

R-009-707.2

2387

**CONCERNS SOUTH GROUNDWATER
CONTAMINATION PLUME MEETING FEBRUARY
8, 1991**

03/08/91

DOE-FO/EPA

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ENCLOSURE

OU5

February 8, 1991, meeting with OEPA concerning the South Groundwater Contamination Plume Removal Action.

Persons present at the meeting included:

C. J. Fermaintt	(DOE/FMPC)
D. J. Brettschneider	(WMCO)
T. L. Crawford	(WMCO)
F. L. Johnston	(WMCO)
J. M. Lacefield	(WMCO)
G. E. Mitchell	(OEPA/SWDO)
M. Burt	(OEPA/SWDO)
T. Schneider	(OEPA/SWDO)
M. Walbridge	(OEPA/SWDO)

A representative for USEPA, although invited, was not present.

A meeting agenda with Attachments 1-3 & 5-8 was distributed to all the persons in attendance (Enclosure B). The items discussed were based on, but not limited to, the agenda. At the conclusion of the meeting, OEPA supplied WMCO with an Application for Modification of NPDES permit (Enclosure C).

Meeting items discussed included:

1. The 50% complete design drawings for Part 2 of the Removal Action were reviewed. The design drawings had been supplied to USEPA and OEPA for informational purposes just prior to the February 8, 1991, meeting.
2. It was stated that although current design efforts for the Part 2 pipeline include asphalt-dipped carbon steel pipe, High Density Polyethylene (HDPE) pipe will probably be used. OEPA was asked if they had an opinion on PVC pipe use. They expressed some concern over code allowed leakage from joints of the PVC piping. All agreed that the HDPE piping system with butt-fused joints would be more desirable than PVC.
3. OEPA was informed that a new effluent outfall line will be constructed as part of the Part 2 effort. The existing FMPC outfall will be abandoned. As a result, DOE will formally be requesting a twenty day extension in resubmitting the Part 2 and Part 3 Work Plan in order to incorporate this new design development. Consequently, the Work Plan concerning the repair of the existing FMPC outfall pipeline will not be submitted.
4. OEPA expressed concerns about how the Part 2 operation will affect the Paddys Run Site Plume (PRP). These concerns included provisions for early warning monitoring.

5. OEPA questioned the location of the Part 2 recovery well field as shown in the design drawings, based on a February 1 meeting with DOE and ASI/IT. OEPA thought that IT had indicated that the southern edge of the South Plume was located significantly further north. WMC0, DOE, and OEPA thought it prudent that this discrepancy be clarified before design continues. (ACTION ITEM)
6. OEPA emphasized that check valves should be provided in the Part 2 and Part 3 design where pressure differentials in connecting pipelines exist. WMC0 indicated that this was being done but would be rechecked. (ACTION ITEM)
7. WMC0 proposed three new monitoring points [003], [607], & [608] (shown in Attachments 1 & 2 of Enclosure B). [608] was being added in response to Work Plan comments. It was explained that with new NPDES monitoring at [003] and the existing NPDES monitoring at Manhole 175 (001), a new NPDES monitoring point to monitor the combined flows from MH 175 and South Plume, would not be necessary. WMC0 explained that such a monitoring point for combined flows would need to be located outside the FMPC property boundary. After discussion, OEPA concurred that the arrangement proposed would be acceptable. Monitoring points, [607] and [608], would provide an indication of the uranium removal efficiency for the IAWWT.
8. The proposed monitoring parameters listed in Attachment 3 of Enclosure B were discussed. WMC0 proposed that the results for the NPDES parameters listed for [003] and [607] would be reported with the NPDES monthly reports and that limits should not be set. OEPA concurred but requested that dissolved oxygen and iron be added to the monitoring parameters listed for [003]. Alpha and beta radiation, uranium, and other radionuclides listed for [003], [607], and [608] would be reported in the Federal Facilities Compliance Agreement (FFCA) - Quarterly Report.
9. OEPA supplied WMC0 an Application for Modification of the FMPC NPDES permit (Enclosure C). Only the proposed NPDES monitored points [607] and [003] would be added to the permit. [608] would only be reported in the FFCA Quarterly Report as it does not contain any NPDES parameters. (ACTION ITEMS)
10. The proposed location of the IAWWT near the SWRB was sketched on the 50% complete design drawings and discussed. (Attachment 4 of Enclosure B was not prepared in time for the meeting).
11. The preliminary process and instrumentation drawing for the IAWWT was presented in Attachment 7 of Enclosure B. OEPA responded favorably to this process drawing. It was requested that a pH probe with override (shutdown) of the pumping system be provided prior to the Ion Exchange units. This would protect against any possibility of acid getting through to remove uranium from the resin. (ACTION ITEM)

