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RI/FS DOCUMENT CHANGE REQUESTS (DCRS)

07/25/90

DOE-1429-90
DOE-FSO/EPA
1
LETTER

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RF

Department of Energy
FMPC Site Office
P.O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 738-6319

July 25, 1990
DOE-1429-90

Catherine A. McCord, Remedial Project Manager
U. S. Environmental Protection Agency
Region V - 5HR-12
230 S. Dearborn Street
Chicago, IL 60604

Graham E. Mitchell
Ohio Environmental Protection Agency
40 S. Main Street
Dayton, OH 45402

Dear Ms. McCord & Mr. Mitchell:

RI/FS DOCUMENT CHANGE REQUESTS (DCRs)

Enclosed for your approval is Document Change Request (DCR) number 45 dealing with the use of eight-inch temporary casing in RI/FS monitor wells and a copy of the requested viewgraph on justification for the use of eight-inch temporary casing. This DCR was discussed and verbal approval received from you at the June 28, 1990 TIE meeting. U. S. EPA comments provided at this meeting have been incorporated.

Also enclosed for your approval are DCRs number 41 and 46, which were provided to you at the TIE meeting. These DCRs are for the additional sample collection to support Operable Unit 1 and Operable Unit 2. OEPA comments on these documents have been received and are being incorporated. The field work involved in these DCRs cannot begin until your approval is obtained. Since this work is critical to the RI/FS for Operable Units 1 and 2, your immediate attention to this matter is appreciated.

If you have any questions, please contact Oba Vincent, of my staff, at (513) 738-6937.

Sincerely,

Ray Hansen for

Gerald W. Westerbeck
FMPC Site Manager

DP-84:Vincent

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DOCUMENT CHANGE REQUEST

This form is used to initiate permanent changes to controlled distribution project-specific procedures, such as the QAPP, Work Plan and Sampling Plan.

REQUEST NO. 41
Issue Date:
Page 1 of 9
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REQUESTOR: H. Windecker PHONE NO.: 378-3100 DATE: 4-5-90

DOCUMENT TITLE: Work Plan

SECTION/PARAGRAPH/PAGE NO.: 4.2.1.3 DOCUMENT NUMBER: --

ISSUE DATE: January 1987 LATEST REVISION DATE: March 1988

JUSTIFICATION:

Justification for 11 additional wells to support the Operable Unit 2 RI/FS is provided in the attached document entitled "Operable Unit 2, Additional Sampling."

CONTENT OF CHANGE:

In order to characterize the nature and distribution of contamination at the Active and Inactive Fly Ash Piles and the Sanitary Landfill, 11 borings are required. Four will be located at the Inactive Fly Ash Pile, three at the Active Fly Ash Pile, and four to be completed as monitoring wells, if groundwater is encountered, at the Sanitary Landfill.

EFFECTIVE DATE OF CHANGE:

☐ When all approvals have been obtained _____ Effective Date

☐ Other (Specify): _____

REQUIRED APPROVALS:

Project Director	6/20/90 Date		
Project QA Officer	6/20/90 Date	WMCO QA Officer	7/9/90 Date
Technical Manager	6/20/90 Date	DOE COTR	7/19/90 Date

TO BE COMPLETED BY DOE

A. Prior EPA notification required?	☐ Yes	☐ No
B. Prior EPA approval required?	☑ Yes	☐ No
C. Immediate implementation?	☐ Yes	☑ No

FORM007

2

ADDITIONAL SOIL SAMPLING ACTIVITIES

This work plan addendum presents an analysis of the current need for additional site characterization for Operable Unit 2 under the RI/FS. Operable Unit 2, Solid Waste Units, is comprised of five components: a Sanitary Landfill; an Inactive Fly Ash Pile, an Active Fly Ash Pile; Lime Sludge Ponds; and the Southfield Area. This work plan addendum specifies the quantity and location of additional soil borings and the type of analysis required. The justification for 11 soil borings is to adequately characterize the nature of contamination present and define the limits of the solid waste units within Operable Unit 2. Each solid waste unit was evaluated with data available from previous studies, primarily, the CIS study conducted by R. F. Weston (1986), and the present program. This evaluation concluded that the data are acceptable to characterize the Lime Sludge Ponds and the Southfield Area, but appears to be inadequate to characterize the Sanitary Landfill and Fly Ash Piles. Additional sampling within these subunits is necessary to complete the Baseline Risk Assessment and the Feasibility Study.

