AMWTP-041

BNFL-5232-RPT-ESH-07, Rev. 0

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IDAHO OPERATIONS OFFICE

Construction Certification Report for Waste Management Facility –634 for the Advanced Mixed Waste Treatment Project

EPA ID No. ID4890008952

September 2002

MANUAL TITLE: Construction Certification Report for Waste Management Facility–634 for the Advanced Mixed Waste Treatment Project, September 2002 (BNFL-5232-RPT-ESH-07, Rev. 0)

ASSIGNED TO: DOE Reading Rm. c/o C. Maupin **CONTROL #:** 8

TRANSMITTAL
LETTER

BNFL Inc.

BNFL Inc.
765 Lindsay Blvd.
Idaho Falls, ID 83402
Tel: (208) 524-8484
Fax: (208) 524-4442

September 30, 2002

Brian Monson, Hazardous Waste Program Manager
Idaho Department of Environmental Quality
1410 North Hilton
Boise, ID 83706-1255

Subject: **Transmittal of the Construction Certification Report for the AMWTP Waste Characterization Facility (WMF-634) – AM-BN-L-5176**

Dear Mr. Monson:

Enclosed are two copies of the Construction Certification Report (CCR) for the AMWTP Waste Characterization Facility (WMF-634). This CCR is provided in accordance with Permit Condition (PC) I.R and II.A.2 of the AMWTP Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Storage Permit, U.S. Environmental Protection Agency (EPA) Identification Number ID4890008952. This CCR addresses all physical changes to WMF-634 previously addressed in the permit modification requests (PMRs) to the AMWTP HWMA/RCRA Storage Permit submitted and subsequently approved by the State of Idaho Department of Environmental Quality (DEQ) as indicated below:

1. The Class 2 PMR submitted to the DEQ on 9/20/00 and approved by the DEQ on 11/27/00.
2. The Class 1 PMR requiring prior DEQ approval submitted to the DEQ on 3/23/01, as revised on 4/9/01, and approved by the DEQ on 4/13/01.
3. The Class 3 PMR submitted to the DEQ on 8/14/01and approved by the DEQ on 2/11/02.
4. The Class 3 PMR submitted to the DEQ on 2/28/02, as revised on 7/1/02, and approved by the DEQ on 9/10/02.

It would be beneficial to receive DEQ approval of this CCR, including final approval to start mixed waste storage and treatment operations, by October 28, 2002, to support the start of the Retrieval Operations Operational Readiness Review.

We appreciate your attention and efforts on this important project. We are available to meet with you and your staff at any time by phone or in person to clarify the information presented.

If you have questions or comments, please contact Jim Jackson at (208) 557-7056 or myself at (208) 575-7014.

Sincerely,

Frederick P. Hughes, General Manager
Advanced Mixed Waste Treatment Project

cc: (with enclosures)
Delissa Blattner, BNFL Inc. (FOR)
Jeff Hunt, EPA Region X
Bob Bullock, DEQ
AMWTP Document Control
FPH-230-2002

cc: (w/o enclosures)
John Medema, DOE-ID
Brian English, DEQ
Rensay Owen, DEQ IFRO
Jim Jackson, BNFL Inc.
Christian Maupin, BNFL Inc.
Grenville Harrop, BNFL Inc.
Martin Wheeler, BNFL Inc.
Joe Hickey, BNFL Inc.
Isabelle Wheeler, BNFL Inc.
Kathleen Trevor, INEEL Oversight

APPROVAL LETTER

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

24
DEQ Hr
Isabelle
Jim
Martin
Jeff
Good job!
Fred

October 21, 2002

Mr. Frederick P. Hughes
General Manager
BNFL Inc.
765 Lindsay Blvd.
Idaho Falls, ID 83402-1821

Mr. Tim Safford
Environmental Compliance Manager
Idaho Operations Office
U.S. Department of Energy
850 Energy Drive
Idaho Falls, ID 83401-1563

SUBJECT: Approval of the Construction Certification Report for the Advanced Mixed Waste Treatment Project (AMWTP) Waste Characterization Facility (WMF-634) at the Radioactive Waste Management Complex (RWMC) on the Idaho National Engineering & Environmental Laboratory (INEEL) (EPA ID Nos. ID4890008952)

Dear Mr. Hughes and Mr. Safford:

The Department of Environmental Quality (DEQ) completed a review of the Construction Certification Report, submitted in accordance with IDAPA 58.01.05.012 [40 CFR §270.30(l)(2)]. A site inspection and follow-up visit were conducted on October 8 and 9, 2002.

DEQ has determined that this unit was constructed in accordance with the permit, and the permittee may commence storage and treatment of waste in WMF-634.

DEQ noted one concern with the report. A Class 1 Modification to the permit appears to be the appropriate path to incorporate the necessary changes to the permit attachments, described in Attachment B in the permit. DEQ recommends these minor changes be incorporated in the upcoming Permit Modification Request.

If you have any questions concerning this matter, please contact Mr. Brian English at (208) 373-0425.

Sincerely,

Brian R. Monson, Hazardous Waste Program Mgr.
State Waste Management and Remediation Division

BRM\BLE:ls \Amwtf\Amwtp\ 2002\CCR letter

cc: Jeff Hunt, EPA Region 10
INpbwmf
Kathleen Trever, INEEL Oversight
COF

CONSTRUCTION
CERTIFICATION
REPORT

CONSTRUCTION CERTIFICATION REPORT FOR WASTE MANAGEMENT FACILITY-634 AT THE ADVANCED MIXED WASTE TREATMENT PROJECT AT THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY (EPA ID NUMBER ID4890008952)

Summary

BNFL Inc. and the Department of Energy (DOE) submitted to the State of Idaho Department of Environmental Quality (DEQ) a Class 3 Permit Modification Request (PMR) including a Request for Temporary Authorization (RTA), BNFL-5232-SPMR-03, to the Advanced Mixed Waste Treatment Project (AMWTP) Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Storage Permit (EPA ID No. ID4890008952) on August 14, 2001. The purpose of this Class 3 PMR/RTA was to modify the Waste Management Facility 634 (WMF-634) to add characterization equipment for the purpose of characterizing waste for shipment to the Waste Isolation Pilot Plant (WIPP) or another waste management unit. The DEQ approved this PMR on February 11, 2002. Additionally, BNFL Inc. and DOE submitted to the DEQ a Class 3 PMR/RTA, BNFL-5232-SPMR-04, which further modified the process description, equipment, and physical layout of WMF-634. The DEQ approved this PMR on September 10, 2002. The installation/construction activities described in the above mentioned PMRs have been completed.

The purpose of this report is to provide the DEQ construction certification documentation in accordance with Permit Conditions (PCs) I.R and II.A.2 of the AMWTP HWMA/RCRA Storage Permit. This Construction Certification Report (CCR) consists of the following:

- Narrative Report – The Narrative Report notes the minor deviations from the approved designs and specifications necessary to accommodate proper construction and the substitution of equivalent or superior materials or equipment. The Narrative Report also contains information describing the differences between the drawings submitted with the PMRs and the enclosed as-built drawings.

- Final As-Built Drawings – Professional Engineer certified as-built drawings for WMF-634 are provided in Attachment A.

- Minor Permit Text Deviations – Minor revisions to the text of the AMWTP HWMA/RCRA Storage Permit resulting from construction activities are included in Attachment B.

- Certification Statements – Certification statements for the Professional Engineers who are certifying that WMF-634 has been modified in accordance with the above mentioned PMRs and the information presented in this report are included in Attachment C.

- Certification Statements – Certification statements signed by the Owner and Operator as required by the Idaho Administrative Procedures Act (IDAPA) 58.01.05.012 [Title 40 Code of Federal Regulations (CFR) 270.11] and PC I.W of the AMWTP HWMA/RCRA Storage Permit are included in Attachment D.

Narrative Report

Ten drawings are included as part of the AMWTP HWMA/RCRA Storage Permit and the associated PMRs. The minor deviations to these drawings necessary to accommodate proper construction are listed below. All minor deviations described below are incorporated on the final as-built drawings.

No deviations have been made to the following drawings: 1) 1-05-55-001 Rev. 07 [Process Flow Sheet (Volume Balance)], 2) 1-05-55-002 Rev. 06 [Process Flow Sheet (Mass Balance)], 3) 57-0300 Rev. 02 (Control System and Data Management Functional Block Diagram), 4) 57-0301 Rev. 02 (DMS Interface Block Diagram), 5) 56-1910 Rev. 01 (Site Utilities), and 6) 53-1901 Rev. 02 (AMWTP Traffic Flow). Due to continuing construction activities associated with the Advanced Mixed Waste Treatment Facility (AMWTF), deviations to these six drawings may occur. Any deviations made to these six drawings as a result of construction activities will not affect any physical or operational activity occurring within WMF-634, unless the deviation is evaluated in accordance with PC I.D or II.M of the AMWTP HWMA/RCRA Storage Permit. These six drawings will be submitted to the DEQ in accordance with PC II.A.3 of the AMWTP HWMA/RCRA Treatment Permit or as a PMR in accordance with PC I.D of the AMWTP HWMA/RCRA Storage Permit.

