




Imagery Source: Historical Aerial Photograph #13 (09/17/1980)

Areas addressed under the UAO:

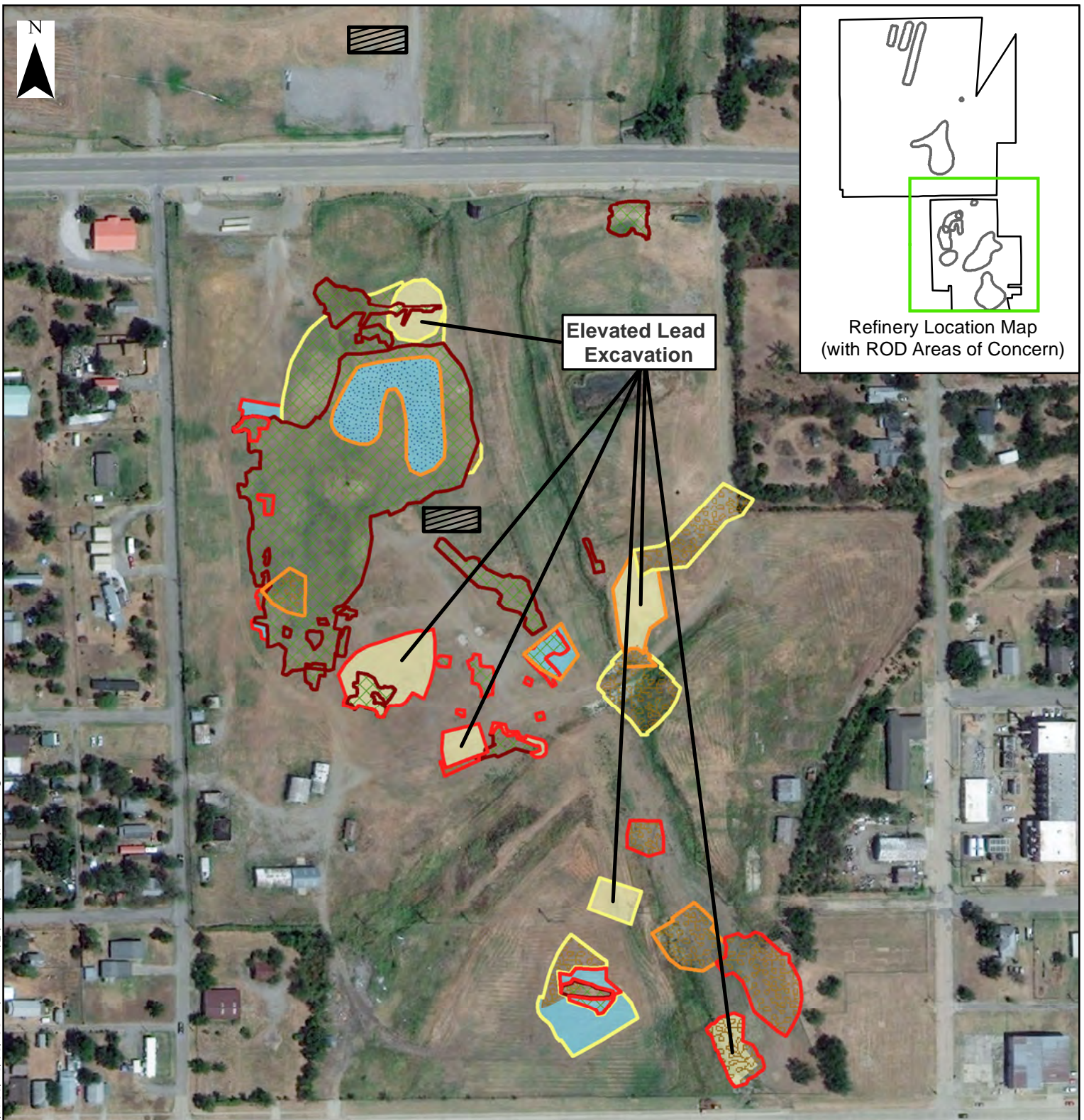
 Soil Removal Excavated to Greater than 2 Feet for Visual Confirmation

 Visual Contamination (Initial Excavation to 2 Feet)

0 40
Base Aerial: 1980  Feet

Area Addressed Under the
UAO within AA-1

FIGURE
42



Refinery Location Map
(with ROD Areas of Concern)

Elevated Lead
Excavation

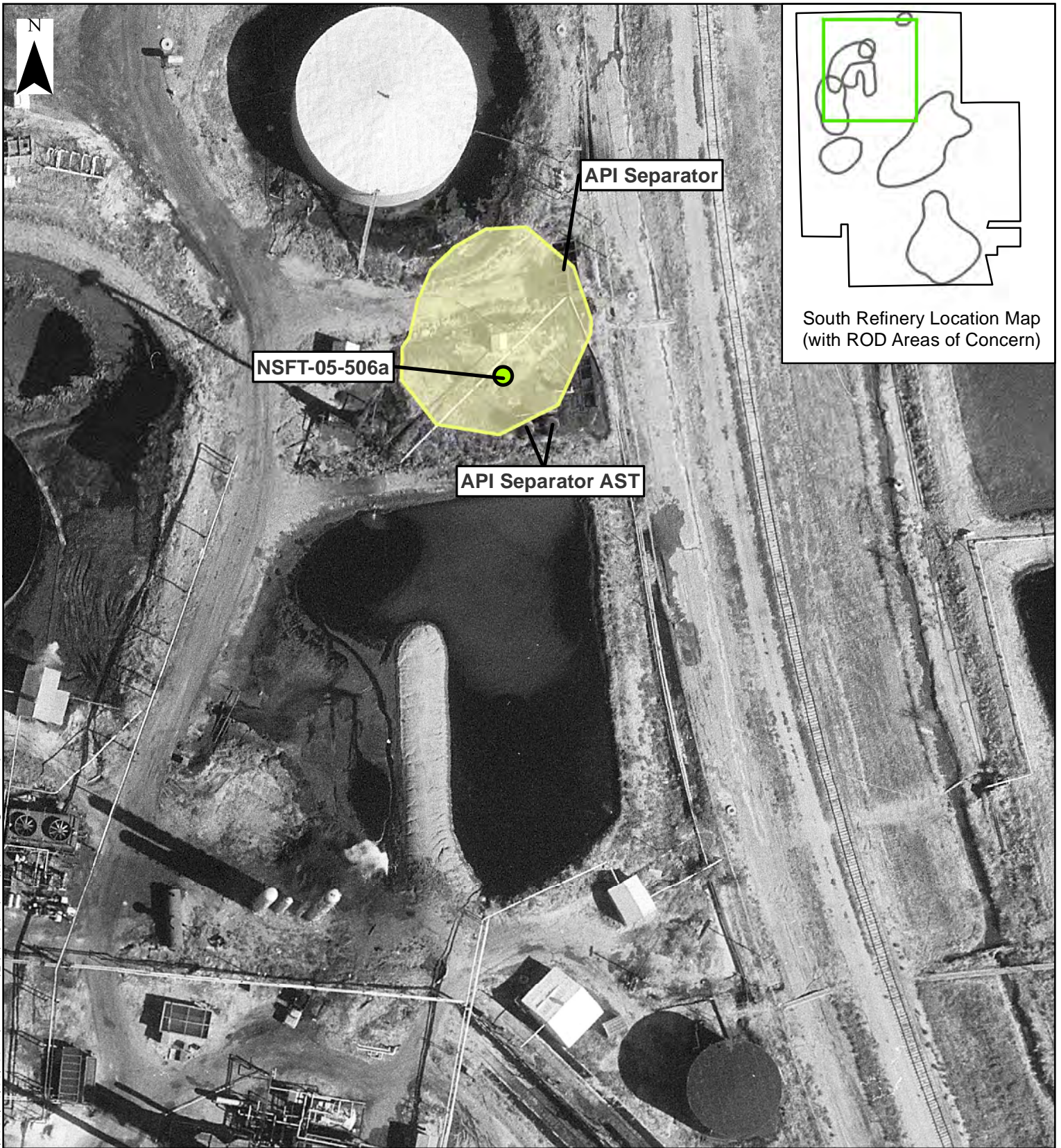
Imagery Source: Historical Aerial Photograph #38 (08/05/2011)

