2-209.13 1092

Department of Energy
Ohio Field Office
Fernald Area Office
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Cincinnati, Ohio 45253-8705
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NOV 14 1997
DOE-0134-98

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

RESPONSES TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE RESPONSE TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS TO THE AREA 2, PHASE I SITE PREPARATION PACKAGE

Enclosed for your information, review, and comment please find the responses to comments from the U.S. Environmental Protection Agency (U.S. EPA) and Ohio Environmental Protection Agency (OEPA) on the response to comments from the U.S. EPA and OEPA on the site preparation documents for Area 2, Phase I (Southern Waste Units). These comments were provided to the Department of Energy (DOE) via transmittal letters dated October 2, 1997, and September 16, 1997. As described within the responses, Mechanical Drawing Sheet N000 is also enclosed. The DOE is proceeding to incorporate the response to comments into the project documents.

If you have any questions or comments on these documents, please contact Robert Janke at (513) 648-3124.

Sincerely,

Johnny Reising

FEMP:Nickel

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosures: As Stated

cc w/enc:

N. Hallein, EM-42/CLOV
G. Jablonowski, USEPA-V, 5HRE-8J
T. Schneider, OEPA-Dayton (total of 3 copies of encs.)
F. Bell, ATSDR
D. S. Ward, HSI GeoTrans
R. Vandegrift, ODOH
F. Barker, Tetra Tech
M. Davis, ANL
D. Carr, FDF/52-2
J. D. Chiou, FDF/52-5
T. Hagen, FDF/65-2
T. Klimek, FDF/52-5
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EDC, FDF 52-7

RESPONSE TO USEPA AND OEPA COMMENTS ON THE RESPONSE TO USEPA AND OEPA COMMENTS TO THE AREA 2, PHASE I SITE PREPARATION PACKAGE

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

NOVEMBER, 1997

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

RESPONSE TO USEPA COMMENTS ON THE RESPONSE TO USEPA AND OEPA COMMENTS TO THE AREA 2, PHASE I SITE PREPARATION PACKAGE

GENERAL COMMENTS

SITE PREPARATION PLAN

1) Commenting Organization: USEPA Commentor:
Section #: Not applicable (NA) Page #: NA Code: Line #: NA
Original General Comment #: 24

Comment: Although U.S. EPA concurs that a 4-inch diameter drain is more than adequate to handle the volume of water from the 3/4 post hydrant, a 4-inch diameter drain may not be adequate to drain all storm water from the vehicle wash area. This additional flow may be excessive for the drain and the oil/water separator as shown in the design drawings.

Response: The 4-inch drain is adequate to drain the equipment wash area during a 10-year, 24-hour storm event, but not a 25-year, 24-hour storm event. Therefore, in order to facilitate better drainage of the equipment was area during a 25-year, 24-hour storm event, a 6-inch diameter drain will be installed. This will decrease the amount of time to drain the equipment wash area, reduce potential clogging of the drain line, and lessen the probability of ponding within the equipment wash area. The equipment wash area is able to contain the stormwater from a 25-year, 24-hour storm event within its curbs, so any ponding that does occur will not discharge directly to Paddys Run.

Action: A Design Change Notification (DCN) will be issued to increase the drain diameter from 4-inches to 6-inches.

2) Commenting Organization: USEPA Commentor:
Section #: Not applicable (NA) Page #: NA Code: Line #: NA
Original General Comment #: 25

Comment: The concern still remains that inflow of flood water from Paddy's Run into Retention Basin 1 could occur through the Retention Basin 1 overflow structure because the overflow elevation for Retention Basin 1 is 538.5 feet above mean sea level and the interpolated Paddy's Run water level is 539.1 feet above mean sea level during a 25-year, 24-hour storm event.

Response: Agree. The following language has been added to the A2PI Implementation Plan: "To accommodate periods when the level in Paddys Run rises to a level near the top of the embankment for Retention Basin 1, sandbags will be used to increase the height of that embankment to an elevation of 541. These sandbags will be in place before the excavation phase begins." As an alternative to conventional sandbags, FDF will propose a "continuous berm." A continuous berm is a long continuous sandbag, one foot high and one foot wide, filled with sand and wrapped with filter fabric. The technical specifications will be modified to reflect the commitment of placing sandbags and/or a continuous berm along the embankment of Retention Basin 1.

Action: A Design Change Notification (DCN) will be issued to revise Section 02279 3.5 to incorporate the placement of sandbags and/or a continuous berm along the embankment of Retention Basin 1 to increase the height to elevation of 541 feet in all areas except the emergency spillway. The elevation of the emergency spillway will be increased to an elevation greater than 539 feet.

