut Street
Wilmington, North Carolina.

This is a "kick-off" meeting to provide the public with information concerning the Old ATC Refinery on Surry Street located in downtown Wilmington, and what actions EPA plans to take.

We invite interested citizens to attend this public meeting. For more information, call 1-800-435-9233 and speak to Beverly Hudson or Diane Barrett.

U.S. OFFICIAL MAIL
U.S. POSTAGE

ATLANTA APR 14 '94 PENALTY FOR PRIVATE USE $300

U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Region 4

North Superfund Remedial Branch
Diane Barrett, Community Relations Coord.
Beverly Hudson, Remedial Project Manager

Official Business
Penalty for Private Use $300

RECEIVED
APR 18 1994
SUPERFUND SECTION

DATC0064
S/F
KIM CLARKE, PUBLIC INFO. OFFICER
SUPERFUND SECTION, SOLID WASTE MGMT. DIV
NC DEPARTMENT OF ENVIRONMENT, HEALTH
& NATURAL RESOURCES
P.O. BOX 27687
RALEIGH NC 27611-7687

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

March 17, 1994

4WD-NSRB

APPROVAL MEMORANDUM

SUBJECT: Request for an Engineering Evaluation/Cost Analysis at the OLD ATC Refinery, Cape Fear Terminal, Wilmington, New Hanover County, North Carolina

FROM: Beverly T. Hudson, Remedial Project Manager BTH
North Carolina Remedial Section

THRU: Curt Fehn, Chief
North Carolina Remedial Section

TO: Joseph R. Franzmathes, Director
Waste Management Division

I. PURPOSE

The purpose of this memorandum is to request and document your approval to conduct the proposed Engineering Evaluation/Cost Analysis (EE/CA) to support the selection and implementation of a non-time critical removal action at the OLD ATC Refinery in Wilmington, North Carolina.

II. BACKGROUND AND SITE CONDITIONS

A. Background

The Old ATC Refinery is an abandoned facility located in Wilmington, North Carolina that operated from 1971 to 1986. The refinery's operation included the production of naphtha fuel #2 and #6 oil as well as kerosene. The current owner, City, Gas and Transmission (CG&T), of Lexington, Kentucky is in bankruptcy.

In July 1987, the company was given a Notice of Violation (NOV) from the North Carolina Department of Environmental, Health and Natural Resources (NCDEHNR). due to #6 fuel oil leaking from valves. The NOV ordered CG&T to "cease all discharges of petroleum products onto the lands of the state and to excavate all contaminated materials and/or soils."

In 1991, the U.S. Coast Guard became involved with the site when oil was discovered leaching from the banks of the drainage canal. Responding under the authority of the Oil Pollution Act, the U.S. Coast Guard prevented oil pollution from entering into the Cape Fear River.

In April 1992, oil was discovered leaking from a failed gasket into the south bermed area of the site. Approximately 18,000 gallons of oil were removed from the bermed area. The U.S. Coast Guard suspected that the leak occurred during cargo transfers at the neighboring Sprague refinery. Sprague shared transmission lines with CG&T. The lines were capped to prevent a recurrence of the leak.

A Superfund Preliminary Assessment was conducted in 1991 and the Site Inspection was conducted in 1992. Based on the guidance "Setting Priorities for NPL Sites", dated October 28, 1992 and the Preliminary Hazardous Ranking System (HRS) score, the Old ATC Refinery is an NPL caliber site.

B. Physical Location

The OLD ATC Refinery is located on approximately 12 acres of land adjoining the Cape Fear River and consists of a tank farm, refinery, laboratory, workshop and office building. The area surrounding the site is industrial and is located directly north of the site (see Figure 1). There is evidence of stressed vegetation around some of the storage tanks and in the area of the former sludge pile. Access to the site is restricted by a fence and locked gate. The site layout is shown on Figure 2.

C. Site Characteristic

The site is also located in the Atlantic Coastal Plain Physiographic Province. The soil beneath the site is considered to be part of the Urban Land Complex and consists of soils which have been altered by cuts, fillings, grading, and the lower sandy aquifer. Groundwater flows toward the Cape Fear River which is used for fisheries, and commercial and recreational boating.

The surface water pathway is the primary pathway of concern at the site. Sediment samples were collected and analyzed to determine if contamination had migrated from the site into the surface water pathway. Arsenic, copper, lead and vanadium were detected in sediment samples collected in this pathway and also in the Cape

Fear River. A relatively high concentration of lead 990(mg/kg) was detected in the control sample at the mouth of the storm drainage discharge pipe.

Other materials and products associated with the petroleum refinery include: lead(350ppm), mercury(1.1ppm), arsenic(11ppm), vanadium(2100ppm), copper(50ppm), barium(52ppm) and nickel(16ppm). PAHs in concentration ranging from 667 to 43,000mg/kg were present at several source areas at the site.

Receptors include several federal and state endangered or threatened aquatic species found in the surface water pathway. Mostly notably, American alligators, a federally threatened species, have been observed on site and in the Cape Fear River adjacent to the site. Approximately 19.6 miles of wetlands frontage occurs along the surface water pathway within the 15-mile target distance limit.

D. Quantities and Types of Substances Present

The site is contaminated with several heavy metals such as lead, copper, nickel, mercury, barium, zinc, vanadium, arsenic, cadmium, manganese and high levels of PAHs. Level II contamination of the Cape Fear River has been documented. There are large volumes of waste onsite including tank bottom/waste oil in tanks; a 2,000 gallon tank of tetraethyl lead (leaking); an API separator with waste oil sludge; about 20 55-gallon drums of caustic chemicals; and other unknown chemicals in the boiler shack, sludge piles, waste soil sludges and the furnace refractory deposition area, leaking valves, alleged rusty scales and tank bottom burial pits near the river. Refractory wastes, tank bottoms, API sludge and rusty scales have been buried or raked into the soil on site.

III. Threat to Public Health, Welfare, or the Environment

The EPA Region IV NSRB has determined that a release threat, as defined by Section 101 of CERCLA, exists at the Site. The Site meets the requirements for initiating a non-time critical removal according to criteria listed in Section 300.415 of the National Contingency Plan (NCP). In evaluating the potential risks posed by the compounds listed in Section III of this EE/CA approval memorandum, the following factors cited from the National Contingency Plan must be considered in determining the appropriateness of a removal action:

Section 300.415 (b)(2)(i): " Actual or potential exposure to nearby human population, animals, or the food chain from hazardous substances or pollutants or contaminants."

Three state endangered or threatened species known as the American Alligator, Shortnose Sturgeon and the Barrel Floater are within four miles of the site. The American Alligator has been sighted on-site on several occasions, and is considered a level II target individual.

Section 300.415 (b)(2)(ii): " Actual or potential contamination of drinking water supplies or sensitive ecosystems."

There are extensive wetlands and tidal flats (over 19 miles of wetlands frontage and hundreds of acres of wetlands) at the site. The Cape Fear River is also a commercial fishery in the area of the site.

Section 300.415 (b)(2)(iii): "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release."

Large quantities of waste on the surface and buried on site create a continued threat of release. There are numerous drums containing caustics, microbicides, and unknown chemicals found on-site. Several of the drums appear to be leaking and collapsed. Other sources such as storage tanks containing waste oil sludge (tank bottoms) were found onsite. A reading of greater than 1000 parts per million of an unidentified organic compound exists in a pipeline from the tetraethyl lead tank. Also, a sweet fruity odor, characteristic of tetraethyl lead, was evident around the tank.

