Response Gen: Reporting/Admin-Gen 90-SDP-03-81C

MWH

Con 12-1-1
Doc # 59163

August 30, 2004

Mr. Jeff Simmons
Iowa Department of Natural Resources
Wallace State Office Building
502 East 9th Street
Des Moines, IA 50319

MW#1912755.0101

RE: Request To Discontinue Monitoring and Reporting Requirements
Midwest Fly Ash Landfill
Kirkville, Iowa
Permit #90-SDP-3-81C

Dear Mr. Simmons:

MWH has prepared this letter on behalf of ISG Resources in response to the Iowa Department of Natural Resources' (IDNR's) letter dated July 29, 2004. In a letter dated January 30, 2004, ISG Resources petitioned the IDNR to discontinue annual post-closure sampling and reporting requirements for the Midwest Fly Ash Landfill. The IDNR's July 29, 2004 response letter raised concerns about 1) elevated sulfate concentrations in downgradient monitoring wells, and 2) the location of monitoring well MW-21 relative the landfill ash boundary. These concerns are addressed below.

Elevated Sulfate Concentrations

see 5/19/99 approval letter dated 10/4/04

Groundwater samples from the Midwest Flyash Landfill have been analyzed for sulfate since 1999. All sulfate analytical data collected at the Midwest Flyash Landfill are presented in Table 1. Water table elevations and contours based on November 12, 2003 gauging data are shown in Figure 1. Figure 1 also includes all site-wide monitoring wells.

As noted by the IDNR, downgradient sulfate concentrations consistently exceed the background concentration measured in monitoring well MW-9. The IDNR requested an explanation of these elevated sulfate levels to supplement and justify the request to discontinue monitoring.

The elevated sulfate concentrations are likely a result of intrinsic site geology. The location of the ash landfill is a reclaimed strip mine. The Lanning Coal Company mined coal from the current ash landfill location between 1949 and 1958. The coal at the landfill location was most likely a high-sulfur bituminous coal, consistent with the rest of the state of Iowa's coal resources. The elevated background sulfate concentrations and raised downgradient concentrations are likely a product of dissolution of residual coal and minerals at the site. The background sulfate concentration has exceeded the proposed

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drinking water maximum contaminant level of 500 milligrams per liter (mg/L) for each of the five annual samples collected to date. In four of the five sampling events, the sulfate concentrations in downgradient monitoring well MW-12 (located approximately 500 feet southeast of monitoring well MW-21) have been lower than the background concentrations. The wide variability in sulfate concentrations is likely due to local aquifer characteristics.

Location of MW-21

Monitoring well MW-21 is located close to the ash landfill boundary, but is not within an ash deposition area. The landfill boundary shown in Figure 1 is approximate and the scale of the drawing distorts the proximity of MW-21 to this boundary. Attachment A includes the soil boring log for monitoring well MW-21, as originally provided in the Hydrologic Monitoring System Plan for the Midwest Fly Ash Sanitary Landfill (June, 1993). The reported geology includes weathered shale to approximately 25 feet. Monitoring well MW-21 is screened from approximately 13 to 23 feet below ground surface and is not located within the ash boundary.

Closure Request

ISG Resources requests the IDNR consider the information provided in this letter when evaluating the initial request to discontinue post-closure site activities. This letter has been provided to the IDNR by the deadline indicated in the July 29, 2004 letter to ISG Resources in order for a decision to made before the required Fall 2004 monitoring event.

Please call me at 515-253-0830 if you have any questions or require further information.

Sincerely,

Michael J. Alowitz
Environmental Engineer

/mja:vas
Attachments
cc: Ms. Nina Koger, IDNR
Mr. Gary Greene, ISG Resources, Inc.
Mr. Paul Brandt, IDNR Field Office 6