12. Attachment 5 of Enclosure B showed the relationship of the South Plume's remediation well locations with respect to the removal action recovery well locations. The force main is being sized to allow for additional flows from these wells. It was explained how the pump station is designed to allow for this modification.
13. Attachment 6 of Enclosure B showed how the combined flow from the SSLS and SWRB would make available enough uranium for removal by the IAWWT as stated in the dispute resolution agreement. The existing Standard Operating Procedure for the SWRB would be revised to ensure that an adequate quantity of stormwater remained for treatment by the IAWWT. WMCO presented the possibility of a new removal action to eliminate SWRB overflows into the Storm Sewer Outfall Ditch by increasing the capacity of the SWRB pump station. It was also explained that an emergency tie-in (locked valve) from the SWRB to the South Plume force main was being planned.
14. WMCO asked for clarification concerning the Part 1 Alternate Water Supply well field. OEPA stated that the owner of a well does not necessarily need to own all of the land within the well's isolation radius (300 feet). An easement can be in place instead. Also, the well field location shown (Attachment 8 of Enclosure B) is preliminary and will probably be moved to the west and the well configuration changed.
15. OEPA explained briefly the requirements of well development and sampling for Part 1.
16. WMCO conveyed the idea of possibly supplying an alternate water supply to other portions of the South Plume area from the Part 1 well field. OEPA expressed that iron and manganese treatment may be required if concentrations exceed OEPA guidelines. Other treatment may be required if the quality of the untreated groundwater does not meet drinking water standards established by OEPA. Chlorine disinfection will be required if the number of people served constitutes a community system.
17. WMCO stated that supplying USEPA and OEPA with 30%, 65%, and 95%/100% design submittals is contrary to the 50%, 90%, and 100% design submittals required from their AE-Firm by contract. These design submittals will be made available to USEPA and OEPA for information only. Comments will be welcomed but need to be received in a timely manner (approximately two weeks).
18. DOE and WMCO stated that a draft Operations and Maintenance (O&M) manual for Part 2 will be made available to USEPA and OEPA. However, the manual will not be ready until after the design is completed. It was agreed, however, that the plan for operation of the well field would be issued for comment ASAP. (ACTION ITEM)

19. DOE and WMCO requested from OEPA existing O&M manuals, namely for the Brandt Pike and Van Dyne Crotty projects, to ensure the contents of the O&M manual for operation of the Part 2 well field is consistent with similar previously approved documents. (OEPA ACTION ITEM)

MEETING AGENDA

Date: February 8, 1991
Place: Offices of OEPA
Subject: South Groundwater Contamination Plume Removal Action:
Part 2 - Groundwater Pumping and Discharge System and
Part 3 - Interim Advanced Wastewater Treatment System (IAWWT)