Section 300.415 (b)(2)(iv): "High levels of hazardous substances or pollutants or contaminants in soils largely at the surface, that may migrate."

Contaminated soil is prevalent throughout the parcel. Several metals, characteristic of refinery operations, were detected in the source/surface soil samples. A synopsis of soil contaminants concentration is available in Table 1.

Section 300.415 (b)(2)(vii): " Availability of other appropriate federal or state response mechanism to respond to a release."

The Potentially Responsible Party (PRP) has been identified for the Site. It is not expected that the PRP will respond and perform a removal in a timely manner. It is not expected that the State or any other governmental entity will conduct the necessary remediation activity. The Coast Guard will respond to releases of petroleum products into the river, but does not plan to remove or remediate on-site sources of contamination.

IV. Imminent and Substantial Endangerment

Actual or threatened releases of hazardous substances from this Site if not addressed by implementing a non-time critical removal action, as recommended in this Approval Memorandum, may present an imminent and substantial endangerment to the public health or welfare or the environment.

V. Enforcement Actions

The PRP has abandoned the site. EPA will perform an Engineering Evaluation/ Cost Analysis (EE/CA) as a fund-lead project. During the performance of the EE/CA, we will notify the PRP with a general notice letter and a 104(e) request. If positive responses are received, we may negotiate with the PRP for performance of the non-time critical removal and/or EE/CA.

VI. Proposed Project/Oversight and Cost

A. Objectives of the EE/CA: 1) The objective of the EE/CA will be to determine the volume of contaminated surface material and soils to be excavated and removed or treated, and 2) Determine the best method of remediation or disposal/treatment.

B. Estimated Cost: EPA proposes to perform an EE/CA. An Alternative Remedial Contract Strategy (ARCS) contractor will perform the field work, and the cost analysis. The estimated cost for the EE/CA is approximately $250,000.

C. EE/CA Schedule: The current plan is for the field work to be conducted by the ARCS contractor by early summer and the EE/CA to be released for public comment in the Fall/Winter 1994.

VII. RECOMMENDATION

Ongoing investigations have determined that there has been a release of hazardous substances into the environment. Consistent with Section 104(b) of CERCLA, further investigation is necessary to plan and direct future response actions.

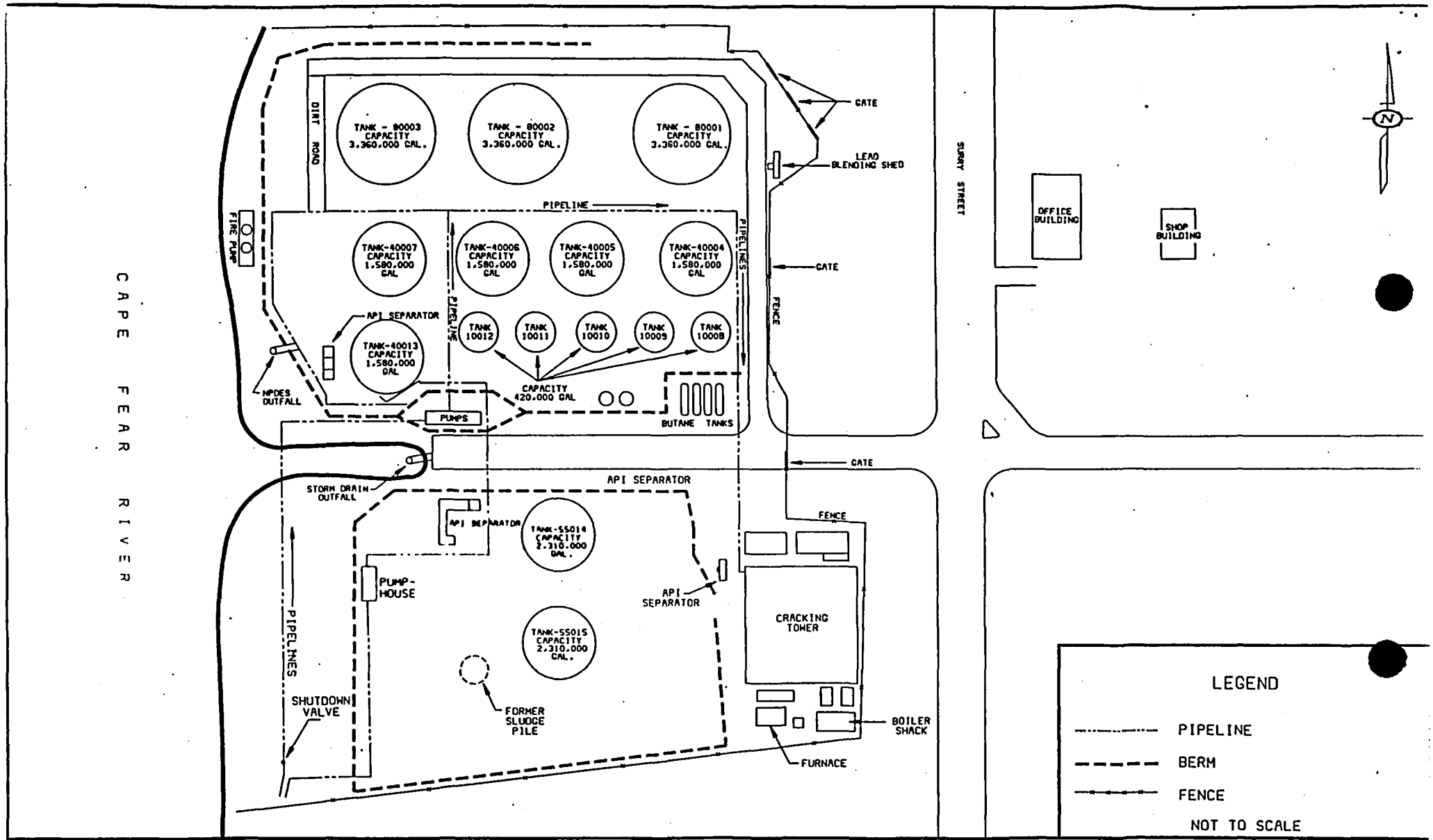
Conditions at the site meet the NCP Section 300.415 (b)(2) criteria for a non-time critical removal and I recommend your approval of the proposed engineering evaluation/cost analysis (EE/CA) request.