Areas addressed under the UAO:		Visual Contamination (Initial Excavation to 2 Feet)	TEL Storage
 Soil Removal Excavated to Greater than 2 Feet for Visual Confirmation		 Benzo(a)anthrene	
 Soil Removal Excavated to Minimum Depth of 24 Inches		 Benzo(a)pyrene	
 Soil Removal Excavated to Minimum Depth of 15 Inches		 Arsenic	
 Soil Removal Excavated to Minimum Depth of 6 Inches		 Lead	

Base Aerial: 2011 0 200
Feet

Areas Addressed Under the UAO for Lead

FIGURE
43

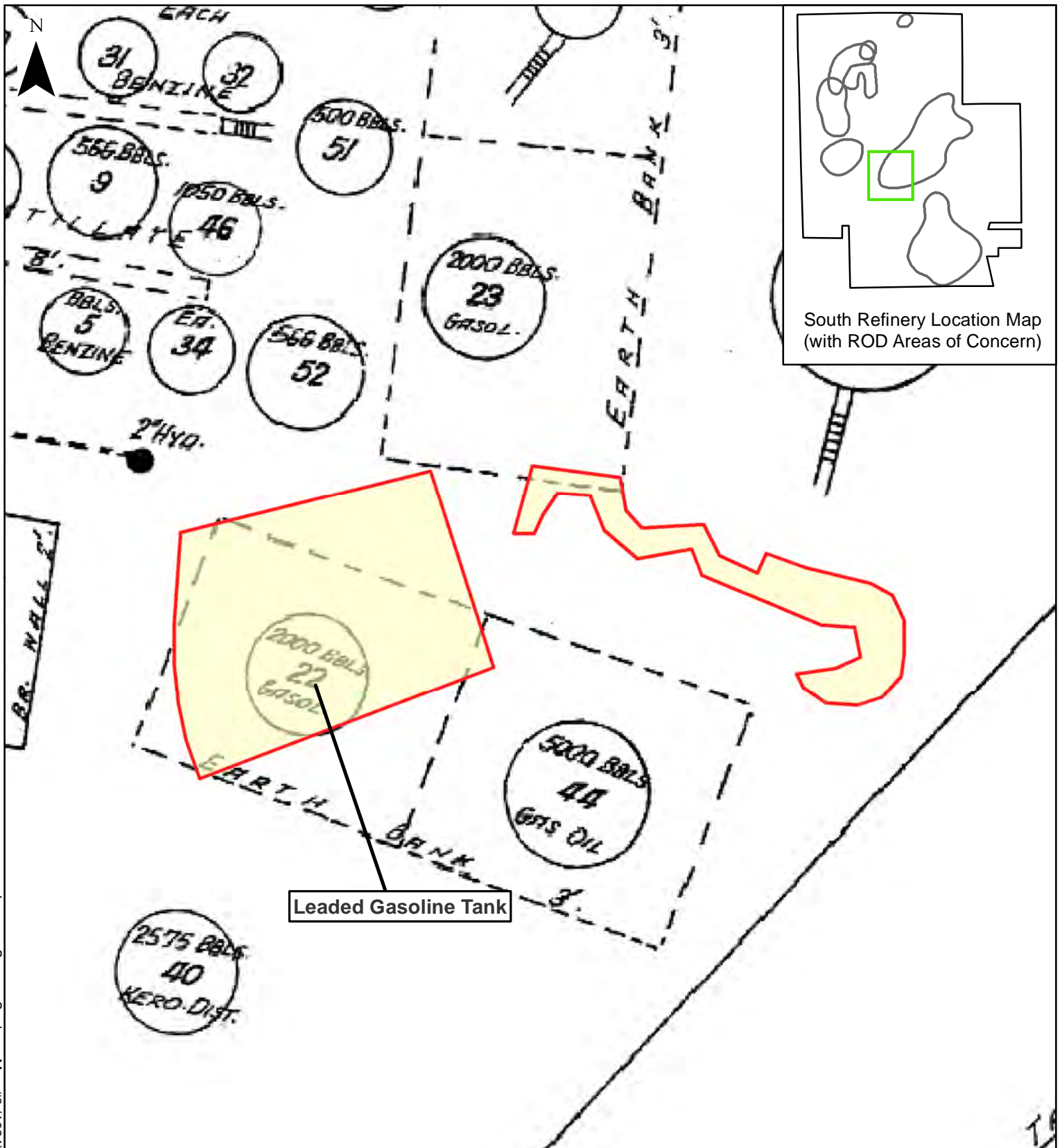


Imagery Source: Historical Aerial Photograph #13 (09/17/1980)

<p>Areas addressed under the UAO:</p> <p> Soil Removal Excavated to Minimum Depth of 6 Inches</p>	<p> Lead</p> <p>0 80 Base Aerial: 1980 Feet</p>
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Area Addressed Under the UAO
for Lead within SAOC 5-1

FIGURE
44



South Refinery Location Map (with ROD Areas of Concern)

Leaded Gasoline Tank

Areas addressed under the UAO:

