
ENVIRONMENTAL REVIEW OF ZIMMER SITE STATUS
FOR THE CINCINNATI GAS & ELECTRIC COMPANY

MAY 31, 1984
JOB NO. 02580-057-17

Dames & Moore



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May 31, 1984

The Cincinnati Gas & Electric Company
139 E. Fourth Street
Cincinnati, OH 45202

Attention: Mr. W. D. Waymire
Manager of General Engineering

Gentlemen:

Environmental Review of Zimmer Site Status
For The Cincinnati Gas & Electric Company

INTRODUCTION

Dames & Moore has performed an environmental review of the Zimmer site status at the W.H. Zimmer Station as requested by The Cincinnati Gas & Electric Company (CG&E). This review focused on two particular items:

1. A description of the site's status, with particular attention to disturbed areas and to related erosion and runoff control measures
2. Development of a restoration plan, including procedures and schedules for grading and seeding, that will stabilize the site until construction of the coal plant begins

The study entailed a reconnaissance of the Zimmer site, discussions with CG&E personnel concerning the site status, a review of figures provided by CG&E showing the past and projected configuration of onsite facilities, and the development of a restoration plan for disturbed areas.

SITE STATUS

Figures 1 and 2 show the configuration of onsite facilities as of January 21, 1984. These figures show the location of major onsite structures, borrow areas, existing roadways, access routes, parking lots, fence lines, and the switchyard and transmission corridors. Figure 3 presents the projected configuration of plant site facilities as of the end of December 1984. A comparison of Figure 3 with Figures 1 and 2 shows that most of the construction trailers and miscellaneous buildings will have been removed by the end of December 1984. The trailer and building-removal process is already well underway.

The basic site profile and elevations have remained largely unchanged for approximately 7 years, except for the following major site modifications:



The Cincinnati Gas & Electric Company
May 31, 1984
Page -2-

- *A craft-workers' parking lot covering approximately 10.6 acres was constructed immediately north of the main plant buildings during the fall of 1983; extensive fill and grading were required. The parking surface and access ramp were blacktopped during December 1983 and January 1984 to minimize dust impacts on the estimated 3,000 craft-workers, plant personnel, travelers on U.S. Route 52, and nearby residents and communities.
- *A parking lot addition (see coordinates F-6 on Figure 2) was constructed during the same period as the craft-worker's parking lot. This parking lot was also blacktopped to minimize dust emissions.
- *The existing parking areas along U.S. Route 52 (coordinates A-3 through A-6 and B-3 through B-6, Figure 2) were also paved in late 1983/early 1984 for the same environmental reasons indicated above. The parking area bounded by coordinates A-6 through A-8, and B-6 through B-8 was not paved because this area was designated as an overflow parking facility and the anticipated use was minimal.
- *In the case of the formerly proposed buildings G, H, and I (see Figure 2), pilings were installed, but the buildings were never constructed. The top of the pilings protrude approximately 2 feet off the existing ground surface. There are no immediate plans to remove or grade over these piles; as presently envisioned, these areas will be used as laydown areas.

Overall, with the exception of the areas listed above, site drainage has been well established over the last several years. Sheet runoff is directed towards drainage ditches and conduits, and no evidence of severe onsite erosion was observed during a May 1984 reconnaissance of the Zimmer site. In general, the recent site modifications listed above conform to existing drainage patterns, and there is no reason to expect a significant increase in the rate of erosion due to these modifications.

The trailers and temporary buildings that either have been or will be removed are typically underlain by crushed rock or slab foundations. There are no plans to remove the slabs or take up the crushed rock at this time. It is envisioned that areas covered by these materials could be used during construction of the coal plant facilities. Unpaved areas interlying the trailers and buildings are covered by bare dirt, crushed rock, or a combination of the two. Invader species of grasses and weeds are scattered throughout these areas.



The Cincinnati Gas & Electric Company
May 31, 1984
Page -3-

RESTORATION PLAN

Site restoration work should be designed to minimize erosion and windborne dust originating from disturbed areas onsite. It should also be designed to preclude areas of standing water and saturated soils. However, it should not necessarily be designed to landscape the site, which will undergo additional disruption when coal plant construction activities begin.