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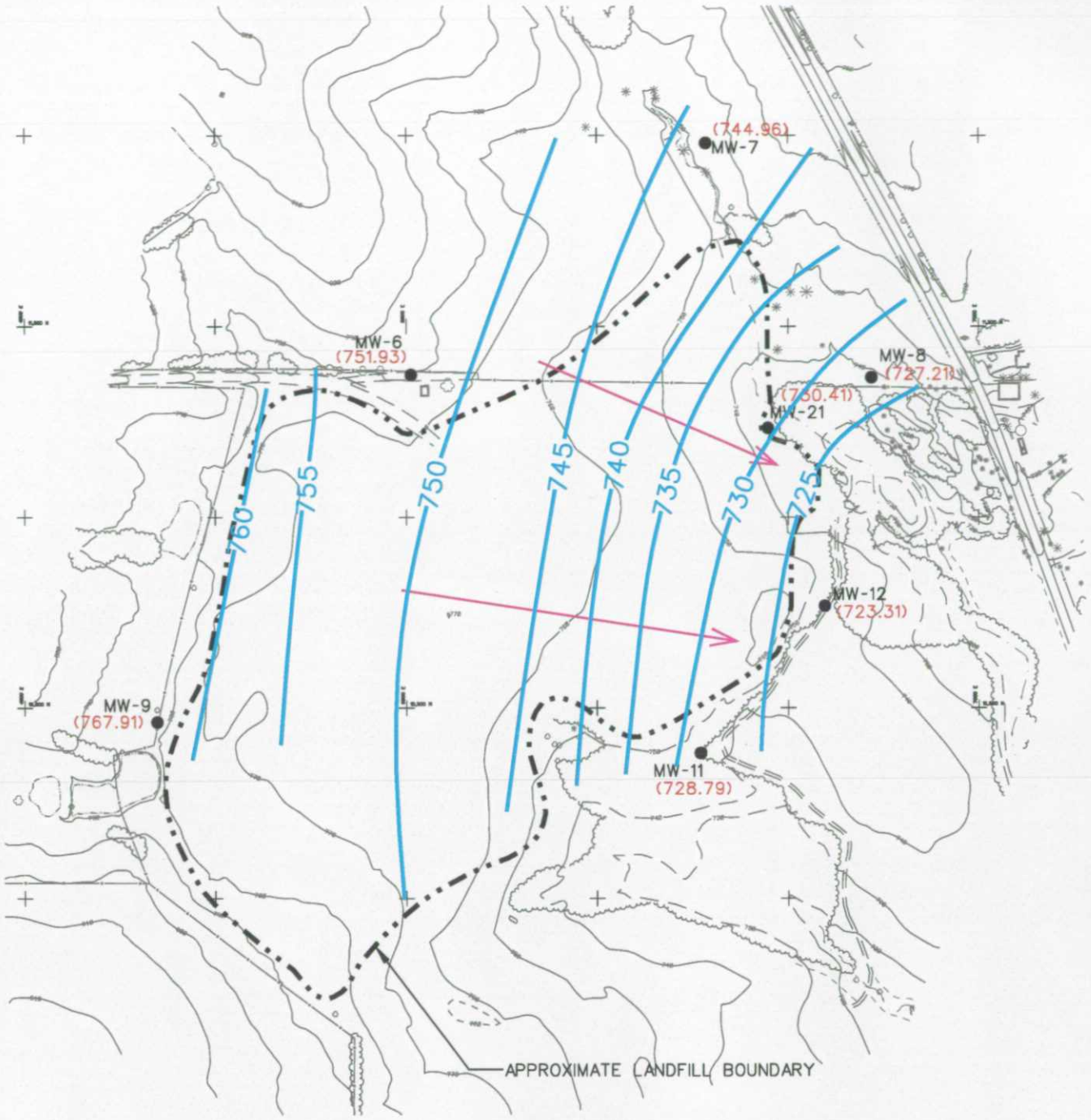
TABLE 1

GROUNDWATER SULFATE CONCENTRATIONS
MIDWEST FLYASH LANDFILL

	Water Table				Uppermost Aquifer			
	Upgradient	Downgradient			Upgradient	Downgradient		
Date	MW-9	MW-11	MW-12	MW-21	MW-20	MW-18	MW-19	MW-22
Sep-99	770	1,400	380	2,300	320	620	93	530
Nov-00	840	1,680	488	3,153	3,340	651	124	737
Nov-01	1,110	1,460	572	2,920	343	475	117	651
Nov-02	932	1,500	306	3,350	3,870	622	109	686
Nov-03	958	1,700	1,120	3,410	369	594	129	709
2-year Average	1,021	1,480	439	3,135	2,107	549	113	669
Mean	922				1,648			

All concentrations are in milligrams per liter.



LEGEND:

- ● WATER TABLE MONITORING WELL
- —740 WATER TABLE SURFACE CONTOUR
- (724.13) WATER TABLE ELEVATION AT MONITORING WELL
- ← INFERRED DIRECTION OF GROUNDWATER FLOW

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SCALE IN FEET

MWH Des Moines Iowa	ISG RESOURCES, INC MIDWEST FLY ASH LANDFILL	SITE MAP AND WATER TABLE CONTOURS FROM NOVEMBER 2003	FIGURE 1

30-AUG-2004

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ATTACHMENT A

James M. Montgomery
Consulting Engineers, Inc.

LOCATION: Midwest Fly Ash Sanitary Landfill
Kirkville, Iowa
HOLE NO: SB-21
JOB NO: 2595.0090

DATE: January 4, 1993
DATUM: NGVD
DRILLER: Aquadrill
INSPECTOR: M. Leat

TYPE OF SURFACE: grass
DRILLING METHOD: Hollow Stem Auger
TOTAL DEPTH: 25.5 ft

DEPTH (FEET)	MONITORING WELL	GRAPHIC LOG	LITHOLOGIC LOG	SAMPLING RECOVERY	SAMPLING NAME	SAMPLING ANALYSES	ELEVATION (FEET)
0							736.70
				–	AS-1	–	
5				–	AS-2	–	
10			WEATHERED SHALE	–	AS-3	–	
15				–	AS-4	–	
20				–	AS-5	–	
25			UNWEATHERED SHALE	–	–	–	
			B.O.B. AT 25.5 FT				
30							