HAFB07

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RESPONSIVENESS – INTEGRITY - TEAMWORK

January 23, 2007

New Mexico Environment Department
Hazardous Waste Bureau
Permits Management Program
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Attention: Mr. John E. Kieling
Program Manager

Subject: Response to Notice of Deficiency: Voluntary Corrective Measures Work Plan, SS-61 Soil Remediation, August 2006, Holloman Air Force Base, EPA ID# NM6572124422, HWB-HAFB-05-007 and -008.

Dear Mr. Kieling,

Enclosed please find tabulated responses to the subject Notice of Deficiency (HWB-HAFB-05-007 and -008). Upon verbal or written concurrence from NMED, Bhate will submit the changed pages to NMED.

If you have any questions, please feel free to call me at 303-815-1762.

Sincerely,
Bhate Environmental Associates, Inc.

Frank Gardner, PG
Program Manager

cc w/ encl: C. Amindyas, NMED HWB
D. Strasser, NMED HWB
G. Fish, HAFB

Response to Comments Voluntary Corrective Measures Work Plan Site SS-61 Soil Remediation, August 2006 Holloman AFB, NM				
Comment No.	Section	Page	Comment	Response
Author	David Strasser		Date of Comments: November 27, 2006, Notice of Deficiency HWB-HAFB-05-007 and HWB-HAFB-05-008	Date of Response: December 20, 2006
1	General		As previously stated, the Work Plan under review was submitted in response to two previous NODs. Although most of the NOD comments appear to have been addressed in the body of the Work Plan, no formal response to the individual NOD comments was provided. To allow for an efficient and effective NMED review of the NOD responses, the Permittee is required to submit a stand-alone document that provides a response to each NOD comment as outlined in this letter and the past NOD letters. Where possible, rather than duplicating information, the stand-alone document may refer to the section(s) in the Work Plan that address the NOD comments.	Concur. Responses to the previous SS-61 NMED NOD comments (HWB-HAFB-05-007 [Monitored Natural Attenuation Report of SS-61] and HWB-HAFB-05-008 [Additional Groundwater Work Plan for SS-61]) have been addressed in stand-alone Response to Comment spreadsheets for each NOD. The individual Response to Comment spreadsheets will be included in Attachment A of the *SS-61 Soil Remediation Voluntary Corrective Measures Work Plan.*
2	General		According to Figures 1-3, 1-5, 3-1 and 3-2 in the Work Plan, the southern boundary for site SS-61 terminates north of Building 1079. However, various documents submitted for this site refer to the possible presence of an oil/water separator at the southeast corner of Building 1079 and a concrete sump located at the northwest corner of Building 1079. Section 5.4 (Summary of the Nature and Extent of Contamination) of the *Phase II Remedial Investigation Report for SS-61* (December 2000) states that gasoline-related constituents were detected in the groundwater south of Building 1079 and that these detections are likely the result of a past release from an oil/water separator formerly located at the southeast corner of Building 1079. In addition, a soil sample collected from 1-2 ft below ground surface in boring DP-40, collected during the Phase II Remedial Investigation	The *Phase II Remedial Investigation Report for SS-61, Holloman AFB, NM* (Foster Wheeler, 2000) references a concrete sump located near the northwest entrance of the hangar (B1079) and a oil/water separator located near the southeast corner of Building 1079. . A site visit was conducted on December 14, 2006 to investigate the concrete sump and the oil/water separator associated with B1079. As determined during the site visit the locations of the two structures are shown in the attached Figure 1. The metal lids covering each structure were removed so that the interior could be inspected and photographed. As shown in attached Photographs 1 and 2 it was determined that the oil water separator described in the Phase II RI Report is actually a valve box for the buried underground pipeline that traverses Site SS-61 from the north to south (Figure 1). Based on the location of the pipeline valve box (located 94 ft from the southeast corner of B1097), the southern extent of the buried pipeline is located approximately 50 feet