Approval: _____

Disapproval: _____

Date: 3/22/94

Joseph R. Franzmathes, Director
Waste Management Division
Environmental Protection Agency
Region IV



SCIENCE AND TECHNOLOGY CORP

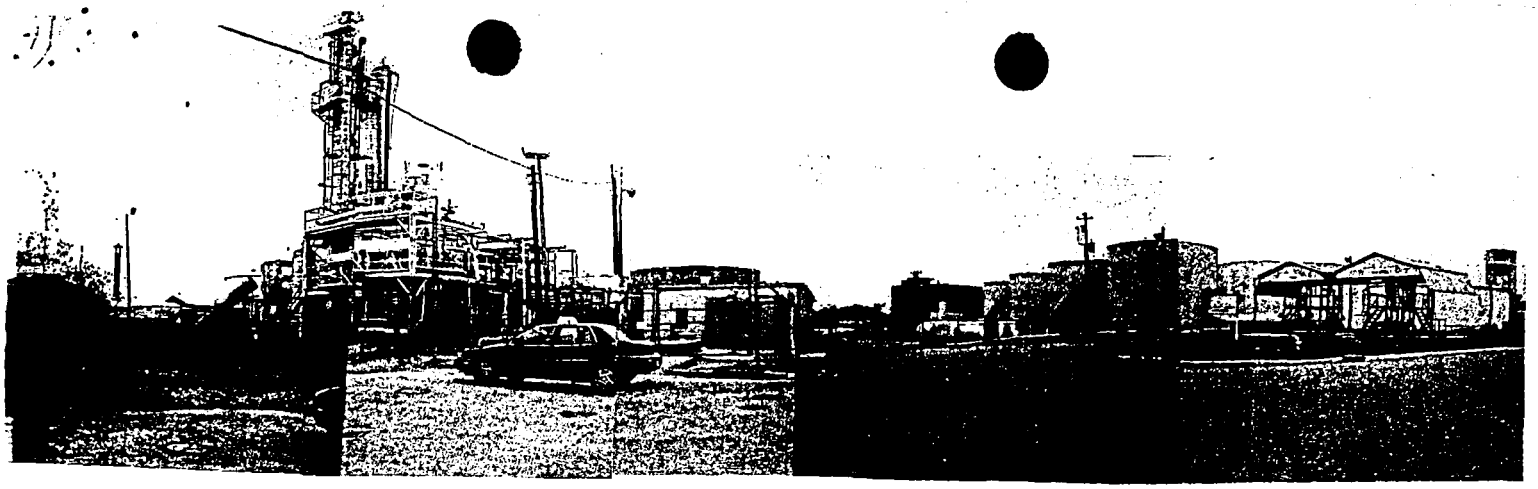
SITE LAYOUT MAP
OLD ATC REFINERY
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

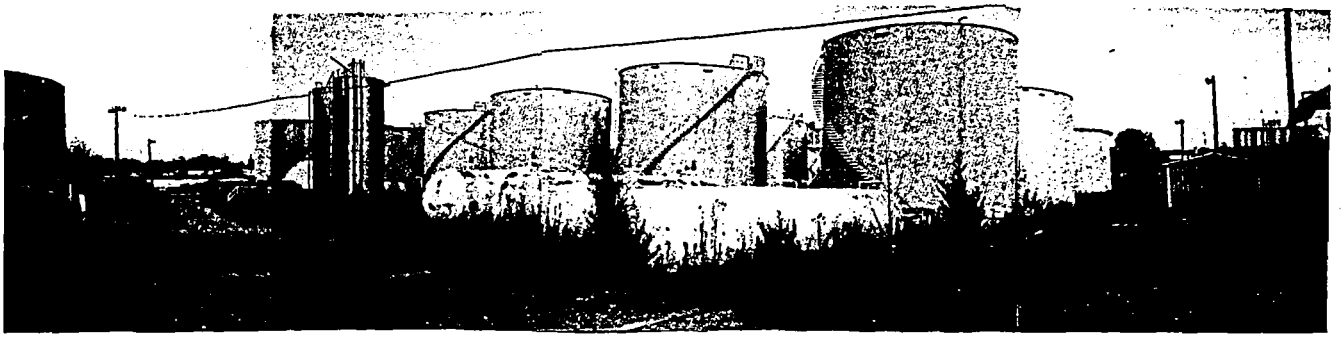
FIGURE 2

Table 1
Summary of Inorganic Analytical Results
Surface Soil Samples
Old ATC Refinery
Wilmington, New Hanover County, North Carolina

Parameter (mg/kg)	Ranges of Naturally Occurring Metals in NC	AT-SS-01 Near Surry Street	AT-SS-02 area of Refractory Deposit	AT-SS-03 area of Sludge Pile	AT-SS-04 area around Lead Line	AT-SS-05 area around API Separator	AT-SS-06 area of Refractory Deposit	AT-SS-07 Dup. for SS05
Aluminum	700-20,000	1700	900	1500	1000	1500	NA	1400
Arsenic	4.1-8.5	--	--	11J	--	--	NA	--
Barium	10-200	46	--	51	--	33	NA	28
Beryllium	<1	0.22J	--	--	--	--	NA	--
Calcium	150-2300	1900	29000	5900	16000	25000	NA	23000
Chromium	1-20	5.6J	2.8J	7.3J	1.7J	5.2J	NA	6J
Copper	<1-18	35J	--	54J	--	14J	NA	--
Iron	100-10,000	4900	1700	5300	2000	4100	NA	4300
Lead	<10	140	37	230	33	66	NA	55
Magnesuim	50-1500	260	430	340	340	450	NA	440
Manganese	<2-150	81	29	74	30	110	NA	83
Mercury	0.032-0.061	0.15	--	0.16	--	--	NA	--
Nickel	<1-5	2.8	16	3.8	2.2	2.5J	NA	2.5J
Potassium	2,200-6,800	140	66J	140	90	140	NA	140
Vanadium	<1-20	11	22	--	--	--	NA	--
Zinc	Not given	98	76	100	47	100	NA	98

J - Estimated value.
U - Material was analyzed for but not detected. The number is the sample quantitation limit (SQL).
-- - Material was not detected above the SQL.
NA - Sample was not analyzed for metals
[ ] - Denotes sample concentrations greater than or equal to 3 times naturally occurring concentration.





State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

February 9, 1994

Cathy Amoroso
NC CERCLA Project Manager
US EPA Region IV Waste Division
345 Courtland Street, NE
Atlanta Georgia 30365

Subject: Old ATC Refinery, NCD 986 186 518
Wilmington, New Hanover County
State-Lead Non-Time Critical Removal CA

Dear Ms. Amoroso:

As per our telephone conversation last week, I understand that the Regional Decision Team has approved the subject site as a candidate for a Non-Time Critical Removal Action. The NC Superfund Section strongly supports this decision as it appears to be the most expeditious and cost effective means currently available for addressing this site. In addition, I would like to express our interest in acting as a State-Lead for this action through a Non-Time Critical Removal Cooperative Agreement with EPA. I understand that this site is currently a low priority for ERRB (see attached). Given the availability of funding from EPA, a State lead on this site could expedite cleanup by using State staff rather than ERRB staff who have emergency and time-critical removals to tend to as a high priority. In addition, many of our staff members have worked in a Support Agency capacity and have experience in review and comment on NPL site documents and in support of NPL site community relations efforts. Their familiarity with the RI/FS process could certainly be applied to development of the EE/CA which shares many of the same elements.