Minor Permit Text Deviations

Minor deviations to the text of the AMWTP HWMA/RCRA Storage Permit are being made as a result of this construction certification report. Due to revisions to the drawings, the cover page of Appendix II – *WMF-634 Drawings and Topographic Map* has been updated and is included in Attachment B.

Additional minor deviations have also been made to the text of the AMWTP HWMA/RCRA Storage Permit as a result of equivalent/superior (E/S) determinations, which were made and documented in accordance with PC II.M of the AMWTP HWMA/RCRA Storage Permit. This modified text is located in Section F-3a(1) - *Internal Communications*, which in turn is located in Attachment 6 of the AMWTP HWMA/RCRA Storage Permit. The modified text has been included in Attachment B. Proposed revisions to the text have been identified using an italic font for information added, and a strikeout font for information deleted.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Characterization Facility General Arrangement			
53-1921	7	The location of the roller conveyor and chain transfer sections located between columns 3 and 4 have been changed from 3 feet (ft) – 11 5/8 inches (in.) and 11 ft – 1 in. to 4 ft – 4 in. and 11 ft - 5/8 in. respectively. The dimensions for these sections of conveyor are located at grid points F7 and F5.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 3 and 5 has been changed from 38 ft – 11 in. to 38 ft – 11 1/8 in. The dimension for this section of conveyor is located at grid point H5.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 4 and 6 has been changed from 18 ft – 5 in. to 18 ft – 2 1/4 in. The dimension for this section of conveyor is located at grid point K6.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 5 and 7 has been changed from 18 ft – 6 in. to 18 ft – 3 3/8 in. The dimension for this section of conveyor is located at grid point L6.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 6 and 7 has been changed from 11 ft – 8 in. to 11 ft – 7 in. The dimension for this section of conveyor is located at grid point M5.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The orientation and size of the air compressor, equipment identification number (ID No.) K-232-001, was modified. The air compressor is located on the north wall of WMF-634 at grid point F4.	Air compressor modified to facilitate ease of installation and maintenance on air compressor.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Characterization Facility General Arrangement (continued)			
53-1921	7	The orientation and size of the compressor air dryer, equipment ID No. D-232-001, was modified. The compressor air dryer is located on north wall of WMF-634 at grid point G4.	Compressor air dryer modified to facilitate ease of installation and maintenance on compressor air dryer.
		Updated the general arrangement of Drum Vent System (DVS). Added hydrogen cylinder cabinet, analytical gas storage cabinet, power conditioner, and moved the electrical cabinet 2 ft 6 in. south and 2 ft 1 in. east. The DVS is located at grid point G7.	Updated to accommodate the current vendor design on the DVS.
		Relocated CCTV, equipment ID No. CCTV-232-001, on south west corner of box assay shield wall to approximately 3 ft above the top of the shield wall at the south west corner. The CCTV is located at grid point H7.	The CCTV was relocated to enhance operational efficiencies.
		The handrail section, which is located within the box assay shield wall area near column 5, has been removed. The handrail section was located at grid point J6.	The handrail section is no longer required for personnel safety because the shielding has been revised and the access to the box assay equipment is protected by a photocell.
		The drum assay stations (1 and 2) mechanism control and system electronics enclosures were relocated. The enclosures have been moved approximately 3 ft south from the position along the north wall of WMF-634. The enclosures have been separated by approximately 3 ft by moving the east enclosure. The enclosures are located at grid point K5.	Assay stations mechanical control and system electronics enclosures were relocated to facilitate maintenance and installation.
		Relocated the assay control room clean agent bottle rack, used for the inergen clean agent fire suppression system in the assay control room, from the north wall of WMF-634 to the west wall of the assay control room. The bottle rack is located at grid point Q5.	Change made due to insufficient clearance on the north wall of WMF-634 to mount the bottle racks and the pre-action valve train for fire water to the control room.
		Relocated the packet assay system approximately 3 ft to the east. Packet assay system located at grid point N6.	Packet assay system moved to facilitate maintenance.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Characterization Facility General Arrangement (continued)			
53-1921	7	Modified the sampling glovebox, equipment ID No. Z-250-802, to incorporate changes. Changes made to the sampling glovebox include: a) reduction in the width of the sample glovebox from approximately 40.75 in. to 36 in., b) separation of the sampling glovebox into two smaller gloveboxes (i.e., a radiological contaminated side and radiological clean side) each with a width of approximately 18 in., c) modification of glovebox windows from a diamond shape to a rectangle shape, d) installation of additional gloveports into the glovebox, e) installation of various ports and air filters, f) reduction of the sampling glovebox to an approximate length of 48 in. and height of 18 in. and g) addition of ventilation piping to the glovebox. The sampling glovebox is located at grid point O6.	Design changes made to meet operational requirements.
		Modified the coring glovebox, equipment ID No. Z-250-801, to incorporate changes. Changes made to the coring glovebox include: a) reduction of the width of the glovebox by approximately 8 in., 2) installation of additional gloveports on the glovebox, 3) changed a portion of the glovebox windows from a diamond shape to a rectangle shape, 4) addition of ventilation piping to glovebox, and 5) deletion of infeed conveyor, equipment ID No. W-250-804. The coring glovebox is located at grid point P6.	Design changes made to meet operational requirements.
		Relocated the Real Time Radiography (RTR) control room clean agent bottle rack, used for the inergen clean agent fire suppression system in the RTR control room, from the north wall of WMF-634 to the east wall of the RTR control room.	Change made due to insufficient clearance on the north wall of WMF-634 to mount the bottle racks and the pre-action valve train for fire water to the control room.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Characterization Facility General Arrangement (continued)			
53-1921	7	Moved the location of the personnel access stairs to the platform of the coring and sampling gloveboxes was moved from the north east side of the platform to the central area of the north side of the platform. Modified the orientation of the personnel access platform. The personnel access platform is located at grid point O7.	Design changes made to meet operational requirements.
		Revised equipment layout in RTR and Assay Control Rooms. RTR Control Room is located at grid point B5 and Assay Control Room is located at Q5.	Design changes made to meet operational requirements.
		Relocated temperature controls for MAU-232-001A and 001B to inside WMF-634 near column line 4 on the north and south walls respectively. Added equipment labels for temperature controllers, TC-232-001A and 001B. Equipment ID No. labels located at H3 and F14 respectively.	The temperature controls were moved to enhance operational efficiencies.
		Relocated the pneumatic panel from the south west wall of the inner box assay shield wall (grid point J8) to the north wall of the inner box assay shield wall (grid point J6).	Pneumatic panel relocated per vendor specifications.
		Added box assay operator interface panel to the outer south wall of the box assay shield wall. Control panel located at grid point K8.	Equipment provided for completeness.
		Deleted the packet assay compressor, equipment ID No. P-250-800, which was located at grid point N6.	Packet assay supplied with compressor by vendor.
		Added assay control panel, equipment ID No. DEP-232-001, to the north wall of WMF-634. Panel located at grid point H4.	Equipment provided for completeness.
		Relocated the condensate collection system approximately 3 ft to the east. Condensate collection system located at grid point N6.	Condensate collection system was inadequate for the volume of condensate generated, and was redesigned to increase the capacity of the system. Condensate collection system relocated to accommodate the increase in size.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Characterization Facility General Arrangement (continued)			
53-1921	7	The revision boxes have been updated. This included updating the revision number, revision date, revision description, and approvals.	Information provided for completeness.
		Added "Record Drawing" Stamp to drawing.	Information provided for completeness.
Drawing Number	**Revision Number**	**Minor Deviations To As-Built Drawing[1]**	**Rational**
Type II Module (WMF-634) Characterization Facility Sections Sheet 1			
53-1941	7	Relocated the assay control room clean agent bottle rack, used for the inergen clean agent fire suppression system in the assay control room, from the north wall of WMF-634 to the west wall of the assay control room.	Relocated clean agent bottle rack due to insufficient clearance on the north wall of WMF-634 to mount the bottle racks and the pre-action valve train for fire water to the control room.
