DUKE COGEMA
STONE & WEBSTER

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

13 November 2001
DCS-NRC-000072

Subject: Docket Number 070-03098
Duke Cogema Stone & Webster
Mixed Oxide Fuel Fabrication Facility
Update to Responses to NRC Clarification Request for MFFF ER

Reference: P. S. Hastings (DCS) letter to NRC Document Control Desk, DCS-NRC-000067, dated 26 October 2001, *Response to Clarification Request – Responses to Request for Additional Information on the Duke Cogema Stone & Webster Mixed Oxide Fuel Fabrication Facility Environmental Report*

In the letter referenced above, Duke Cogema Stone & Webster's (DCS') response to question 21 (found on pages 10-12 of the response) referenced the anticipated Corrective Action Plan for the Old F-Area Seepage Basin. We have recently received a copy of the Corrective Action Plan from the U.S. Department of Energy (DOE), along with the letter transmitting the Corrective Action Plan to the South Carolina Department of Health and Environmental Control (SCDHEC). We are forwarding these documents to NRC as an enclosure to this letter.

If you have any questions, please call me at (704) 373-7820 or Mary Birch at (704) 382-1401.

Sincerely,

Peter S. Hastings, P.E.
Licensing Manager

PO Box 31847
Charlotte, NC 28231-1847

400 South Tryon Street, WC-32G
Charlotte, NC 28202

NMSS/Public

Enclosure: B.T. Hennessy (DOE) letter to C.M. Gorman (SCDHEC) and K.B. Feely (USEPA), 25 October 2001, *Groundwater Mixing Zone Plan for Corrective Action for the Old F-Area Seepage Basin*, with attachment

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OCT 25 2001

Mr. C. M. Gorman, Manager
Federal Facility Agreement Section
Division of Site Assessment and Remediation
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

Mr. K. B. Feely
Savannah River Site Remedial Project Manager
Waste Management Division
United States Environmental Protection Agency, Region IV
61 Forsyth Street, SW
Atlanta, GA 30303

Dear Mr. Gorman and Mr. Feely:

SUBJECT: Groundwater Mixing Zone Plan for Corrective Action for the Old F-Area Seepage Basin (904-49G)

As communicated to you on August 24, 2001 and agreed upon at the Core Team scoping meeting on September 13, 2001, a Groundwater Mixing Zone Plan for Corrective Action for the Old F-Area Seepage Basin (OFASB) Operable Unit (904-49G) is being submitted.

At the scoping meeting, the Core Team agreed that Savannah River Site (SRS) should collect and analyze groundwater from the area between the OFASB and the F-Area fenceline. The resultant data will help determine the nature and extent of contamination upgradient of the OFASB.

The enclosed plan summarizes the Core Team's findings and presents a schedule for performing additional investigation to resolve the source(s) of observed contamination. SRS requests your approval on the schedule and deliverables by November 26, 2001.

As you are aware, the President has submitted a proposed budget for Fiscal Year 2002 to the Congress. The Secretary of Energy has reiterated the commitment of the Administration to safely cleaning up the USDOE complex and complying with applicable environmental laws and regulations. In addition, the Secretary has directed a comprehensive review of the Environmental Management program. The challenges that are included in the budget proposal as well as the results of the policy review may have an impact on the enclosed document. As the specifics of the budget and review become more clear, SRS may propose further updates to the Environmental Restoration program as appropriate.

Questions from you or your staff may be directed to me at (803) 725-7032.

Sincerely,

Brian T. Hennessey
SRS Remedial Project Manager
Environmental Restoration Division

BTH/LHW:kfs
OD-02-117
Enclosure:
1. Groundwater Mixing Zone Plan for Corrective Action for the Old F-Area Seepage Basin Operable Unit (904-49G), WSRP-RP-2001-4239

c: A. B. Gould, USDOE-ECD, 703-A
C. V. Anderson, USDOE-ERD, 703-A
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EPD Files, (A. Odom) 742-A
Administrative Record File, 730-2B, 1000

WSRC-RP-2001-4239
October 2001

OLD F-AREA SEEPAGE BASIN OPERABLE UNIT GROUNDWATER MIXING ZONE PLAN FOR CORRECTIVE ACTION (U)

Westinghouse Savannah River Company
Savannah River Site
Aiken, SC 29808

1.0 Status of the Old F-Area Seepage Basin Operable Unit

In August 2001, the Savannah River Site (SRS) notified the Department of Energy (DOE-SR), the South Carolina Department of Health and Environmental Control (SCDHEC), and the US Environmental Protection Agency (USEPA) that contaminants had exceeded predicted levels in several wells that monitor groundwater quality near the Old F-Area Seepage Basin Operable Unit (OFASB OU).

A Core Team of representatives from DOE-SR, SCDHEC, and USEPA met in September 2001 to examine data and to recommend a plan for corrective action. This document summarizes the Core Team's findings and presents a schedule for performing additional investigation to resolve the source(s) of observed contamination.

2.0 Background

The Old F-Area Seepage Basin was an unlined basin that operated from 1954 to 1969. Discharges to the basin included wastewater, occasional cooling water, collected rainfall, and spent nitric acid etching solutions containing uranium. The OFASB OU is included in Appendix C of the SRS Federal Facility Agreement (FFA). The OFASB OU comprises the seepage basin, associated soil and vegetation, an adjacent ditch, a pipeline, and a groundwater unit. In March 1997, USEPA and SCDHEC approved a Record of Decision (ROD) for OFASB OU. The final remedial action selected for the OFASB OU includes (WSRC, 1999):

- In-situ stabilization of contaminated material (source control)
- Construction of a low-permeability cover over the stabilized material
- Implementation of a groundwater mixing zone
- Implementation of institutional controls to limit access to and to restrict future use

SRS submitted a groundwater mixing zone application in 1997 (WSRC, 1997); the application was approved in 1998. In 1999, SRS established a well network to monitor the groundwater unit. The network includes three plume assessment wells, three intermediate wells, and four compliance boundary wells (Figure 1).

The groundwater mixing zone application included a site-specific groundwater flow and transport model (WSRC, 1998), which was used to predict contaminant concentrations expected at the compliance boundary wells. Predicted concentrations were screened against maximum contaminant levels (MCLs) for contaminants of interest. Results indicated that, except for iodine-129, contaminants of interest would remain lower than their respective MCLs in the compliance boundary wells. Iodine-129 was predicted to slightly exceed the MCL at the compliance boundary in the future, and then decline steadily.

Mixing zone concentrations limits (MZCLs) were calculated for the plume assessment wells, which are located between the OFASB and the compliance boundary. Table 1 summarizes the contaminants of interest and applicable groundwater standards.

In accordance with the mixing zone application, the monitoring network is sampled twice annually for constituents of concern (COCs; iodine-129, nitrate, strontium-90, tritium, total uranium), for contaminants that require further evaluation (lead, radium-226, and radium-228), and for radionuclide indicator parameters (gross alpha activity and non-volatile beta activity).

SRS initially sampled the OFASB OU well network in September 2000, establishing a baseline for post-remedial-action groundwater conditions and providing the basis for checking the predictions of the mixing zone application. Data from the September 2000 sampling event indicate that several MCLs were exceeded in three compliance boundary wells. Confirmation sampling was conducted in January 2001, and the exceedances were confirmed in July 2001. Groundwater sampling required by the approved Post-Construction Report for OFASB OU (WSRC, 2001) was initiated in September 2001. This document reviews the exceedances and summarizes a plan to investigate the source(s) of observed contamination.

3.0 Problem Warranting Action

Samples collected in September 2000 (3Q2000) from three compliance boundary wells exceeded applicable MCLs for iodine-129, strontium-90, tritium, and/or nitrate. Samples from two plume assessment wells also exceeded MCLs for lead and radium-226, signaling that these constituents should be evaluated for inclusion in the mixing zone contaminant transport model.

In accordance with the mixing zone application, the well network was resampled. Data from the January 2001 (1Q2001) resampling event confirm the previous exceedances and indicate additional exceedances for lead and nitrate.

Table 2 summarizes the exceedances noted in the 3Q2000 and 1Q2001 data.

3.1 Scope of Problem

The contaminant plume defined in the mixing zone application and transport model is limited to the Upper Three Runs Aquifer, and extends in the direction of groundwater flow from the old seepage basin downgradient toward the compliance boundary. The distance from the basin to the compliance boundary is approximately 400 meters (~1300 feet). Groundwater travel time between the basin and the compliance boundary is approximately 10-12 years (WSRC, 1998). The distance from the compliance boundary to the closest (mapped) seepline is approximately 50 meters (~160 feet).

Data from the two sampling events show that MCLs have been exceeded in three compliance boundary wells (and, as previously recognized, in the plume assessment wells), but that no intermediate wells exceed MCLs. Furthermore, no MZCLs have been contravened in any plume assessment well. (Refer to Table 3 and Table 4 for 3Q2000 and 1Q2001 data, respectively.)

The magnitudes of several contaminants increase to the east along the compliance boundary, away from the modeled flow lines emanating from OFASB. For example, tritium activities along the compliance boundary increase steadily and dramatically in an eastward direction – from ~2,500 pCi/l at FNB-12 to 165,000 pCi/l at FNB-15 (Figure 2). A similar pattern exists for nitrate (Figure 3) and possibly for iodine-129 and gross alpha activity (Figures 4 and 5, respectively).

This recurring pattern – contamination increasing away from the flow originating from the basin – suggests the presence of contamination derived from sources other than OFASB. It appears that contamination derived from the basin is mixing indistinguishably with contaminants derived from other sources. (The distributions of other contaminants, for example strontium-90 and non-volatile beta activity, suggest the presence of two more discrete plumes – one derived from the OFASB and one derived from upgradient sources.)

Uncertainty about the existence of upgradient sources was described in the mixing zone application (WSRC, 1997). And recent historical data demonstrate the presence of contamination, especially tritium, in groundwater upgradient and sidegradient from OFASB OU (Figure 6). However, with the current configuration of wells at OFASB and in F-Area, it is difficult to determine the presence (and, therefore, the extent) of upgradient contamination and the degree to which upgradient contamination may have commingled with plumes derived from OFASB. The Core Team recognized this limitation and agreed that additional, upgradient characterization is required.