3) Commenting Organization: USEPA Commentor:
Section #: NA Page #: NA Code: Line #: NA

Original General Comment #:

Comment: The text of "Evaluation of the Potential Peak Stages in Paddy's Run During Storm Events of Cross Sections Close to the Proposed Retention Basin No. 1" states that results from cross sections D-D and E-E were linearly interpolated to estimate water levels at cross sections C'-C', B'-B', and A'-A'. However, the text does not provide justification for performing linear interpolation to determine water levels at cross sections C'-C', B'-B', and A'-A'. This justification must be provided to evaluate the validity of the linear interpolation method. In addition, Figure 7 does not define x-axis increments.

Response: Paddys Run channel bed has a mild slope (<0.006) and relatively uniform width (about 40 feet) in the lower portion of the channel cross section between Stations D-D and E-E, which are about 1000 feet apart. As shown in Figures 3, 4, and 7, the simulated 25-year flood elevations at Stations D-D and E-E are within the lower portion of the two cross sections. Therefore, normal flow conditions (hydraulically speaking) without abrupt elevation changes are expected between the two stations during the simulated flood events. Actually, the SWF&IM model assumes that normal flow conditions exist throughout the simulated reach of Paddys Run and , therefore, the Manning's Equation was used to develop the rating curves at all the calculated stations. Under normal flow conditions, water surface is generally parallel to the channel bed and water surface elevations between two adjacent measured or directly calculated elevations are usually estimated by linear interpolations. Distances between channel stations are shown in Figure 1. Figure 7 uses the distances between stations as the relative x scale to show the interpolated station-specific water surface elevations. Therefore, increments on the w-axis is not critical in Figure 7 for the intended purposes.

Action: No action.

4) Commenting Organization: USEPA Commentor:

Section #: NA Page #: NA Code: Line #: NA

Original General Comment #:

Comment: It should be noted that not all the design drawings are included in the design package. Piping and instrument, and electrical drawings were not included.

Response: Only the General (X series), Civil (G series), and one Mechanical (N series) drawings have been revised with the revised documents that were submitted to EPA. The electrical drawings have not been revised. Therefore, the electrical drawings are not resubmitted to the USEPA and OEPA (because they did not change from the set previously submitted). One mechanical

drawing (N0003) was inadvertently left out of the package, and is attached.

Action: A complete set of updated drawings incorporating recently approved Design Change Notifications (DCNs) will be submitted to USEPA and OEPA in the near future.

RESPONSE TO OEPA COMMENTS ON THE RESPONSE TO USEPA AND OEPA COMMENTS TO THE AREA 2, PHASE I SITE PREPARATION PACKAGE

GENERAL COMMENTS

SITE PREPARATION PLAN

1) Commenting Organization: OEPA Commentor: OFFO
Section #: Not Applicable (NA) Page #: NA Code: C Line #: NA
Original General Comment #: 7

Comment: Revise action to state "...embankment, sandbags will be used..." Ohio EPA agreed to the current basin design on the commitment that bags will be used to prevent Paddys Run from breaching the berm.

Response: Agree. The following language has been added to the A2PI Implementation Plan: "To accommodate periods when the level in Paddys Run rises to a level near the top of the embankment for Retention Basin 1, sandbags will be used to increase the height of that embankment to an elevation of 541. These sandbags will be in place before the excavation phase begins." As an alternative to conventional sandbags, FDF will propose a "continuous berm." A continuous berm is a long continuous sandbag, one foot high and one foot wide, filled with sand and wrapped with filter fabric. The technical specifications will be modified to reflect the commitment of placing sandbags along the embankment of Retention Basin 1.

Action: A Design Change Notice (DCN) will be issued to revise Section 02270 3.5 to incorporate the placement of sandbags and/or a continuous berm along the embankment of Retention Basin 1 in order to increase the height to an elevation of 541 in all areas except the emergency spillway. The elevation of the emergency spillway will be increased by one foot to 539.

2) Commenting Organization: OEPA Commentor: OFFO
Section #: NA Page #: NA Code: C Line #: NA
Original General Comment #: 10

Comment: The response and action in EPA comment #6 refers the reader to Section 2200 2.1.C for details. The correct reference is Section 2200 2.1.D. Ohio EPA is concerned with the 3" maximum rock size and believes it presents a threat to the synthetic liner integrity. DOE should provide Ohio EPA with a manufacturers specifications stating that the liner can be placed over such objects with a vertical load and no negative effects. Otherwise DOE must revise the contract specification package to ensure the integrity of the liner is not jeopardized.