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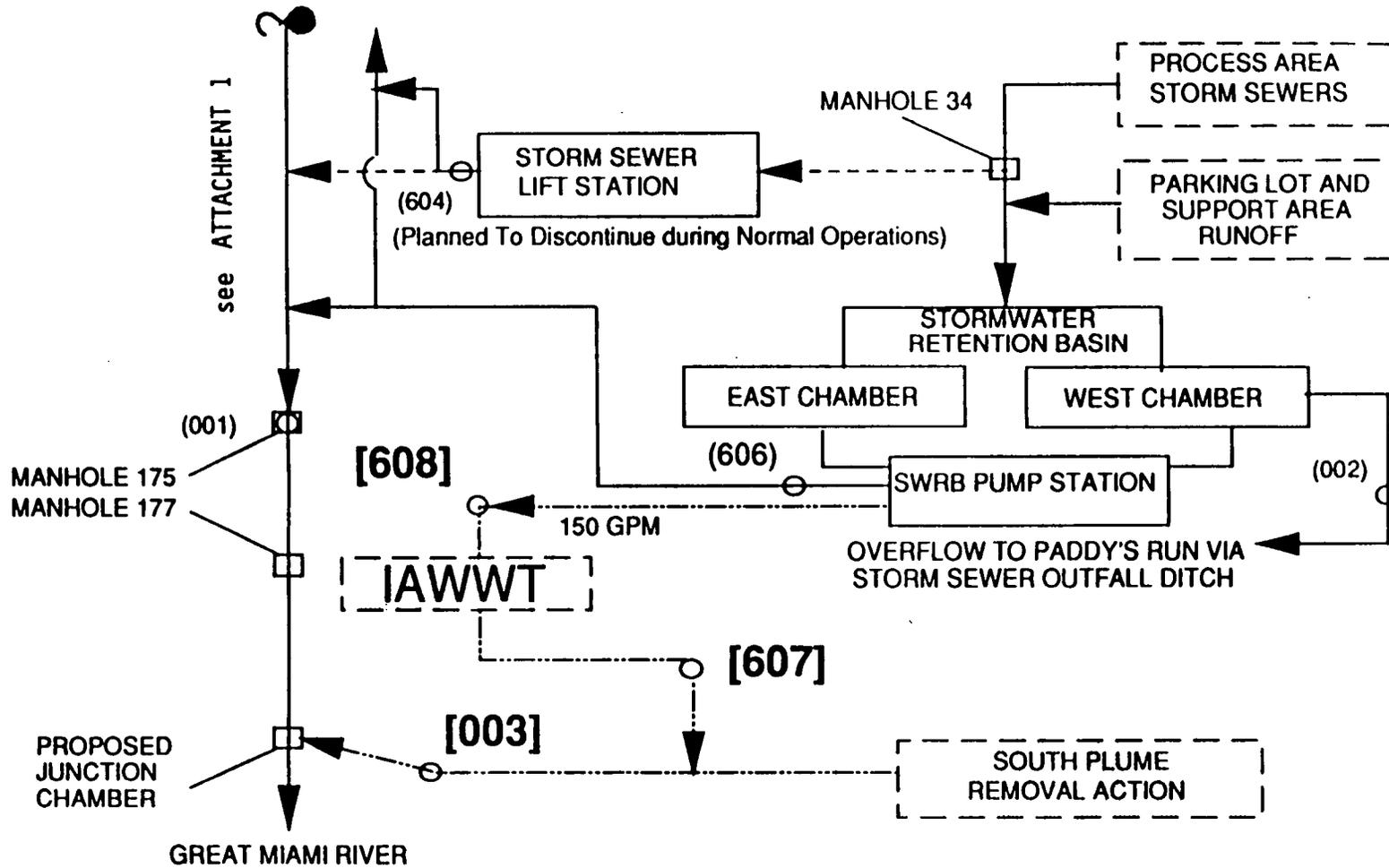
- I. Introduction & Purpose - *Brettschneider*
- II. Discussion of System Layout - *Lacefield*
 - A. Review of 50% Design Drawings
 - B. Discussion of New Outfall Line
- III. Proposed Monitoring Points - *Brettschneider/Johnston*
 - A. Wastewater Flow Diagrams and Location of Proposed Monitoring Points (see Attachments 1-3)
 - B. IAWWT at Stormwater Retention Basins (see Attachment 4)
 - C. Total FMPC effluent to be characterized by existing NPDES Outfall 001 (Manhole 175) and Proposed Monitoring Point 003
 - D. How removal efficiencies will be determined for IAWWT
- IV. Discussion of Part 2 & Part 3 Work Plan - *Crawford/Brettschneider*
 - A. Recovery Wells (presented in South Plume EE/CA)
 - a. Number and Location
 - b. Pumping Rate predicted by Groundwater Model
 - B. Transfer Pump Station
 1. Pumping Rate, Throttling, Flow Controls
 2. Surge Tank
 - C. Groundwater Discharge Pipeline
 1. Reserve Capacity for Pipeline outside FMPC property boundary considering future flows from Remedial Action Recovery Wells (see Attachment 5)
 2. Pipeline material will be either HDPE with Butt-fused joints or Asphalt-Dipped Carbon Steel with welded joints; no secondary containment (EPA opinion on PVC)