Careful thought was given to locate the borings to minimize the number required while maximizing the usefulness of the information obtained. The locations were chosen due to the potential for the presence of contamination and to evaluate areas not characterized by previous borings. A summary of the sampling effort is outlined in Table 1. A detailed discussion and proposed sampling strategy is presented for each solid waste unit to be sampled.

SANITARY LANDFILL

Due to the heterogeneity of waste placed in the Sanitary Landfills, it is unreasonable to expect that any degree of sampling (short of excavation) would be sufficient to directly encounter all radiological and chemical constituents that may have been deposited in the landfill. Samples of the leachate from the wastes will provide an indicator of the hazardous nature of the material deposited in the landfill. It is proposed that four borings be completed within the landfill, near its periphery, in locations where leachate is likely to collect. Figure 1 shows the selected sampling locations. Each boring should be continuously sampled, such that materials encountered can be visually characterized. At approximate intervals of five feet, or when field instruments detect the presence of radiological or organic constituents, samples should be collected and retained for possible radiological and inorganic HSL parameter analysis. These samples should be retained for analysis if leachate or groundwater is not encountered.

TABLE 1

PROPOSED ADDITIONAL SAMPLING EFFORT, OPERABLE UNIT 2

Location	Number of Borings	Approximate Depth (ft)	Purpose	Sample Type	Number of Samples per Boring	Sample Parameters
Sanitary Landfill, Near Periphery	4	15-20	Sample waste; determine depth of landfill, sample leachate	Soil/waste	5	Archive
				Liquid/leachate	1	Full HSL/Full Rad/PCB
Active Fly Ash Pile	3	15-20	Evaluate horizonal and vertical distribution and variability	Fly ash	6	Full Rad/Organic and Inorganic HSL/PCB
Inactive Fly Ash Pile	4	25-35	As above	Fly Ash	7	Full Rad/Organic and Inorganic HSL/PCB/EP TOX Metals
Lime Sludge Ponds			No additional sampling required at this time			
Southfield Area			No additional sampling required at this time			
Total	11			Solid	20	Archive
				Liquid	4	Full HSL/Full Rad/PCB
				Fly ash	46	Full Rad/Organic and Inorganic HSL/PCB
				Fly ash	28	EP TOX Metals

Note: Sampling to be conducted in compliance with Remedial Investigation and Feasibility Study, Feed Materials Production Center Vol I, Sampling Plan, Section 4, Subsurface Soils Sampling Plan, March 1988.

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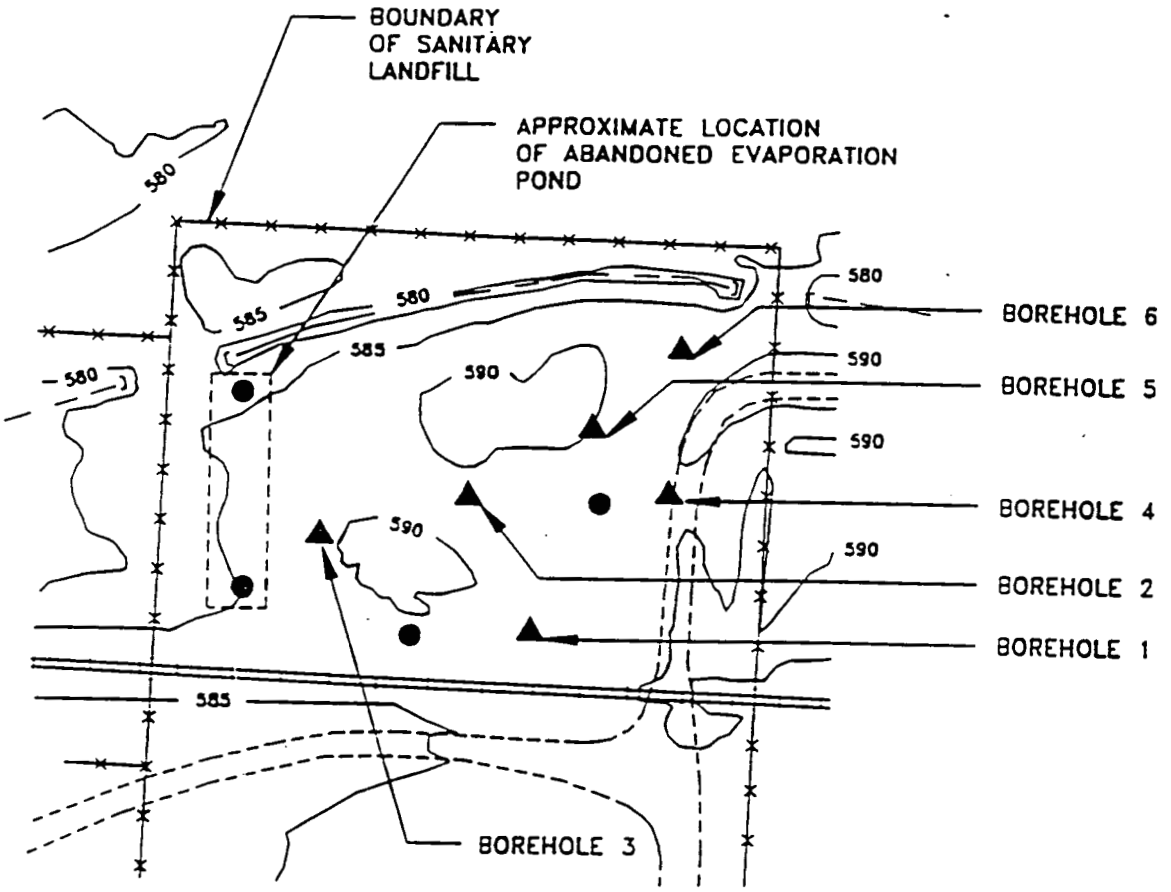