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			in May 2000, showed a Total Petroleum Hydrocarbon (TPH) result of 7,800 mg/kg. This boring is located just southwest of Building 1079. The NMED's January 27, 2006 NOD for the *Monitored Natural Attenuation Report for SS61* (Comment #2) required that the Permittee submit a discussion on the possibility that the two aforementioned structures near Building 1079 could be a potential source of groundwater contamination at this site and to include a figure depicting the locations of these structures. This comment was not addressed in the Work Plan. The Permittee is again required to submit this discussion and figure and to explain why the southern boundary of SS-61 does not extend to a point south of Building 1079. Regarding the elevated TPH soil sample result from boring DP-40, the Permittee is required to revise the additional investigation requirements of the Work Plan to include additional soil characterization for hazardous constituents in the vicinity (within 20 to 50 feet) of boring DP-40 to determine if this area is a potential source of groundwater contamination.	southeast from what is depicted on Figure 3-1 (SS-61 Voluntary Corrective Measures Work Plan, Bhate, 2006). As a result, Figures 1-3 and 3-1 from the Work Plan, (attached) have been revised to show the actual location of the buried north-south trending pipeline. The concrete sump (attached Photographs 3 and 4) is located approximately 20 feet from the northwest entrance of B1079 (Figure 1). Based on interviews with current B1079 personnel, 6 to 8 floor drains located throughout B1079 were connected to the concrete sump. The sump gravity drained into the sanitary sewer system. It was reported during the site visit that the B1079 floor drains were sealed with cement approximately two years ago. During the Phase II RI (Foster Wheeler, 2000) a total of 40 soil samples were collected from 20 direct push technology (DPT) borings drilled within in the southern portion of SS-61 (south of Dezonia Rd) in the vicinity of B1079 and B1080. As shown in the attached Figure 1, four DPT soil borings were drilled adjacent to the northwest and southeast corners of Building 1079. DPT borings DP44 and DP45 were drilled along the northwest corner of B1079 down and cross gradient from the concrete sump. DPT borings DP39 and DP46 were drilled adjacent to the southeast corner of Building 1079 downgradient of the pipeline valve box. These borings were advanced to approximately 20 ft below ground surface; three soil samples were collected from each borehole for vertical characterization. TRPH was detected in DP-39 in the 1- to 2-ft interval at a concentration of 260 mg/kg. TRPH was also detected at DP-44 in the 11- to 12-ft interval with a concentration of 46 mg/kg. Both of these detections are below the NMED SSLs for TRPH. Additionally, TRPH and VOCs were not detected in any of the other soil samples collected from these

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				four soil borings. Therefore, based on the analytical results from the Phase II RI, there does not appear to be source area associated with either the concrete sump or the pipeline valve box. Additionally, Section 5.4 in the Phase II RI Report stated that "Only one soil sample collected during the Phase II RI exceeded the petroleum hydrocarbon action level. TRPH was detected at a concentration of 7,800 mg/kg at DP40 in the sample collected from 1 to 2 ft." The location of DP40 is also shown on the attached Figure 1. It is important to note that TRPH and VOCs were not detected in the two DP40 samples collected from 5 to 6 and 8.5 to 9.5 ft bgs. In April 2004, as part of the Focused Feasibility Study, eight soil samples were collected from four locations in the area surrounding the Phase II RI sampling location DP-40. The boring locations and sampling results are shown on Figure 3 of the *Interim Final Focused Feasibility Study, Spill Site 61, Holloman AFM, NM,* (Bhate, 2004). The four soil borings were field located approximately 10 feet to the north, south, east and west of soil boring DP-40. Two soil samples were collected from each location (one sample from 0 to 1 foot, and one sample from 1 to 2 feet) and analyzed for TRPH and total organic carbon. Values for TRPH ranged from non-detect to 201 mg/kg in the sample from SB-02-1, collected from 0 to 1 foot. TRPH detected in each soil sample was in the C22-C36 carbon range. TRPH was not detected above the NMED total petroleum hydrocarbon screening level of 940 mg/kg (TPH screening guideline for kerosene and jet fuel, NMED October, 2006). Therefore, this isolated occurrence of petroleum hydrocarbon (DP40 1 to 2 ft bgs) is likely the result of an isolated surface spill in the area. Based on the soil data collected during the Phase II RI and the