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-4996 FAX 919-715-3605
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In searching for innovative ways of accomplishing risk reduction and cleanup, I hope EPA will consider the possibility of funding State-Lead Non-Time Critical Removal Actions at this or other sites. Please let me know if I can provide any additional input or if you would like to further discuss this proposal.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
NC Superfund Section

Attachment

cc: Mike Kelly
Craig Benedikt
Susan Deihl

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

AUG 05 1993

4WD-ERRB

RECEIVED
AUG 10 1993
SUPERFUND SECTION

RECEIVED
AUG 09 1993
NC DIVISION OF SOLID WASTE MANAGEMENT

Mr. Mike Kelly, Director
Solid Waste Management Division
North Carolina Division of
Solid Waste Management
P.O. Box 27687
Raleigh, North Carolina 27611-7687

RE: Old ATC Refinery, Wilmington, North Carolina

Dear Mr. Kelly:

On July 22, 1993, the U.S. Environmental Protection Agency's Emergency Response and Removal Branch (ERRB) reviewed the available information for the above referenced site to determine its eligibility for a potential removal action under the National Contingency Plan (NCP). The site information was evaluated using criteria from Section 300.415 of the NCP and current ERRB program guidance.

Based upon ERRB's review, the above referenced site meets the criteria for a low priority removal action. The site is located in an industrial area and is secured by a chain link fence. Two areas onsite which were identified as representing an immediate threat were inspected. An above-ground storage tank containing less than 2,000 gallons of tetraethyl lead has a badly corroded vent pipe, but no liquids were observed to be leaking. Also, several drums in a storage shed were found to be in poor condition, but again, no releases were discovered. In each of these cases, adequate secondary containment is present, which would prevent migration of a potential spill from the site.

Because the site has been given a low priority, a removal action will not be scheduled for anytime in the near future. As such, EPA would encourage the State of North Carolina to conduct any cleanup activities it may deem necessary at this site. The EPA On-Scene Coordinator learned during the recent site visit that there is a prospective purchaser for this property who hopes to operate a glycol recovery facility at this location. For more information regarding this matter, we recommend that you contact Jeff Babb with the US Coast Guard Marine Safety Office in Wilmington, at (919) 343-4894.

This determination does not preclude any other investigations or response actions by other parties. Should site conditions change or additional information become available, ERRB will re-evaluate

this site as necessary. Should you have any questions concerning ERRB's determination, please contact Mr. Shane Hitchcock, Chief of Removal Operations Section, at (404) 347-3931.

Sincerely,

Myron D. Lair, Chief
Emergency Response and Removal Branch

cc: Narindar Kumar, Site Assessment Section, EPA
Jeff Babb, USCG MSO-Wilmington

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

16 February 1990

Ms. Diane Harvell
Director of Environmental Health
New Hanover County Health Department
2029 South 17th Street
P.O. Box 3785
Wilmington, NC 28406

RE: Off-site reconnaissances

Dear Ms. Harvell:

David Lilley of the NC Superfund Section spoke with you today to notify you that the NC Superfund Section will conduct off-site reconnaissances of potential hazardous waste sites in the vacinity of the ATC Petrol plant in Wilmington, NC. The reconnaissances will be conducted on 19 February 1990 by Mark Durway and Ed Wallingford of the Superfund Section.

The purpose of the reconnaissances is to determine if the sites pose a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The reconnaissance team will locate all nearby water supplies (surface and groundwater, community and private) and any close sensitive environments, schools, and day care centers.

These reconnaissances are not emergency situations but are normal steps in the evaluation of all uncontrolled and unregulated potential hazardous waste sites in North Carolina. You may want to have your representative meet the reconnaissance team at the sites. If so, please contact Mark Durway at (919) 733-2801 and he will coordinate a meeting.

If these reconnaissances indicate the need for future study of the sites, we will contact your office to advise. If you have any questions, please don't hesitate to call David Lilley or me at (919) 733-2801.

Sincerely,

Grover Nicholson, Head
CERCLA Branch
Superfund Section

CV/db/sitenot.doc

Enclosures

cc: Gordon Layton
Doug Holyfield
Steve Reid
Lois Walker
Ann Rudd
David Lilley
File

Federal

Trip Notification & Authorization

Prepared by: DURWAY

Today's Date: 2/16/90

Site Trip

Date of Trip: 2/19/90

If trip date changed or cancelled note below:
Trip Date Changed To: _____ Cancelled: ____

NCD#: ~~981476708~~ Site Name: vicinity of ATC Petrol
City: WILMINGTON County: New HANOVER

Reason for Trip: former employee, Don Arthur, will show where waste was disposed. Possible ERRIS addition.

Name of Hotel (Overnight Trip): N/A Hotel Telephone Number: ( ) ___ - _____

(Please list appropriate County Health Department contact person to call to advise of trip)
Environmental Supervisor or Health Director to call: DIANNE HARVELL Title: DIR ENV HLTH
(Note if Dr., M.P., etc.)

Telephone Number: (919) 341 - 4191

Project Team Leader: M. DURWAY

Assistants: E. WALLINGFORD, _____, _____

Authorized by: David Bottelle
Industrial Hygienist

Attach To Notification Form: 4 copies each: Preliminary Assessment Form (First page only)
NONE - possible ERRIS addition. Notification Form
EPA Transmittal Letter

Staff Notification Procedures: Use **Black Ink** or **Typewriter** only*

1. This form goes to Data Management Coordinator (DMC) 10 days prior to trip
2. If date of trip changes - note change. Mark "X" if cancelled.
3. Day after trip, submit to Lee Crosby a short paragraph on site trip.

Notes: Health Department Official Contacted: Ms. Diane Harvell
Back Up Letter Required: Yes ✓ No ____

notified Ms. Harvell on 2-16-90 (DBC)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

AUG 05 1993

4WD-ERRB

RECEIVED
AUG 10 1993
SUPERFUND SECTION

RECEIVED
AUG 09 1993
NC DIVISION OF SOLID WASTE MANAGEMENT

Mr. Mike Kelly, Director
Solid Waste Management Division
North Carolina Division of
Solid Waste Management
P.O. Box 27687
Raleigh, North Carolina 27611-7687

RE: Old ATC Refinery, Wilmington, North Carolina

Dear Mr. Kelly:

On July 22, 1993, the U.S. Environmental Protection Agency's Emergency Response and Removal Branch (ERRB) reviewed the available information for the above referenced site to determine its eligibility for a potential removal action under the National Contingency Plan (NCP). The site information was evaluated using criteria from Section 300.415 of the NCP and current ERRB program guidance.

Based upon ERRB's review, the above referenced site meets the criteria for a low priority removal action. The site is located in an industrial area and is secured by a chain link fence. Two areas onsite which were identified as representing an immediate threat were inspected. An above-ground storage tank containing less than 2,000 gallons of tetraethyl lead has a badly corroded vent pipe, but no liquids were observed to be leaking. Also, several drums in a storage shed were found to be in poor condition, but again, no releases were discovered. In each of these cases, adequate secondary containment is present, which would prevent migration of a potential spill from the site.

Because the site has been given a low priority, a removal action will not be scheduled for anytime in the near future. As such, EPA would encourage the State of North Carolina to conduct any cleanup activities it may deem necessary at this site. The EPA On-Scene Coordinator learned during the recent site visit that there is a prospective purchaser for this property who hopes to operate a glycol recovery facility at this location. For more information regarding this matter, we recommend that you contact Jeff Babb with the US Coast Guard Marine Safety Office in Wilmington, at (919) 343-4894.

This determination does not preclude any other investigations or response actions by other parties. Should site conditions change or additional information become available, ERRB will re-evaluate

this site as necessary. Should you have any questions concerning ERRB's determination, please contact Mr. Shane Hitchcock, Chief of Removal Operations Section, at (404) 347-3931.