NOTE:

BORING LOCATIONS MAY BE RELOCATED TO AREAS OF KNOWN SEEPS AS DIRECTED BY THE SITE GEOLOGIST.

50 0 50 100 150
SCALE IN FEET

LEGEND:

▲ BOREHOLE (WESTON CIS)

● APPROXIMATE BORING LOCATIONS

FIGURE 1. APPROXIMATE SAMPLING LOCATIONS, SANITARY LANDFILL

Each boring should fully penetrate the landfill. If leachate or groundwater is encountered in a boring, a two-inch diameter, stainless steel piezometer will be installed and the liquid will be sampled. As shown in Table I, the liquid sample collected should be analyzed for HSL organic compounds. HSL inorganic compounds, PCBs, and radiological components. All samples will be shipped within 24 hours of sampling. If groundwater or leachate is not encountered, one or more of the retained samples will be selected for analysis. Sample selection will be based on the highest recorded field measurements.

FLY ASH PILES

As part of the CIS investigation, three borings were placed within the Inactive Fly Ash Pile and one was placed within the Active Fly Ash Pile. One composite sample per boring was analyzed. From this investigation, PCBs, inorganic compounds and radiological constituents were found. In order to more fully characterize the vertical and horizontal distribution of contaminants contained within each fly ash pile, for additional borings within the Inactive Fly Ash Pile and three additional borings within the Active Fly Ash Pile are proposed. Figures 2 and 3, respectively, show the proposed locations.

Each boring will fully penetrate the fly ash to aid in estimating the total volume of fly ash at the site, and shall be continuously sampled for visual classification. Samples from the Inactive Fly Ash Pile will be taken at intervals of approximately five feet and retained for laboratory analyses. Six of the samples will be analyzed for full isotopic radionuclide analyses, organic and inorganic HSL compounds, and PCBs. Additionally, an TCLP extraction and RCRA metals analysis will be conducted on each sample taken from the Inactive Fly Ash Pile.

It is proposed that three borings be completed within the Active Fly Ash Pile. These borings will be sampled and analyzed in a similar manner as described for the Inactive Fly Ash Pile. A total of six samples per boring will be collected for analysis since the Active Fly Ash Pile is expected to be a smaller height that the Inactive Fly Ash Pile. The proposed drilling and sampling program is shown on Table 1.

