

NATIONAL PARK SERVICE/AMOCO PRODUCTION CO
Meeting on Oct. 21, 1994

South Sprint Gas Collection Facility

Proposed Agenda Items

- 1) Amoco Environmental Reorganization
- 2) NPS response to APC report
- 3) Oct. 31, 1994 site delineation: plume delineation technique
piezometer locations
6 sparge locations
EPA method 624 and 625
enhanced fluid recovery
- 4) Facility enhancement proposal
- 5) S. Sprint remediation options
- 6) New data review

NAME

REPRESENTING

PHONE #

Steve Hunt	NPS - Hazmat - Denver	303 969 2080
Mike Grimm	Amoco Prod. Comp.	713/366-3245
Graig Dockter	ENTRIX, Inc.	713/666-6223
Mike Greenwood	Amoco Prod Company	409-490-8220
Paul Eubank	Padre Island Nat'l Seashore	512-949-8173
Bruce Heise	NPS - Mining & Minerals	303 969 2093
Jim Woods	" " "	" " "
Linda K. Flansky	NPS - Regional Minerals Coord. SWR	505-988-6711
Jay W. Powell	NPS WRD	303-225-3519

SOUTH SPRINT GAS COLLECTION FACILITY

Remediation

I. Remove free phase hydrocarbons by:

1. Adding additional skimming wells
2. Vapor extraction in dune area (can only vent 5 lbs/day BTEX without permit)
3. Dual phase pneumatic recovery wells
if each well = 1 gpm = 1440 gal/day
6 wells x 1440 gal/day = 8,640 gals/day = 205 bwpd

Water disposal options:

- a) API separator - treat water (i.e., bio treat cell, air stripper, carbon filter) - surface discharge
 - b) API separator - treat water-infiltration gallery
 - c) Drill disposal well (or convert existing well [i.e., Bright])
4. Skimming trenches ?
 5. Vacuum truck technology

II. Soil Remediation

1. Dig up and haul off entire area or select spots e.g., under tank battery
2. Dig up and land farm
3. Dig up and incinerate on site
4. Vapor extraction - applicable in upland or dune areas or in combination with dual phase recovery wells

III. Groundwater Remediation

1. Air sparging and/or vacuum extraction
2. Pump and (treat or dispose)

SOUTH SPRINT GCF
Groundwater Project
Free Phase Hydrocarbon Thickness Summary

	2/24/94	2/28/94	3/3/94	3/30/94	5/30/94	7/21/94	8/30/94	9/21/94
OW-1	--	--	--	--	--	--	--	--
OW-2	--	--	--	--	--	--	--	--
OW-3	--	--	--	--	--	--	--	--
OW-4	--	--	--	--	--	0.02	0.05	0.06
OW-5	--	--	--	--	--	--	--	--
OW-6	--	--	NM	0.12	0.13	0.08	0.77	0.02
OW-7	--	--	NM	--	--	--	2.45	0.32
OW-8	--	--	NM	0.02	0.02	0.01	2.68	0.73
OW-9	--	NM	NM	0.01	0.65	0.39	1.35	0.02
OW-10	--	NM	NM	0.01	0.03	--	2.35	0.54
OW-11	--	NM	NM	--	--	--	--	--
OW-12	--	--	--	--	--	--	--	--
OW-13	--	NM	--	--	--	--	0.27	0.08
OW-14	--	--	--	--	--	--	--	--
OW-15	--	NM	NM	1.27	1.20	0.58	2.11	1.44
OW-16	--	NM	NM	1.03	0.36	0.28	1.48	0.36
OW-17	--	NM	NM	0.03	0.06	0.00	2.13	0.01
SVE-1	--	NM	NM	NM	NM	NM	--	--
RW-1	NM	NM	NM	NM	NM	0.01	0.01	NM
RW-2	NM	NM	NM	NM	NM	0.09	0.52	NM
RW-3	NM	NM	NM	NM	NM	--	--	NM
RW-4	NM	NM	NM	NM	NM	--	0.68	NM
RW-5	NM	NM	NM	NM	NM	0.04	1.17	NM
RW-6	NM	NM	NM	NM	NM	0.02	--	NM

Note: all measurements in feet of free phase hydrocarbons

SOUTH SPRINT GCF
Groundwater Project
Water Elevation Summary

	2/24/94	2/28/94	3/3/94	3/30/94	5/30/94	7/21/94	8/30/94	9/21/94
OW-1	3.71	3.65	3.54	5.44	4.53	NM	2.31	3.30
OW-2	3.69	3.60	3.50	5.25	4.43	NM	2.33	3.32
OW-3	3.63	3.55	3.45	5.17	4.35	NM	NM	NM
OW-4	3.63	3.54	3.46	5.11	4.36	2.95	2.31	3.30
OW-5	3.65	3.58	3.51	5.10	4.34	NM	NM	NM
OW-6	3.59	3.52	NM	5.02	4.32	2.99	2.26	3.31
OW-7	3.69	3.63	NM	5.18	4.43	2.99	2.07	3.30
OW-8	3.53	3.46	NM	5.01	4.26	2.90	2.09	3.17
OW-9	3.41	NM	NM	4.87	4.07	2.74	2.07	3.12
OW-10	3.30	NM	NM	4.73	4.01	2.77	1.98	3.01
OW-11	3.18	NM	NM	4.58	3.88	NM	2.07	2.96
OW-12	3.77	3.72	3.66	5.52	4.63	NM	2.36	3.37
OW-13	3.53	NM	3.43	5.18	4.25	NM	2.21	3.20
OW-14	3.18	3.15	3.12	4.53	3.86	2.96	2.09	2.97
OW-15	3.48	NM	NM	4.83	4.12	1.89	2.06	3.17
OW-16	3.58	NM	NM	4.98	4.30	2.98	2.18	3.24
OW-17	3.57	NM	NM	5.09	4.36	3.02	2.13	3.32
SVE-1	3.61	NM	NM	NM	NM	NM	NM	NM
RW-1	NM	NM	NM	NM	NM	2.91	1.86	NM
RW-2	NM	NM	NM	NM	NM	3.04	2.39	NM
RW-3	NM	NM	NM	NM	NM	2.96	2.18	NM
RW-4	NM	NM	NM	NM	NM	2.86	2.30	NM
RW-5	NM	NM	NM	NM	NM	2.54	2.08	NM
RW-6	NM	NM	NM	NM	NM	2.72	2.15	NM

Notes:

NM well not measured on that date
all elevations in feet above sea level