3.2 Scope and Objectives of Additional Characterization

The Core Team agreed that SRS should collect and analyze groundwater from the area between OFASB and the F-Area fenceline (Figure 7). The resultant data will help determine the nature and extent of contamination upgradient from OFASB.

4.0 OFASB OU Strategy and Schedule

SRS proposes to submit a focused Sampling and Analysis Plan, describing the proposed sampling locations, sampling depths, and analytical parameters. The plan will summarize all pertinent modeling, geologic, and hydrostratigraphic data that have been collected for the OFASB OU.

SRS proposes the following schedule and deliverables:

- Submit a Sampling and Analysis Plan on 22 January 2002.
- Twelve (12) weeks after approval of Sampling and Analysis Plan, begin fieldwork.
- Ten (10) weeks after receiving validated data, convene the Core Team, review data, and reach consensus on a plan for further technical and programmatic actions (maintenance of the mixing zone and Record of Decision for OFASB OU, the need for additional mixing zone compliance wells, creation of an expanded F-Area Groundwater OU, etc.).
- After Core Team consensus, submit a report on additional characterization.
- Execute additional technical and programmatic actions as agreed.

Regulatory review and approval cycles and WSRC comment resolution periods for the Sampling and Analyses Plan will adhere to 60/45/30 day schedules.

5.0 References

WSRC, 1996. *Corrective Measure Study/Feasibility Study Report for the Old F-Area Seepage Basin (904-49G) (U)*, WSRC-RP-95-385, Rev. 1, February 1996, Westinghouse Savannah River Company, Aiken, SC

WSRC, 1997. *Groundwater Mixing Zone Application for the Old F-Area Seepage Basin (U)*, WSRC-RP-97-39, Rev. 1, March 1997, Westinghouse Savannah River Company, Aiken, SC

WSRC, 1998. *Old F-Area Seepage Basin Transport Analyses In Support of a SCDHEC Mixing Zone Application*, WSRC-TR-98-00307, Rev. 0, September 1998, Westinghouse Savannah River Company, Aiken, SC

WSRC, 1999. *Corrective Measures Implementation/Remedial Design/Remedial Action Work Plan for Old F-Area Seepage Basin (904-49G) (U)*, WSRC-RP-97-854, Rev. 1.2, Westinghouse Savannah River Company, Aiken, SC

WSRC, 2001. *Post-Construction Report for Old F-Area Seepage Basin (Building 904-49G) (U)*, WSRC-RP-2000-4100, Rev.1, Rev. 1.2, Westinghouse Savannah River Company, Aiken, SC

Constituents of Concern	MCL	MZCL
tritium ^{3}H	20,000 pCi/L	216,000 pCi/L
iodine-129 ^{129}I	1 pCi/L	48 pCi/L
nitrate NO_3	10 mg/L	20.9 mg/L
strontium-90 ^{90}Sr	8 pCi/L	146 pCi/L
total uranium U_{total}	30* µg/L	83 µg/L
Constituents Requiring Further Evaluation	**MCL**	**MZCL**
lead Pb	15 µg/L	not calculated
radium-226 ^{226}Ra	5 pCi/L	not calculated
radium-228 ^{228}Ra	5 pCi/L	not calculated
Radionuclide Indicator Parameters	**MCL**	**MZCL**
gross alpha activity	15 pCi/L	not calculated
non-volatile beta activity	4 mrem/year total effective dose	not calculated

* The groundwater mixing zone application cited 20 µg/L as the proposed MCL for U_{total}. The MCL for U_{total} is 30 µg/L.

Table 1. Constituents of interest, MCLs, and MZCLs for OFASB OU.

Well	Monitoring Network Significance	3Q2000 Exceedances	1Q2001 Exceedances	Applicable Standard	Action or Response
FNB-3	Plume Assessment	Pb = 17.6 µg/l	Pb = 39.5 µg/l	not calculated	Evaluate ^{226}Ra and Pb for inclusion in the mixing zone model.
FNB-5	Plume Assessment	^{226}Ra = 6.36 pCi/l	^{226}Ra = 7.67 pCi/ml Pb = 18.1 µg/l (J)		
FNB-13	Compliance Boundary	^{129}I = 2.65 pCi/l (J) ^{90}Sr = 14.7 pCi/l ^{3}H = 68,700 pCi/l	^{129}I = 1.86 pCi/l (J) ^{90}Sr = 29.5 pCi/l ^{3}H = 64,900 pCi/l	MCL ^{129}I = 1 pCi/l MCL ^{90}Sr = 8pCi/l MCL ^{3}H = 20,000 pCi/l	Submit a plan for corrective action by 25 October 2001.
FNB-14	Compliance Boundary	^{129}I = 2.63 pCi/l (J) ^{3}H = 94,600 pCi/l	^{129}I = 2.82 pCi/l (J) N = 11 mg/l ^{3}H = 101,000 pCi/l	MCL ^{129}I = 1 pCi/l MCL N = 10 mg/l MCL ^{3}H = 20,000 pCi/l	
FNB-15	Compliance Boundary	^{129}I = 5.69 pCi/l N = 15.3 mg/l ^{90}Sr = 9.68 pCi/l ^{3}H = 165,000 pCi/l	^{129}I = 5.5 pCi/l N = 19.3 mg/l ^{90}Sr = 10.7 pCi/l ^{3}H = 165,000 pCi/l	MCL ^{129}I = 1 pCi/l MCL N = 10 mg/l MCL ^{90}Sr = 8pCi/l MCL ^{3}H = 20,000 pCi/l	

Table 2. Summary of mixing zone standards, exceedances, and response actions.

Table 3: OFASB Mixing Zone Well Network, 3Q2000 Sampling Results

VALID	WELL NAME	SAMPLE DATE	ANALYTICAL RESULT	RESULT UNIT	EPA GUIDE	EPA STORET	EMS CODE	ANALYTE	ANALYTICAL METHOD	LAB	DETECTION LIMIT	QUANTITATION LIMIT	CONCENTRATION FACTOR	FORMAT	RESULT PRECISION	pH	CONDUCTIVITY	TURBIDITY
Plume Assessment Wells FNB-2, FNB-3, FNB-5																		
D	FNB 2	9/5/00	17.8	PCL				Iodine-129	EPIA-006	GP	1.02	6.7	1	AN98	2.84	4	133	5.4
S	FNB 2	9/5/00	10.8	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.045	0.25	5	AN98		4	133	5.4
D	FNB 2	9/5/00	95.9	PCL				Strontium-90	EPIA-004	GP	0.768	4.668	1	AN98	1.95	4	133	5.4
D	FNB 2	9/5/00	84400	PCL				Tritium	EPIA-002	GP	556	3956	1	AN98	1700	4	133	5.4
D	FNB 2	9/5/00	61.3	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		4	133	5.4
D	FNB 2	9/5/00	5	UGL	U			Lead, total recoverable	EPA6010B	GE	1.83	5	1	AN98		4	133	5.4
D	FNB 2	9/5/00	0.45	PCL	U			Radium-226	EPIA-008	GP	0.771	1.745	1	AN98	0.487	4	133	5.4
D	FNB 2	9/5/00	1.88	PCL	U	V		Radium-228	EPIA-009	GP	0.775	1.731	1	AN98	0.478	4	133	5.4
D	FNB 2	9/5/00	3.31	PCL	U	V		Radium-228	EPIA-009	GP	1.02	2.376	1	AN98	0.678	4	133	5.4
D	FNB 2	9/5/00	40.7	PCL				Gross alpha	EPIA-001	GP	0.72	6.62	1	AN98	2.95	4	133	5.4
D	FNB 2	9/5/00	163	PCL				Nonvolatile beta	EPIA-001	GP	1.18	9.84	1	AN98	4.33	4	133	5.4
D	FNB 3	9/6/00	0.118	PCL	U			Iodine-129	EPIA-006	GP	0.717	1.875	1	AN98	0.579	5	58	1.5
D	FNB 3	9/6/00	1.3	PCL	J	I		Iodine-129	EPIA-006	GP	1.24	3.68	1	AN98	1.22	5	58	1.5
D	FNB 3	9/6/00	1.52	PCL	U			Iodine-129	EPIA-006	GP	1.64	3.52	1	AN98	0.94	5	58	1.5
D	FNB 3	9/6/00	1.77	PCL	U			Iodine-129	EPA902.0MOD	TM	7.31	14.89	1	AN98	3.79	5	58	1.5
D	FNB 3	9/6/00	2.72	PCL	U			Iodine-129	EPA902.0MOD	TM	7.79	15.99	1	AN98	4.1	5	58	1.5
S	FNB 3	9/6/00	4.38	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.027	0.15	3	AN98		5	58	1.5
S	FNB 3	9/6/00	4.47	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.027	0.15	3	AN98		5	58	1.5
S	FNB 3	9/6/00	4300	UGL				Nitrate-nitrite as nitrogen	EPA353.2	WA	20	200	10	AN98		5	58	1.5
D	FNB 3	9/6/00	6.03	PCL				Strontium-90	EMLSR02MOD	TM	1.27	3.47	1	AN98	1.1	5	58	1.5
D	FNB 3	9/6/00	6.3	PCL				Strontium-90	EMLSR02MOD	TM	1.1	3.08	1	AN98	0.99	5	58	1.5
D	FNB 3	9/6/00	7.43	PCL	J	K	C	Strontium-90	EPIA-004	GP	0.872	2.31	1	AN98	0.719	5	58	1.5
D	FNB 3	9/6/00	7.84	PCL	J	K	C	Strontium-90	EPIA-004	GP	0.893	2.403	1	AN98	0.755	5	58	1.5
D	FNB 3	9/6/00	18.36	PCML				Tritium	EPA906.0MOD	TM	1.12	3.78	1	AN98	1.33	5	58	1.5
D	FNB 3	9/6/00	18.49	PCML				Tritium	EPA906.0MOD	TM	1.12	3.78	1	AN98	1.33	5	58	1.5
D	FNB 3	9/6/00	21.5	PCML				Tritium	EPIA-002	GP	0.529	2.247	1	AN98	0.859	5	58	1.5
D	FNB 3	9/6/00	20000	PCL				Tritium	EPIA-002	GP	528	2190	1	AN98	831	5	58	1.5
D	FNB 3	9/6/00	21500	PCL				Tritium	EPIA-002	GP	529	2247	1	AN98	859	5	58	1.5
D	FNB 3	9/6/00	21800	PCL				Tritium	EPIA-002	GP	531	2263	1	AN98	866	5	58	1.5
D	FNB 3	9/6/00	10.77	UGL				Uranium, total recoverable	ASTMD5174M	TM	0.03	0.35	1	AN98	0.16	5	58	1.5
D	FNB 3	9/6/00	11.27	UGL				Uranium, total recoverable	ASTMD5174M	TM	0.03	0.37	1	AN98	0.17	5	58	1.5
D	FNB 3	9/6/00	19	UGL	J	I		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5	58	1.5
D	FNB 3	9/6/00	50	UGL	U			Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5	58	1.5
D	FNB 3	9/6/00	7.9	UGL	J	I		Lead, total recoverable	EPA6010B	WA	4.7	47	1	AN98		5	58	1.5
D	FNB 3	9/6/00	9.57	UGL				Lead, total recoverable	EPA6010B	GE	1.83	5	1	AN98		5	58	1.5
D	**FNB 3**	**9/6/00**	**17.6**	**UGL**				**Lead, total recoverable**	**EPA6010B**	**GE**	**1.83**	**5**	**1**	**AN98**		**5**	**58**	**1.5**
D	FNB 3	9/6/00	0.983	PCL	J	I		Radium-226	EPIA-008	GP	0.603	1.593	1	AN98	0.495	5	58	1.5
D	FNB 3	9/6/00	1.24	PCL	J	I		Radium-226	EPIA-008	GP	0.583	1.655	1	AN98	0.536	5	58	1.5
D	FNB 3	9/6/00	0.52	PCL	U			Radium-228	EPIA-009	GP	0.991	1.953	1	AN98	0.481	5	58	1.5
D	FNB 3	9/6/00	1.41	PCL	J	I		Radium-228	EPIA-009	GP	1.16	2.428	1	AN98	0.634	5	58	1.5
D	FNB 3	9/6/00	4.17	PCL	R	K	C	Radium-228	EPA904.0MOD	TM	5.25	11.75	1	AN98	3.25	5	58	1.5
D	FNB 3	9/6/00	5.4	PCL	R	K	C	Radium-228	EPA904.0MOD	TM	4.93	11.25	1	AN98	3.16	5	58	1.5
D	FNB 3	9/6/00	7.24	PCL				Gross alpha	EPA900.0MOD	TM	1.03	3.81	1	AN98	1.39	5	58	1.5
D	FNB 3	9/6/00	7.54	PCL				Gross alpha	EPA900.0MOD	TM	1.1	4.04	1	AN98	1.47	5	58	1.5
D	FNB 3	9/6/00	9.43	PCL				Gross alpha	EPIA-001	GP	0.863	4.363	1	AN98	1.75	5	58	1.5