Sincerely,

Myron D. Lair, Chief
Emergency Response and Removal Branch

cc: Narindar Kumar, Site Assessment Section, EPA
Jeff Babb, USCG MSO-Wilmington

JAck

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

AUG 05 1993

4WD-ERRB

RECEIVED
AUG 10 1993
SUPERFUND SECTION

RECEIVED
AUG 09 1993
NC DIVISION OF SOLID WASTE MANAGEMENT

Mr. Mike Kelly, Director
Solid Waste Management Division
North Carolina Division of
Solid Waste Management
P.O. Box 27687
Raleigh, North Carolina 27611-7687

RE: Old ATC Refinery, Wilmington, North Carolina

Dear Mr. Kelly:

On July 22, 1993, the U.S. Environmental Protection Agency's Emergency Response and Removal Branch (ERRB) reviewed the available information for the above referenced site to determine its eligibility for a potential removal action under the National Contingency Plan (NCP). The site information was evaluated using criteria from Section 300.415 of the NCP and current ERRB program guidance.

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this site as necessary. Should you have any questions concerning ERRB's determination, please contact Mr. Shane Hitchcock, Chief of Removal Operations Section, at (404) 347-3931.

Sincerely,

Myron D. Lair, Chief
Emergency Response and Removal Branch

cc: Narindar Kumar, Site Assessment Section, EPA
Jeff Babb, USCG MSO-Wilmington

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR 29 1992

4WD-WPB

Ms. Pat DeRosa, Head
CERCLA Branch
North Carolina Department of Environment,
Health and Natural Resources
P.O. Box 27687
Raleigh, North Carolina 27611-7687

Dear Pat:

The following reports have recently been reviewed and accepted by the EPA - Region IV Site Assessment Section:

Preliminary Assessments

Durham Coal Gasification Plant NCD 986 173 938 Durham County	Site Inspection -Low Priority
Wilmington Coal Gas Plant NCD 986 188 910 New Hanover County	Site Inspection -High Priority
National Pin Services NCD 982 174 492 Wilson County	No Further Remedial Action Planned (NFRAP)
Greenville Coal Gas Plant NCD 986 188 886 Pitt County	Site Inspection -High Priority (Referred to EPA's Emergency Response & Removal Branch)

Site Inspections

Ideal Basic Industries NCD 980 557 839 New Hanover County	No Further Remedial Action Planned (NFRAP)
Old ATC Refinery NCD 986 186 518 New Hanover County	Expanded Site Inspection High Priority
Caro-Knit NCD 986 171 965 New Hanover	High Priority for PRESCORE scoring (assigned to EPA contractor)
GTE Sylvania NCD 009 305 699 Johnston County	Expanded Site Inspection Medium Priority

Printed on Recycled Paper

If you have any questions regarding these decisions, please contact me at (404) 347-5065.

Sincerely,

Cathy Amoroso

Cathy Amoroso
Environmental Scientist

cc: Grover Nicholson, NCDEHNR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

RECEIVED
MAY 5 1992
SUPERFUND SECTION

APR 29 1992

4WD-WPB

Ms. Pat DeRosa, Head
CERCLA Branch
North Carolina Department of Environment,
Health and Natural Resources
P.O. Box 27687
Raleigh, North Carolina 27611-7687

Dear Pat:

The Site Inspection report for the Old ATC Refinery (NCD986186518) has recently been reviewed and accepted by EPA-Region IV's Site Assessment Section. EPA's ARCS contractor has been tasked to do an Expanded Site Inspection on the site on a high priority basis.

If you have any questions regarding these decisions, please contact me at (404) 347-5065.

Sincerely,

Cathy Amoroso

Cathy Amoroso
Environmental Scientist

Printed on Recycled Paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

DATE: 5/11/92

SUBJECT: OLD ATC REFINERY
WILMINGTON, N.C.

FROM: DORA ANN JOHNSON, OSC DAJ

TO: THE FILE

RECEIVED
JUN 2 1992
NC DIVISION OF SOLID WASTE MANAGEMENT

On April 7, 1992 EPA OSC Johnson responded to the Old ATC Refinery in Wilmington, N.C. escorted by Jeff Babb of the Wilmington Marine Safety Office. The phone number at the Marine Safety Office is as follows (919)347-4894, FTS-671-4894.

Upon arrival at the Wilmington Airport, Mr. Babb drove OSC Johnson to the site. The site was the location of a past large scale oil refinery. The site has been slowly releasing oil from the soils into the Cape Fear River for almost one year. The Coast Guard had requested that EPA respond to the site and give information to the Coast Guard as to the possibility of taking the site over and utilizing CERCLA fund for the remaining cleanup of the site. At the present time the Oil Pollution Act (OPA) funds are being utilized to respond to oil in the waterway nearby. OSC Johnson informed the Coast Guard officer onsite as well as at the Marine Safety Office that EPA would have to open the OPA fund which is already being used to prevent the oil from entering the river. OSC Johnson also informed the Coast Guard of their ability to clean up contaminated soils at the site with the OPA. OPA funds can be spent on areas where the soils were only contaminated with oil and not solvents or other chemical waste materials in the area of oil release.

In summary, OSC Johnson would not commit EPA to respond to the oil contamination as an emergency with the OPA money being utilized at this time. The CERCLA money would only be used in cases where there were obvious chemical waste or contaminated soils not related to oil. At this site, CERCLA funds would not be used to cleanup the sheen from the oil contaminated soil but could be used for the removal of acids, bases, oxidizers and the tetraethyllead tank that were present onsite. Once funds become available to initiate an emergency cleanup or stabilization of the tetraethyllead tank and other remaining contaminants onsite, the Coast Guard and other interested governmental agencies can be notified. The EPA is presently pursuing ranking the site on the NPL.

Printed on Recycled Paper

22 April 1992

TO: File

FROM: Jack Butler

SUBJECT: Old ATC Refinery, NCD986186518

Ms. Dora Ann Danner, EPA Removal Section (404/347-3931), contacted our office on 21 April 1992 concerning the subject site. Ms.Danner confirmed that she had visited the site to evaluate it for a removal action; however, she could not identify anything that required immediate action. Ms. Danner added that she had not, and would not be preparing a report of this visit.

JB/dk/3

21 April 1992

TO: File

FROM: Jack Butler

SUBJECT: Old ATC Refinery, NCD986186518

Ms. Kathy Amoroso, EPA Region IV (404/347-5065), contacted our office on this date concerning the subject site. Ms. Amoroso reported that she had talked to Mr. Jeff Babb, U.S. Coast Guard (919/671-4894), who reported that the Coast Guard had been involved with this site since the mid 1970's. Ms. Amoroso also reported that, at her request, Ms. Dora Ann Danner, EPA Removal Section (404/347-3931), had visited the site a couple of weeks ago. Ms. Amoroso added that the Removal Section probably will not be able to help at this site largely due to funding limitations. Ms. Amoroso said she will be notifying our office in writing in the near future that this site can go on for an ESI.

JB/dk/2

WILM...GTON, N.C.