Soil Removal Excavated to Minimum Depth of 24 Inches

Lead

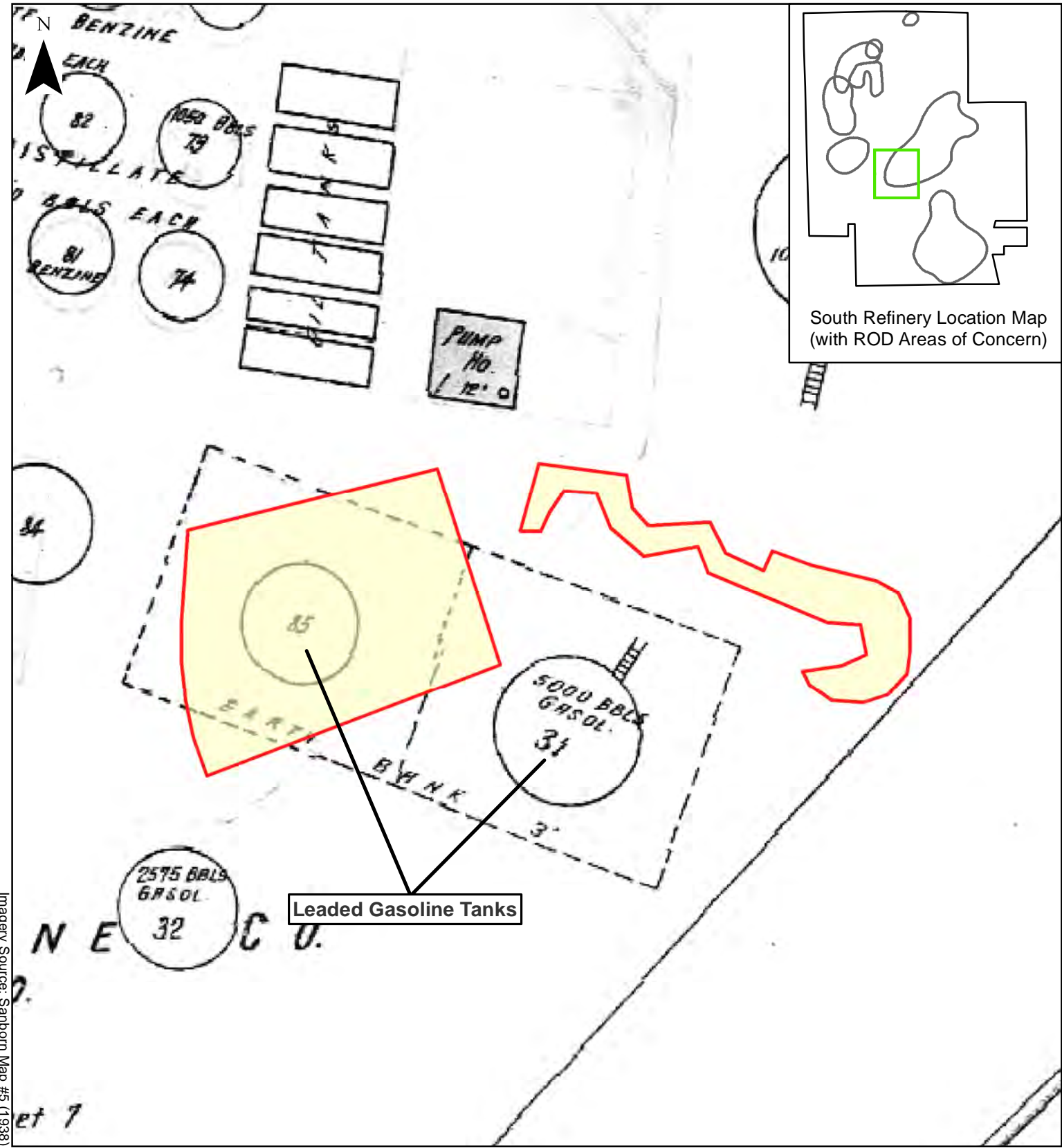
0 40
Feet

Sanborn Map: 1924

Areas Addressed Under the UAO for Lead within SAOC 2-5 and 2-6

FIGURE 45

Imagery Source: Sanborn Map #3 (1924)



Imagery Source: Sanborn Map #5 (1938)

Areas addressed under the UAO:

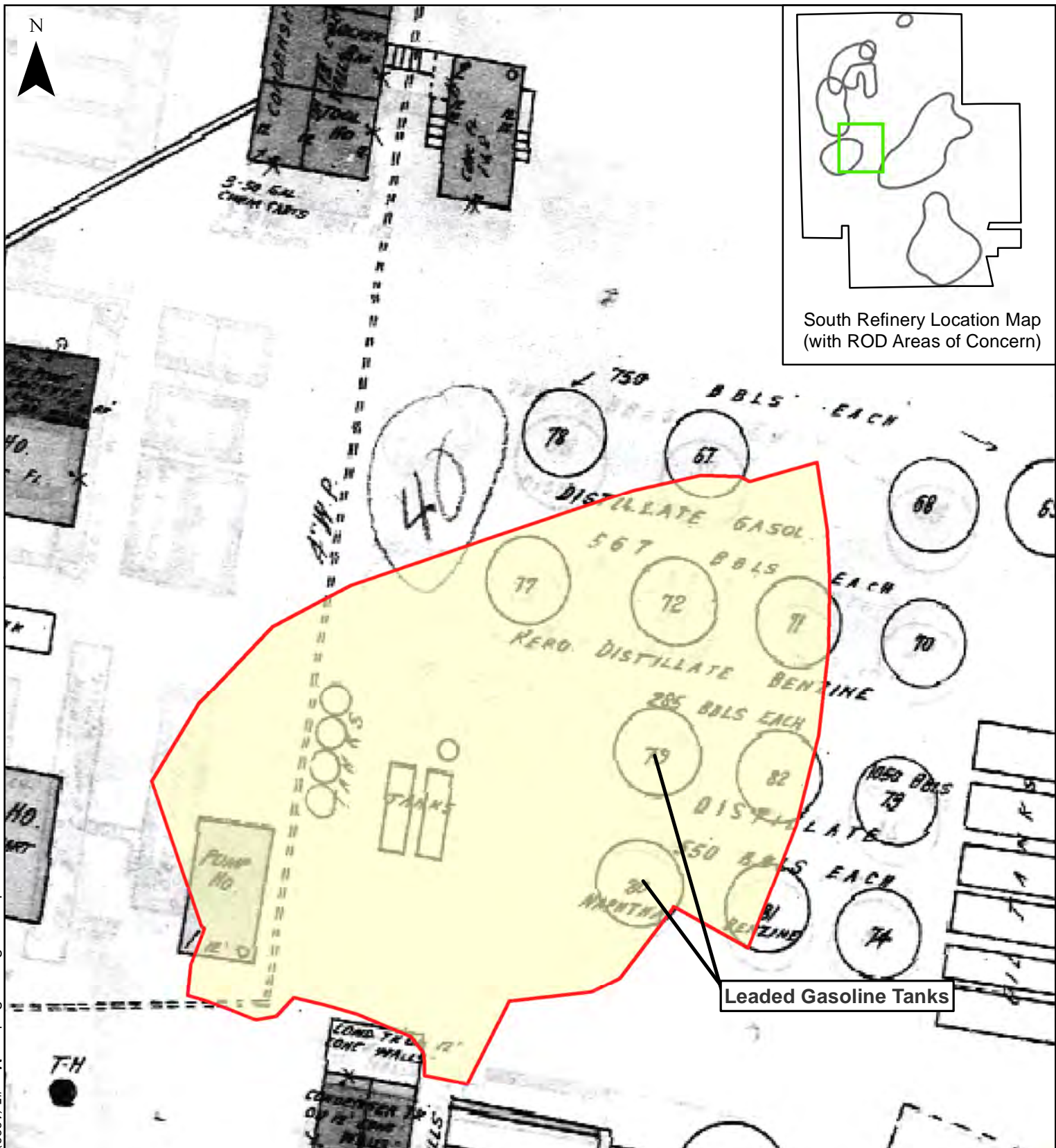
- Soil Removal Excavated to Minimum Depth of 24 Inches
- Lead