VALID	WELL NAME	SAMPLE DATE	ANALYTICAL RESULT	RESULT UNIT	EPA GUIDE	EPA STORET	EMS CODE	ANALYTE	ANALYTICAL METHOD	LAB	DETECTION LIMIT	QUANTITATION LIMIT	CONCENTRATION FACTOR	FORMAT	RESULT PRECISION	pH	CONDUCTIVITY	TURBIDITY
D	FNB 3	9/6/00	10.2	PCL				Gross alpha	EPIA-001	GP	0.79	4.33	1	AN98	1.77	5	58	1.5
D	FNB 3	9/6/00	22.65	PCL				Nonvolatile beta	EPA900.0MOD	TM	1.74	5.76	1	AN98	2.01	5	58	1.5
D	FNB 3	9/6/00	22.71	PCL				Nonvolatile beta	EPA900.0MOD	TM	1.71	5.69	1	AN98	1.99	5	58	1.5
D	FNB 3	9/6/00	23.2	PCL				Nonvolatile beta	EPIA-001	GP	1.49	5.43	1	AN98	1.97	5	58	1.5
D	FNB 3	9/6/00	23.8	PCL				Nonvolatile beta	EPIA-001	GP	1.4	5.3	1	AN98	1.95	5	58	1.5
D	FNB 5	9/5/00	3.38	PCL	J	I		Iodine-129	EPIA-006	GP	1.3	4.18	1	AN98	1.44	4.2	165	2.1
S	FNB 5	9/5/00	14.9	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.09	0.5	10	AN98		4.2	165	2.1
D	FNB 5	9/5/00	24.3	PCL				Strontium-90	EPIA-004	GP	0.756	2.916	1	AN98	1.08	4.2	165	2.1
D	FNB 5	9/5/00	92200	PCL				Tritium	EPIA-002	GP	581	4281	1	AN98	1850	4.2	165	2.1
D	FNB 5	9/5/00	40.6	UGL	JU	V	6	Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		4.2	165	2.1
D	FNB 5	9/5/00	5	UGL	U			Lead, total recoverable	EPA6010B	GE	1.83	5	1	AN98		4.2	165	2.1
D	FNB 5	9/5/00	6.36	PCL				Radium-226	EPIA-008	GP	0.761	3.161	1	AN98	1.2	4.2	165	2.1
D	FNB 5	9/5/00	3.56	PCL	U	V		Radium-228	EPIA-009	GP	0.949	2.267	1	AN98	0.659	4.2	165	2.1
D	FNB 5	9/5/00	23.9	PCL				Gross alpha	EPIA-001	GP	0.656	5.296	1	AN98	2.32	4.2	165	2.1
D	FNB 5	9/5/00	79.5	PCL				Nonvolatile beta	EPIA-001	GP	1.32	7.44	1	AN98	3.06	4.2	165	2.1
Intermediate Wells FNB-9, FNB-10, FNB-11																		
D	FNB 9	9/5/00	0.0734	PCL	U			Iodine-129	EPIA-006	GP	0.673	1.447	1	AN98	0.387	5.7	40	0.9
S	FNB 9	9/5/00	1.08	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.009	0.05	1	AN98		5.7	40	0.9
D	FNB 9	9/5/00	-1.28	PCL	U			Strontium-90	EPIA-004	GP	1.56	3.304	1	AN98	0.872	5.7	40	0.9
D	FNB 9	9/5/00	2590	PCL				Tritium	EPIA-002	GP	529	1351	1	AN98	411	5.7	40	0.9
D	FNB 9	9/5/00	11.9	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5.7	40	0.9
D	FNB 9	9/5/00	0.292	PCL	U			Gross alpha	EPIA-001	GP	0.722	1.458	1	AN98	0.368	5.7	40	0.9
D	FNB 9	9/5/00	2.02	PCL	J	I		Nonvolatile beta	EPIA-001	GP	1.32	2.812	1	AN98	0.746	5.7	40	0.9
D	FNB 10	9/5/00	-0.339	PCL	U			Iodine-129	EPIA-006	GP	0.891	2.149	1	AN98	0.629	5.2	32	2
S	FNB 10	9/5/00	1.41	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.009	0.05	1	AN98		5.2	32	2
D	FNB 10	9/5/00	-0.143	PCL	U			Strontium-90	EPIA-004	GP	0.791	1.439	1	AN98	0.324	5.2	32	2
D	FNB 10	9/5/00	3300	PCL				Tritium	EPIA-002	GP	526	1394	1	AN98	434	5.2	32	2
D	FNB 10	9/5/00	22.2	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5.2	32	2
D	FNB 10	9/5/00	0.812	PCL				Gross alpha	EPIA-001	GP	0.309	0.791	1	AN98	0.241	5.2	32	2
D	FNB 10	9/5/00	1.31	PCL				Gross alpha	EPIA-001	GP	0.297	0.841	1	AN98	0.272	5.2	32	2
D	FNB 10	9/5/00	1.31	PCL				Gross alpha	EPIA-001	GP	0.297	0.841	1	AN98	0.272	5.2	32	2
D	FNB 10	9/5/00	3.8	PCL				Nonvolatile beta	EPIA-001	GP	0.497	1.303	1	AN98	0.403	5.2	32	2
D	FNB 10	9/5/00	3.8	PCL				Nonvolatile beta	EPIA-001	GP	0.497	1.303	1	AN98	0.403	5.2	32	2
D	FNB 10	9/5/00	4.39	PCL				Nonvolatile beta	EPIA-001	GP	0.624	1.57	1	AN98	0.473	5.2	32	2
D	FNB 11	9/5/00	0.375	PCL	U			Iodine-129	EPIA-006	GP	0.641	1.369	1	AN98	0.364	5.5	58	1.2
S	FNB 11	9/5/00	4.2	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.027	0.15	3	AN98		5.5	58	1.2
D	FNB 11	9/5/00	1.09	PCL	J	I		Strontium-90	EPIA-004	GP	0.7	1.5	1	AN98	0.4	5.5	58	1.2
D	FNB 11	9/5/00	13200	PCL				Tritium	EPIA-002	GP	529	1925	1	AN98	698	5.5	58	1.2
D	FNB 11	9/5/00	50	UGL	U			Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5.5	58	1.2
D	FNB 11	9/5/00	0.894	PCL	U			Gross alpha	EPIA-001	GP	0.912	2.162	1	AN98	0.625	5.5	58	1.2
D	FNB 11	9/5/00	21.6	PCL				Nonvolatile beta	EPIA-001	GP	1.51	5.35	1	AN98	1.92	5.5	58	1.2