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- D. Interim Advanced Wastewater Treatment System (see Attachments 6&7)
 - 1. Criteria used to size IAWWT, USEPA Comment No. 7
 - 2. Proof-of-Process Testing
 - a. Wastewater Stream to be treated
 - b. Mass of uranium expected in influent
 - 3. IAWWT Process Flow Sheet
 - 4. Fate of spent resin
 - 5. Fate of solids from filters
 - 6. AWWT (capacity - Phase I and Phase II)
- E. Access/Easements
- V. Remedial Action - *Brettschneider*
 - A. Impacts on Removal Action Recovery Wells and Transfer Pump Station
 - B. Recovery Wells added for Remedial Action
 - C. AWWT Expansion
- VI. Miscellaneous - *Brettschneider*
 - A. Design Document Submittals
 - B. Other issues
 - Part 1 Wellfield (see Attachment 8)

ATTACHMENTS

- 1 Proposed Interim Wastewater Flow Diagram (Overview)
- 2 Proposed Interim Wastewater Flow Diagram
- 3 Monitoring Parameters
- 4 Site Plan of SWRB for IAWWT Location (*Not Included*)
- 5 Remediation Recovery Wells
- 6 1989 Uranium Concentration Comparison
- 7 IAWWT Facility Flowsheet
- 8 Part 1 Alternate Water Supply Wellfield



- LEGEND**
- DISCONTINUED
 - - - - - SOURCE (PROPOSED SHADED)
 - PROPOSED
 - (XOX) NPDES SAMPLING POINT
 - [XOX] PROPOSED SAMPLING POINTS