FEB 21 92

Old ATC Refinery

Morning Star, Friday, February 21, 1992

389 – 390 – 144 – 411

UNTY WANTS STATE TO TEST LAND / Property owner denies allegation

Ex-worker: Refinery sludge was dumped in Pender

ANDREA MONROE
Writer

Pender County officials plan to ask the .C. Division of Environmental Management test land near Burgaw that a former ATC troleum Co. employee says was used as a troleum sludge dumping site between 1983 1985.

Frank George said he and another ATC ployee helped George Potter, then owner the George W. Potter Septic Tank Ser-, haul five or six truckloads of petroleum lge from storage tanks at a Wilmington nery to a field on Stag Park Road south of urgaw.

The owner of the land and the current own- of the septic tank company deny Mr. orge's allegations. A spokesman for ATC uld not comment Thursday.

Pender County Administrator Jerry Randall said he has asked the county Health Department to contact the DEM about testing the site.

The Surry Street refinery, now owned by City Gas & Transmission Corp., has gone through several owners and operators since it was built in 1971. Axel Johnson Inc. of Manhattan, which owned Titan Petroleum and ATC Petroleum, produced petroleum products at the refinery from 1971 to 1981, Robert Way, a spokesman for Axel Johnson, said Thursday.

Donald Arthur of Wilmington worked at the refinery for 11 years. Mr. Arthur said Axel Johnson used the site for oil storage after it stopped operating the refinery. Mr. Arthur filed suit Monday against Axel Johnson, alleging the company failed to inform employees that they were handling toxic materials. The suit says he suffered nerve damage after being exposed to sulfur dioxide, lead and other materials at the site.

Mr. Way refused to comment on Mr. Arthur's lawsuit. He also refused to comment on Mr. George's allegation that sludge from the storage tanks was dumped in Pender County.

CG&T bought the refinery from Winston-Salem oil man Roger Page in 1986. The company emerged from Chapter 11 bankruptcy this week and has announced plans to sell the refinery.

Mr. George said the sludge — gooey, foul-smelling oil — was sucked out of storage tanks, loaded into the septic tank trucks and hauled to the site. He said the sludge was then pumped out with a hose and spread on a field owned by Hugh Overstreet.

"It was where nobody could see you," Mr. George said. "It was way back down in the field."

Mr. Overstreet said he was shocked by Mr. George's allegations. He said Mr. Potter spread septic tank waste on the land from about 1984 to 1990, but he does not remember seeing any oil sludge. The county or the state checked the land each year it was in use, he said, and did not find any viol-

The state Division of Solid Waste Management, which has issued septage dumping permits since 1989, does not have a record of violations by George W. Potter Septic Tank Service, said Angie Coppola with the septage management branch. The county Health Department issued the permits prior to 1989. Harry Lewis, Pender's environmental health supervisor, said he does not remember having any problems with the Overstreet site.

Ace Potter, now owner of George W. Potter Septic Tank Service, said he cannot believe his father would have dumped petroleum sludge on anyone's land. Ace Potter start-

Please see **SLUDGE** *on page 2B*

Sludge

Continued from page 1B

ed running the business in 1990 after his father died.

"I just can't believe that, as much as my father feared the law," Mr. Potter said.

State law prohibits the spreading of petroleum sludge without a permit, Ed Beck, an environmental engineer in DEM's Wilmington office, said Thursday.

Mr. Beck said septage tests that were performed on the Overstreet site probably would not detect petroleum, lead or other heavy metals. He said he will talk with officials from the septage management branch this week to decide who will test the site for heavy metals.

"The next step is to decide who's going to take a look at the site and figure out what happened there," he said.

Both Mr. Overstreet and Mr. Potter said they welcome a state investigation of the site.

13 February 1992

TO: File

FROM: Jack Butler

SUBJECT: Old ATC Refinery
NCD 986 186 518

On this date, Hanna Assefa and I discussed the status and history of the subject site with Rodney Ingle, TV-3, Wilmington (919/763-0979), and with Merton Vance, Wilmington Star News.

JB/dk/1

FILE COPY

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

May 28, 1991

Mr. Thomas Stich
Sanitarian Supervisor
Environmental Health Division
New Hanover County Health Department
2029 S. 17th Street
Wilmington, North Carolina 28401

RE: Screening Site Investigation
Old ATC Refinery
NCD986186518

Dear Mr. Stich:

David Lilley of the NC Superfund Section spoke with Harriet Mitchell of your office today to notify you that the NC Superfund Section will conduct a screening site investigation of the subject site located in New Hanover County, North Carolina. The investigation will be conducted on June 6, 1991 by Hanna Assefa of the NC Superfund Section.

The purpose of the investigation is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The investigation team will take samples on and around the site to determine if a hazardous condition exists. Additionally, they will locate all nearby water supplies (surface and groundwater, community and private) and any close sensitive environments, schools, and day care centers.

This investigation is not an emergency situation but is a normal step in the evaluation of all uncontrolled and unregulated potential hazardous waste sites in North Carolina. You may want to have your representative meet the investigation team at the site. If so, please contact Hanna Assefa at (919) 733-2801 and she will coordinate a meeting. I am enclosing background data on the site for your information.

If the investigation indicates the need for future study of the site, we will contact your office to advise. If you have any questions, please don't hesitate to call David Lilley or me at (919) 733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
Superfund Section

Enclosures

cc: Dexter Matthews
Doug Holyfield
Steve Reid
Patricia Bowden
Ann Rudd
David Lilley
File

Federal
Trip Notification & Authorization

Prepared by: Hanna Assefa

Today's Date: 05/28/91

*Use Black Ink or Typewriter only-Staff to fill out first 2 blocks only.

Site Trip

Date of Trip: June 06 1991

If trip date changed or cancelled note below:
Trip Date Changed To: _____ Cancelled: ___

NCD#: 986-186-518 Site Name: OLD ATC REFINARY
City: WILMINGTON County: New Hanover.

Reason for Trip: Screening Site Investigation

Name of Hotel (Overnight Trip): _____ Hotel Telephone Number: ( ) ___ - _____

Authorized by: David B. Lilley
Industrial Hygienist

Project Team Leader: Hanna Assefa

Assistants: Mark Durway, David Lilley, _____

Attach To Notification Form: 1 copy each:
Submit to the
Industrial Hygienist

- Preliminary Assessment Form (First page only)
- Site Map
- PA Transmittal Letter

(Please list appropriate County Health Department contact person to call to advise of trip)
Environmental Supervisor or Health Director to call: Thomas Stich Title: Sanitarian Supervisor
(Note if Dr., M.P., etc.)
Telephone Number: (919) 251-3250

Notes: Health Department Official Contacted: Harriet Mitchell
Back Up Letter Required: Yes ✓ No ___
Notified Ms. Mitchell for Thomas Stich on 5-28-91 (DBL)

Note: Signed original to Data Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

FILE COPY

APR 25 1991

RECEIVED
MAY 07 1991
SUPERFUND SECTION

4WD-WPB

Ms. Pat DeRosa
Superfund Section
Division of Solid Waste Management
North Carolina Department of Environment,
Health and Natural Resources
P.O. Box 27687
Raleigh, North Carolina 27611

Dear Ms. DeRosa:

The U.S. Environmental Protection Agency, Region IV has reviewed the Preliminary Assessment prepared by your office for the Old ATC Refinery (NCD986186518), Wilmington, North Carolina. The Region concurs with the State recommendation for a Screening Site Inspection (SSI). Attached are comments pertaining to this site that should be addressed during the SSI.