VALID	WELL NAME	SAMPLE DATE	ANALYTICAL RESULT	RESULT UNIT	EPA GUIDE	EPA STORET	EMS CODE	ANALYTE	ANALYTICAL METHOD	LAB	DETECTION LIMIT	QUANTITATION LIMIT	CONCENTRATION FACTOR	FORMAT	RESULT PRECISION	pH	CONDUCTIVITY	TURBIDITY
Compliance Boundary Wells FNB-12, FNB-13, FNB-14, FNB=15																		
D	FNB 12	9/5/00	0.0686	PCL	U			Iodine-129	EPIA-006	GP	0.673	1.463	1	AN98	0.395	5.2	26	2.5
S	FNB 12	9/5/00	0.33	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.009	0.05	1	AN98		5.2	26	2.5
D	FNB 12	9/5/00	-0.3	PCL	U			Strontium-90	EPIA-004	GP	0.874	1.58	1	AN98	0.353	5.2	26	2.5
D	FNB 12	9/5/00	2480	PCL				Tritium	EPIA-002	GP	527	1339	1	AN98	406	5.2	26	2.5
D	FNB 12	9/5/00	16.1	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5.2	26	2.5
D	FNB 12	9/5/00	0.102	PCL	U			Gross alpha	EPIA-001	GP	0.57	1.054	1	AN98	0.242	5.2	26	2.5
D	FNB 12	9/5/00	0.182	PCL	U			Nonvolatile beta	EPIA-001	GP	1.2	2.266	1	AN98	0.533	5.2	26	2.5
D	**FNB 13**	**9/5/00**	**2.65**	**PCL**	**J**	**I**		**Iodine-129**	**EPIA-006**	**GP**	**0.93**	**3.37**	**1**	**AN98**	**1.22**	**5.2**	**83**	**2.1**
S	FNB 13	9/5/00	7.65	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.045	0.25	5	AN98		5.2	83	2.1
D	**FNB 13**	**9/5/00**	**14.7**	**PCL**				**Strontium-90**	**EPIA-004**	**GP**	**0.934**	**2.73**	**1**	**AN98**	**0.898**	**5.2**	**83**	**2.1**
D	**FNB 13**	**9/5/00**	**68700**	**PCL**				**Tritium**	**EPIA-002**	**GP**	**537**	**3497**	**1**	**AN98**	**1480**	**5.2**	**83**	**2.1**
D	FNB 13	9/5/00	12.6	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5.2	83	2.1
D	FNB 13	9/5/00	2.27	PCL				Gross alpha	EPIA-001	GP	0.532	1.97	1	AN98	0.719	5.2	83	2.1
D	FNB 13	9/5/00	46.6	PCL				Nonvolatile beta	EPIA-001	GP	1.26	5.72	1	AN98	2.23	5.2	83	2.1
D	**FNB 14**	**9/5/00**	**2.63**	**PCL**	**J**	**I**		**Iodine-129**	**EPIA-006**	**GP**	**0.668**	**3.128**	**1**	**AN98**	**1.23**	**4.9**	**96**	**1.9**
S	FNB 14	9/5/00	9.35	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.045	0.25	5	AN98		4.9	96	1.9
D	FNB 14	9/5/00	-0.69	PCL	U			Strontium-90	EPIA-004	GP	1.35	2.604	1	AN98	0.627	4.9	96	1.9
D	**FNB 14**	**9/5/00**	**94600**	**PCL**				**Tritium**	**EPIA-002**	**GP**	**589**	**4389**	**1**	**AN98**	**1900**	**4.9**	**96**	**1.9**
D	FNB 14	9/5/00	15.6	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		4.9	96	1.9
D	FNB 14	9/5/00	3.78	PCL				Gross alpha	EPIA-001	GP	0.823	2.693	1	AN98	0.935	4.9	96	1.9
D	FNB 14	9/5/00	9.5	PCL				Nonvolatile beta	EPIA-001	GP	1.19	3.37	1	AN98	1.09	4.9	96	1.9
D	**FNB 15**	**9/5/00**	**5.69**	**PCL**				**Iodine-129**	**EPIA-006**	**GP**	**1.01**	**3.95**	**1**	**AN98**	**1.47**	**5.8**	**178**	**1.1**
S	**FNB 15**	**9/5/00**	**15.3**	**MGL**				**Nitrate-nitrite as nitrogen**	**EPA353.1**	**GE**	**0.09**	**0.5**	**10**	**AN98**		**5.8**	**178**	**1.1**
D	**FNB 15**	**9/5/00**	**9.68**	**PCL**				**Strontium-90**	**EPIA-004**	**GP**	**1.07**	**2.806**	**1**	**AN98**	**0.868**	**5.8**	**178**	**1.1**
D	**FNB 15**	**9/5/00**	**165000**	**PCL**				**Tritium**	**EPIA-002**	**GP**	**785**	**7325**	**1**	**AN98**	**3270**	**5.8**	**178**	**1.1**
D	FNB 15	9/5/00	16.1	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	11.9	50	1	AN98		5.8	178	1.1
D	FNB 15	9/5/00	4.63	PCL				Gross alpha	EPIA-001	GP	0.713	2.893	1	AN98	1.09	5.8	178	1.1
D	FNB 15	9/5/00	41.3	PCL				Nonvolatile beta	EPIA-001	GP	1.19	5.43	1	AN98	2.12	5.8	178	1.1

Notes:

PCL picoCuries/liter
PCML picoCuries/milliliter
MGL milligrams/liter
UGL micrograms/liter

Bold data exceed applicable thresholds.
Shaded data exceed MCLs and will be evaluated for inclusion in the contaminant transport model.

Table 4: OFASB Mixing Zone Well Network, 1Q2001 Sampling Results

VALID	WELL NAME	SAMPLE DATE	ANALYTICAL RESULT	RESULT UNIT	EPA GUIDE	EPA STORET	EMS CODE	ANALYTE	ANALYTICAL METHOD	LAB	DETECTION LIMIT	QUANTITATION LIMIT	CONCENTRATION FACTOR	FORMAT	RESULT PRECISION	pH	CONDUCTIVITY	TURBIDITY
Plume Assessment Wells FNB-2, FNB-3, FNB-5																		
D	FNB 2	1/29/01	15.6	PCL				Iodine-129	RADA-006	GP	1.3	6.76	1	AN98	2.73	4.3	138	6.7
S	FNB 2	1/29/01	11.8	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.069	0.5	10	AN98		4.3	138	6.7
D	FNB 2	1/29/01	92.2	PCL				Strontium-90	RADA-004	GP	0.758	5.798	1	AN98	2.52	4.3	138	6.7
D	FNB 2	1/29/01	90700	PCL				Tritium	RADA-002	GP	618	4118	1	AN98	1750	4.3	138	6.7
D	FNB 2	1/29/01	73.6	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		4.3	138	6.7
D	FNB 2	1/29/01	5	UGL	U			Lead, total recoverable	EPA6010B	GE	3.44	5	1	AN98		4.3	138	6.7
D	FNB 2	1/29/01	4.11	PCL				Radium-226	RADA-008	GP	0.574	2.39	1	AN98	0.908	4.3	138	6.7
D	FNB 2	1/29/01	2.52	PCL				Radium-228	RADA-009	GP	1	2.222	1	AN98	0.611	4.3	138	6.7
D	FNB 2	1/29/01	54	PCL				Gross alpha	RADA-001	GP	1.01	7.87	1	AN98	3.43	4.3	138	6.7
D	FNB 2	1/29/01	159	PCL				Nonvolatile beta	RADA-001	GP	1.6	9.82	1	AN98	4.11	4.3	138	6.7
D	FNB 3	1/29/01	1.01	PCL	U			Iodine-129	RADA-006	GP	1.35	2.65	1	AN98	0.65	4.6	64	1.7
S	FNB 3	1/29/01	5.04	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0207	0.15	3	AN98		4.6	64	1.7
D	FNB 3	1/29/01	6.42	PCL				Strontium-90	RADA-004	GP	0.813	2.291	1	AN98	0.739	4.6	64	1.7
D	FNB 3	1/29/01	18800	PCL				Tritium	RADA-002	GP	613	2323	1	AN98	855	4.6	64	1.7
D	FNB 3	1/29/01	34.1	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		4.6	64	1.7
D	FNB 3	1/29/01	39.5	UGL				Lead, total recoverable	EPA6010B	GE	3.44	5	1	AN98		4.6	64	1.7
D	FNB 3	1/29/01	1.01	PCL	J	I		Radium-226	RADA-008	GP	0.578	1.594	1	AN98	0.508	4.6	64	1.7
D	FNB 3	1/29/01	0.883	PCL	J	I		Radium-228	RADA-009	GP	0.694	1.454	1	AN98	0.38	4.6	64	1.7
D	FNB 3	1/29/01	6.55	PCL				Gross alpha	RADA-001	GP	0.819	3.319	1	AN98	1.25	4.6	64	1.7
D	FNB 3	1/29/01	16.2	PCL				Nonvolatile beta	RADA-001	GP	1.59	4.59	1	AN98	1.5	4.6	64	1.7
D	FNB 5	1/29/01	3.08	PCL	R		4	Iodine-129	RADA-006	GP	1.96	4	1	AN98	1.02	4.1	144	5.2
D	FNB 5	1/29/01	3.32	PCL	J	I		Iodine-129	RADA-006	GP	0.888	3.488	1	AN98	1.3	4.1	144	5.2
D	FNB 5	1/29/01	3.35	PCL	U			Iodine-129	EPA902.0MOD	TM	4.69	11.47	1	AN98	3.39	4.1	144	5.2
D	FNB 5	1/29/01	3.64	PCL	U			Iodine-129	EPA902.0MOD	TM	8.29	16.73	1	AN98	4.22	4.1	144	5.2
S	FNB 5	1/29/01	13.9	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.069	0.5	10	AN98		4.1	144	5.2
S	FNB 5	1/29/01	14.6	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.069	0.5	10	AN98		4.1	144	5.2
S	FNB 5	1/29/01	14900	UGL				Nitrate-nitrite as nitrogen	EPA353.2	WA	100	1000	50	AN98		4.1	144	5.2
D	FNB 5	1/29/01	21.8	PCL				Strontium-90	RADA-004	GP	0.875	3.515	1	AN98	1.32	4.1	144	5.2
D	FNB 5	1/29/01	23.91	PCL				Strontium-90	EMLSR02MOD	TM	1.64	5.72	1	AN98	2.04	4.1	144	5.2
D	FNB 5	1/29/01	24.36	PCL				Strontium-90	EMLSR02MOD	TM	1.62	5.68	1	AN98	2.03	4.1	144	5.2
D	FNB 5	1/29/01	32.6	PCL				Strontium-90	RADA-004	GP	0.954	4.394	1	AN98	1.72	4.1	144	5.2
D	FNB 5	1/29/01	70.69	PCML				Tritium	EPA906.0MOD	TM	1.26	6.16	1	AN98	2.45	4.1	144	5.2
D	FNB 5	1/29/01	80.01	PCML				Tritium	EPA906.0MOD	TM	1.37	6.79	1	AN98	2.71	4.1	144	5.2
D	FNB 5	1/29/01	77400	PCL				Tritium	RADA-002	GP	619	3879	1	AN98	1630	4.1	144	5.2
D	FNB 5	1/29/01	77500	PCL				Tritium	RADA-002	GP	617	3857	1	AN98	1620	4.1	144	5.2
D	FNB 5	1/29/01	17	UGL	U		6	Uranium, total recoverable	ASTMD5174M	TM	0.03	1.19	1	AN98	0.58	4.1	144	5.2
D	FNB 5	1/29/01	17.04	UGL	U		6	Uranium, total recoverable	ASTMD5174M	TM	0.03	1.17	1	AN98	0.57	4.1	144	5.2
D	FNB 5	1/29/01	57.2	UGL	U	V	6	Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		4.1	144	5.2
D	FNB 5	1/29/01	57.7	UGL	U	V	6	Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		4.1	144	5.2
D	FNB 5	1/29/01	6.75	UGL				Lead, total recoverable	EPA6010B	GE	3.44	5	1	AN98		4.1	144	5.2
D	FNB 5	1/29/01	10.2	UGL				Lead, total recoverable	EPA6010B	GE	3.44	5	1	AN98		4.1	144	5.2
D	FNB 5	1/29/01	18.1	UGL	J	I		Lead, total recoverable	EPA6010B	WA	4.7	47	1	AN98		4.1	144	5.2
D	FNB 5	1/29/01	6.46	PCL				Radium-226	RADA-008	GP	0.528	2.668	1	AN98	1.07	4.1	144	5.2
D	FNB 5	1/29/01	7.67	PCL				Radium-226	RADA-008	GP	0.473	2.953	1	AN98	1.24	4.1	144	5.2