PROPOSED INTERIM WASTEWATER FLOW DIAGRAM

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DRAFT 2/18/91

MONITORING PARAMETERS

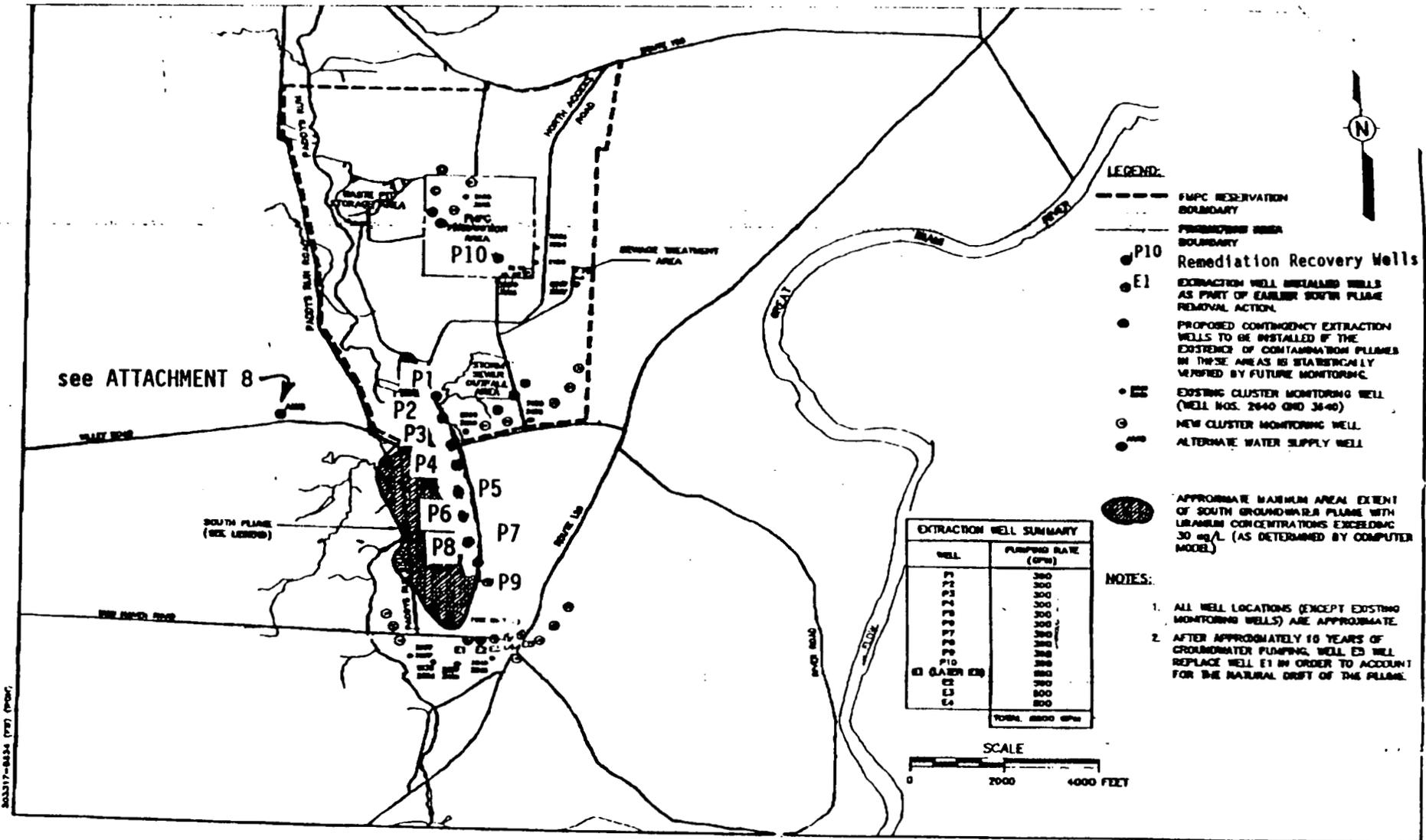
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MONITORING PARAMETER	NUMBER				
	(606) ^A	[607]	[608]	[003]	(001)
Residue, Total Nonfilterable	(4)	[3]		[3]	(3)
Flowrate	(1)	[1]		[1]	(1)
pH, SU Continuously Monitored		[1]		[1]	(1)
Oil and Grease, Total	(8)	[2]		[2]	(2)
Dissolved Oxygen					(2)
Carb. BOD ₅					(3)
NH ₃ -N, NO ₃ -N					(3)
Total CN					(2)
Total : F, Cr, Cu, Pb, Ni, Ag					(3)
Cr, Dissolved Hexavalent					(3)
Alpha & Beta Radiation		[4]	[7]	[4]	(4)
Uranium		[4]	[7]	[4]	(4)
Uranium -233, -234, -235, -236, -238				[5]	(5)
Thorium -228, -230, -232,				[5]	(5)
Thorium -234				[3]	(3)
Radium -226, -228				[5]	(5)
Actinium -227				[5]	(5)
Lead -210				[5]	(5)
Neptunium -237				[5]	(5)
Potassium -40				[5]	(5)
Plutonium -238, -239/240				[5]	(5)
Technetium -99				[5]	(5)
Cesium -137				[6]	(6)
Ruthenium -106				[6]	(6)
Strontium -90				[6]	(6)

Notes:

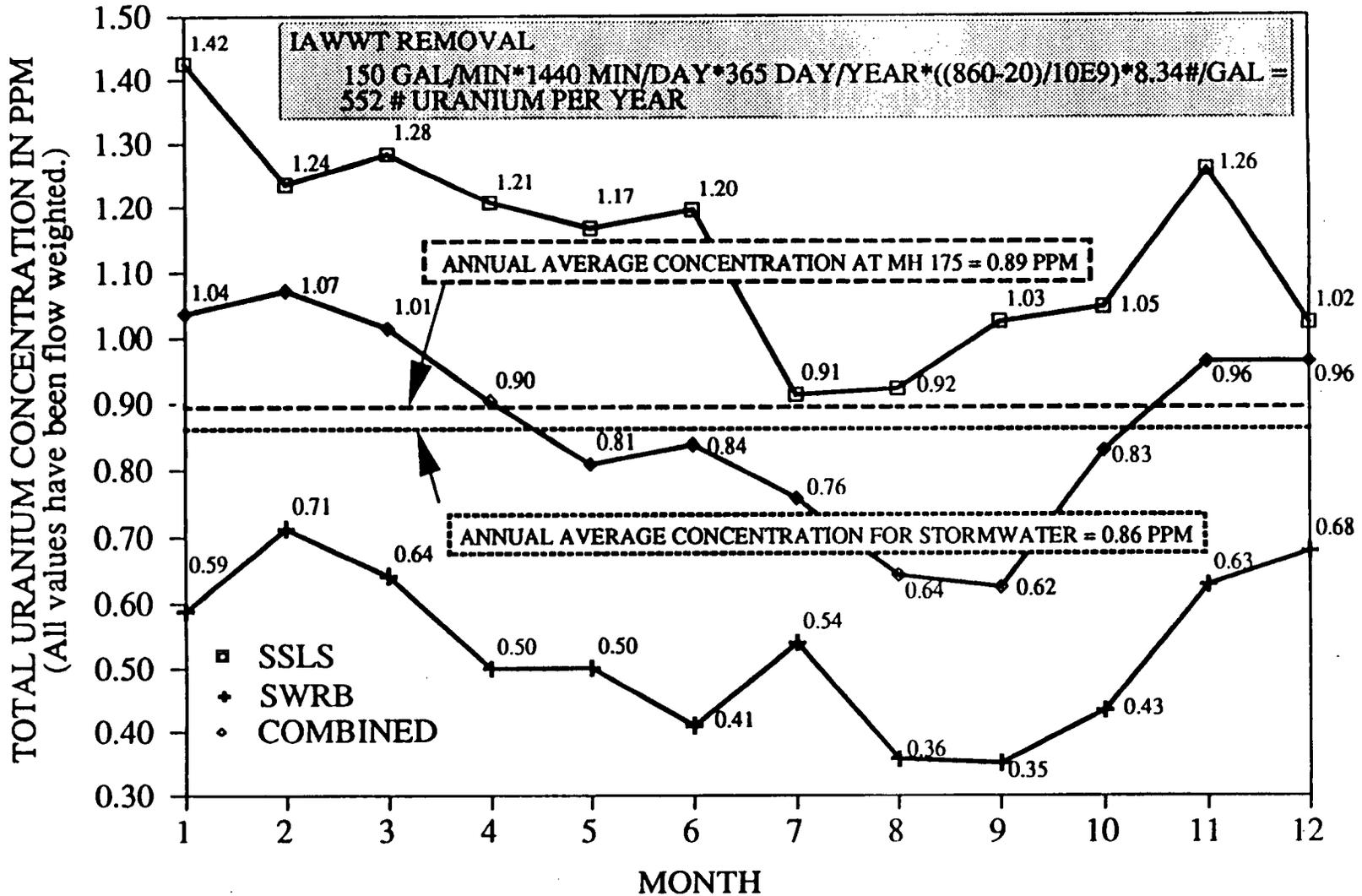
- () indicates Existing Sampling Point or Monitoring Parameter analyzed
- [] indicates Proposed Sampling Point or Monitoring Parameter to be analyzed
- A. Parameters Monitored only when discharging
 1. Continuously monitored
 2. Grab Sample taken 1/Week
 3. 24 Hour Composite sampled 1/Week
 4. 24 Hour Composite sampled 1/Day
 5. Daily Samples Compositated & Analyzed Monthly
 6. Daily Samples Compositated & Analyzed Quarterly
 7. 24 Hour Composite consisting of 4 Hour grab samples
 8. Grab Sample taken 1/Day