		Relocated the RTR control room clean agent bottle rack, used for the inergen clean agent fire suppression system in the RTR control room, from the north wall of WMF-634 to the east wall of the RTR control room.	Relocated clean agent bottle rack due to insufficient clearance on the north wall of WMF-634 to mount the bottle racks and the pre-action valve train for fire water to the control room.
		The location of the roller conveyor and chain transfer sections located between columns 6 and 7 for the SECTION A viewpoint has been changed from 12 ft – 6 1/8 in. to 12 ft - 5 3/8 in. The dimension for this section of conveyor is located at grid point M2 on the drawing.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 6 and 7 for the SECTION A viewpoint has been changed from 7 ft – 7 5/8 in. to 7 ft – 6 7/8 in. The dimension for this section of conveyor is located at grid point M5 on the drawing.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 3 and 7 for the SECTION B viewpoint has been changed from 98 ft – 5 5/8 in. to 98 ft 1/4 in. The dimension for this section of conveyor is located at grid point J9.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Characterization Facility Sections Sheet 1 (continued)			
53-1941	7	The location of the roller conveyor and chain transfer sections located between columns 6 and 7 for the SECTION B viewpoint has been changed from 4 ft – 8 1/8 in. to 4 ft – 9 1/8 in. The dimension for this section of conveyor is located at grid point N10.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 3 and 4 for the SECTION A viewpoint has been changed from 3 ft – 11 5/8 in. to 4 ft – 4 in. The dimension for this section of conveyor is located at grid point F5.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		The location of the roller conveyor and chain transfer sections located between columns 3 and 4 for the SECTION B viewpoint has been changed from 3 ft – 11 5/8 in. to 4 ft – 4 in. The dimension for this section of conveyor is located at grid point F9.	Location of conveyor and transfer chain sections was changed in order for the equipment to be installed properly.
		Relocated CCTV, equipment ID No. CCTV-232-001, at south west corner of box assay shield wall to approximately 3 ft. above top of south west corner of assay shield wall.	The CCTV was relocated to enhance operational efficiencies.
		Added "Record Drawing" Stamp to drawing.	Information provided for completeness.
		The revision boxes have been updated. This included updating the revision number, revision date, revision description, and approvals.	Information provided for completeness.
WMF-634 Facility Arrangement and Grading Plan			
52-1900	5	The bottled gas storage pad was moved approximately 43.5 ft south along the east wall of WMF-634. The storage pad is located at grid point Q11. Added grading elevation references to the new location of the storage pad. A concrete walkway was added on the east side of WMF-634. Walkway extends from personnel access door to gas storage pad.	Bottled gas storage pad was relocated to increase personnel safety, as the original storage cabinet location was too close to the east WMF-634 personnel access door.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
WMF-634 Facility Arrangement and Grading Plan (continued)			
52-1900	5	Increased the size of the bottled gas storage pad. The storage pad dimensions have been changed from 18 ft to 20 ft (north – south dimension) and from 14 ft to 16 ft (east – west dimension). The storage pad is located at grid point Q11.	Increased the size of the bottled gas storage pad in order to accommodate the relocation of the storage pad, and facilitate proper installation.
		Added a concrete pad for the placement of a transformer. The concrete pad is located on the south side of WMF-634, near grid point E11.	The pad was constructed to accommodate the transformer.
		Revised the size, location, and grading for the EP-D diesel generator pad. The size of the earth pad area has been changed to accommodate the concrete foundation required for the generator. The pad has changed from approximately 11.7 ft (north – south dimension) by 20 ft (east – west dimension) to an approximate size of 13.7 ft by 20 ft. The EP-D generator pad was moved to the north, and the grading elevation references were updated from an elevation of 5022.0 to 5023.3 ft. The generator pad is located at grid point E4.	The pad was expanded to accommodate an increase in the size of the generator.
		Increased the size of the earth pad located on the north-east exterior corner of WMF-634. Increased the grading elevation of the concrete pad from 5023.0 ft to 5023.3 ft. The earth pad is located at grid point P4.	The earth pad was increased in size to allow for a level step off surface from the concrete step.
		Added "Record Drawing" Stamp to drawing.	Information provided for completeness.
		The revision boxes have been updated. This included updating the revision number, revision date, revision description, and approvals.	Information provided for completeness.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Electrical One Line Diagram – Sheet 1			
54-0801	7	Added equipment ID No. DS-232-OXF to fused disconnect switch. Equipment ID label located at grid point C3.	Information provided for completeness.
		The feeder going from the existing switchgear N-SCSW-SAE1 to the primary side of the existing 150 kVA transformer N-XFR-SAE1 has been changed. Switchgear N-SCSW-SAE1 is now fed into N-STRM-SAE1. The feeder is located at grid point E1.	This change was made to provide an independent feeder for the building main feeder.
		A 30 amp non-fused disconnecting switch was added to the air conditioning system, equipment ID No. ACCU-232-001. Switch added at grid point L7.	The non-fused disconnecting switch added to comply with the National Electric Code (NEC) requirements.
		The 20 amp circuit breaker in the Motor Control Center (MCC), equipment ID No. MCC-232-002, for the Drum Core Sample Retrieval System (DCSRS) has been converted to a spare circuit breaker. Spare breaker is located at grid point J16.	Glovebox local controllers were deleted by the manufacturer.
		Vendor supplied transformers were added to the one-line diagram for the two RTR units, equipment ID Nos. Z-213-101 and Z-213-106. Transformers are located at grid points N12 and O12.	Transformers were supplied by the RTR vendor to obtain the required service at 208Y/120V.
		A secondary main breaker was added to transformer XFMR-232-002. Breaker is located at grid point G7.	A secondary main breaker was added to meet NEC requirements for feeding multiple panels from one panel.
		The motor for the air compressor, equipment ID No. K-232-001, was increased from a 25 horsepower (hp) motor to a 30 hp motor. Feeder breaker to the air compressor was increased to 50 amps. Air compressor motor is located at grid point E12 and the breaker is located at grid point E10.	Motor power was increased per vendor information. Feeder breaker size was increased in order to accommodate the increase in the motor size.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Electrical One Line Diagram – Sheet 1 (continued)			
54-0801	7	Motor starter for the make up air unit (MAU), equipment ID No. MAU-232-001B, in MCC-232-001 was replaced with a 20 amps trip circuit breaker. The motor power load for MAU-232-001B was changed from 5 hp to 7.5 hp. Breaker is located at grid point G10 and the motor is located at grid point G11.	The MAU was supplied with a starter from the vendor; therefore there was no need for a starter in the MCC. Motor power load was changed per vendor information.
		The generator, equipment ID No. BGEN-232-001, breaker size changed from a 300 amps to a 450 amps trip breaker. The breaker is located at grid point K12.	The generator breaker size was changed per vendor information.
		Increased the transfer switch, equipment ID No. ATS-232-001, rating from 300 amps to 400 amps. Transfer switch is located at grid point J11.	The transfer switch rating was increased for interrupt rating requirements of the equipment within WMF-634.
		Increased the size of the main breaker for MCC-232-001 and MCC-232-002 from a 300 amps to a 350 amps trip breaker. Breaker is located at grid point J10.	Main generator breaker size was increased in order to accommodate usage of the generator's full load current.
		The motor size for the two exhaust fans, equipment ID Nos. EF-232-002A and EF-232-002B, was increased from a 10 hp motor to a 20 hp motor. The motor starter for these exhaust fans increased from a size 1 starter to a size 2 starter. Increased the non-fused disconnect for the exhaust fans from 30 amps to 60 amps, and the motor feed wire sizes were also increased. The exhaust fans are located at grid points A16 and B16.	Increased the motor size per vendor information. The motor starter, non-fused disconnect, and feed wire sizes all increased due to the increase in the motor size.
		Motor starter for the MAU-232-001A in MCC-232-002 was replaced with a 20 amps trip circuit breaker. The motor power load for MAU-232-001A was changed from 5 hp to 7.5 hp. The breaker is located at grid point E14 and the motor is located at grid point E16.	Motor starter for the MAU-232-001A was removed from MCC, as the MAU was supplied with a starter as part of the equipment, therefore there was no need for a starter in the MCC. Motor power load changed per vendor information.