If you or your staff have any questions, please contact me at (404) 347-5065.

Sincerely yours,

Deborah A. Vaughn-Wright

Deborah A. Vaughn-Wright
Project Manager

Enclosure

Old ATC Refinery
PA Review Comments

Petroleum Exclusion

* The major regulatory concern at this site is the applicability of the Petroleum Exclusion (CERCLA § 101(14) and 104(2)). Enclosed are several memorandums discussing this exclusion.

* Under the Petroleum Exclusion, the Superfund Program can only look at waste generated by "RCRA" like activities (40 CFR § 261.32, K waste 048 through 52 and Appendix VII):

  Slop oil emulsion solids
  Heat exchanger bundle cleaning sludge
  API separator sludge
  Leaded tank bottoms

* Though many contaminants may be associated with a refinery, due to the Petroleum Exclusion, we are limited to lead and/or hexavalent chromium and non-petroleum related organics (i.e. - PBC, pesticides).

* The PA discusses an oil water separator. It must be determined if it is an API separator. This would affect using the unit as a source.

NPDES Permit

* Is there a history of permit violations?

* What hazardous substances were analyzed, if any?

Surrounding Industry

* Because the site is in a heavily industrialized area, possible outside sources of contamination should be identified. This will help in attributing contamination to the site.

Lee — FYI

FILE COPY

LAW OFFICES
OF
BRUCE H. ROBINSON, JR.
P. O. BOX 625
WALLACE, NORTH CAROLINA 28466
TELEPHONE: (919) 285-7534

RECEIVED
JUN 10 1991
SUPERFUND SECTION

May 23, 1991

COPY

Ms. Hanna Assefa
Environmental Chemist
N.C. Superfund Section
N.C. Department of Environment, Health &
Natural Resources
P.O. Box 27687
Raleigh, NC 27611-7687

RE: Preliminary Assessment
Old ATC Refinery
Wilmington, New Hanover County, NC
NCD TBA

Dear Ms. Assefa:

This is in response to your letter of March 27, 1991 to Earl Boseman. I represent Donald Arthur, Sr., who is currently attempting to find out what kind of contamination there was on the site. It is urgent that this information be made available right away because of Mr. Arthur's health condition as diagnosed by his physician.

I know there has been some delay in the examination of this site based on other correspondence in the file. It is urgent to us that we know when this examination will be compelted so we can know what contamination Mr. Arthur has been exposed to and what, if anything, can be done to help him.

I am sending a copy of this letter to Mrs. Cheryl A. McMorris (Environmental Chemist, CERCLA Unit, Solid and Hazardous Waste Management Branch, Environmental Health Section, N.C. Department of Human Resources, Raleigh, NC), who wrote a letter dated February 6, 1987 concerning this problem.

I am also sending a copy of this letter to Pat DeRosa (Waste Management Specialist, CERCLA Unit, Solid and Hazardous Waste Management Branch, Environmental Health Section, NC Department of Human Resources, Raleigh, NC), who wrote a letter dated September 3, 1987 to Ms. Denise Smith.

I am also sending a copy of this letter to Mr. C. Mark Durway , Hydrogeologist, Superfund Section, NC Department of Environment, Health and Natural Resources, Raleigh, NC), who wrote a letter to Mr. Arthur in November of 1990.

I am today requesting Karen Gottovi, State Legislator for this area, to help us in trying to get this site investigated quickly. She also wrote us a letter, and I am sending her a complete package of the pertinent information relating to the problem.

I would very much appreciate a prompt response from your office as time is critical.

Sincerely,

BRUCE ROBINSON, JR.

BHRjr/fw

cc: Ms. Cheryl A. McMorris
Ms. Pat DeRosa
Mr. C. Mark Durway
Ms. Karen Gottovi
Mr. Donald Arthur, Sr.

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

February 11, 1991

Mr. Thomas Stich
Sanitarian Supervisor
New Hanover County Health Department
Environmental Health Division
2029 South 17th Street
Wilmington, NC 28401

RE: Preliminary Assessment
On-Site Reconnaissance
Old ATC Refinery
NCD TBA

Dear Mr. Stich:

David Lilley of the North Carolina Superfund Section spoke with you today to notify you that the North Carolina Superfund Section will conduct an on-site reconnaissance of the subject site located in New Hanover County, North Carolina. The reconnaissance will be conducted on February 21, 1991 by Hanna Assefa of the North Carolina Superfund Section.

The purpose of the reconnaissance is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The reconnaissance team will locate all nearby water supplies (surface and groundwater, community and private) and any close sensitive environments, schools, and day care centers.

This reconnaissance is not an emergency situation but is a normal step in the evaluation of all uncontrolled and unregulated potential hazardous waste sites in North Carolina. You may want to have your representative meet the reconnaissance team at the site. If so, please contact Hanna Assefa at (919) 733-2801 and she will coordinate a meeting. I am enclosing background data on the site for your information.

If the reconnaissance indicates the need for future study of the site, we will contact your office to advise. If you have any questions, please don't hesitate to call David Lilley or me at (919) 733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
Superfund Section

Enclosures

cc: Jim Coffey
Doug Holyfield
Steve Reid
Patricia Bowden
Ann Rudd
David Lilley
File

Federal
Trip Notification & Authorization

Prepared by: Hanna Assefa

Today's Date: 2/10/91

*Use Black Ink or Typewriter only-Staff to fill out first 2 blocks only.

Site Trip

Date of Trip: 2/21/91

If trip date changed or cancelled note below:
Trip Date Changed To: _____ Cancelled: ___

NCD#: TBA Site Name: OLD ATC REFINARY
City: WILMINGTON County: New Hanover

Reason for Trip: Preliminary Assesment on-site reconnaissance

Name of Hotel (Overnight Trip): _____ Hotel Telephone Number: ( ) ___ - _____

Authorized by: David B. [signature]
Industrial Hygienist

Project Team Leader: Hanna Assefa

Assistants: Jack Butler, _____, _____

Attach To Notification Form: 1 copy each:
Submit to the
Industrial Hygienist

Preliminary Assessment Form (First page only)
Site Map
PA Transmittal Letter

(Please list appropriate County Health Department contact person to call to advise of trip)
Environmental Supervisor or Health Director to call: Tom Stich Title: Sanitarian Supervisor
(Note if Dr., M.P., etc.)
Telephone Number: (919) 251 - 3250

Notes: Health Department Official Contacted: Tom Stich
Back Up Letter Required: Yes ✓ No ___
Notified Mr. Stich on 2-11-91 (DBL)

Note: Signed original to Data Manager

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

26 November 1990

The Honorable Don Betz
Mayor of Wilmington
Post Office Box 1810
Wilmington, NC 28402

Dear Mayor Betz:

In response to your letter concerning old ATC Refinery, I would like to assure you that we are proceeding with an evaluation of the site. The site has been added to the U.S. Environmental Protection Agency Comprehensive Environmental Response, Compensation, and Liability Inventory System (CERCLIS). The CERCLIS site addition letter to EPA has been enclosed for your information.

We also plan to conduct a site investigation early next year to collect additional information. Mark Durway, a hydrogeologist in the Superfund Section, will be the project manager for the investigation. Pat DeRosa, the CERLCA Branch Head, will be coordinating activities with EPA.