Response: DOE agrees that the integrity of the geomembrane liner must be maintained, and that the surface on which the liner is placed must be appropriate. Section 02713 3.1 addresses the preparation of the surface of the infiltration barrier prior to placement of the geomembrane liner. Section 3.1.A requires "the earthen surface shall be smooth and true to grade with no exposed rocks, stones, sticks, roots, or other sharp objects or debris of any kind larger than 2"

in any direction." Section 3.1.B requires the contractor to inspect the infiltration barrier surface for acceptability of the surface prior to placement of the geomembrane liner. Section 3.1.C requires the contractor to protect and maintain the surface of the infiltration barrier prior to placement of the geomembrane liner. The maximum 3" rock size specified in Section 2200 2.1.D will be revised to a maximum 2" dimension in any direction. DOE believes that these requirements are adequate to ensure the integrity of the geomembrane liner. To ensure that these requirements are met, DOE approval of the infiltration barrier surface shall be required prior to placement of the geomembrane liner.

Action: A Design Change Notice (DCN) will be issued to revise Section 2200. Article 2.1.D will be revised to read: "Clay and clay like soil material obtained from the designated OSDF Sediment Basin Stockpile with a maximum rock size of 2 inches in any direction."

Section 2200 1.6 will also be revised. Section 1.6.C will be added to read as follows:

"C. Inspection of Infiltration Barrier: Visually inspect 100 percent of surface of infiltration barrier material for any stones or gravel with visible dimensions of 2" or larger in any direction or visible protrusions, in accordance with Section 02713. FDF must approve condition of the infiltration barrier prior to the placement of the geomembrane liner."

3) Commenting Organization: OEPA Commentor: OFFO
Section #: NA Page #: NA Code: C Line #: NA
Original General Comment #: 18

Comment: As stated in the comment, neither Ohio EPA nor USEPA have approved this approach. Ohio EPA continues to disagree with the proposed method for evaluating these three contaminants. DOE should remove usage of this method until such time as an agreed upon approach is developed. If DOE continues to pursue this method, they run the risk of jeopardizing soil segregation and site preparation activities.

Response: As part of a continuing discussion on how best to quantify thorium-232, radium-228, and thorium-228 in FEMP soils, the Ohio Environmental Protection Agency (OEPA) in an October 17 letter from Thomas Schneider to Johnny Reising, DOE-FN, proposed a basis for calculating the above three radionuclides. The FEMP accepts the central tenet of that proposal: that only gamma emitting radionuclides below (in the decay chain) the analyte of interest and in secular equilibrium with the analyte of interest will be used for the activity concentration calculations. The exact gamma emitting radionuclides and the exact gamma photon energies to be used will be detailed in a forthcoming letter from DOE to the OEPA. Further, the technical basis for their selection will be discussed in that same letter. In the above referenced letter from OEPA to DOE-FN, OEPA concurred with an earlier recommendation by DOE-FN that an error weighted average utilizing counting data from multiple gamma photons be employed to calculate the final activity concentration . The form of the equation to be used will also be given in the forthcoming letter from DOE-FN to OEPA. In summary, when the above mentioned letter from DOE-FN to OEPA is written, DOE-FN expects that no

significant differences of opinion between OEPA and DOE-FN on how best to calculate thorium-232/228 will exist.

Action: No action at this time; subsequent actions regarding future analytical methods will be based on the response to the above-referenced technical letter.

4) Commenting Organization: OEPA Commentor: OFFO
Section #: NA Page #: NA Code: C Line #: NA
Original General Comment #: 19(2)
Comment: The decision to use a 95% confidence interval was based upon risk as well as pervasiveness. Ohio EPA believes the consequences of failing to certify Tc-99 with sufficient certainty are significant considering the WAC and FRL concentrations. In addition, if the material is not pervasive then certifying to a 95% confidence interval should not present a difficulty during certification. If on the other hand difficulty in certifying to 95% confidence is encountered then the conclusions regarding process knowledge and contaminant distribution are incorrect, jeopardizing not only the certification process but also the WAC process as well. Thus Ohio EPA concludes that in areas where Tc-99 is an ASCOC that certification should be to the 95% confidence interval.

Response: Tc-99 is not pervasive nor is it a significant contributor of risk. Additionally, Tc-99 data from the laboratory indicates no presence of Tc-99 above 0.7 pCi/g. However, statistical analysis will be performed to certify Tc-99 to a 95% confidence interval.

Action: Statistical analysis will be performed to certify Tc-99 to a 95% confidence interval.