Drawing Number	Revision Number	Minor Deviations To As-Built Drawing[1]	Rational
Type II Module (WMF-634) Electrical One Line Diagram – Sheet 1 (continued)			
54-0801	7	The motor size for the two exhaust fans, equipment ID Nos. EF-232-003A and EF-232-003B, was increased from a 2 hp motor to a 5 hp motor. The motor circuit protectors (MCPs) for these exhaust fans increased in size. The exhaust fans are located at grid points C16 and D16.	Increased the motor size per vendor information. MCPs increased in size in order to accommodate the larger motor.
		Revised Note 7 to change the primary metering demand time interval from a 30 minute (min.) interval to a 15 min. interval. Additionally, the memory storage time was changed from a 45 day to a 40 day requirement.	Note revised to reflect current operational parameters.
		Added "Record Drawing" Stamp to drawing.	Information provided for completeness.
		The revision boxes have been updated. This included updating the revision number, revision date, revision description, and approvals.	Information provided for completeness.

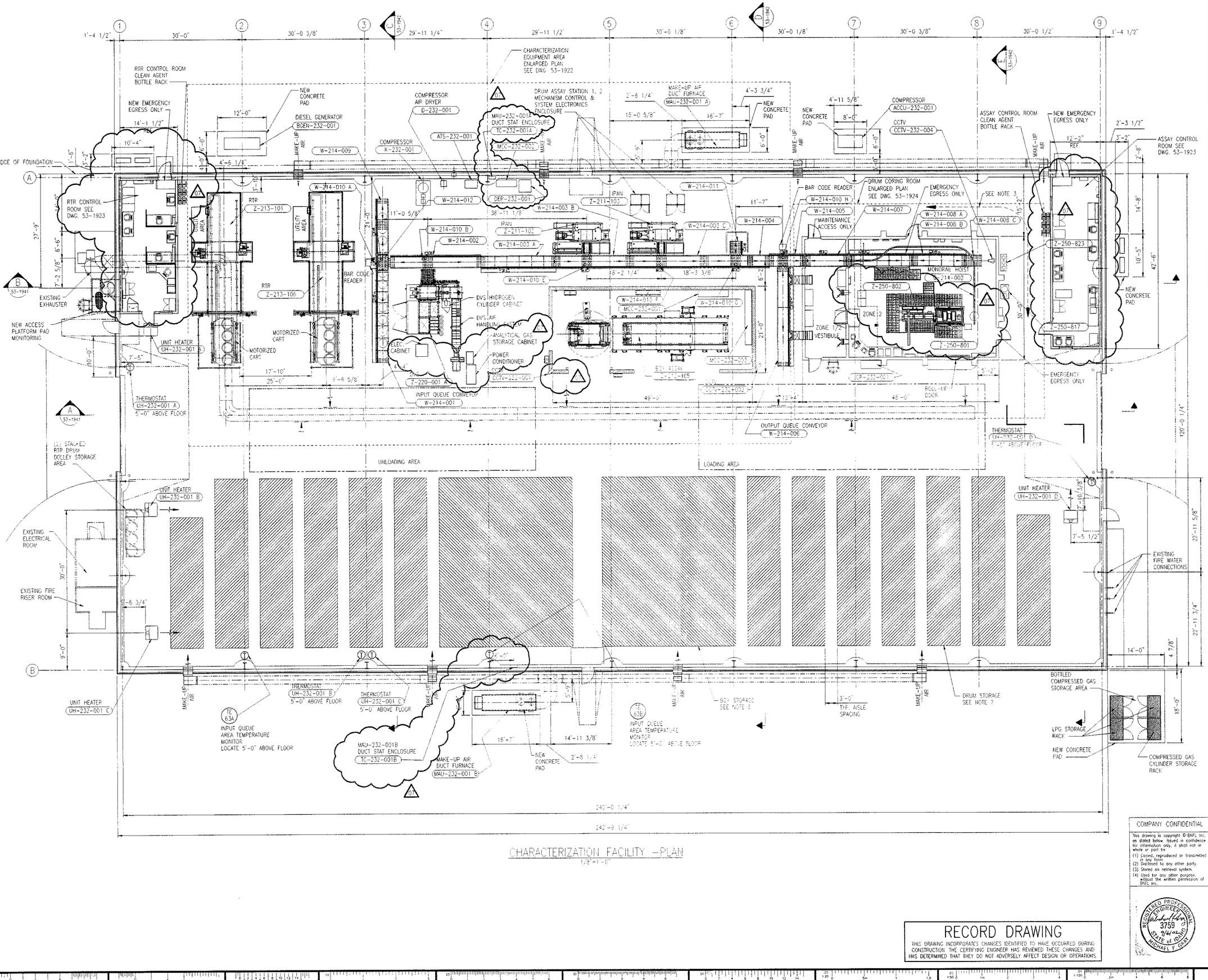
1. The secondary containment system calculations, provided in Attachment VII of the AMWTP HWMA/RCRA Storage Permit, were re-evaluated with regard to the minor deviations identified in this CCR. No changes to the secondary containment system calculations are required.

ATTACHMENT A

Attachment A

Final Professional Engineer Certified As-Built Drawings

53-1921



CHARACTERIZATION FACILITY – PLAN

1/8"=1'-0"

REV	DATE	DESCRIPTION	BY	LEAD ENGR	DEPT MGR	PROJ MGR
00	9/8/00	RE-ISSUE FOR PERMIT SUBMITTAL – TL-1589	SJA	MG	GS	EEC
01	9/15/00	ISSUE FOR CONSTRUCTION TL#1620	SJA	MG	GS	JLN
02	11/30/00	ISSUE FOR CONSTRUCTION REVISED PER VENDOR DATA, ASSAY AND RTR EQUIP. TL# 2172	SJA	MG	GS	JLN
03	1/22/01	ISSUE FOR CONSTRUCTION REVISED EQUIPMENT LAYOUT CHANGES PER CORING ROOM TL#2641	SJA	MG	GS	JLN
04	3/12/01	ISSUE FOR CONSTRUCTION REVISED DIMENSIONS PER FIELD SURVEY TL#2165	SJA	MG	GS	JLN
05	6/25/01	ISSUE FOR CONSTRUCTION REVISED PER VENDOR INFO/RELOCATE BOTTLED GAS STORAGE TL#2792	LRH	MG	MG	EEC
06	7/6/02	ISSUE FOR CONSTRUCTION INCORPORATE ECN-M-392, M-427, M-580, M-680 TL #11755	SJA	MG	MG	JS
07	9/6/02	ISSUE FOR RECORD INCORPORATED ECN-M-1460, M-1477. TL#12390	KSP			

NOTES

1. WMF-634 IS AN EXISTING TYPE II MODULE THAT WILL BE MODIFIED FOR USE AS THE AMWTP CHARACTERIZATION FACILITY.
2. MODIFICATIONS INCLUDE:
   A. INSULATING ENTIRE BUILDING.
   B. HEATING ADDITION.
   C. ADDING TWO CONTROL ROOMS WITH INDEPENDENT HVAC AND FIRE DETECTION AND PROTECTION.
   D. ADDING THE CORING ROOM WITH INDEPENDENT VENTILATION SYSTEMS AND FIRE DETECTION AND PROTECTION.
   E. INSTALLING CHARACTERIZATION EQUIPMENT AND CONVEYORS.
   F. INSTALL BOX ASSAY SHIELD WALL.
3. FORKLIFT ACCESS TO DRUM ASSAY SYSTEMS.
4. MONORAIL HOIST Q-214-002 SUPPORT FROM CORING ROOM ROOF.
5. AREA INSIDE WMF-634 IS CLASSIFIED AS ZONE 1, OPERATING AREAS WHERE NO DISCRETE SOURCE OF RADIOLOGICAL RELEASE WILL BE PRESENT.
6. BOXES AND DRUMS WILL BE STORED IN AN APPROVED CONFIGURATION. MAXIMUM STORAGE IS SIMILAR TO THE EXISTING APPROVED CONFIGURATIONS FOR THE TYPE II STORAGE MODULES
7. STACKED DRUMS IN ROWS NO MORE THAN FOUR DRUMS WIDE, FIVE DRUMS HIGH, AND 22 DRUMS LONG.
8. STACK BOXES IN ROWS NO MORE THAN FOUR BOXES WIDE, FOUR BOXES HIGH, AND 11 BOXES LONG.
9. MAXIMUM COMBINATION OF DRUMS AND BOXES IS 5,520 DRUMS AND 352 BOXES.
10. INPUT AND OUTPUT QUEUE AREAS SHOWN PROVIDE A MINIMUM FOUR DAYS OF OPERATING THROUGHPUT.

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE

ADVANCED MIXED WASTE TREATMENT PROJECT
INEEL – DOE/ID

TYPE II MODULE (WMF-634) CHARACTERIZATION FACILITY GENERAL ARRANGEMENT

MORRISON KNUDSEN CORPORATION
ENGINEERS & CONSTRUCTORS GROUP

DEPT	ARCH	STR/CIV	MECH	ELECT	PIPING	INST	Q/A	ESC ADM	PROJ MGT
INIT	RNC	CDV		JDN	STR	CHN	ERE	DSC	QSC for ZS
DATE	12/21/99	12/21/99		12/21/99	12/21/99	12/21/99	12/21/99	12/21/99	12/21/99

BNFL Inc.