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				additional soil sampling surrounding the DP40 location (conducted during the feasibility study) there doesn't appear to be a VOC or TRPH source area above NMED SSLs associated with Building 1079 (concrete sump, former oil water separator or the petroleum spill located in the area of DP40). The *Voluntary Corrective Measures Work Plan SS-61 Soil Remediation, HAFB, NM* focuses on locating a VOC/TRPH source area in the vicinity of an abandoned fuel pipeline (near Building 1072) which is located immediately downgradient of the most VOC contaminated monitoring well (SS61-MW-03). Therefore, it was determined to terminate the Site SS-61 southern boundary north of Building 1079 and south of B1087 as shown on Figures1-3, 1-5, 3-1 and 3-2.
3	App C (QAPP Addendum)	Table 4-3	The NMED's January 17, NOD for the *Additional Groundwater Monitoring Work Plan for SS-61* (Comment #5) required that the Permittee ensure that laboratory Minimum Detection Limits (MDLs) for all constituents in groundwater be lower than the New Mexico Water Quality Control Commission (NMWQCC) standards or EPA Maximum Contaminant Levels, whichever is appropriate. Appendix C (Quality Assurance Project Plan Addendum) of the Work Plan under review presented Table 4-3 (Summary of Laboratory QC Limits). This table does not show a Reporting Limit (RL/MDL) for 1,2-Dibromoethane (EDB) and shows a RL/MDL for benzo(a)pyrene at 5µg/L. The NMWQCC standard for EDB is 0.1 µg/L and 0.7 µg/L for benzo(a)pyrene.	The values in Table 4-3 represent the laboratory's Reporting Limit (RL) rather than their MDL. The laboratory 8270 MDL for **benzo(a)pyrene** is 1.0 µg/L. If a guaranteed MDL of 0.7 µg/L or less is required, Bhate can have the samples analyzed for Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Method 8310, which will provide an RL of 0.2 µg/L and a MDL of 0.1 µg/L for benzo(a)pyrene. Based on the analytical data presented in the historical reports, benzo(a)pyrene has not been detected and is not a historical contaminant of concern for Site SS-61. . The compound **EDB** is not included in the laboratories standard VOC list because this compound reacts with the hydrochloric acid preservative used in normal VOC samples producing unreliable results. There is a special analysis for EDB (EPA 504.1) which can provide n RL of 0.02 µg/L and an MDL of 0.01 µg/L if it is required. Based on the analytical data presented in the historical reports, **EDB** has not been detected and is not a historical contaminant of concern for Site SS-61.