Sanborn Map: 1938

0 40
Feet

Areas Addressed Under the UAO
for Lead within SAOC 2-5 and 2-6


FIGURE
46



South Refinery Location Map
(with ROD Areas of Concern)

Leaded Gasoline Tanks

Areas addressed under the UAO:

 Soil Removal Excavated to Minimum Depth of 24 Inches

 Lead

0 40
Feet

Sanborn Map: 1938

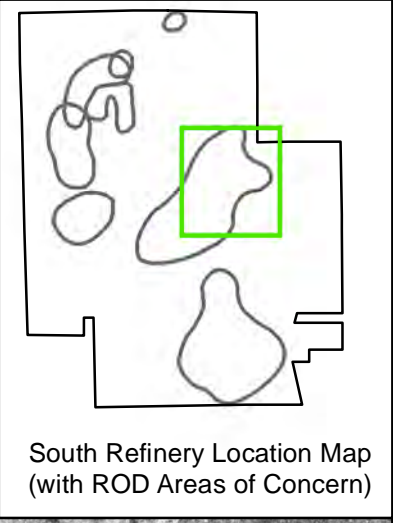
Areas Addressed Under the UAO for
Lead within SAOC 3-5, 3-6 and 3-7

FIGURE
47

Imagery Source: Sanborn Map #5 (1938)





Tank 93, Gasoline



Imagery Source: Historical Aerial Photograph #13 (09/17/1980)

Areas addressed under the UAO:

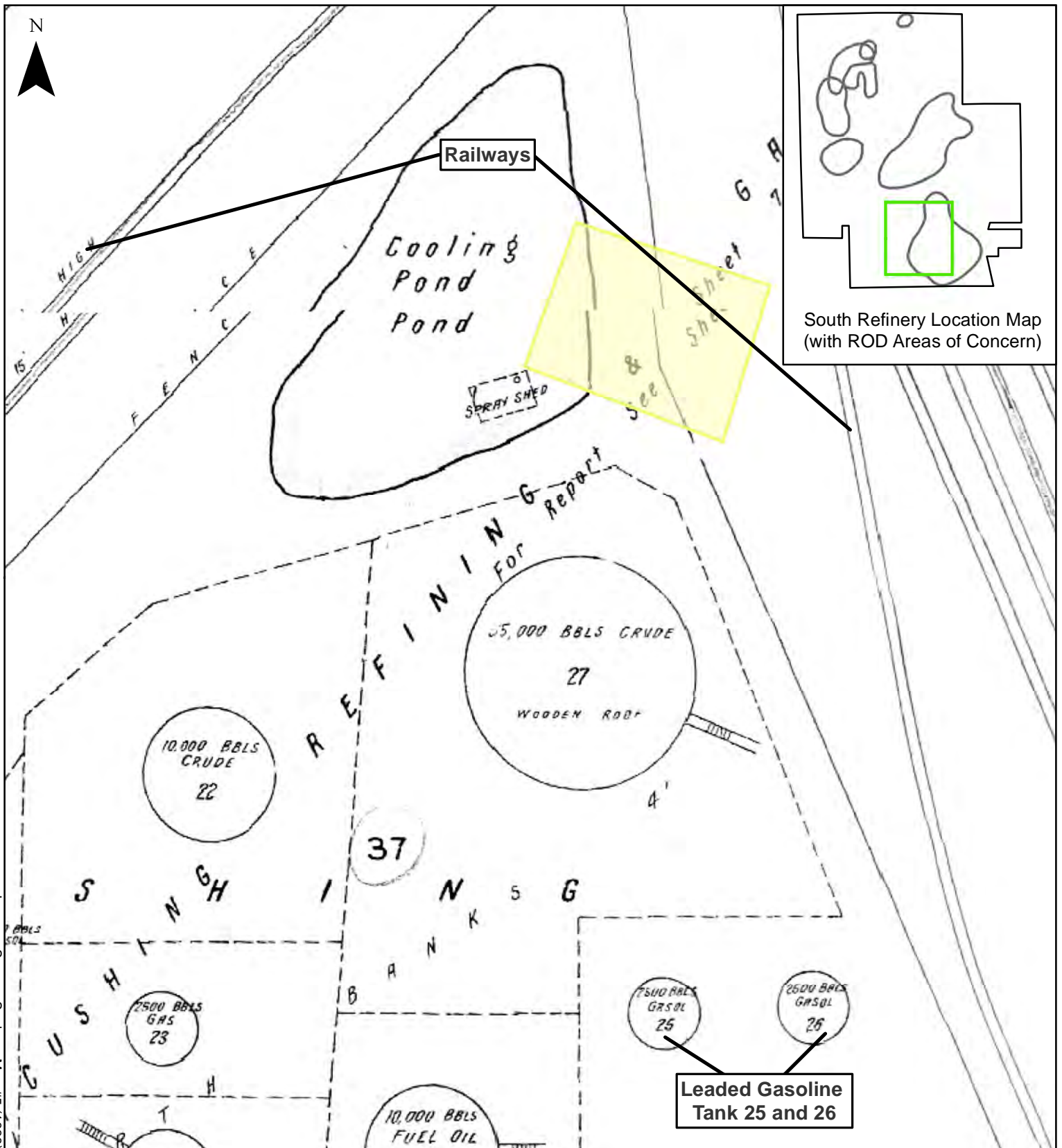
 Soil Removal Excavated to Minimum Depth of 15 Inches