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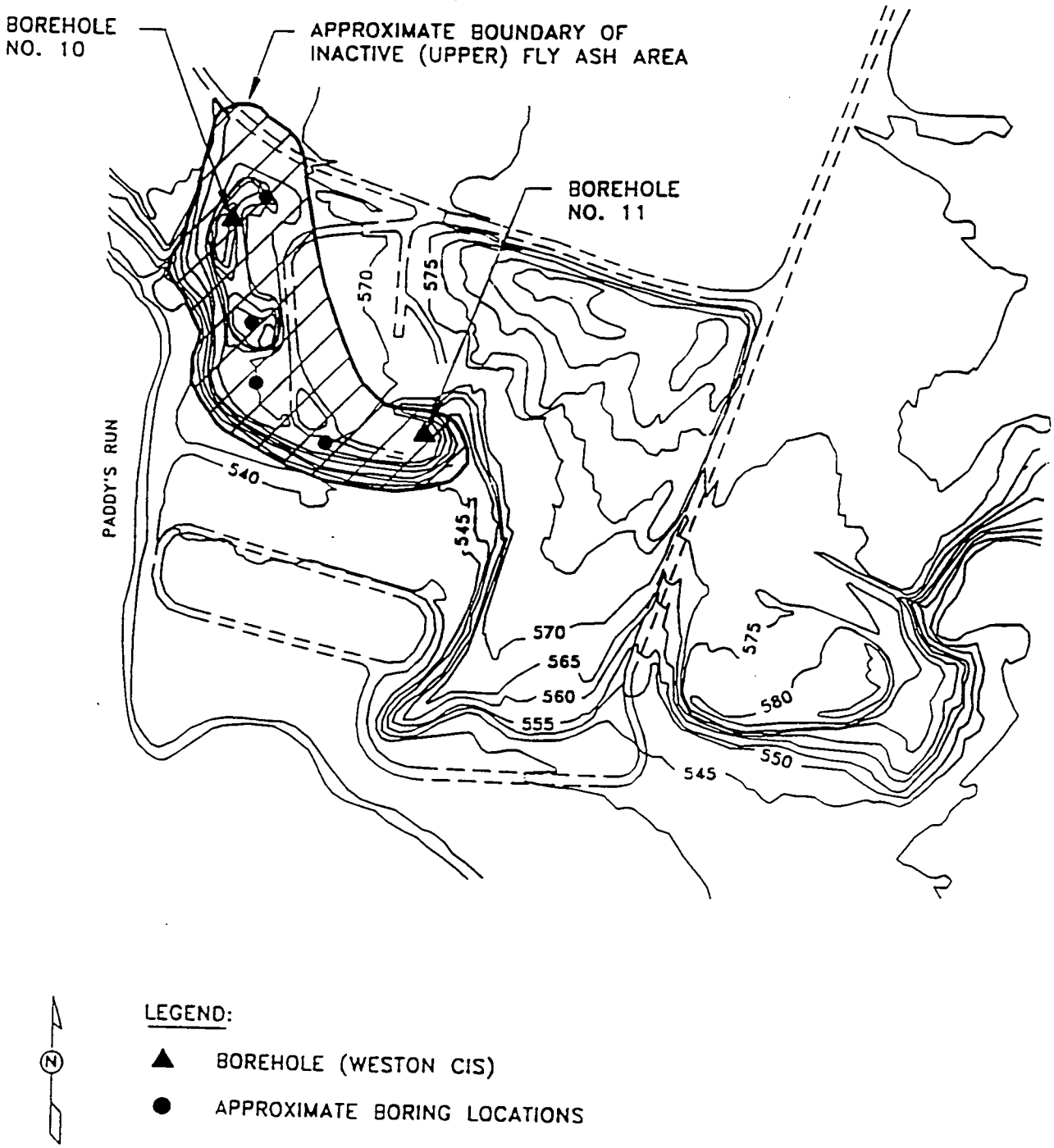