VALID	WELL NAME	SAMPLE DATE	ANALYTICAL RESULT	RESULT UNIT	EPA GUIDE	EPA STORET	EMS CODE	ANALYTE	ANALYTICAL METHOD	LAB	DETECTION LIMIT	QUANTITATION LIMIT	CONCENTRATION FACTOR	FORMAT	RESULT PRECISION	pH	CONDUCTIVITY	TURBIDITY
D	FNB 5	1/29/01	2.88	PCL				Radium-228	RADA-009	GP	1.05	2.382	1	AN98	0.666	4.1	144	5.2
D	FNB 5	1/29/01	3.92	PCL				Radium-228	RADA-009	GP	1.02	2.4	1	AN98	0.69	4.1	144	5.2
D	FNB 5	1/29/01	29.96	PCL	R			Radium-228	EPA904.0MOD	TM	2	7.14	1	AN98	2.57	4.1	144	5.2
D	FNB 5	1/29/01	30.68	PCL	R			Radium-228	EPA904.0MOD	TM	1.77	6.91	1	AN98	2.57	4.1	144	5.2
D	FNB 5	1/29/01	23.72	PCL				Gross alpha	EPA900.0MOD	TM	1.15	5.93	1	AN98	2.39	4.1	144	5.2
D	FNB 5	1/29/01	24.9	PCL				Gross alpha	RADA-001	GP	0.998	5.858	1	AN98	2.43	4.1	144	5.2
D	FNB 5	1/29/01	26.14	PCL				Gross alpha	EPA900.0MOD	TM	0.78	5.84	1	AN98	2.53	4.1	144	5.2
D	FNB 5	1/29/01	27.5	PCL				Gross alpha	RADA-001	GP	0.773	5.593	1	AN98	2.41	4.1	144	5.2
D	FNB 5	1/29/01	60.2	PCL				Nonvolatile beta	RADA-001	GP	1.56	6.7	1	AN98	2.57	4.1	144	5.2
D	FNB 5	1/29/01	62.7	PCL				Nonvolatile beta	RADA-001	GP	1.95	7.39	1	AN98	2.72	4.1	144	5.2
D	FNB 5	1/29/01	76.91	PCL				Nonvolatile beta	EPA900.0MOD	TM	1.69	7.93	1	AN98	3.12	4.1	144	5.2
D	FNB 5	1/29/01	77.24	PCL				Nonvolatile beta	EPA900.0MOD	TM	1.5	7.76	1	AN98	3.13	4.1	144	5.2
Intermediate Wells FNB-9, FNB-10, FNB-11																		
D	FNB 9	1/29/01	0.531	PCL	U			Iodine-129	RADA-006	GP	1.81	4.07	1	AN98	1.13	5.4	39	4.4
S	FNB 9	1/29/01	1.32	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0069	0.05	1	AN98		5.4	39	4.4
S	FNB 9	1/29/01	1.32	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0069	0.05	1	AN98		5.4	39	4.4
S	FNB 9	1/29/01	1.35	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0069	0.05	1	AN98		5.4	39	4.4
D	FNB 9	1/29/01	0.119	PCL	U			Strontium-90	RADA-004	GP	0.798	1.512	1	AN98	0.357	5.4	39	4.4
D	FNB 9	1/29/01	2320	PCL				Tritium	RADA-002	GP	626	1532	1	AN98	453	5.4	39	4.4
D	FNB 9	1/29/01	34.8	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		5.4	39	4.4
D	FNB 9	1/29/01	0.586	PCL	U			Gross alpha	RADA-001	GP	0.756	1.662	1	AN98	0.453	5.4	39	4.4
D	FNB 9	1/29/01	2.19	PCL	J	I		Nonvolatile beta	RADA-001	GP	1.59	3.346	1	AN98	0.878	5.4	39	4.4
D	FNB 10	1/29/01	0.799	PCL	U			Iodine-129	RADA-006	GP	0.978	2.372	1	AN98	0.697	4.8	32	0.9
S	FNB 10	1/29/01	1.51	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0069	0.05	1	AN98		4.8	32	0.9
D	FNB 10	1/29/01	-0.307	PCL	U			Strontium-90	RADA-004	GP	1.05	1.896	1	AN98	0.423	4.8	32	0.9
D	FNB 10	1/29/01	2430	PCL				Tritium	RADA-002	GP	620	1526	1	AN98	453	4.8	32	0.9
D	FNB 10	1/29/01	11.6	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		4.8	32	0.9
D	FNB 10	1/29/01	1.55	PCL	J	I		Gross alpha	RADA-001	GP	0.64	1.868	1	AN98	0.614	4.8	32	0.9
D	FNB 10	1/29/01	3.29	PCL	J	I		Nonvolatile beta	RADA-001	GP	1.62	3.536	1	AN98	0.958	4.8	32	0.9
D	FNB 11	1/29/01	0.0756	PCL	U			Iodine-129	RADA-006	GP	1.35	2.832	1	AN98	0.741	5.2	46	2.9
S	FNB 11	1/29/01	2.85	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0069	0.05	1	AN98		5.2	46	2.9
D	FNB 11	1/29/01	1.64	PCL	J	I		Strontium-90	RADA-004	GP	0.871	1.913	1	AN98	0.521	5.2	46	2.9
D	FNB 11	1/29/01	11700	PCL				Tritium	RADA-002	GP	631	2073	1	AN98	721	5.2	46	2.9
D	FNB 11	1/29/01	34.8	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		5.2	46	2.9
D	FNB 11	1/29/01	1.42	PCL	J	I		Gross alpha	RADA-001	GP	0.853	2.127	1	AN98	0.637	5.2	46	2.9
D	FNB 11	1/29/01	6.79	PCL				Nonvolatile beta	RADA-001	GP	1.54	3.74	1	AN98	1.1	5.2	46	2.9
Compliance Boundary Wells FNB-12, FNB-13, FNB-14, FNB=15																		
D	FNB 12	1/29/01	0.406	PCL	U			Iodine-129	RADA-006	GP	1.59	3.084	1	AN98	0.747	5.1	26	2.5
S	FNB 12	1/29/01	0.25	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0069	0.05	1	AN98		5.1	26	2.5
D	FNB 12	1/29/01	-0.0195	PCL	U			Strontium-90	RADA-004	GP	0.82	1.522	1	AN98	0.351	5.1	26	2.5
D	FNB 12	1/29/01	2310	PCL				Tritium	RADA-002	GP	618	1514	1	AN98	448	5.1	26	2.5
D	FNB 12	1/29/01	50.1	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		5.1	26	2.5