SCALE: 1/8"=1'-0"	RDR DATE 9/21/02	BNFL INC. WORK ORDER NUMBER
DRAWN: S. ANTOINE	12/13/99	BNFL-5232
DESIGNED: S. ANTOINE	12/13/99	WBS 2.04.02.05
CHECKED: M. GRAY/GJW	12/21/99	SYSTEM 200 QUALITY LEVEL NQ
VERIFIED: N/A		DRAWING NUMBER 53-1921 REV 07
APPROVED: D. CROCKETT	9/15/00	

CADD FILE: WCP550\WK1\WMF634\53-1921

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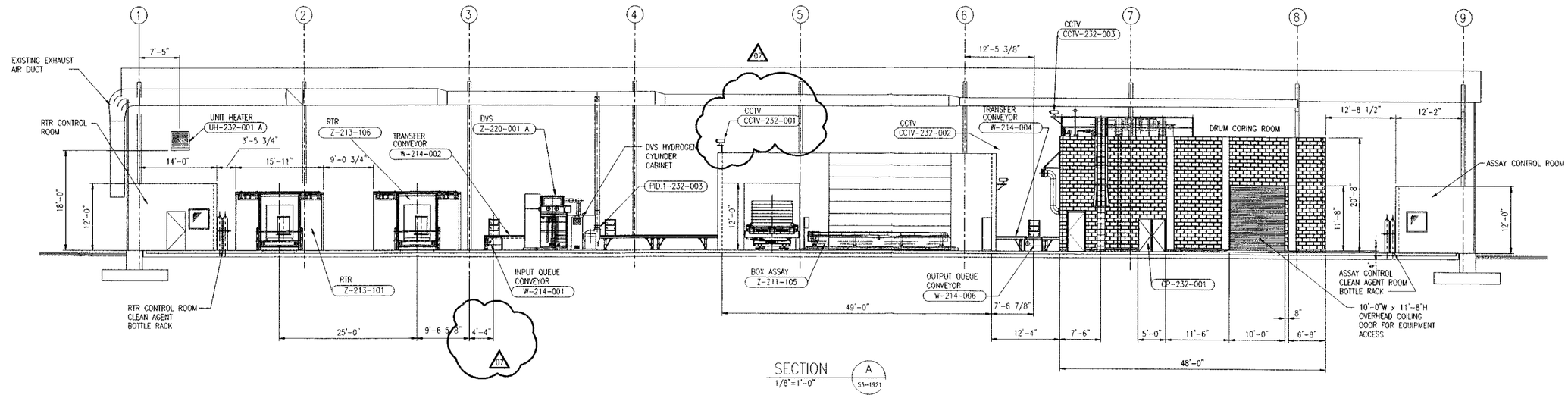
REGISTERED PROFESSIONAL ENGINEER 3759 STATE OF IDAHO MICHAEL F. GRAY 9/6/02

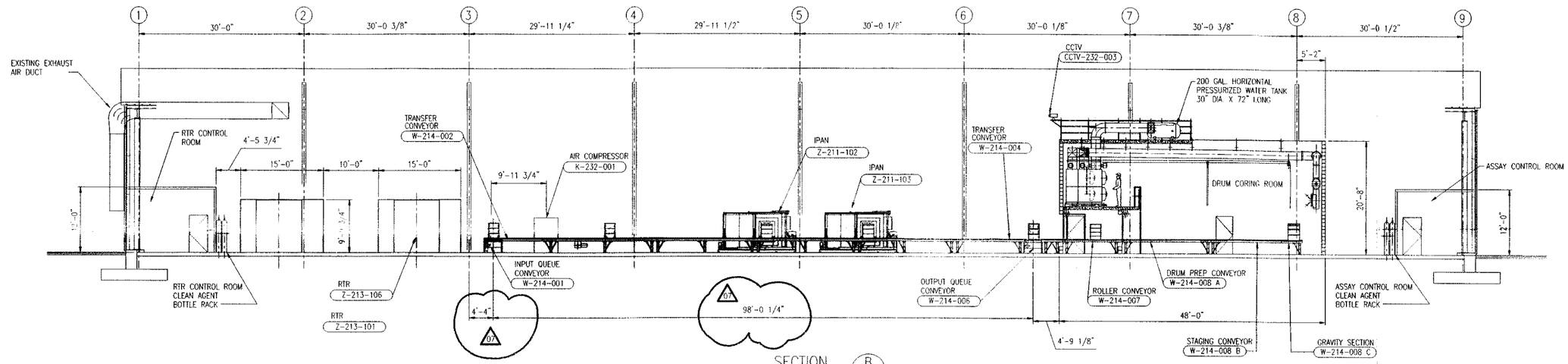
RECORD DRAWING

THIS DRAWING INCORPORATES CHANGES IDENTIFIED TO HAVE OCCURRED DURING CONSTRUCTION. THE CERTIFYING ENGINEER HAS REVIEWED THESE CHANGES AND HAS DETERMINED THAT THEY DO NOT ADVERSELY AFFECT DESIGN OR OPERATIONS.

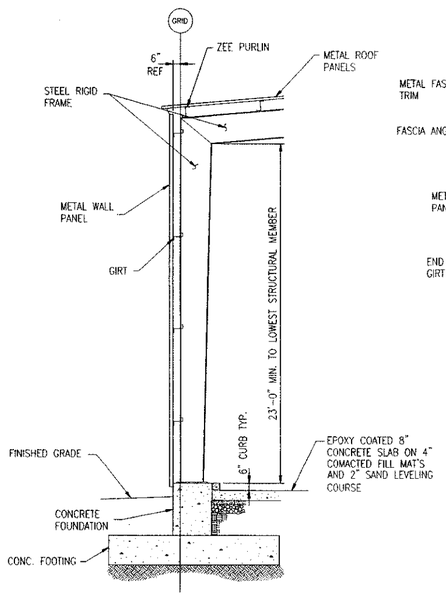
53-1941



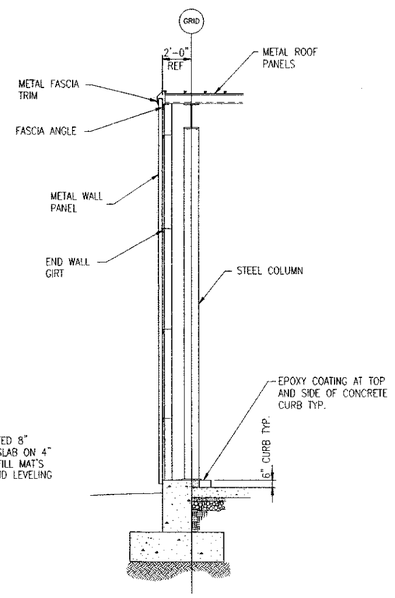
SECTION A
1/8"=1'-0"
53-1921



SECTION B
1/8"=1'-0"
53-1921



NORTH/SOUTH WALL SECTION
1/4"=1'-0"



EAST/WEST WALL SECTION
1/4"=1'-0"

REV	DATE	DESCRIPTION	BY	LEAD ENGR	DEPT MGR	PROJ MGR
00	9/8/00	RE-ISSUE FOR PERMIT SUBMITTAL TLF1589	SJA	MG	GS	DEC
01	9/15/00	ISSUE FOR CONSTRUCTION TLF1620	SJA	MG	GS	JLN
02	11/30/00	ISSUE FOR CONSTRUCTION ADDED CCTV, REVISED PER VENDOR DATA TLF 4179	SJA	MG	GS	JLN
03	1/22/01	ISSUE FOR CONSTRUCTION REVISED DOOR TAGGING ADDED CLEAN AGENT RACKS TLF2841	SJA	MG	GS	JLN
04	3/13/01	ISSUE FOR CONSTRUCTION REVISED DIMENSIONS PER FIELD SURVEY TLF3105	SJA	MG	GS	JLN
05	6/25/01	ISSUE FOR CONSTRUCTION REVISED PER VENDOR INFO. TLF4252	LRH	MG	MG	DEC
06	7/8/02	ISSUE FOR CONSTRUCTION INCORPORATE DCN M-634-3 TLF752	SJA	AM	AM	DEC
07	9/6/02	ISSUE FOR RECORD, UPDATED CONVEYORS TL #12390	SJA	MG	MG	DEC

NOTES

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE

ADVANCED MIXED WASTE TREATMENT PROJECT
INEEL – DOE/ID

TYPE II MODULE (WMF-634) CHARACTERIZATION FACILITY SECTIONS SHEET 1

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MORRISON KNUDSEN CORPORATION
ENGINEERS & CONSTRUCTORS GROUP

DEPT	ARCH	STR/CIV	MECH	ELECT	PIPING	INST	O/A	ENG	PROJ MGR
INIT	DNE	CSV		JEN	SPH	CNH	DRB	DEC	for AD
DATE	12/21/99	12/21/99		12/21/99	12/21/99	12/21/99	12/21/99	12/21/99	

BNFL Inc.