FIGURE 2. APPROXIMATE SAMPLING LOCATIONS, INACTIVE FLY ASH

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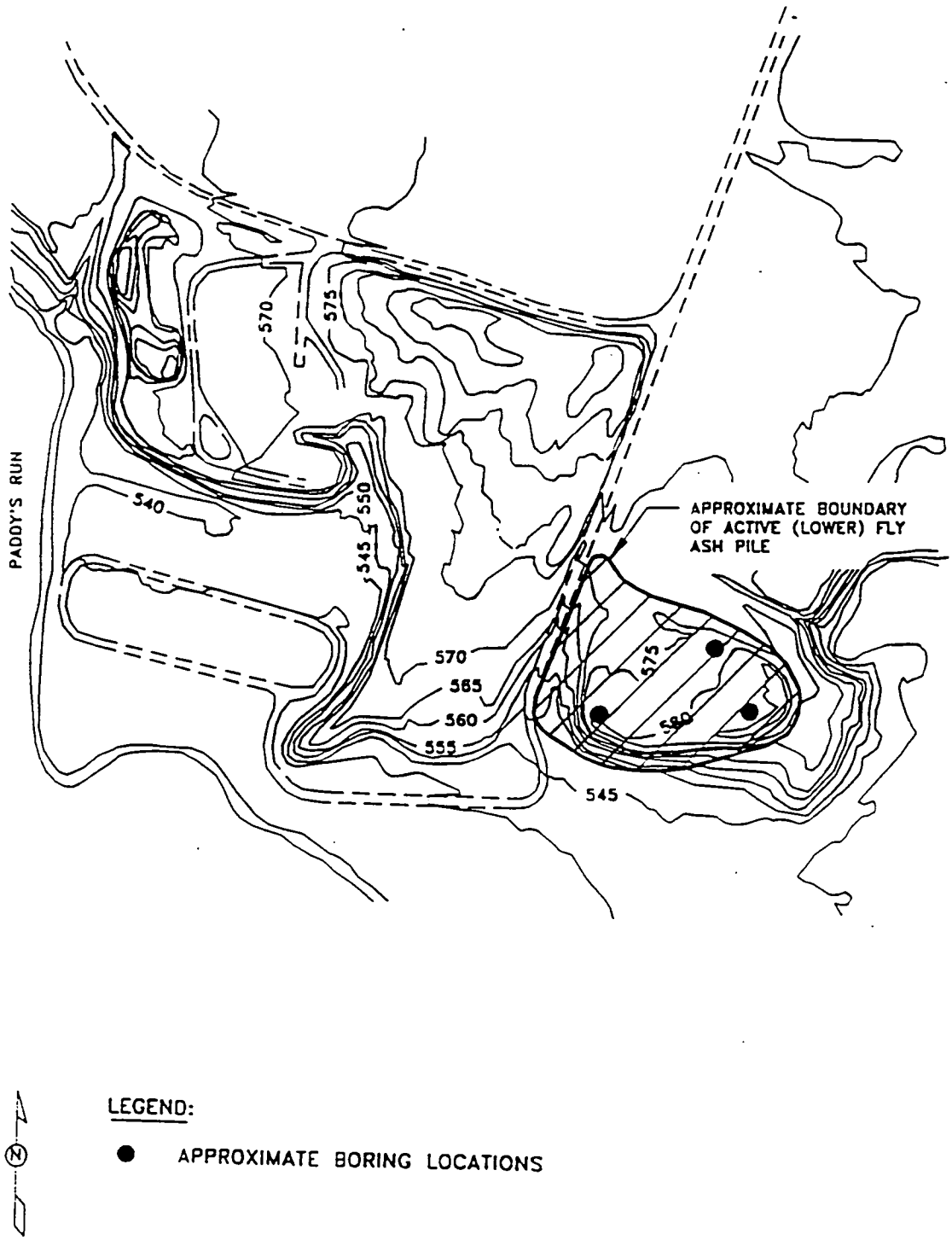

FIGURE 3. APPROXIMATE SAMPLING LOCATIONS, ACTIVE FLY ASH

Additionally, during the drilling of at least two borings, one at each pile, shelby tube samples will be collected. A geotechnical testing program will be conducted to provide physical data to be used for development of selected alternatives. The geotechnical testing program is shown on Table 2.

All work shall be conducted in accordance with accepted work procedures, health and safety procedures, quality assurance procedures, and Remedial Investigation and Remedial Study, Feed Material Production Center Vol. I, Sampling Plan, March 1988.

TABLE 2

PROPOSED GEOTECHNICAL TESTING PROGRAM

PER SAMPLE

TEST	METHOD	QUANTITY
Grain Size/Hydrometer	ASTM D-422	3
Atterberg Limits	ASTM D-4318	3
Moisture Content	ASTM D-2216	3
Specific Gravity	ASTM D-854	3
Standard Proctor	ASTM D-698	1
Relative Density*	ASTM D-2049	1
1-D Consolidation	ASTM D-2435	1
Permeability	ASTM D-2434	1
In Place Density	ASTM D-2922 or ASTM D-2167 or ASTM D-1556	3

*Fly ash tends to dust when dry and liquify when saturated. Therefore, it is desirable to modify test apparatus. See Electric Power Research Institute (EPRI) report EA-1281.

Note: One additional test is required to determine the quantities of major chemical constituents contained in the fly ash. This test is ASTM C 311 "Sampling and Testing Fly Ash for Use as an Admixture in Portland Cement Concrete:. This test should be performed on a sample from the Active Fly Ash Pile.