 Lead

Base Aerial: 1980  0 40 Feet

Area Addressed Under the UAO within SAOC 2-7

FIGURE 48



Areas addressed under the UAO:

Soil Removal Excavated to Minimum Depth of 6 Inches

Lead

Sanborn Map: 1938

0 40 Feet

Area Addressed Under the UAO within SAOC 1-8

FIGURE
49

Table 1

Time Required to Displace Midland Crude and Products in Tankage

Hydrocarbon Classes	Displacement of Midland Hydrocarbons, Days
Gasoline	28
Platformer Feed	20
Crude	22
Diesel	49
Alkylate	33
Gas Oil	49
Topped Crude No. 6 Fuel Oil	30

Table 2
Hudson Refinery Atmospheric Tank Timeline

Tank Number	Location	Contents per 1973 SPCC ⁽¹⁾	Tank Capacity, kBbls ⁽¹⁾	At Time of Sale to Hudson 1977 ⁽²⁾	At Time of Refinery Shutdown, 1982 ⁽³⁾ (10)	Stenhouse Cleaning 1986 ⁽⁴⁾ (11)	Tank Condition				
							1995 ⁽⁵⁾	Western Salvage Operation 1996 ⁽⁶⁾	Following EPA Emergency Action 1998 ⁽⁷⁾ (12)	2001 ⁽⁸⁾	At Time of EPA Non-Critical Removal Action 2003 ⁽¹⁰⁾ (14)
Crude Oil											
70	SOUTH	Crude (Slop)	0.6	Intact	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled
71	SOUTH	Crude (Slop)	0.6	Intact	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled
90	SOUTH	Crude	25.6	Intact	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled
95	SOUTH	Crude	1.8	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled, Cleaned in 1998	Dismantled
96	SOUTH	Crude	55.2	Intact	Intact	Intact Cleaned 1986	Intact	Intact	Dismantled	Dismantled, Cleaned in 1998	Dismantled
102	NORTH	Natural Gas Liquids	10.3	Intact	Intact	Intact Cleaned 1986	Intact	Intact	Intact	Dismantled	Dismantled
97	SOUTH	Crude	56	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled, Cleaned in 1998	Dismantled

Table 2 (cont.)
Hudson Refinery Atmospheric Tank Timeline

Tank Number	Location	Contents per 1973 SPCC(1)	Tank Capacity, kBbls (1)	At Time of				Tank Condition			
				At Time of Sale to Hudson 1977 (2)	Refinery Shutdown, 1982 (3), (10)	Stenhouse Cleaning 1986 (4), (11)	1995 (5)	Western Salvage Operation 1996 (6)	Following EPA Emergency Action 1998 (7), (12)	2001 (8)	At Time of EPA Non-Critical Removal Action 2003 (10), (14)
Intermediate Products											
16	SOUTH	LCCO	10	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
22	SOUTH	Gas Oil	3.5	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
27	SOUTH	Gas Oil	55.2	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
21	SOUTH	Distillate	1.1	Intact	Intact, Cleaned 1978	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
31	SOUTH	Leaded Gasoline/ Platformate	5.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
35	SOUTH	Platformate Feed	37.4	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
36	SOUTH	Topped Crude	56.1	Intact	Intact, Cleaned 1980	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
37	SOUTH	Recovered Oil	1.5	Intact	Intact	Intact	Intact	Intact,	Intact,	Intact	Dismantled
38	SOUTH	Recovered Oil	1.5	Intact	Intact	Intact	Intact	Intact,	Intact,	Intact	Dismantled
39	SOUTH	Gas Oil	25.1	Intact	Intact, Cleaned 1978	Intact	Intact	Intact,	Intact,	Partially Dismantled	Dismantled
40	NORTH	Gas Oil	25.1	Intact	Intact	Intact	Intact	Cleaned 1998	Cleaned 1998	Dismantled	Dismantled
41	NORTH	Cat Naphtha	10.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
42	NORTH	Cat Naphtha	10.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
43	NORTH	Slurry	5.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
44	NORTH	LCCO	5.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
45	NORTH	LCCO	5.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
53	NORTH	Alkylate	10	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
54	NORTH	Alkylate	10	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
55	NORTH	Recovered Oil	0.3	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
60	SOUTH	Naphtha	0.7	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
61	SOUTH	Naphtha	0.7	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
63	SOUTH	Topped Crude, No. 6 FO, Vac. Btms., Slurry	5.1	Intact	Intact, Cleaned 1978	Intact	Intact	Intact	Intact,	Partially Dismantled	Dismantled

**Table 2 (cont.)
Hudson Refinery Atmospheric Tank Timeline**

Tank Number	Location	Contents per 1973 SPCC ⁽¹⁾	Tank Capacity, kBbls ⁽¹⁾	At Time of Sale to Hudson 1977 ⁽²⁾	At Time of Refinery Shutdown, 1982 ^{(3),(4)}	Stenhouse Cleaning 1986 ^{(4),(11)}	Tank Condition					At Time of EPA Non-Critical Removal Action 2003 ^{(10),(14)}
							1995 ⁽⁵⁾	Western Salvage Operation 1996 ⁽⁶⁾	Following EPA Emergency Action 1998 ^{(7),(12)}	2001 ⁽⁸⁾	2003 ^{(10),(14)}	
Intermediate Products												
64	SOUTH	Vac. Btms., Slurry	5.2	Intact	Intact, Cleaned 1980	Intact	Intact	Intact	Cleaned 1998	Intact	Intact	Dismantled
67	SOUTH	Gas Oil	0.8	Intact	Intact	Intact	Intact	Intact	Partially Dismantled	Dismantled	Dismantled	Dismantled
72	SOUTH	Recovered Oil	0.6	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
74	SOUTH	Distillate	0.6	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
75	SOUTH	Recovered Oil	0.6	Intact	Intact	Intact	Intact	Dismantled	Cleaned in 1998	Dismantled	Dismantled	Dismantled
77	SOUTH	Gas Oil	0.6	Intact	Intact	Intact	Intact	Intact	Partial Dismantled, Cleaned in 1998	Dismantled	Dismantled	Dismantled
83	SOUTH	Distillate	0.6	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
88	SOUTH	Distillate	0.6	Intact	Intact	Intact	Intact	Intact	Partially Dismantled	Dismantled	Dismantled	Dismantled
89	SOUTH	Distillate	0.2	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
98	NORTH	Platformate	10.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
99	NORTH	Platformate	10.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
100	NORTH	Platformate	30	Intact	Intact	Intact	Intact	Dismantled	Dismantled, Cleaned in 1998	Dismantled	Dismantled	Dismantled
101	NORTH	HDS Feed	30	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled

Table 2 (cont.)
Hudson Refinery Atmospheric Tank Timeline

Tank Number	Location	Contents per 1973 SPCC(1)	Tank Capacity, kBbls (1)	At Time of Sale to Hudson 1977 (2)	At Time of Refinery Shutdown, 1982 (3),(10)		Stenhouse Cleaning 1986 (4),(11)	1995 (5)	Western Salvage Operation 1996 (6)		Following EPA Emergency Action 1998 (7),(12)	2001 (8)	At Time of EPA Non-Critical Removal Action 2003 (10),(14)
					Shut down, 1982 (3),(10)	Cleaned 1986 (4),(11)			1995 (5)	Western Salvage Operation 1996 (6)			
Finished Products													
3	SOUTH	Kerosene	0.8	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
4	SOUTH	Kerosene	1.1	Intact	Intact	Cleaned 1986	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
17	SOUTH	Diesel	5.2	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
18	SOUTH	Boiler Fuel	0.2	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
20	SOUTH	Diesel	1.3	Intact	Intact, Cleaned 1978, 1982	Intact	Cleaned 1986	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
23	SOUTH	Diesel	2.6	Intact	Intact	Intact	Cleaned 1986	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
24	SOUTH	Kerosene	5.1	Intact	Intact	Intact	Cleaned 1986	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
28	SOUTH	Diesel	2.6	Intact	Intact, Cleaned 1978, 1981	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
30	SOUTH	Kerosene	10.1	Intact	Intact	Intact	Cleaned 1986	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
32	SOUTH	Leaded Gasoline	1.2	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
33	SOUTH	Kerosene	1.3	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
34	SOUTH	Kerosene, Converted to No. 6 FO in 1979	1.4	Intact	Intact, Cleaned 1979	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
69	SOUTH	Kerosene	0.8	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled
73	SOUTH	Kerosene	0.6	Intact	Intact	Intact	Cleaned 1986	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled
76	SOUTH	No 6 Fuel Oil	10.5	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
80	SOUTH	Leaded Gasoline/ Kerosene	0.8	Intact	Intact	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled
81	SOUTH	Kerosene	0.8	Intact	Intact	Intact	Cleaned 1986	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled

**Table 2 (cont.)
Hudson Refinery Atmospheric Tank Timeline**

Tank Number	Location	Contents per 1973 SPCC ⁽¹⁾	Tank Capacity, kBbls ⁽¹⁾	At Time of Sale to Hudson 1977 ⁽²⁾	At Time of Refinery Shutdown, 1982 ^{(3),(4)}	Stenhouse Cleaning 1986 ^{(4),(11)}	Tank Condition				At Time of EPA Non-Critical Removal Action 2003 ^{(10),(14)}
							1995 ⁽⁵⁾	Western Salvage Operation 1996 ⁽⁶⁾	Following EPA Emergency Action 1998 ^{(7),(12)}	2001 ⁽⁸⁾	
Finished Products											
82	SOUTH	Kerosene	0.8	Intact	Intact	Intact Cleaned 1986	Intact	Intact	Partially Dismantled	Partially Dismantled	Dismantled
84	SOUTH	Kerosene	2.5	Intact	Intact	Intact Cleaned 1986	Intact	Dismantled	Dismantled	Dismantled	Dismantled
85	SOUTH	Leaded Gasoline / Diesel	5.1	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled	Dismantled
86	SOUTH	Leaded Gasoline/ Unleaded Gasoline	5.1	Intact	Intact, Cleaned 1977	Intact Cleaned 1986	Intact Cleaned	Dismantled	Dismantled	Dismantled	Dismantled
91	SOUTH	Diesel	10	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled
92	SOUTH	Leaded Gasoline	10	Intact	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled
93	SOUTH	Leaded Gasoline Blending	15	Intact	Intact	Intact Cleaned 1986	Intact Cleaned 1986	Intact Cleaned 1986	Partially Dismantled	Partially Dismantled	Dismantled
94	SOUTH	Leaded Gasoline/ Out of Service(?)		Intact	Intact	Intact Cleaned in 1978	Intact Cleaned in 1978	Dismantled	Dismantled	Dismantled	Dismantled
103	NORTH	Leaded Gasoline Blending	35.3	Intact	Intact, Cleaned 1979	Intact Cleaned 1986	Intact	Dismantled	Dismantled	Dismantled	Dismantled
104	NORTH	Leaded Gasoline Blending	35.3	Intact	Intact, Cleaned 1979	Intact Cleaned 1986	Intact Cleaned	Dismantled	Dismantled	Dismantled	Dismantled

**Table 2 (cont.)
Hudson Refinery Atmospheric Tank Timeline**

Tank Number	Location	Contents per 1973 SPCC(1)	Tank Capacity, kBbls (1)	At Time of Sale to Hudson 1977 (2)	At Time of Refinery Shutdown, 1982 (3),(10)	Stenhouse Cleaning 1986 (4),(11)	Tank Condition			
							1995 (5)	Western Salvage Operation 1996 (6)	Following EPA Emergency Action 1998 (7),(12)	2001 (8)
Out of Service										
1	SOUTH	Out of Service	0.8	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled	Dismantled
46	NORTH	Out of Service	1	Unknown	Gasoline used for TEL unloading, Recovered Oil	Unknown	Unknown	Dismantled	Dismantled	Dismantled
47	NORTH	Out of Service	1	Unknown	Unknown	Unknown	Unknown	Unknown	Cleaned in 1998	Cleaned in 1998
65	SOUTH	No. 6 Fuel Oil(Out of Service)	1.1	Intact	Intact	Intact	Intact	Dismantled, Cleaned in 1998	Dismantled	Dismantled
66	SOUTH	No. 6 Fuel Oil(Out of Service)	0.8	Intact	Intact	Intact	Intact	Dismantled, Cleaned in 1998	Dismantled	Dismantled
79	SOUTH	Leaded Gasoline, Out of Service in 1979	0.8	Intact	Intact	Intact	Intact	Dismantled	Dismantled	Dismantled
78	SOUTH	Kerosene, Out of Service in 1979	0.6	Intact	Intact	Intact	Intact	Intact	Intact	Dismantled
Chemicals										
58	SOUTH	Caustic	0.7	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
59	SOUTH	Caustic	0.7	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