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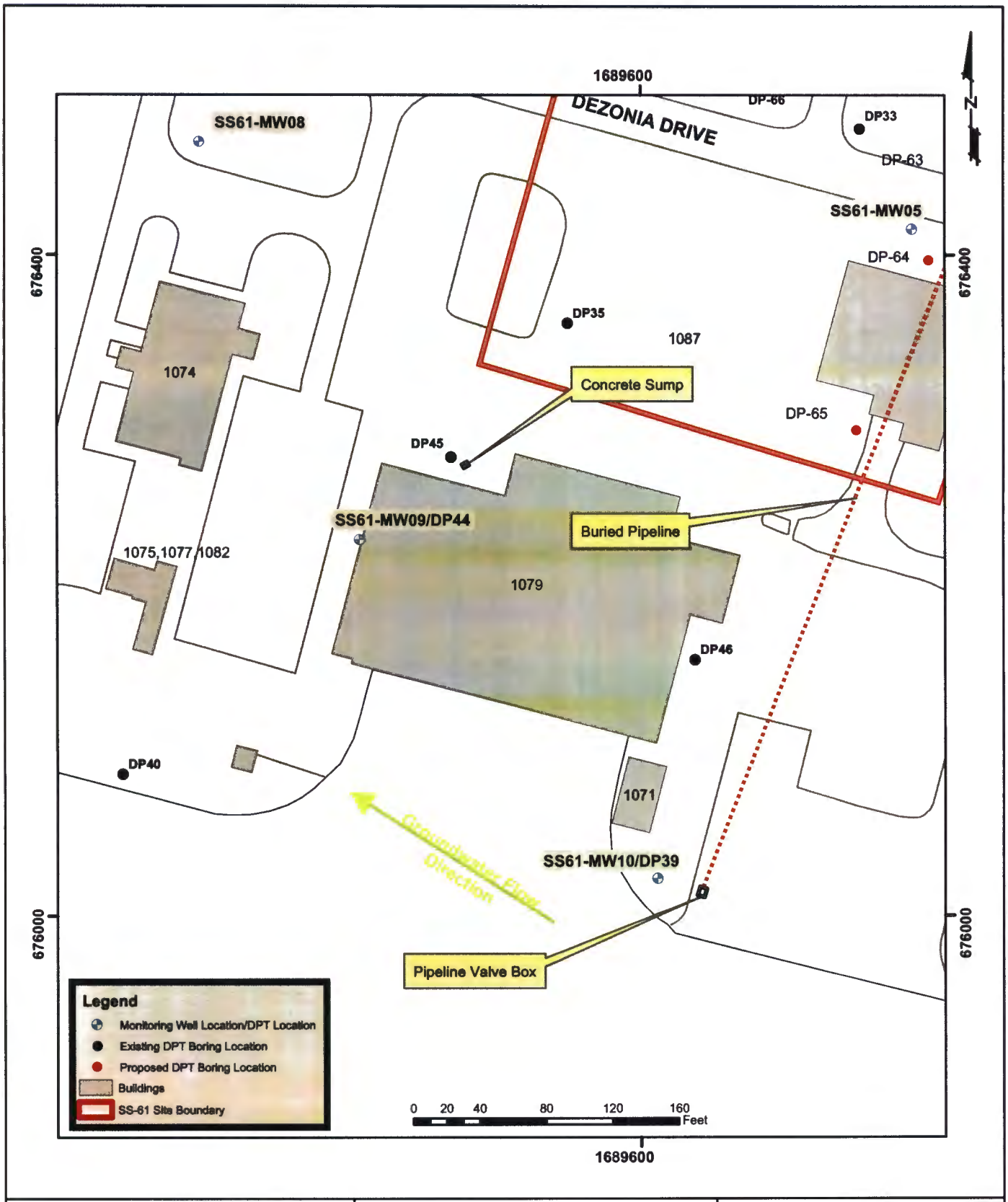
4	2.5.5.1 & 3.2.2	2-13 & 3-4	These Sections state that organic vapor analyzer (OVA) readings will be collected during the advancement of each soil boring and that if the OVA reading is less than 50 parts per million, no soil samples will be collected for off-site analysis. The Permittee is required to revise these Sections to show the collection of a minimum of one soil sample for off-site analysis from each soil boring, regardless of the OVA readings. The locations of sample collection shall be biased to areas with the greatest potential for contamination.	Concur. The bullet in each of these Sections have been revised to read; "If the OVA (FID) reading is less than 50 ppm, one soil sample will be collected for offsite analysis. This soil sample will be collected from the interval with the greatest potential for contamination or the capillary fringe."
5	3.2.4.1	Fig. 3-2	This Section and Figure describe and show the location for two new monitoring wells to serve to delineate the downgradient horizontal extent of plume migration. Based upon groundwater sampling results provided in previous reports, the Permittee is required to re-locate proposed monitoring well SS61-MW-14 to a location east of Building 1001, equidistant between Building 1001 and existing well SS61-MW-03. Proposed well SS61-MW-13 should then be moved to a point equidistant between existing wells MW29-03 and SS61-MW-07. The Permittee is required to revise this Section and Figure 3-2 accordingly.	Concur. The two new monitoring wells have been relocated as per NMED's request. Additionally, the text in Section 3.2.4.1 has been revised to read; "The locations of the two new monitoring wells (SS61-MW-13 and SS61-MW-14) will be approximately 200 and 600 feet downgradient of existing well SS61-MW-03 as shown in Figure 3-2. Specifically, proposed monitoring well SS61-MW-14 will be located east of Building 1001, equidistant between Building 1001 and existing well SS61-MW-03 and proposed well SS61-MW-13 will be located at a point equidistant between existing wells MW-29-03 and SS61-MW-07. Based on the most recent potentiometric surface maps the groundwater flow direction is to the west-northwest at the site (Figure 5-1). Therefore, the two new monitoring wells will serve as downgradient wells to monitor the horizontal extent of plume migration."
			End of Comments	