SCALE: AS NOTED	9/5/02	BNFL INC. WORK ORDER NUMBER
DRAWN: S. ANTOINE	12/14/99	BNFL-5232
DESIGNED: S. ANTOINE	12/14/99	WBS: 2.04.02.05
CHECKED: M. GRAY/GJH	12/21/99	SYSTEM: 200 QUALITY LEVEL: NQ
VERIFIED: N/A		DRAWING NUMBER 53-1941 REV. 07
APPROVED: D. CROCKETT	9/15/00	
CADD FILE: M07530\WF\WMF634\53-1941.DWG		

REGISTERED PROFESSIONAL ENGINEER 3759 9/6/02 STATE OF IDAHO MICHAEL F. GRAY

RECORD DRAWING
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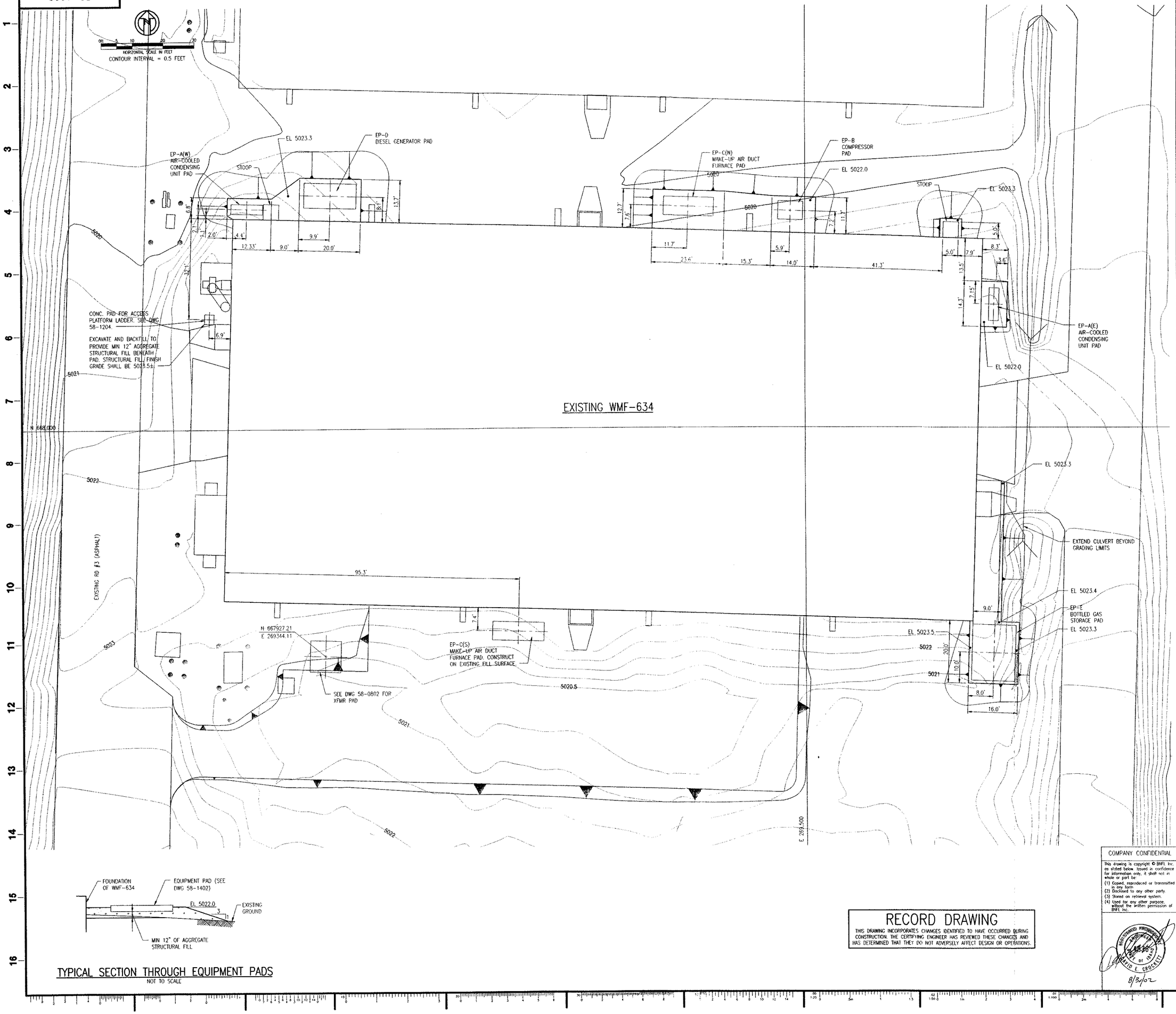
52-1900



TYPICAL SECTION THROUGH EQUIPMENT PADS
NOT TO SCALE

REV	DATE	DESCRIPTION	BY	LEAD ENGR	DEPT MGR	PROJ MGR
00	7/13/00	ISSUE FOR PERMIT SUBMITTAL TL-1404	LRH	DEC	RCB	JLH
01	9/8/00	ISSUE FOR PERMIT SUBMITTAL REVISE EQUIPMENT GRADING FEATURES TL-1589	LRH	DEC	RCB	JLH
02	11/30/00	ISSUE FOR CONSTRUCTION TL-2173	LRH	DEC	RCB	JLH
03	3/15/01	ISSUE FOR CONSTRUCTION REVISE EQUIPMENT PAD LOCATIONS TL-3208	LRH	DEC	KLD	DEC
04	7/8/02	ISSUE FOR CONSTRUCTION USED RTMF PAD KNOW-POINTS: N-668,M-270,M-362 TL#11754	LRH	DEC	DEC	DEC
05	9/6/02	ISSUE FOR RECORD. TL#12390	LRH	DEC	DEC	DEC

NOTES

1. HORIZONTAL AND VERTICAL CONTROL SHOWN ON THIS DRAWING IS BASED UPON THE RWMC HISTORICAL SITE SPECIFIC XYZ SURVEY.
2. SEE DRAWING 58-1402 FOR EQUIPMENT PAD DETAILS.
3. CONSTRUCT FLAT AREAS FOR EQUIPMENT WITH DIMENSIONS AND ELEVATIONS SHOWN USING COMPACTED AGGREGATE OR GENERAL STRUCTURAL FILL. DIMENSIONS ARE FROM EDGE OF FOUNDATION OF WMF-634. SIDESLOPES SHALL BE 3:1 OR FLATTER EXCEPT WHERE TEMPORARY OVERSTEEPENING MAY BE REQUIRED TO AVOID CONSTRUCTION FENCE.

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE

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RECORD DRAWING

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REGISTERED PROFESSIONAL ENGINEER 13116 STATE OF IDAHO DAVID E. CROCKETT
8/2/02

ADVANCED MIXED WASTE TREATMENT PROJECT
INEEL - DOE/ID

WMF-634 FACILITY ARRANGEMENT AND GRADING PLAN

MORRISON KNUDSEN CORPORATION
ENGINEERS & CONSTRUCTORS GROUP

DEPT	ARCH	STR/CIV	MECH	ELECT	PIPING	INST	Q/A	LEAD ENGR	DEPT MGR	PROJ MGR
INIT							DRB	DEC		JLH
DATE							7/13/00	7/13/00	7/13/00	

BNFL Inc.

	BY	DATE
SCALE: 1"=10' UNLESS NOTED		8/23/02
DRAWN: L HAYS		7/07/00
DESIGNED: L HAYS		7/07/00
CHECKED: D CROCKETT		7/13/00
VERIFIED: N/A		
APPROVED: J NAAF		7/13/00

CADD FILE: W:\TSSD\WP\WMF634\CML\52-1900.DWG

BNFL INC. WORK ORDER NUMBER
BNFL-5232
WBS: 2.04.02.01
SYSTEM: N/A QUALITY LEVEL: NQ
DRAWING NUMBER 52-1900 REV 05

54-0801

TO EXISTING N-STRM-SAE1 (JP-9)

EXISTING N-SCSW-SAE1

200A

30A

4"C.3#2 15kV W/SHLD EPR

TO BATCH PLANT (BY OTHERS) DWG 54-0115

XFMR-232-001
500kVA
12.47kV-480Y/277V, 3PH, 4W
Z=5.25
OUTDOOR NEMA 3R-PAD MOUNT

600/5

NOTE 7

2-3"C.4#350kCMIL&1#2/0G

600A SE RATED

600A

NEMA 3R

07 DS-232-OXF

MCC-232-001 (NOTE 6)

2-3"C.4#350kCMIL&1#2/0G

600 AT
600 AF

480-120V

600/5

600A, 480Y/277V, 3PH, 4W, 60HZ, 42,000A

MATCH LINE THIS DWG

10AJ 3A	10AJ 3A	10AJ 3A	10AJ 3A	20AT 100AF	100AT 100AF	20AT 100AF	18AJ 7A	20AT 100AF	20AT 100AF	100AJ 30A	20AT 100AF	20AT 100AF	20AT 100AF	20AT 100AF	20AT 100AF	20AT 100AF			
3/4"C.3#12&1#12G	3/4"C.3#12&1#12G	3/4"C.3#12&1#12G	3/4"C.3#12&1#12G	3/4"C.3#12&1#12G	1 1/2"C.3#2&1#6G		3/4"C.3#12&1#12G	3/4"C.3#10&1#12G											
DS-232003 30A	DS-232004 30A	DS-232005 30A	DS-232006 30A	DS-232007 30A	XFMR-232-002 75kVA 480-208Y/120V 3PH, 4W		DS-232015 30A	DS-232016 30A											
3/4"C.3#12&1#12G	3/4"C.3#12&1#12G			3/4"C.3#12&1#12G	3"C.4#4/0&1#2G		3/4"C.3#12&1#12G												
1/2	1/2	1/2	1/2	3HP	225AT 225AF		3	10HP - 3/4HP	SPARE		FCU-232-001	ACCU-232-001	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE
UH-232-001A UNIT HEATER	UH-232-001B UNIT HEATER	UH-232-001C UNIT HEATER	UH-232-001D UNIT HEATER	Q-214-002 MONORAIL HOIST CORING RM	3"C.4#4/0&1#2G JB200002 JB				BKR		CORING RM FAN	AIR CONDITION SYS	BKR	STARTER	BKR	BKR	BKR	BKR	BKR
					3"C.4#4/0&1#2G														
					150AT 150AF	150AT 150AF													
					DP-232-001 DIST PNL 208V/120V 3PH, 4W, 30 CKT LIGHTING	DP-232-002 DIST PNL 208V/120V 3PH, 4W, 30 CKT LIGHTING													