5) Commenting Organization: Ohio EPA Commentor: OFFO
Drawing #: NA Page #: NA Code: C Line #: NA
Original General Comment #: 22
Comment: The site fugitive dust BAT policy is <u>not</u> referenced in Section 1.5.C. No where in the specification does it require "compliance with the regulatory dust suppression requirements." Ohio EPA is disappointed with the lack of specific reference to the BAT plan and hopes this doesn't reflect a lack of commitment to its implementation. Ohio EPA is still committed to the plan and ensuring DOE's compliance with it. Ohio EPA recommends DOE make explicitly clear to the contractor the requirements of the BAT plan.

Response: Section 1.5.C references Part 6 of the contract documents for direction regarding the Dust Suppression Plan. Part 6 provides details for what is to be included in the Dust Suppression Plan, as well as emphasizing the "importance of <u>proactive</u> dust suppression on this project." While the site fugitive dust BAT policy is not explicitly mentioned, the requirements for the contractor's Dust Suppression Plan are developed directly from Section 5 of the SEP (where the BAT policy is explicitly mentioned), and in turn are developed directly from the BAT policy.

Action: A Request for Clarification of Information (RCI) will be issued to inform the contractor that the Dust Suppression Plan must be in accordance with Part 6 of the contract, which was developed from the site fugitive dust BAT policy, and therefore must also be in compliance with the BAT policy.

6) Commenting Organization: OEPA Commentor: OFFO
Section #: NA Page #: NA Code: C Line #: NA
Original General Comment #: 27

Comment: Ohio EPA believes the original language in the section was left as a carry over from the design without any synthetic liner and including mechanical removal of sediment. As presently written the language should be included in Specification 2200 3.8 along with other specifications for construction of the basins.

Response: The change of location for this specification will not in any way alter the contractor's scope of work, which has already been bid and awarded as worded. In Section 2200, 3.8, the specifications already direct the contractor to "roll infiltration barrier with steel smooth drum roller prior to geomembrane placement".

Action: An RCI will be issued to direct the contractor to apply 3.5.F from Section 2270 when implementing the construction of the infiltration barrier, specified in 3.8 of Section 2200.

7) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: NA Page #: NA Code: C Line #: NA
Original General Comment #: 32

Comment: Ohio EPA disagrees with the wording change to the specification. The original language in the Ohio EPA comment and the text of the specification are appropriate. The 3 square feet was not meant to represent 5% of the area. It is certainly possible to have germination occurring in all areas 3 square feet or less but still have coverage less than 95%. Ohio EPA expects a better commitment to reseeding in A2PI than was exhibited in A1PI.

Response: DOE is committed to minimize surface erosion during A2PI, and therefore agrees to revise the specification. DOE believes that this change reflects Ohio EPA's goal of establishing a time period for establishing sufficient coverage of the seeded areas. Note, in accordance with Section 2900 3.2.C, if seeding is not effective due to time of planting (i.e., between October 15 and March 15), crusting agent will be applied in accordance with Section 2270 3.4.A.

Action: A Design Change Notice (DCN) will be issued to revise the following two sections of the specifications.

Section 2900 3.4.A will be revised to read as follows:

"A. Notify FDF at least three working days prior to date of anticipated inspection. To qualify for acceptance, the following conditions must be met:
   1. An area shall have a good, clean stand of perennial grass.
   2. Within 3 weeks, germination must occur over 95 percent of the area with no bare areas greater than 3 square feet.
   3. Within 3 months, 95 percent of the area must be covered with mature perennial grass.