The recommended restoration program should include three components: grading, revegetation or the addition of crushed rock, and limited modifications to site drainage patterns.

Grading: As indicated in Plates 1 and 2, limited grading is required and no significant cut and fill operations are envisioned. Grading should be designed to spread small mounds of dirt and rock found onsite; eliminate depressions where water is found to accumulate; smooth surfaces so revegetated areas can be maintained; and, reduce slopes, especially adjacent to some of the drainage courses, presently subject to higher rates of erosion. During grading, supervision of earthmoving activities should be provided to ensure that grades are constructed to direct runoff towards drainage ditches. Grading should be scheduled as soon as practical, prior to any revegetation programs.

Revegetation/Crushed Rock Additions: Plates 1 and 2 also show existing grassed-areas and areas where grass seed should be applied. All bare soil areas should be reseeded; it should be at a field supervisor's discretion to decide which areas of limited or sparse vegetative cover should receive seed to thicken ground cover.

Prior to seeding, the ground surface should be prepared by turning the soil with either a spring tooth harrow or a disc to a depth of approximately 4 inches; large rocks and debris should be removed. Based on typical Clermont County soils, a seed mix consisting of the following grasses and legumes is recommended:

	<u>Percent Composition</u>
Sericea lespedeza (hulled)	25
K-31 fescue	25
White clover	15
Kentucky/Marion bluegrass	25
Perennial ryegrass	10

Onsite soil chemistry tests should be performed prior to ordering the seed mix to adjust the mix for any unexpected conditions.



The Cincinnati Gas & Electric Company

May 29, 1984

Page -4-

This seed mix is readily available, cost effective, quick germinating, easily maintained and effective for a fall planting. The legume component will help provide staying power over several seasons.

Broadcast seeding is recommended on flat to moderate slopes at a rate of 65 lbs per acre. If the use of a hydroseeder is required for steep slopes, this rate should be at least doubled. A common 10-20-20 blend fertilizer is recommended for application at a rate of approximately 350 lbs per acre. Also, application of pelletized lime is recommended at a rate of 80 lbs per acre. After the seed mix, fertilizer and lime are applied, a chain should be dragged across the surface to turn the seed under. Straw mulch should then be blown onto the reseeded areas at a rate of 1 ton per acre. From a scheduling standpoint, the seeding effort should take place no later than the first week of October.

The addition of crushed rock should also be applied at the discretion of a field supervisor. In general, sufficient rock should be applied to cover dirt surfaces as required.

Although most of the areas requiring seed and rock are located at the main plant site (see Plate 2), there are some areas that require seed and/or stone in the larger general site area (Plate 1), including:

1. The perimeter of the settling basin and certain adjacent areas
2. The two borrow areas immediately north of the new craft-workers' parking lot
3. Areas adjacent to the meteorological tower west of U.S. Route 52
4. Areas immediately adjacent to the access road leading to the meteorological tower east of U.S. Route 52
5. The borrow area along 345 kV transmission corridor east of U.S. Route 52

The two borrow areas (Items 2 and 5 above) will also require some drainage modifications, as discussed in the following section.

Drainage Modifications: Minor modifications to the existing site drainage are suggested to minimize erosion potential and/or eliminate areas of standing water. These areas include the two borrow areas previously discussed. In general, these modifications are relatively minor. One area requiring particular attention is a small impoundment immediately north of the new craft-worker parking lot. This impoundment should be drained and contoured to direct runoff towards Little Indian Creek, which would conform to natural drainage patterns before the new parking lot was constructed. Rip-rap should be laid in the channel draining the pond and the area should be revegetated according to the specifications presented herein.



The Cincinnati Gas & Electric Company
May 29, 1984
Page -5-

At the borrow area east of U.S. Route 52, a diversion ditch should be cut in the northeast part of the area to direct water into a nearby creek. At present, water runoff is flowing down the borrow area access road, causing minor erosion. The borrow area should be reseeded and stone laid on the access road

CLOSING

If you should have any questions regarding this letter report, please do not hesitate to contact us.

Very truly yours,

DAMES & MOORE

A handwritten signature in cursive script that reads "Glenn D. Martin".

Glenn D. Martin
Associate

GDM/ds

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