MATCH LINE THIS DWG

20AT 100AF	20AT 100AF	60AT 100AF	50AT 100AF	20AT 100AF	350AT 400AF		80AT 100AF	80AT 100AF											
3/4"C.3#8&1#8G	3/4"C.3#8&1#10G	3/4"C.3#12&1#12G	2-2"C.4#2/0&1#2G		1 1/2"C.3#2&1#6G	1 1/2"C.3#2&1#6G													
JB200001		DS-232008 30A			30kVA 480-208Y/120V 3P, 4W	30kVA 480-208Y/120V 3P, 4W													
3/4"C.3#6&1#10G		3/4"C.3#12&1#12G		3/4"C.2#12&1#12G															
W	W	7.5 07	30HP	ATS-232-001 3P, 4W 480V, 400A, 60HZ NEMA 12															
SPARE BKR	SPARE BKR	W-232-001 WELDING	W-232-002 WELDING	K-232-001 AIR COMPRESSOR	MAU-232-001B MAKE UP AIR UNIT		BGEN-232-001 250kW, 480V, 3PH, 4W, 60HZ STAND BY POWER 450AT 600AF GEN DIESEL AUTO START		Z-213-101 REAL TIME RADIOSCOPY UNIT RTR #1	Z-213-106 REAL TIME RADIOSCOPY UNIT RTR #2										
				2-2"C.4#2/0&1#2G															

MCC-232-002

350AT 400AF																			
400A, 480Y/277V, 3PH, 4W, 60HZ, 42,000A																			
100AJ 30A	100AJ 30A	50AT 15A	50AJ 15A	20AT 100AF	100AT 100AF	30AT 100AF	20AT 100AF		70AT 100AF	30AT 100AF	100AJ 30A	225AT 225AF	70AT 100AF	70AT 100AF					
3/4"C.3#8&1#10G	3/4"C.3#12&1#12G	3/4"C.3#12&1#12G		1 1/2"C.3#2&1#6G	3/4"C.3#10&1#12G			1"C.3#6&1#8G			3"C.4#4/0&1#2G	1"C.3#4&1#8G	1"C.3#4&1#8G						
DS-232009 60A	DS-232010 60A	DS-232011 30A	DS-232012 30A	DS-232013 30A	XFMR-232-003 75kVA 480-208Y/120V 3PH, 4W	XFMR-232-004 15kVA 480-208Y/120V 3PH, 4W		XFMR-232-006 45kVA 480-208Y/120V											
3/4"C.3#8&1#10G	3/4"C.3#12&1#12G				2"C.4#4/0&1#2G	1"C.4#6&1#8G		2"C.4#2/0&1#4G											
20	20	5	5	7.5 07	200AT 200AF	60AT 100AF	SPARE BKR	200AT 200AF	SPARE BKR	SPARE STARTER	MCC-232-003 DWG (54-0830)	Z-220-001A DRUM VENT SYSTEM	Z-212-105 BOX RADIO ASSAY SYSTEM (IP-212-001)						
EF-232-002A EXHAUST FAN ZONE 2	EF-232-002B EXHAUST FAN ZONE 2	EF-232-003A EXHAUST FAN ZONE 3	EF-232-003B EXHAUST FAN ZONE 3	MAU-232-001A MAKE UP AIR UNIT ZONE 1	DP-232-003 DIST PNL 208Y/120V 3PH, 4W, 42 CKT	DP-232-006 INST DIST PNL 208Y/120V 3PH, 4W, 30 CKT		DP-232-005 DIST PNL 208Y/120V 3PH, 4W, 30 CKT											

REMOTE MOUNTED (NOTE 1)

EXISTING PANEL S1-PP-3401

480Y/277V, 3PH, 60HZ

3P-20A

50/5 (NOTE 1)

EXISTING S1-MSTR-3401

MCP

F S

7.5

EF-232-001 EXHAUST FAN ZONE 1 EXISTING (FORMERLY HV-3401)

REV	DATE	DESCRIPTION	BY	LEAD ENGR	DEPT MGR	PROJ MGR
00	9/8/00	ISSUE FOR PERMIT TL #AM-MK-TL-1589	AV	JEM	JEM	JLN
01	9/15/00	ISSUE FOR CONSTRUCTION TL #AM-MK-TL-1620	AV	JMC FOR JEM	JMC	DEC
02	12/15/00	ISSUE FOR CONSTRUCTION TL #AM-MK-TL-2322	AV	JEM	JMC	DEC
03	6/11/01	ISSUE FOR CONSTRUCTION TL #AM-MK-TL-4471	CMS	JEM	JEM	TDA
04	08/29/01	ISSUE FOR CONSTRUCTION TL #AM-MK-TL-	MCP	JEM	JMC	JLN
05	02/01/02	ISSUE FOR CONSTRUCTION -DCN-M-566, -526 & -766 INCORPORATED TL #AM-MK-TL-5564	CMS	JEM	JMC	JLN
06	07/08/02	ISSUE FOR CONSTRUCTION -DCN-M-978 & -1232 INCORPORATED -REV.05A & 05B RED LINES INCORPORATED TL #AM-MK-TL-11751	JMC	JMC FOR JLN	JMC	JLN
07	9/6/02	ISSUE FOR RECORD TL #AM-MK-TL- 12390				

NOTES

1. INSTALL A kWH METER NEAR STARTER S1-MSTR-3401 TO MONITOR EF-232-001. PROVIDE CURRENT AND VOLTAGE SIGNALS TO METER. METER AND SOCKET BY SCIENTIFIC-COLUMBUS #J10-120-09S-3-1 WITH A LOAD PROFILE BOARD, TIME OF USE OPTION AND ANY OTHER OPTIONS NECESSARY FOR METER TO STORE 30-MINUTE DEMANDS FOR A MINIMUM OF 45 DAYS INCLUDING THREE CFM4460A30G25 CT,S AND 9S ENCLOSURE/SOCKET ARRANGEMENT.
2. NOT USED.
3. NOT USED.
4. GROUND ALL TRANSFORMERS AND MAIN ELECTRICAL EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, ARTICLE 250.
5. XFMR-232-001, 500kVA, 12.5kV-480Y/277V, 3-PHASE, 4-WIRE, 60HZ, 65°C, 125kV BIL (PRIMARY) AND 30kV BIL (SECONDARY). TRANSFORMER SHALL BE PAD-MOUNTED (ABB MTR-TYPE OR EQUIVALENT); PROVIDE PAD-MOUNTING BASE, HV-BUSHINGS; LV-BUSHINGS WITH TERMINALS AND GROUNDING PROVISIONS. PROVIDE FOUR ADJUSTABLE TAPS OF 2.5% EACH, TWO ABOVE AND TWO BELOW RATED VOLTAGE; RADIAL FEED. TRANSFORMER SHALL BE FILLED WITH ENVIRONMENTALLY-SAFE INSULATION FLUID.
6. A PERMANENT WARNING PLAQUE SHALL BE MOUNTED AT EACH SERVICE DISCONNECT LOCATION, SUCH AS INCOMING SECTION OF NEW MCC-232-001, EXISTING DISCONNECT S1-DSWM-3401 AND EXISTING PANEL N-PP-3401 LISTING ALL OTHER SERVICES AND AREAS SERVED BY ABOVE.
7. THREE PHASE METERING POINT AT TRANSFORMER XFMR-232-001 SHALL USE A JEM-10 SCIENTIFIC-COLUMBUS METER #J10-120-09S-3-1 WITH A LOAD PROFILE BOARD, TIME OF USE OPTION AND ANY OTHER OPTIONS NECESSARY FOR METER TO STORE 15-MINUTE DEMANDS FOR A MINIMUM OF 40 DAYS INCLUDING THREE CFM4460A30G07 CT'S AND 9S ENCLOSURE/SOCKET ARRANGEMENT.

RECORD DRAWING

THIS DRAWING INCORPORATES CHANGES IDENTIFIED TO HAVE OCCURRED DURING CONSTRUCTION. THE CERTIFYING ENGINEER HAS REVIEWED THESE CHANGES AND HAS DETERMINED THAT THEY DO NOT ADVERSELY AFFECT DESIGN OR OPERATIONS

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE
54-0001	ELECTRICAL SYMBOLS

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REGISTERED PROFESSIONAL ENGINEER 4913 STATE OF IDAHO JORGE M. CALLE

ADVANCED MIXED WASTE TREATMENT PROJECT
INEEL - DOE/ID

TYPE II MODULE (WMF-634) ELECTRICAL ONE LINE DIAGRAM-SHT 1

MORRISON KNUDSEN CORPORATION
ENGINEERS & CONSTRUCTORS GROUP

DEPT	ARCH	STR/CIV	MECH	ELECT	PIPING	INST	Q/A	ENG MGR	PROJ MGR
INIT		RK-C/BC	MC		LH		DRB	DC	AJN
DATE		8/21/00	8/18/00		8/18/00		8/18/00	8/18/00	8/18/00

BNFL Inc.