DRAFT
2/3/91

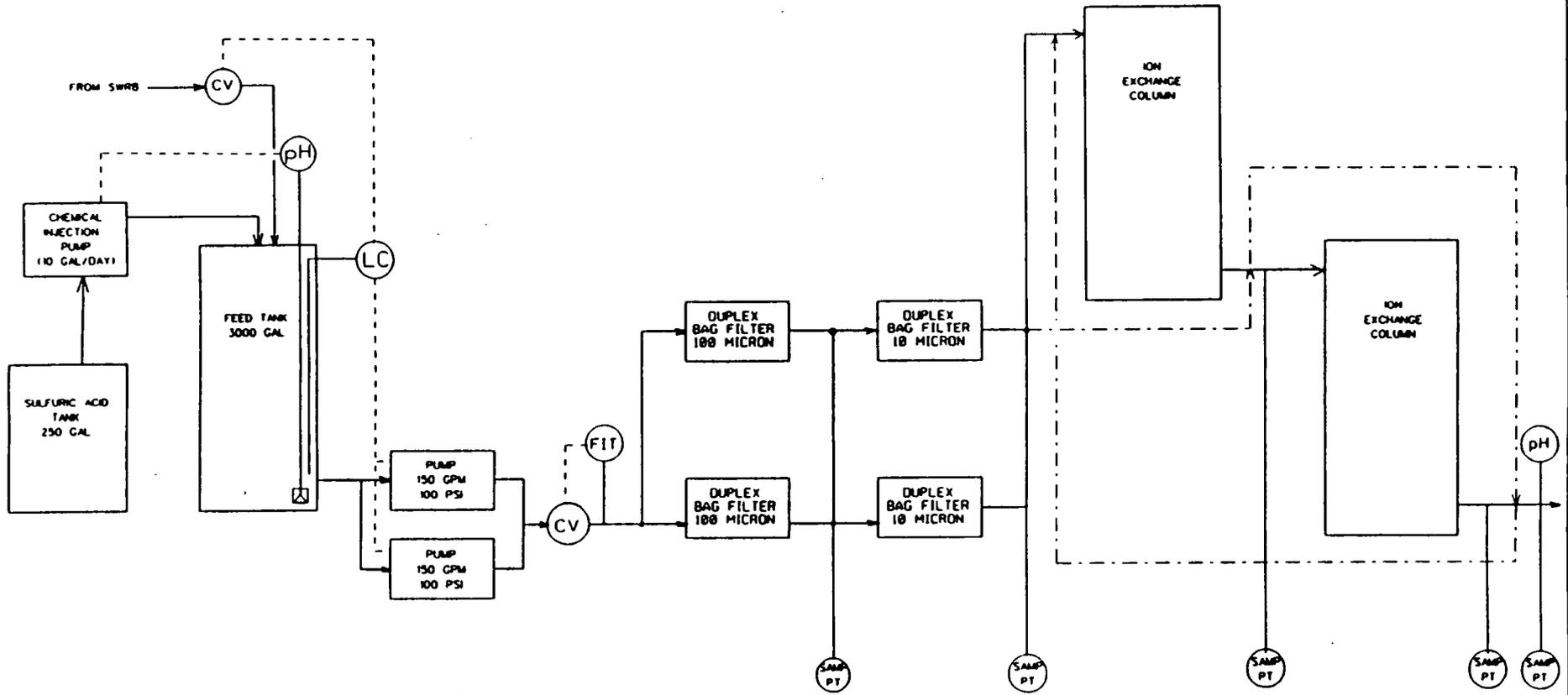


1989 URANIUM CONCENTRATION COMPARISON

FOR THE STORM SEWER LIFT STAION (SSLS) AND STORMWATER RETENTION BASIN (SWRB)