VALID	WELL NAME	SAMPLE DATE	ANALYTICAL RESULT	RESULT UNIT	EPA GUIDE	EPA STORET	EMS CODE	ANALYTE	ANALYTICAL METHOD	LAB	DETECTION LIMIT	QUANTITATION LIMIT	CONCENTRATION FACTOR	FORMAT	RESULT PRECISION	pH	CONDUCTIVITY	TURBIDITY
D	FNB 12	1/29/01	0.749	PCL	U			Gross alpha	RADA-001	GP	1.08	2.288	1	AN98	0.604	5.1	26	2.5
D	FNB 12	1/29/01	0.96	PCL	U			Nonvolatile beta	RADA-001	GP	1.71	3.434	1	AN98	0.862	5.1	26	2.5
D	**FNB 13**	**1/31/01**	**1.86**	**PCL**	**J**	**I**		**Iodine-129**	**RADA-006**	**GP**	**1.27**	**3.69**	**1**	**AN98**	**1.21**	**5**	**96**	**1.6**
S	FNB 13	1/31/01	8.8	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0345	0.25	5	AN98		5	96	1.6
S	FNB 13	1/31/01	8.95	MGL				Nitrate-nitrite as nitrogen	EPA353.1	GE	0.0345	0.25	5	AN98		5	96	1.6
D	**FNB 13**	**1/31/01**	**29.5**	**PCL**				**Strontium-90**	**RADA-004**	**GP**	**0.513**	**2.195**	**1**	**AN98**	**0.841**	**5**	**96**	**1.6**
D	**FNB 13**	**1/31/01**	**64900**	**PCL**				**Tritium**	**RADA-002**	**GP**	**649**	**3629**	**1**	**AN98**	**1490**	**5**	**96**	**1.6**
D	FNB 13	1/31/01	14.3	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		5	96	1.6
D	FNB 13	1/31/01	1.95	PCL	J	I		Gross alpha	RADA-001	GP	0.719	2.159	1	AN98	0.72	5	96	1.6
D	FNB 13	1/31/01	54.7	PCL				Nonvolatile beta	RADA-001	GP	1.58	6.06	1	AN98	2.24	5	96	1.6
D	**FNB 14**	**1/31/01**	**2.82**	**PCL**	**J**	**I**		**Iodine-129**	**RADA-006**	**GP**	**1.22**	**3.66**	**1**	**AN98**	**1.22**	**4.7**	**113**	**3.8**
S	**FNB 14**	**1/31/01**	**10.9**	**MGL**				**Nitrate-nitrite as nitrogen**	**EPA353.1**	**GE**	**0.0345**	**0.25**	**5**	**AN98**		**4.7**	**113**	**3.8**
S	**FNB 14**	**1/31/01**	**11**	**MGL**				**Nitrate-nitrite as nitrogen**	**EPA353.1**	**GE**	**0.0345**	**0.25**	**5**	**AN98**		**4.7**	**113**	**3.8**
D	FNB 14	1/31/01	0.21	PCL	U			Strontium-90	RADA-004	GP	0.415	0.911	1	AN98	0.248	4.7	113	3.8
D	FNB 14	1/31/01	0.259	PCL	U			Strontium-90	RADA-004	GP	0.273	0.607	1	AN98	0.167	4.7	113	3.8
D	**FNB 14**	**1/31/01**	**101000**	**PCL**				**Tritium**	**RADA-002**	**GP**	**664**	**4384**	**1**	**AN98**	**1860**	**4.7**	**113**	**3.8**
D	FNB 14	1/31/01	13.8	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		4.7	113	3.8
D	FNB 14	1/31/01	4.64	PCL				Gross alpha	RADA-001	GP	0.448	2.216	1	AN98	0.884	4.7	113	3.8
D	FNB 14	1/31/01	6.37	PCL				Gross alpha	RADA-001	GP	0.622	2.682	1	AN98	1.03	4.7	113	3.8
D	FNB 14	1/31/01	13	PCL				Nonvolatile beta	RADA-001	GP	1.45	3.91	1	AN98	1.23	4.7	113	3.8
D	FNB 14	1/31/01	15.2	PCL				Nonvolatile beta	RADA-001	GP	1.46	4.04	1	AN98	1.29	4.7	113	3.8
D	**FNB 15**	**1/31/01**	**5.5**	**PCL**				**Iodine-129**	**RADA-006**	**GP**	**1.16**	**5.34**	**1**	**AN98**	**2.09**	**5.5**	**190**	**1**
S	**FNB 15**	**1/31/01**	**19.3**	**MGL**				**Nitrate-nitrite as nitrogen**	**EPA353.1**	**GE**	**0.069**	**0.5**	**10**	**AN98**		**5.5**	**190**	**1**
D	**FNB 15**	**1/31/01**	**10.7**	**PCL**				**Strontium-90**	**RADA-004**	**GP**	**0.267**	**0.999**	**1**	**AN98**	**0.366**	**5.5**	**190**	**1**
D	**FNB 15**	**1/31/01**	**165000**	**PCL**				**Tritium**	**RADA-002**	**GP**	**662**	**5382**	**1**	**AN98**	**2360**	**5.5**	**190**	**1**
D	FNB 15	1/31/01	13.7	UGL	U	V		Uranium, total recoverable	EPA6010B	GE	7.33	50	1	AN98		5.5	190	1
D	FNB 15	1/31/01	6.11	PCL				Gross alpha	RADA-001	GP	0.653	2.753	1	AN98	1.05	5.5	190	1
D	FNB 15	1/31/01	59.2	PCL				Nonvolatile beta	RADA-001	GP	1.32	5.76	1	AN98	2.22	5.5	190	1

Notes:

PCL picoCuries/liter
PCML picoCuries/milliliter
MGL milligrams/liter
UGL micrograms/liter

Bold data exceed applicable thresholds.
Shaded data exceed MCLs and will be evaluated for inclusion in the contaminant transport model.

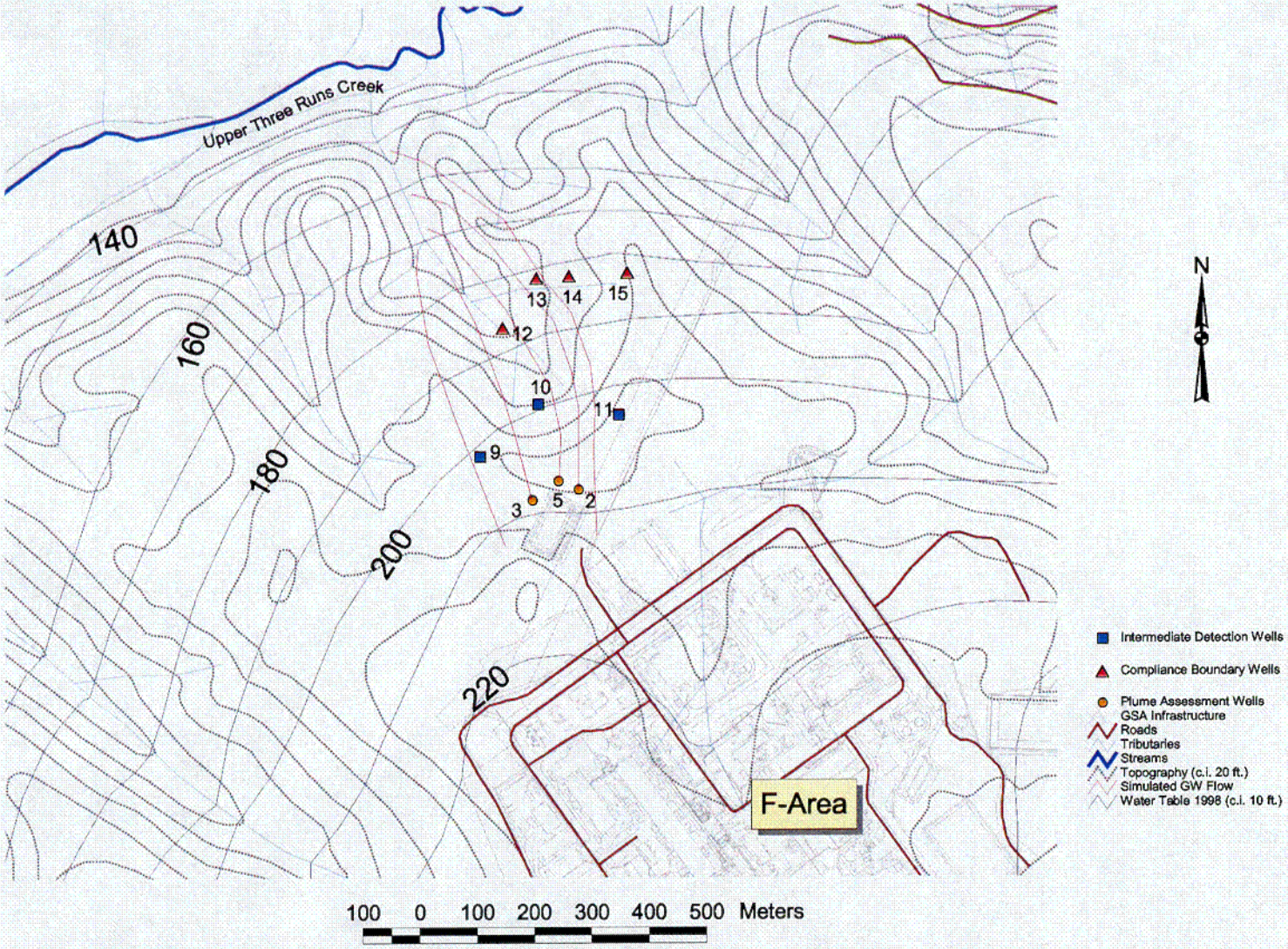

Figure 1. Components of the OFASB OU monitoring well network.

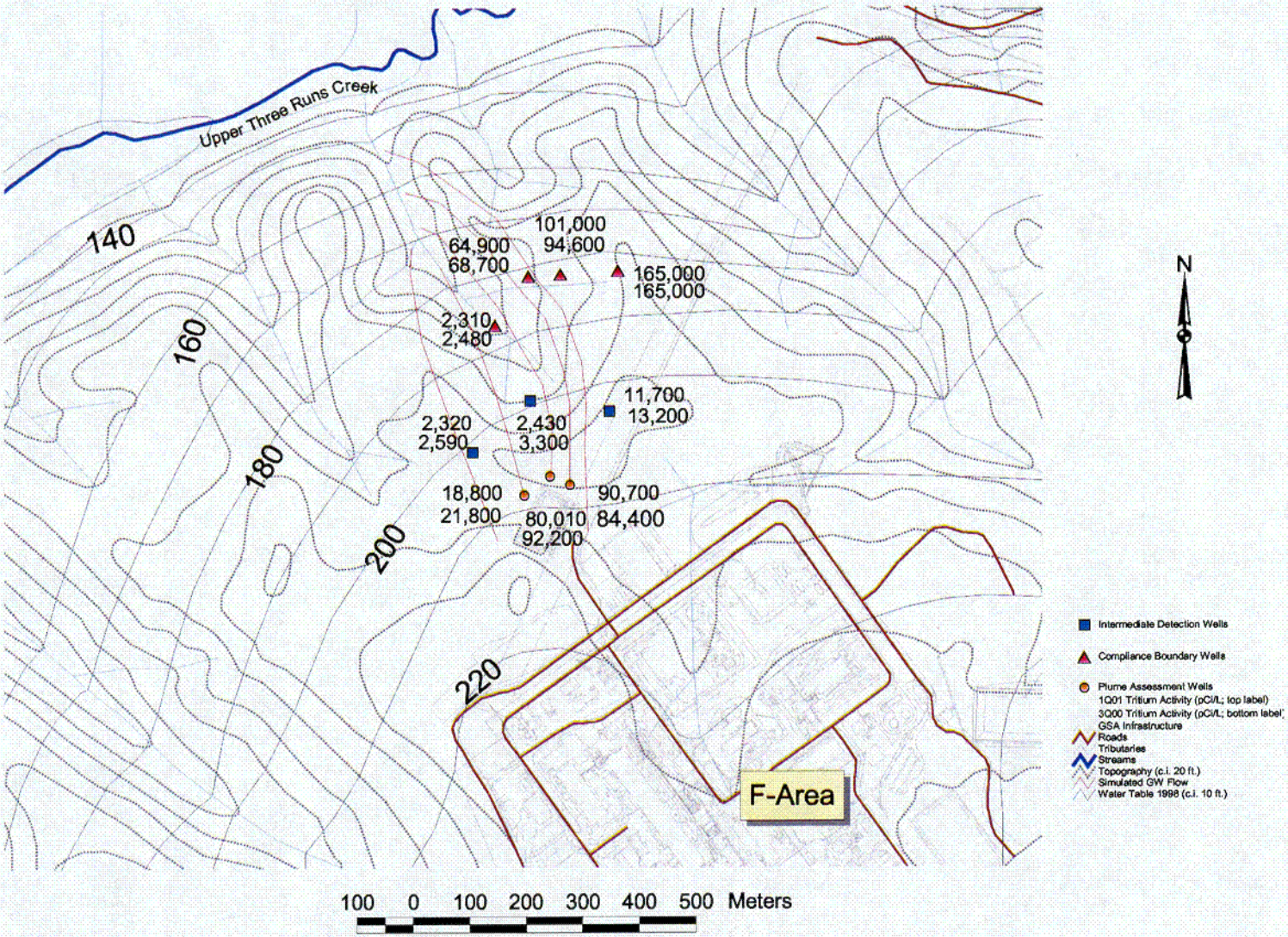

Figure 2. Distribution of tritium in FNB wells, 3Q2000 and 1Q2001.