SCALE: NONE	APP'D 09/05/02	BNFL INC. WORK ORDER NUMBER
DRAWN: T. CHURCH	2/22/00	BNFL-5232
DESIGNED: A. VETSOS	2/04/00	WBS: 2.04.02.05
CHECKED: M. PHILLIPS	8/18/00	SYSTEM: 232 QUALITY LEVEL: NQ
VERIFIED: N/A		DRAWING NUMBER: 54-0801 REV: 07
APPROVED: D.E. CROCKETT	9/15/00	

CAD FILE: W075361\wk\WMF634\ELEC\54-0801.DWG

Attachment B

AMWTP HWMA/RCRA Storage Permit Minor Deviations

APPENDIX II

WMF-634 DRAWINGS AND TOPOGRAPHIC MAP

Item Number	Description	Drawing Number	Revision Number	PE Certification Date	Sheet Number	Revision Approval Date
1	Type II Module (WMF-634) Characterization Facility General Arrangement	53-1921	~~05~~ *07*	~~06/25/01~~ *09/06/02*	1 of 1	~~06/25/01~~ *09/06/02*
2	Type II Module (WMF-634) Characterization Facility Sections Sheet 1	53-1941	~~05~~ *07*	~~06/25/01~~ *09/06/02*	Sheet 1	~~06/25/01~~ *09/06/02*
3	AMWTP Traffic Flow	53-1901	02	11/29/01	1 of 1	12/05/01
4	RWMC/AMWTP Topographic Map	Not Applicable	Not Applicable	Not Applicable	1 of 1	07/25/01
5	WMF-634 Facility Arrangement and Grading Plan	52-1900	~~03~~ *05*	~~03/15/01~~ *08/30/02*	1 of 1	~~03/15/01~~ *09/06/02*
6	Type II Module (WMF-634) Electrical One Line Diagram	54-0801	~~04~~ *07*	~~06/29/01~~ *09/06/02*	1 of 1	~~06/29/01~~ *09/06/02*
7	Site Utilities	56-1901	01	02/23/01	1 of 1	02/23/01

call accounting are incorporated, as required. WMF-634, at a minimum, is equipped with a telephone in the ~~electrical equipment room,~~ assay ~~control room,~~ and RTR control rooms. The Type I Module and Type II Modules are each equipped, at a minimum, with one telephone, and SWEPP is equipped with six telephones (five in the office area and one in the High Bay area). Hand-held radios are routinely used during normal and emergency operations.

The RWMC fire alarm system, which serves all TSA MWMUs, is linked to the INEEL central fire alarm monitoring system. Any alarm condition within the RWMC and the AMWTP is transmitted to the INEEL system's computer located at the fire station at the CFA. The computer activates an alarm printer and audible signal in the fire station and notifies the Warning Communications Center (WCC). Alarm initiating device circuits are continuously monitored, so that failure of any circuit causes an alarm indication at the transponder and main fire alarm panel.

Initiating devices include manual pull stations, area smoke and heat detectors, duct smoke detectors, sprinkler riser flow and tamper (valve position) switches, alarm cabinet door switches, environmental and radiation monitoring alarm contacts, and alarm contacts from any other extinguishing systems panels. Manual pull boxes initiate local and remote alarm signals. Control devices include door holders, contact outputs for fan and damper control, and alarm and speaker signals.

A fire alarm public address (PA) system allows emergency communications from the RWMC central control room and entry to speakers located throughout the RWMC. The speakers are capable of broadcasting various distinct building alarm signals. The Type I Module is equipped with 15 evacuation/voice paging speakers and nine manual fire alarm stations. Each Type II Module, including WMF-634, is equipped with eight evacuation/voice paging speakers and four manual fire alarm stations. SWEPP is equipped with four evacuation/voice paging speakers and manual fire alarm stations.

F-3a(3) External Communications [IDAPA 58.01.05.008; 40 CFR 264.32(b)]

External communication to summon emergency assistance is typically made via the AMWTP telephone system, vehicle two-way radios, hand-held two-way portable radios, and automatic alarms. In the event of an emergency, the following organizations that may be

Attachment C

Professional Engineer Certification Statements

PROFESSIONAL ENGINEER CERTIFICATION OF THE ADVANCED MIXED WASTE TREATMENT PROJECT (AMWTP) CHARACTERIZATION FACILITY [i.e., WASTE MANAGEMENT FACILITY 634 (WMF-634)] CONSTRUCTION CERTIFICATION REPORT

Permit Condition (PC) I.R of the AMWTP Hazardous Waste Management Act (HWMA)/ Resource Conservation and Recovery Act (RCRA) Storage Permit [Environmental Protection Agency (EPA) ID No. ID4890008952] requires that the Permittee submit to the State of Idaho Department of Environmental Quality (DEQ) a letter that includes a narrative report and as-built drawings, as required by PC II.A.2. This Construction Certification Report (CCR) is signed by the Permittee and a registered Professional Engineer, which certifies that the AMWTP Waste Characterization Facility has been modified in accordance with the Class 3 Permit Modification Requests (PMRs), BNFL-5232-SPMR-03, that was submitted to the DEQ on August 13, 2001 and approved by the DEQ on February 11, 2002; and the Class 3 PMR, BNFL-5232-SPMR-04, submitted to the DEQ on March 1, 2002 and subsequently approved by the DEQ.

This CCR describes the minor deviations to that which was submitted to the DEQ as part of the two Class 3 PMRs, as described above. These minor deviations were necessary in order to accommodate proper construction and/or the substitution of equivalent or superior materials or equipment. This CCR provides the rationale for those deviations. These deviations are incorporated into the as-built drawings, which are provided as part of this submittal.

The registrants certify that the facility modifications were constructed in substantial conformity with the attached as-built drawings. The registrants have reviewed project construction records, as required, to gain a level of confidence that those features, which are buried, inaccessible, or otherwise not conducive to visual examination, were constructed in accordance with the attached as-built drawings.

9/19/02

David E. Crockett, Professional Engineer
License No. 4836 – Civil Engineering

Date

9/19/02

Michael F. Gray, Professional Engineer
License No. 3759 – Mechanical Engineering

Date

9/19/02

Jorge M. Calle, Professional Engineer
License No. 4913 – Electrical Engineering

Date

ATTACHMENT D

Attachment D

Owner and Operator Certification Statements

BNFL INC. CERTIFICATION STATEMENT FOR THE CONSTRUCTION CERTIFICATION REPORT FOR THE ADVANCED MIXED WASTE TREATMENT PROJECT CHARACTERIZATION FACILITY [i.e., WASTE MANAGEMENT FACILITY 634 (WMF-634)] AT THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY

The undersigned certifies as required by the Advanced Mixed Waste Treatment Project HWMA/RCRA Storage Permit, Permit Condition I.W and IDAPA 58.01.05.012 [Title 40 of the Code of Federal Regulations (CFR) 270.11(d) and 270.30(k)] as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator Signature:

Frederick P. Hughes 9/24/02

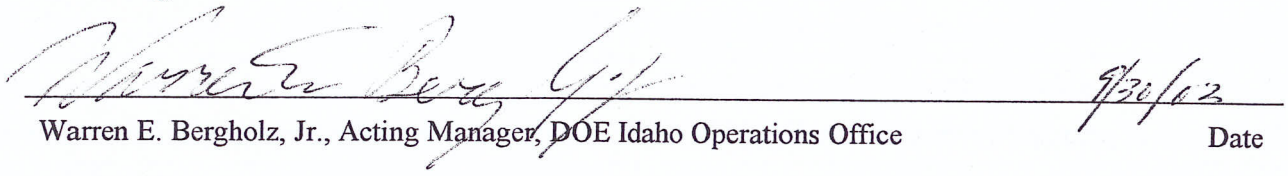
Frederick P. Hughes, AMWTP General Manager, BNFL Inc. Date

DOE-ID CERTIFICATION STATEMENT FOR THE CONSTRUCTION CERTIFICATION REPORT FOR THE ADVANCED MIXED WASTE TREATMENT PROJECT CHARACTERIZATION FACILITY [i.e., WASTE MANAGEMENT FACILITY 634 (WMF-634)] AT THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY

The undersigned certifies, as required by the BNFL Inc. Advanced Mixed Waste Treatment Project HWMA/RCRA Storage Permit, Permit Condition I.W and IDAPA 58.01.05.012 [Title 40 of the Code of Federal Regulations (CFR) 270.11(d) and 270.30(k)], as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature:



Warren E. Bergholz, Jr., Acting Manager, DOE Idaho Operations Office — Date 9/30/03