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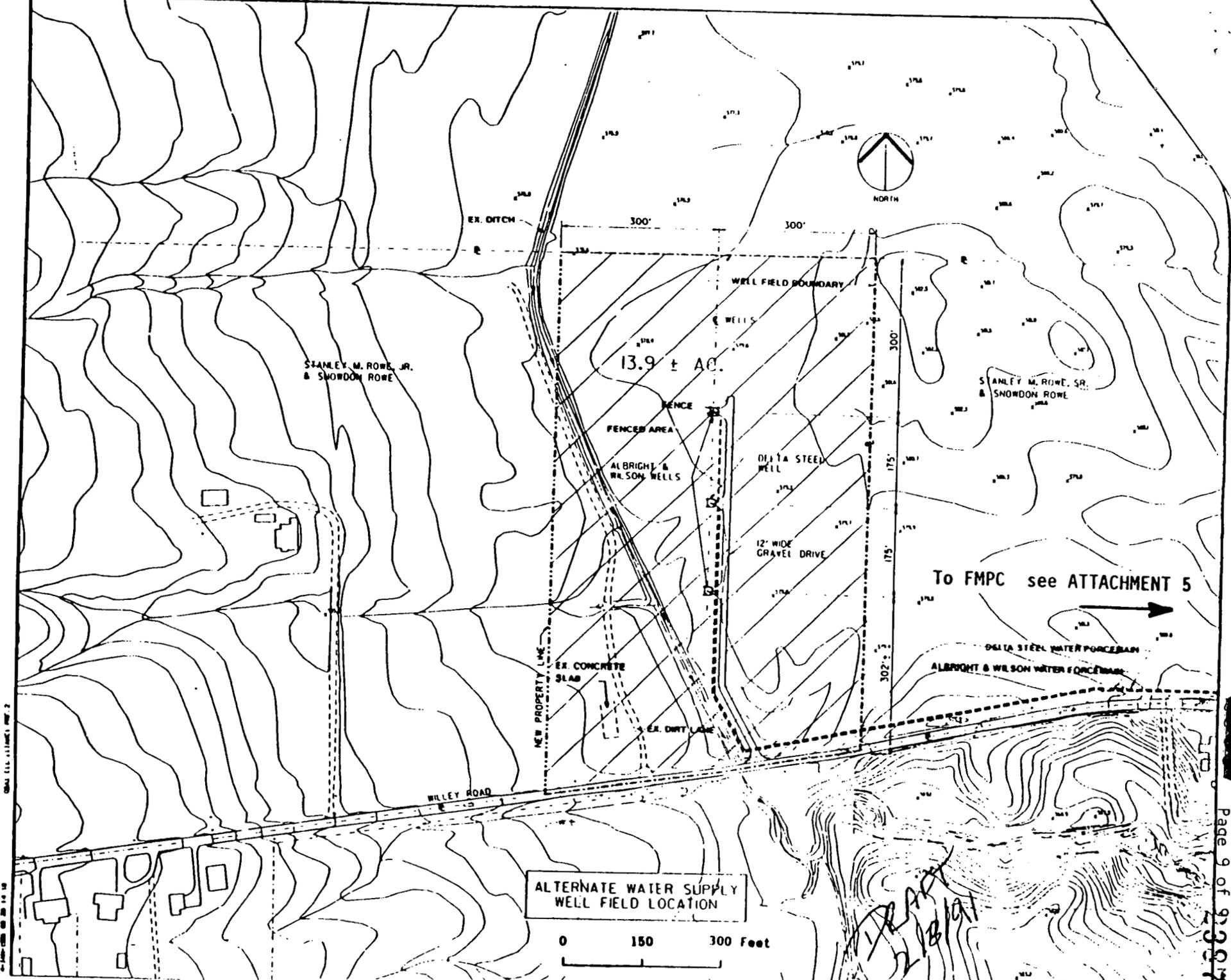
PRELIMINARY
INTERNAL REVIEW
NOT YET COMPLETE

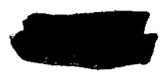
————— PRIMARY FLOW PATH
(THROUGH ION EXCHANGER)
- - - - - SECONDARY FLOW PATH
(THROUGH ION EXCHANGER)

INTERIM ADVANCED WASTE WATER TREATMENT FACILITY

*EAFT
2/3/91*

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7. Describe requested modification in sufficient detail to allow Ohio Environmental Protection Agency personnel to process your request. If a Permit to Install is required under Regulation EP-30 attach a completed application for a Permit to Install and make no other entries in this section. If a Permit to Install is not required and additional space is needed provide the additional information on 8-1/2 by 11 bond paper and mark item 7 continued in the upper left hand corner of each extra sheet.

[This application must be signed by the person who applied for the original permit or some other person eligible under EP-31-03(D)].

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Printed Name of Person Signing

Title

Date Application Signed

Signature of Applicant