C02

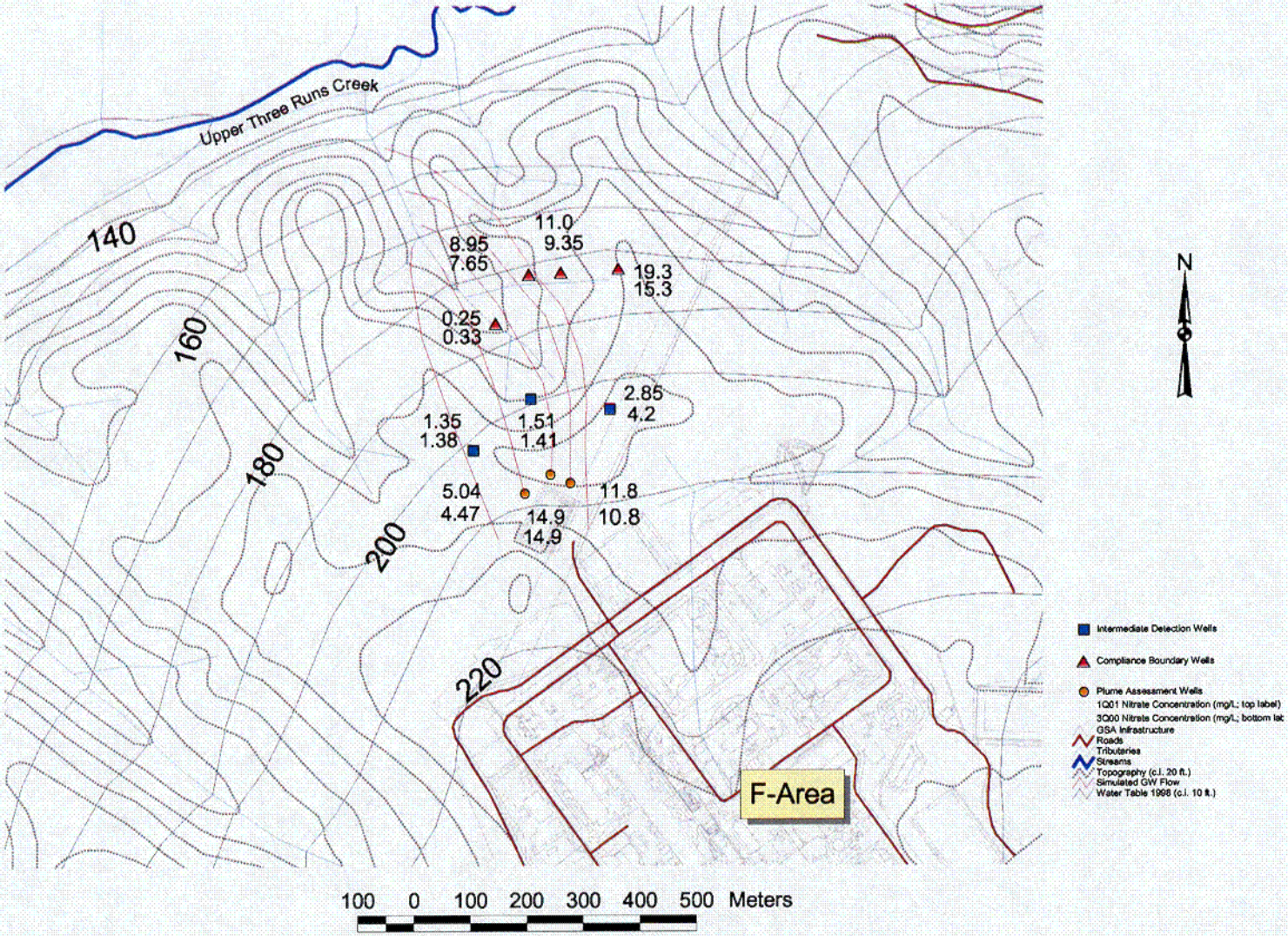

Figure 3. Distribution of nitrate in FNB wells, 3Q2000 and 1Q2001.

C03

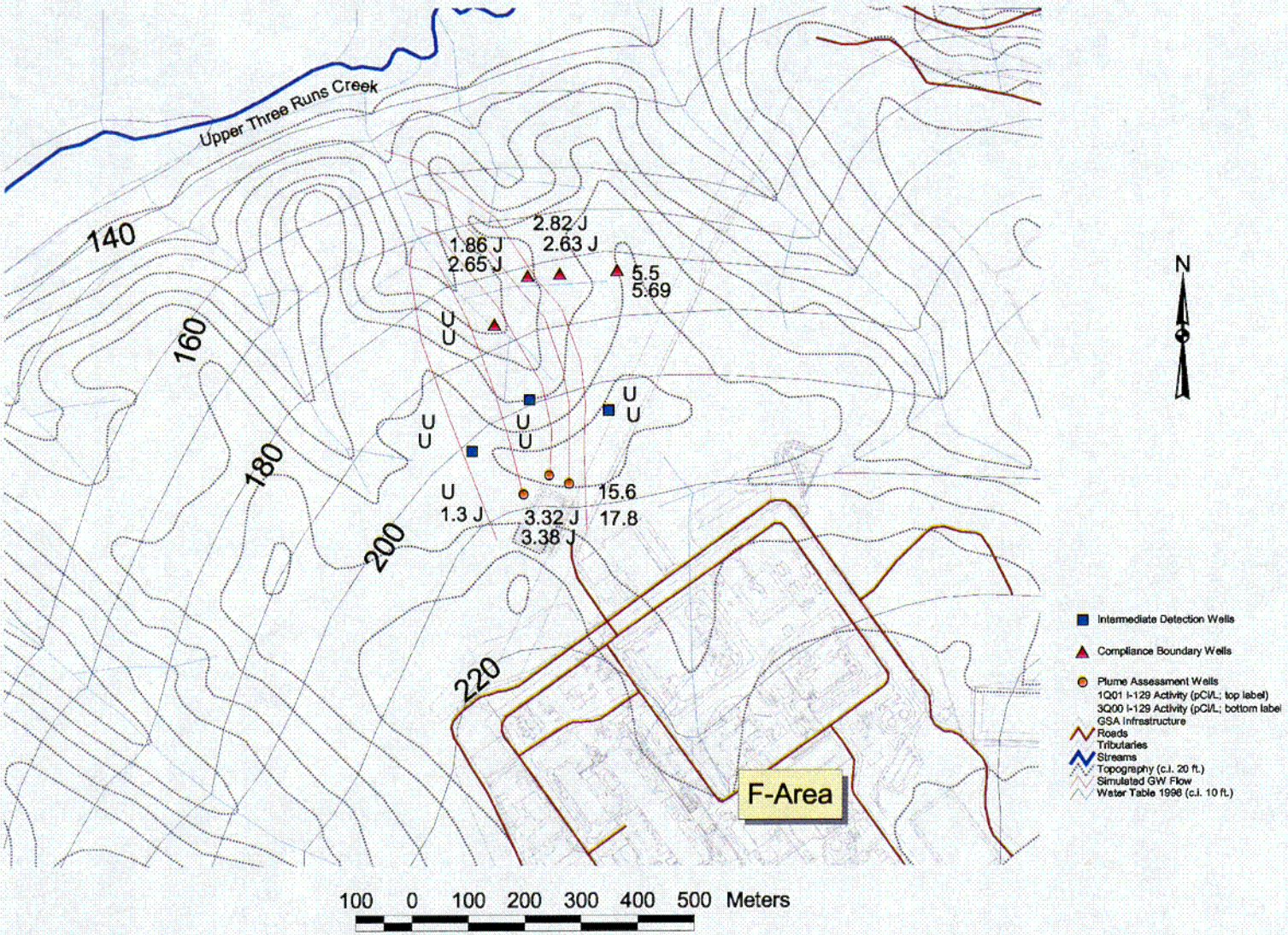

Figure 4. Distribution of iodine-129 in FNB wells, 3Q2000 and 1Q2001.