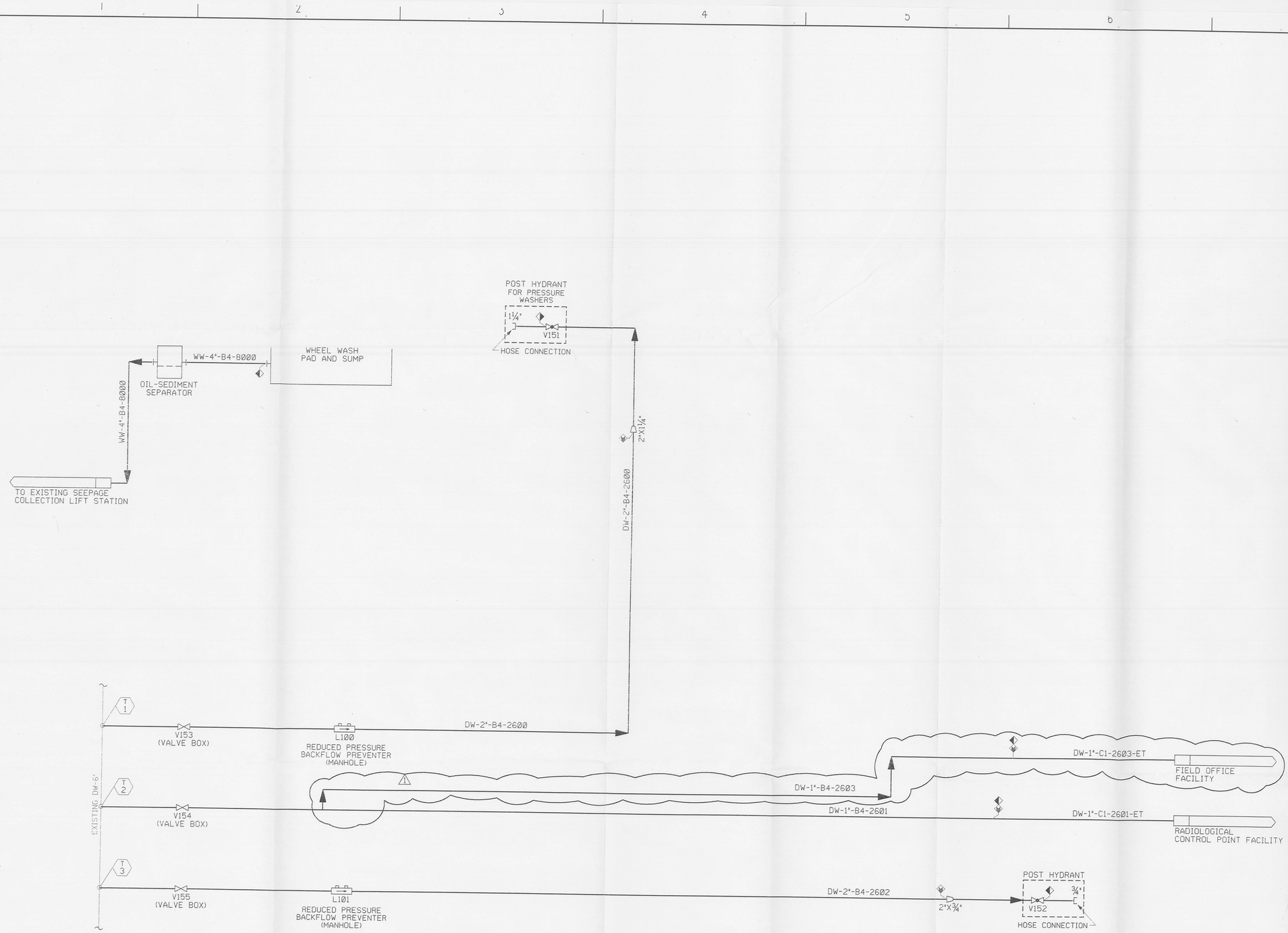
B. Areas that fail to meet these requirements shall be repaired or reseeded as necessary to produce an acceptable stand of grass, as specified in

this Section."

Section 2270 3.4.A will be revised to read as follows:

"A. Forty-five (45) calendar days is the maximum time that an area can be left in an exposed state (i.e., no vegetation). If an exposed construction or impacted material excavation area will not be worked for a period of 45 calendar days, the soils shall be stabilized within 7 calendar days by one of the following methods:

1. During the time period of March 15 through October 15, temporary seeding shall be applied as specified in Section 2900.
2. During the time period of October 15 through March 15, or for areas requiring additional measures after the application of seed (as specified in Section 2900), crusting agent (e.g., pine sap emulsion) shall be applied.



NOTES

1092

LAST VALVE No.	V155

RELATED DWG NO.	DRAWING TITLE	SHEET NO.
92X-5900-X-00320	DRAWING INDEX	X0002
92X-5900-N-00295	SYMBOLS AND LEGEND	N0001

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
1	REVISION PER DCN:20401-006	JMU	N/A	8/29/97
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	06/13/97

STATE OF OHIO — OSCAR W. CARLSON JR. — 60158 — REGISTERED PROFESSIONAL ENGINEER
8-25-97

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS 1092
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
WASTE UNITS REMEDIATION
SOUTHERN WASTE UNITS - SITE PREPARATION PACKAGE

DRAWING TITLE
MECHANICAL PROCESS
PIPING AND INSTRUMENTATION DIAGRAM
DRINKING WATER SYSTEM

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
P. A. WILSON	03/01/96	O. W. CARLSON	05/19/97	K. D. MORRIS	03/25/96

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NO.
MIKE USHER 06/13/97	N/A	20400
A-E DATE	DATE	

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
SCEP/P0165		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-N-00291	N0003	1

12