**Table 2 (cont.)
Hudson Refinery Atmospheric Tank Timeline**

Tank Number	Location	Contents per 1973 SPCC ⁽¹⁾	Tank Capacity, kBbls ⁽¹⁾	At Time of Sale to Hudson 1977 ⁽²⁾	At Time of Refinery Shutdown, 1982 ^{(3),(10)}	Stenhouse Cleaning 1986 ^{(4),(11)}	Tank Condition							
							1995 ⁽⁵⁾	Western Salvage Operation 1996 ⁽⁶⁾	Following EPA Emergency Action 1998 ^{(7),(12)}	2001 ⁽⁸⁾	At Time of EPA Non-Critical Removal Action 2003 ^{(10),(14)}			
1.	EPAFOIA0006333													
2.	Aerial Photograph 7/8/1984													
3.	Aerial Photograph 7/8/1984, Hudson Staff Meeting Minutes, 1977-1982, EOAF01A0017336-93, 00171123-19, 0017123-24, 0015912-16, 0016266-68, 0017130-38, 0017148-78, 0017404-07, 0017416-51, 0017497-526, 0017532-43, 0022363-85, 0022392-422, 0022467-90, LOL003804-08, 004249-51, 0088016-18, 0 088020-23, 0 088026-28, 0088030-33, 0076649-50, 0100585-86, 0088044-48, 0088051-52, 0404679-82, 0088134-37, 100676-79, 0088054-60, 0404674-76, 0404665-70, 0100673-75, 0404690-92, 0100607-09, 0104365-66, 0404658-62, 0100669-70, 0088068-70, 0156511-13, 0100659-62, 0404696-701, 0104315-16, 0100656-58, 0100663-65, 0404704-09, 0088080-81, 0088084-85, 0100649-51, 0404861-64, 0404799-800, 0404651-52, 0402829-32, 0404767-96, 0404761-63, 0404889-95, 0404753-60, 0404745-57, 0404871-85, 0404726-40, 0404719-25, 0404815-46, 0404900-02, 0254823-55													
4.	Annotated_Full_Tank_Inventory_1974 copy, Tank Cleaning Certificate, EPAFOIA0001720-32													
5.	Aerial Photograph 2/5/1995													
6.	Aerial Photograph 10/8/1996													
7.	Aerial Photograph 9/29/1998, Oil Spill Response Report, LOL0255215-6640													
8.	Aerial Photograph 8/29/2001													
9.	Action Memorandum, September 2001, EPAFOIA0132305													
10.	Neither the Oil Spill Response Report nor other reports indicate that these eight tanks were cleaned prior to or as part of the EERA. However, the EPA concluded in the Oil Spill													

Foot Notes

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225-751-7989 (fax)
DKBConsult@cox.net (email)

PROFESSIONAL ACTIVITIES

President of DKB Consulting, Inc. formed in 1997 following a 33-year career with Exxon Co., USA.

Principle activities have included:

- Evaluated the Safe Operations Management Systems for 16 refineries
 - + Developed comprehensive risk management protocol to evaluate effectiveness of management systems
 - In depth assessments of each facility with emphasis on effectiveness of management systems
 - Recommendations for enhancements to management systems
 - Follow-up assessments and evaluations to assure effective implementation
- Safety assessments with risk reduction and technology enhancement recommendations for four delayed coker operations
- Led 8 PSM compliance audits
- Served as outside expert on a task force commissioned by the board of a large Canadian Energy Company to improve oil sands upgrading operations integrity
- Safety assessments for three hydrofluoric acid Alkylation units
- Evaluations of safe work permit procedures and practices at 12 refineries with recommended enhancements
- Fire and explosion investigations
- Developed operations staffing technique for worlds largest refinery at Ulsan, South Korea
- Refinery pre-startup safety audits
- Expert witness in the areas of refinery and petrochemical process operations, process engineering and Process Safety Management
 - + Accepted as an expert in one or more of these fields by:
 - Louisiana 14th Judicial District Court – Arch v. Fisher Rosemont. et. al.
 - Louisiana 19th Judicial District Court – Murphy v. Arco, et al.
 - U. S. District Court – Louisiana Middle District – Sibley v. Exxon
 - Circuit Court of Cook County, Illinois - Rosolowski v. Clark Refining and Marking, Inc.
 - U. S. District Court – Louisiana Eastern District – Turner v. Murphy Oil
 - Louisiana 34th Judicial District Court – Bridges v. Murphy Oil
 - + Issued expert reports and/or provided technical assistance for other cases
- Evaluated eight petrochemical/refinery facilities and safe operations management systems associated with purchaser due diligence
 - + Aided in transition planning using Management of Organization Change (MOOC) techniques

Other areas of expertise include:

- Emergency Response planning; Operations troubleshooting; Operations organization, staffing and planning

RELATED WORK EXPERIENCE

February 1983-July 1997
Process Operations Manager

Exxon Co., USA
Baton Rouge Refinery

Duties:

Responsible for all refinery process operations. Managed a work force of 650 company wage and exempt employees and 100 contract employees. Stewardship responsibility for safe operation of the facilities, environmental performance, production performance and an operating budget which exceeded 600M\$/year. Served on the refinery Management Committee which set broad refinery direction and participated in all major decisions. Chaired the Exxon Company wide Process Managers Committee, which served as a vehicle to oversee safety standards, safe operating committees, HAZOP activities, cost, and reliability improvements on an Exxon refining circuit wide basis.

Accomplishments:

- Developed an effective emergency response organization, which integrates refinery resources with those of the local community.
- Initiated and participated in the formation of an industry/government agency group to enhance both emergency response and public perception.
- Chaired a refining circuit wide task force that developed safety, health, and environmental practices to be used to measure each refinery's performance. The resulting practices have been used as a model for other functions within the company.
- Participated in Process Safety assessments of Exxon refineries both in and outside the US
- Chaired several groups that examined and recommended optimum operations staffing levels and organization structure for Exxon USA refineries. Included benchmarking of Exxon facilities outside of USA and domestic non-Exxon facilities.
- Leader and steward for the refinery's Process Safety Management programs
- Principle technical participant in several OSHA and EPA settlements
- Participated on a worldwide operations and planning bench marking team for the improvement of Exxon's US operations.
- Participated as key management representative in the successfully bargaining of five multi-company labor contracts and 15 labor arbitrations

June 1980-February 1983
Technical Manager

Exxon Co., USA
Baytown Refinery

Duties:

Responsible for approximately 300 engineers who provided day to day product coordination, technical, and computing support. Provided project development, detailed engineering, and execution. Responsible for the career development of all refinery professional employees. Reported to the refinery manager. Member of the refinery Management Committee.