If you have any questions or need any additional information, please do not hesitate to contact Mark Durway, Pat DeRosa, or me. We may be reached at the above address or at (919) 733-2801.

Sincerely,

Lee Crosby

Lee Crosby, Chief
Superfund Section

LC/acr

Enclosures

cc: William L. Meyer

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

November 7, 1990

Ms. Kelly Cain
N.C. CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Subject: CERCLIS Site Addition
Old ATC Refinery
601 Surry Street
Wilmington, NC 28401

Dear Ms. Cain:

Please add the subject site to CERCLIS. Preliminary data indicates the following about the site:

1) This refinery operated from 1972 to 1980 as a topping plant which made residual fuels, chiefly naphtha #2 and fuel #6.

2) A former employee has indicated there were three petroleum sludge pits, a vanadium pentoxide disposal area, and a leaking lead additive line at this site.

3) The refinery is located on the Cape Fear River, which is a major commercial and recreational fishery. This river supports the Cape Fear River estuary which is an important wetland and habitat for several endangered species.

4) An estimated 100 to 1000 ground water users live within three miles of the site. There are no surface water intakes downstream of the site.

A Site Discovery Form is attached. If additional information is needed, please contact Mark Durway or me at (919) 733-2801.

Sincerely,

Lee Crosby

Lee Crosby, Chief
Superfund Section

LC/dmd/atc.ad

Attachment

cc: Pat DeRosa
Pat Bowden
File

SITE DISCOVERY FORM

Part 1: Information necessary to add a site to CERCLIS

ACTION: A

EPA ID: NCD TBA

SITE NAME: Old ATC Refinery SOURCE: T (R=EPA, T=STATE)

STREET: 601 Surry Street CONG DIST: 07 (optional)

CITY: Wilmington ZIP: 28401

CNTY NAME: New Hanover CNTY CODE: 65 (optional)

LATITUDE: 34°/13'/39" LONGITUDE: 77°/56'/20" (optional)

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N

RPM NAME: RPM PHONE: - - (EPA Project Officer)

SITE DESCRIPTION: (optional)

This refinery is located on the Cape Fear River within the city of Wilmington. Although it is not presently operating, its new owner hopes to reopen it soon.

Part 2: Other Site Information

DATE SITE FIRST

REPORTED: 2 /19 /90 REPORTED BY: Donald Ray Arthur, Sir.

REASON FOR LISTING:

A former employee has indicated that there were three petroleum sludge pits, a vanadium pentoxide disposal area, and a leaking lead additive line at this old refinery. Past waste handling practices may pose a threat to fisheries and endangered species of the Cape Fear River and estuary.

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

November 7, 1990

Ms. Kelly Cain
N.C. CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Subject: CERCLIS Site Addition
Old ATC Refinery
601 Surry Street
Wilmington, NC 28401

Dear Ms. Cain:

Please add the subject site to CERCLIS. Preliminary data indicates the following about the site:

1) This refinery operated from 1972 to 1980 as a topping plant which made residual fuels, chiefly naphtha #2 and fuel #6.

2) A former employee has indicated there were three petroleum sludge pits, a vanadium pentoxide disposal area, and a leaking lead additive line at this site.

3) The refinery is located on the Cape Fear River, which is a major commercial and recreational fishery. This river supports the Cape Fear River estuary which is an important wetland and habitat for several endangered species.

4) An estimated 100 to 1000 ground water users live within three miles of the site. There are no surface water intakes downstream of the site.

A Site Discovery Form is attached. If additional information is needed, please contact Mark Durway or me at (919) 733-2801.

Sincerely,

Lee Crosby

Lee Crosby, Chief
Superfund Section

LC/dmd/atc.ad

Attachment

cc: Pat DeRosa
Pat Bowden
File

SITE DISCOVERY FORM

Part 1: Information necessary to add a site to CERCLIS

ACTION: A

EPA ID: NCD TBA

SITE NAME: Old ATC Refinery SOURCE: T (R=EPA, T=STATE)

STREET: 601 Surry Street CONG DIST: 07 (optional)

CITY: Wilmington ZIP: 28401

CNTY NAME: New Hanover CNTY CODE: 65 (optional)

LATITUDE: 34°/13'/39" LONGITUDE: 77°/56'/20" (optional)

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N

RPM NAME: RPM PHONE: - - (EPA Project Officer)

SITE DESCRIPTION: (optional)

This refinery is located on the Cape Fear River within the city of Wilmington. Although it is not presently operating, its new owner hopes to reopen it soon.

Part 2: Other Site Information

DATE SITE FIRST

REPORTED: 2 /19 /90 REPORTED BY: Donald Ray Arthur, Sir.

REASON FOR LISTING:

A former employee has indicated that there were three petroleum sludge pits, a vanadium pentoxide disposal area, and a leaking lead additive line at this old refinery. Past waste handling practices may pose a threat to fisheries and endangered species of the Cape Fear River and estuary.

DATE 11-19-90

INTEROFFICE LOG ITEM ROUTING SLIP

Log Item Number 179

Referred to: Lee

Addressee: Don Betz, Mayor
City of Wilmington
P.O. Box 1810
Wilmington NC 28402

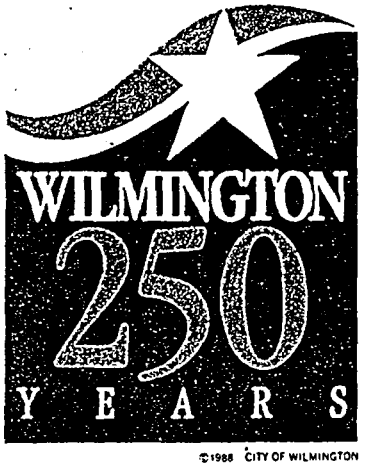
RE: Possible hazardous waste buried at former ATC Refinery now owned by CGT. Requests an investigation and if hazardous wastes are found initiate clean up action.

P.S.: Don CGT is under new ownership. CC: Bill
[illegible] Bill & [illegible] the letter [illegible]
[illegible] the situation.

Please return routing slip and copy of reply to Division Office by

11-26-90

Jerry Lee



November 13, 1990

Mr. William L. Meyer, Director
Division of Solid Waste Management
401 Oberlin Road
Raleigh, NC 27605

Dear Mr. Meyer:

I have been contacted by Mr. Donald Arthur concerning possible hazardous wastes buried at the former ATC Refinery now owned by CG&T. It is my understanding that he has also contacted your Division with this information.

The City is concerned about the existence of such potentially hazardous waste sites and the threat that they present to the health and safety of our residents. I encourage you to take immediate steps to investigate the refinery site, and if hazardous wastes are found, to initiate appropriate further action to get the side cleaned up.

It would be helpful if you would inform me of the approximate date that the site will be investigated so that I can reassure Mr. Arthur that action will be taken.

Please call if we can provide any assistance.

Sincerely,

Don Betz
Mayor

DB:teb

DON BETZ
Mayor

LUTHER H. JORDAN, JR.
Mayor Pro-Tem

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Chairman of the 250th Anniversary Commission

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Chairman of the Fund Raising Campaign

1739-1989
Wilmington's 250th Year
Anniversary Celebration
Post Office Box 1810
Wilmington, North Carolina
28402 919-341-7815