C04

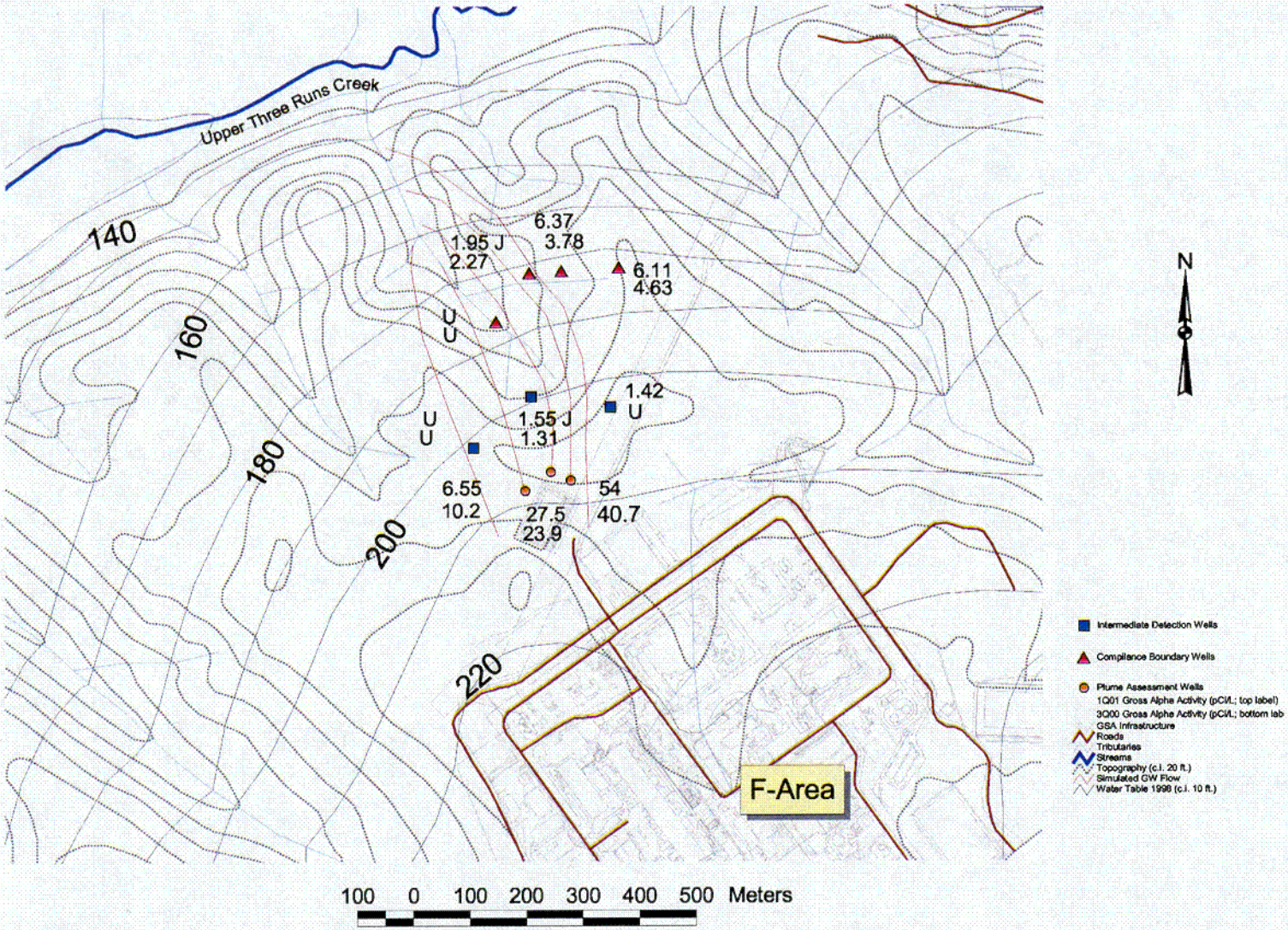

Figure 5. Distribution of gross alpha activity in FNB wells, 3Q2000 and 1Q2001.

C05

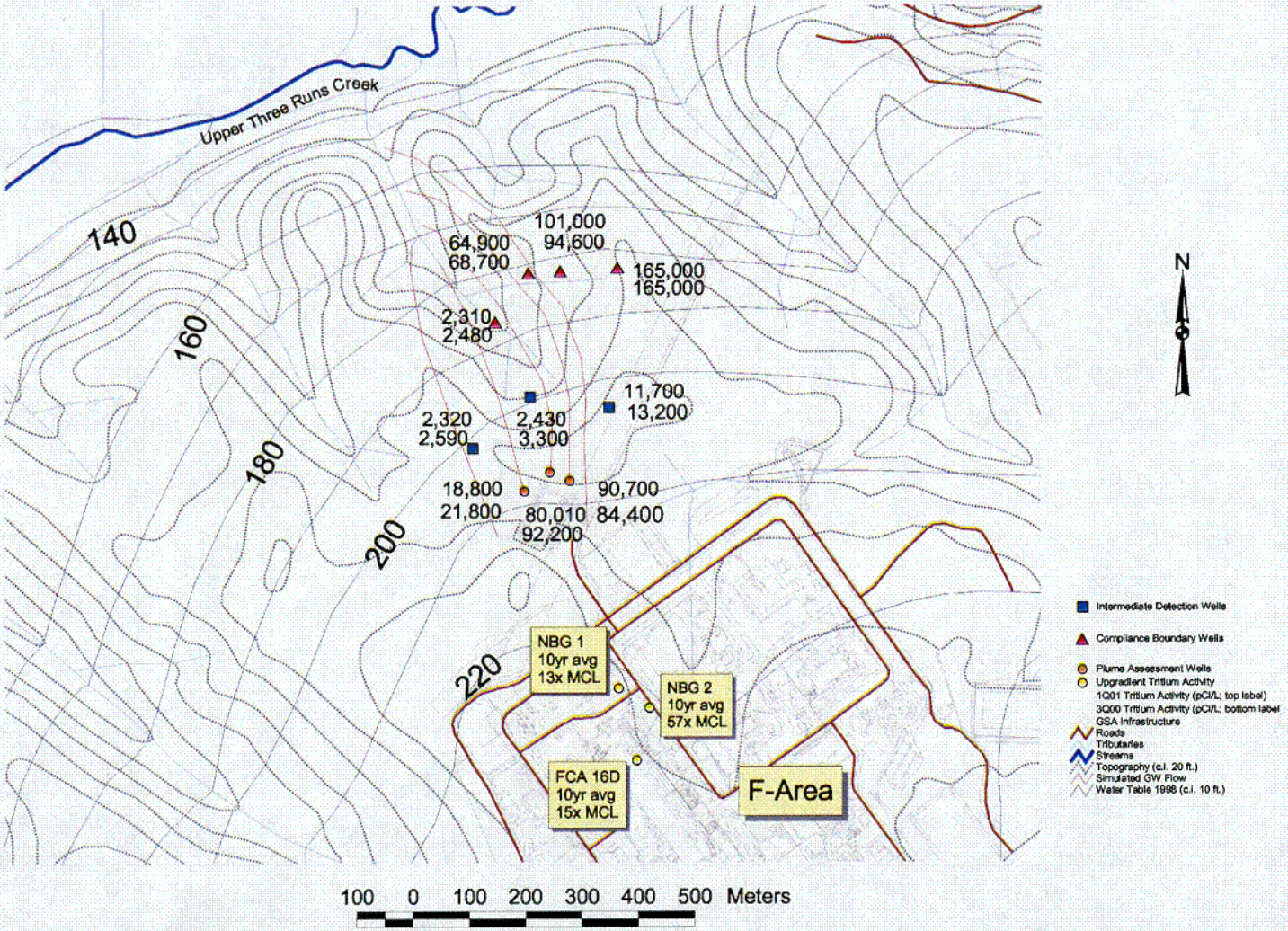

Figure 6. Distribution of tritium in FNB wells and notable upgradient tritium activities.

C06

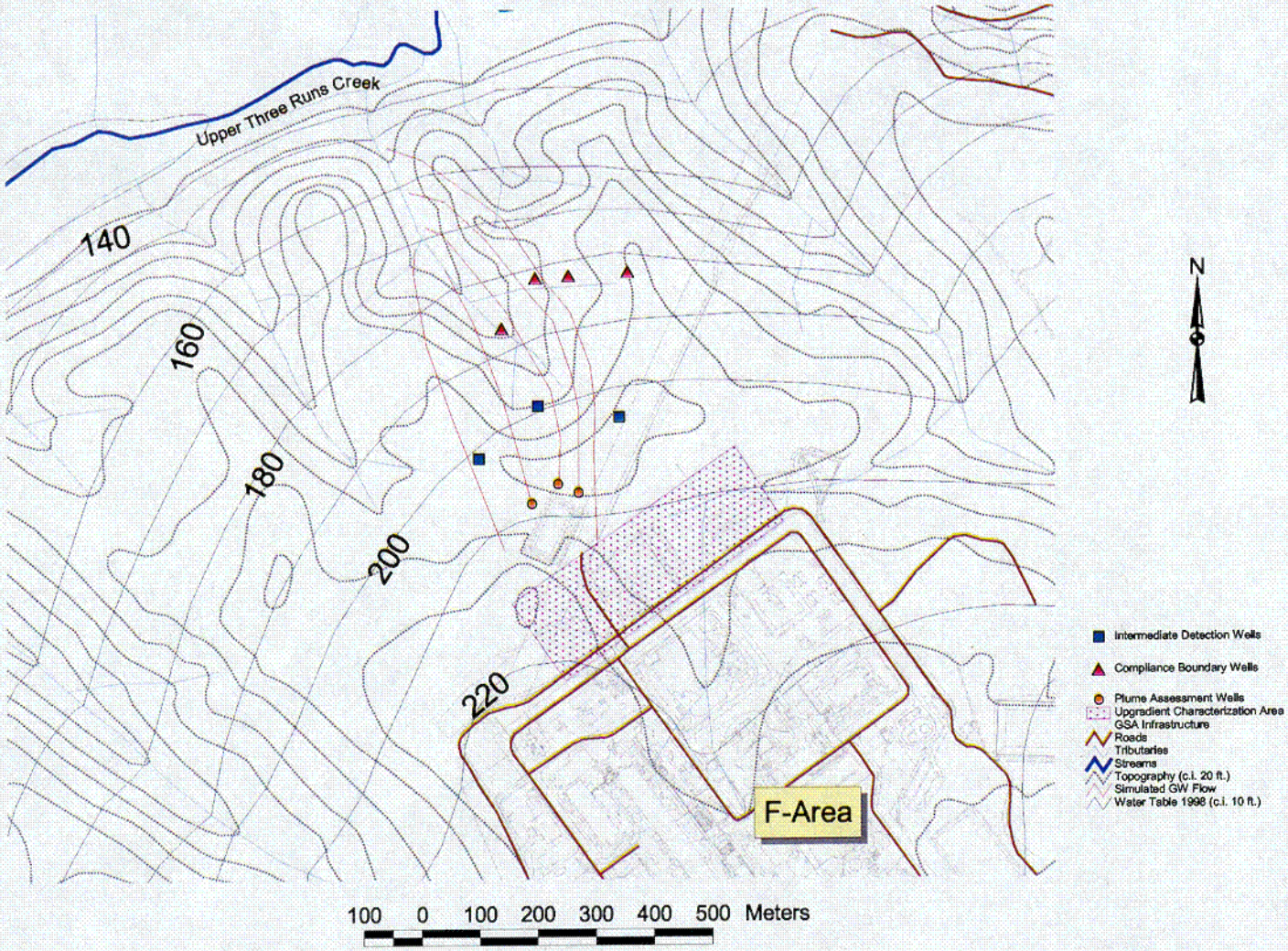

Figure 7. Area proposed for additional characterization.

C07