August 1976-June 1980
Department Head
Cracking and Light Ends

Exxon Co., USA
Baton Rouge Refinery

Duties:

Responsible for the operation of the refineries major conversion units. Reported along with two other operating department heads to the Process Manager.

June 1964-June 1974
Various engineering
and supervisory assignments

Exxon Co., USA
Baton Rouge Refinery

Duties:

Technical support for operations, new facilities startups, process design, operations, computer control, project development and implementation, economic evaluations, inspection, and operations.

EDUCATIONAL BACKGROUND:

Virginia Tech – BSChE

Additional Training and Instruction:

- Trained in both HAZOP and Fault Tree Process Hazard Analysis techniques
- Certified as Industrial Firefighter and Incident Commander via attendance at LSU, Tex A&M, Lamar, and University of Nevada @ Reno fire schools
- Numerous training courses taken in: Design, Operating Procedure development, Heater operations, Safety Engineering, Work Permits, HAZWOPER, Quality Management, Supervisory principles, Safe operations, etc.
- Conducted courses on Risk Management for Exxon's US refinery operations supervision
- Keynote speaker on Safe Operations for Exxon Worldwide Technology Conference
- Speaker on emergency response at API Safe Operations Subcommittee General Meeting

Depositions

Sterling Chemical v. Marathon Oil, District Court of Galveston County, Texas- 2011

INEOS Chemical v. BP Oil, American Arbitration Association – 2009

Bridges v. Murphy Oil, Louisiana 34th Judicial District Court - 2008

Ponca Tribe v. Continental Carbon, US DC WD of Oklahoma – 2008

Turner v. Murphy Oil, U. S. District Court – Louisiana Eastern District - 2006

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2. 9 Final Work Plan Non-critical Removal Action, IT Corporation, November 2002, EPAFAOIA0023238-43
3. Aerial Photographic Analysis, June 1999, EPAFOIA0006345-85
4. Analysis and Interpretations of Aerial Photographs of the Hudson Refinery Superfund Site, Cushing, Oklahoma, February 6, 2009, William E. Coons, PhD.
5. Annotated_Full_Tank_Inventory_1974 copy, Tank Cleaning Certificate, EPAFOIA0001720-32
6. Boehm Affidavit
7. Brady Affidavit
8. CFR-2014, Vol 26, Sec 261.32, Hazardous wastes from specific sources
9. Chemical Supplies, EPAFO1A0016744-16875.
10. Controlled industrial Waste Generator's Listing, July 16, 1982, FF000578-80
11. Cushing Refinery Inventory and Supplies, LOL0097910.
12. Environmental Management Program, WBWC, EPAFOIA0008786.

13. EPA Office of Compliance Section Notebook Project, Profile of the Petroleum Refining Industry, September 1995
14. Equipment List, EPAFOIA0021305
15. Fair Market Value, Turner Mason, February 2, 1976, LOL-0012736-770.
16. Final Consent Decree Work Plan, EPAFOIA0001766-89
17. Forrest Fuqua Interview, July 11, 2007, LOL0099318-368
18. Forrest Fuqua, Williams, Wright, Gaskins Affidavits.
19. Fuqua memo, October 15, 1985, FFR001003-1006.
20. Fuqua affidavit.
21. General Safety Rules Manual, EPAFIOA0012714-719.
22. https://www.youtube.com/watch?feature=player_detailpage&v=27QEdyNn7_Q
23. Hudson Refinery Superfund Site Unilateral Administrative Order for Remedial Design and Remedial Action, January 6, 2009.
24. Hudson Staff Meeting Minutes, 1977-1982, EOAF01A0017336-93, 0017112-19, 0017123-24, 0015912-16, 0016266-68, 0017130-38, 0017148-78, 0017404-07, 0017416-51, 0017497-526, 0017532-43, 0022363-85, 0022392- 422, 0022467-90, LOL003804-08, 004249-51, 0088016-18, 0 088020-23, 0 088026-28, 0088030-33, 0076649-50, 0100585-86, 0088044-48, 0088051-52, 0404679-82, 0088134-37, 100676-79, 0088054-60, 0404674-76, 0404665-70,

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25. Low Level Overflight Photographs, EPAFOIA01041587-2067.

26. Minutes of Management Staff Meeting, July 30, 1981, EPAFOIA0017113; Minutes of Refinery Staff Meeting, January 29, 1981, LOL0022376.

27. Minutes of the Refining Management Staff Meeting, January 11, 1982, EPAFOIA0022602.

28. Minutes of the Refining Management Staff Meeting, June 28, 1977, LOL0088022, LOL088026. LOL088045, EPAFOIA0076650.

29. Minutes of the Refining Management Staff Meeting, May 31, 1979, EPAFOIA0022477, August 30, 1979, LOL0404730.

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31. Oil Insurance Association Inspection, 1955, EPAFOIA007909-910

32. Oil Insurance Association, 1966, EPAFOIA0077895-897.

33. Oil Spill Response Report for Hudson Refinery Cushing, Payne County, Oklahoma, June 26, 2000, LOL0255216-6640

34. Oil Spill Response Report, June 26, 2000, LOL0255215-6640

35. Oil Spill Response Report, LOL0255215-6640
36. Overflight photographs of South Refinery, EPAFOIA0104224
37. Physical Asset Appraisal of the Cushing Refinery, April 30, 1984, EPAFOIA0000643-668.
38. Post-Closure Permit, Land Treatment Unit, Cushing Refinery, July 19, 1996, EPAFOIA0011536-551.
39. Preliminary Figures on Material Covered Under Paragraph 1.1, LOL001409-92, LOL0097910.
40. RCRA/Superfund Hotline Monthly Summary, February 89
41. Refinery Staff Meeting Minutes, EAPFOIA0017137
42. Report Review Compliance Status Assessment, A.T. Kearney, Inc., CABK01181-211
43. SPCC, July 10, 1977, EPAFOIA0012738-50.
44. Special timeline: Leaded gasoline, <http://66.147.244.135/~enviro4/about/ethyl-leaded-gasoline/lead-history-timeline/>
45. Spill Prevention Control and Countermeasures Plan, Midland Refinery, July 10, 1974,
46. Staff Meeting Minutes, EPAFOIA0017479. EPAFOIA0022395.
47. Staff Meeting Minutes, EPAFOIA0017536, 0017516
48. Staff Meeting Minutes, EPAFOIA002377.
49. Staff Meeting Minutes, LOL0100657, 0404864,

50. Vacuum Truck Invoices, 1969-1975 , EPAFAOIA0078756-99, 0078887-982, 0079076-106

51. Vandeven Affidavit.

52. Various Insurance Inspection Reports, EPAFOIA0077879-922