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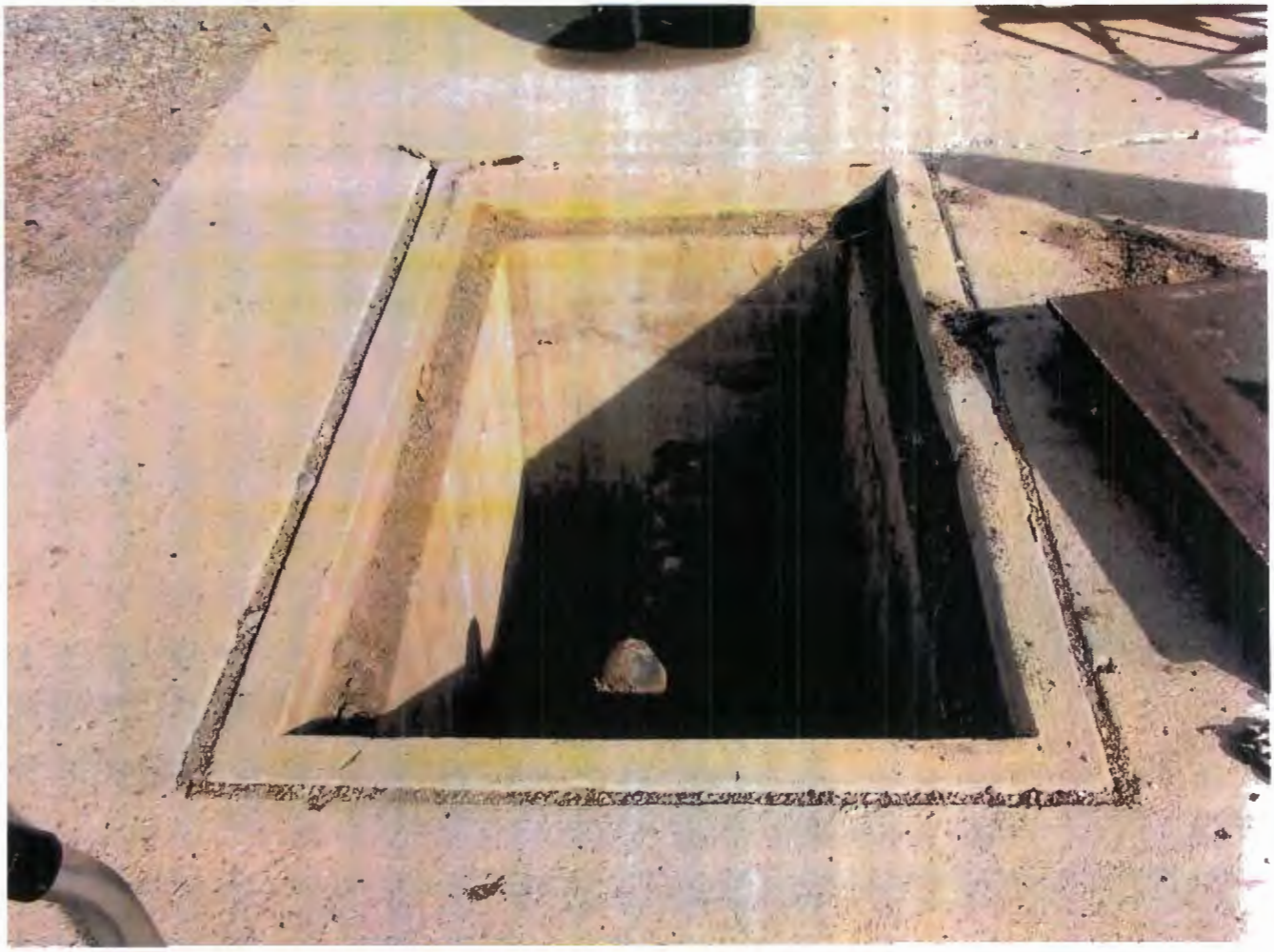
SS-61
Building 1079 Concrete Sump
and Pipeline Valve Box Location Map

PROJECT NO.	SCALE	DATE	DRAWN BY:
9050361	1"=80'	12/19/06	cm
			DRAWING NO: Figure 1

Response to Comments
Voluntary Corrective Measures
Work Plan
Site SS-61

Figure 1

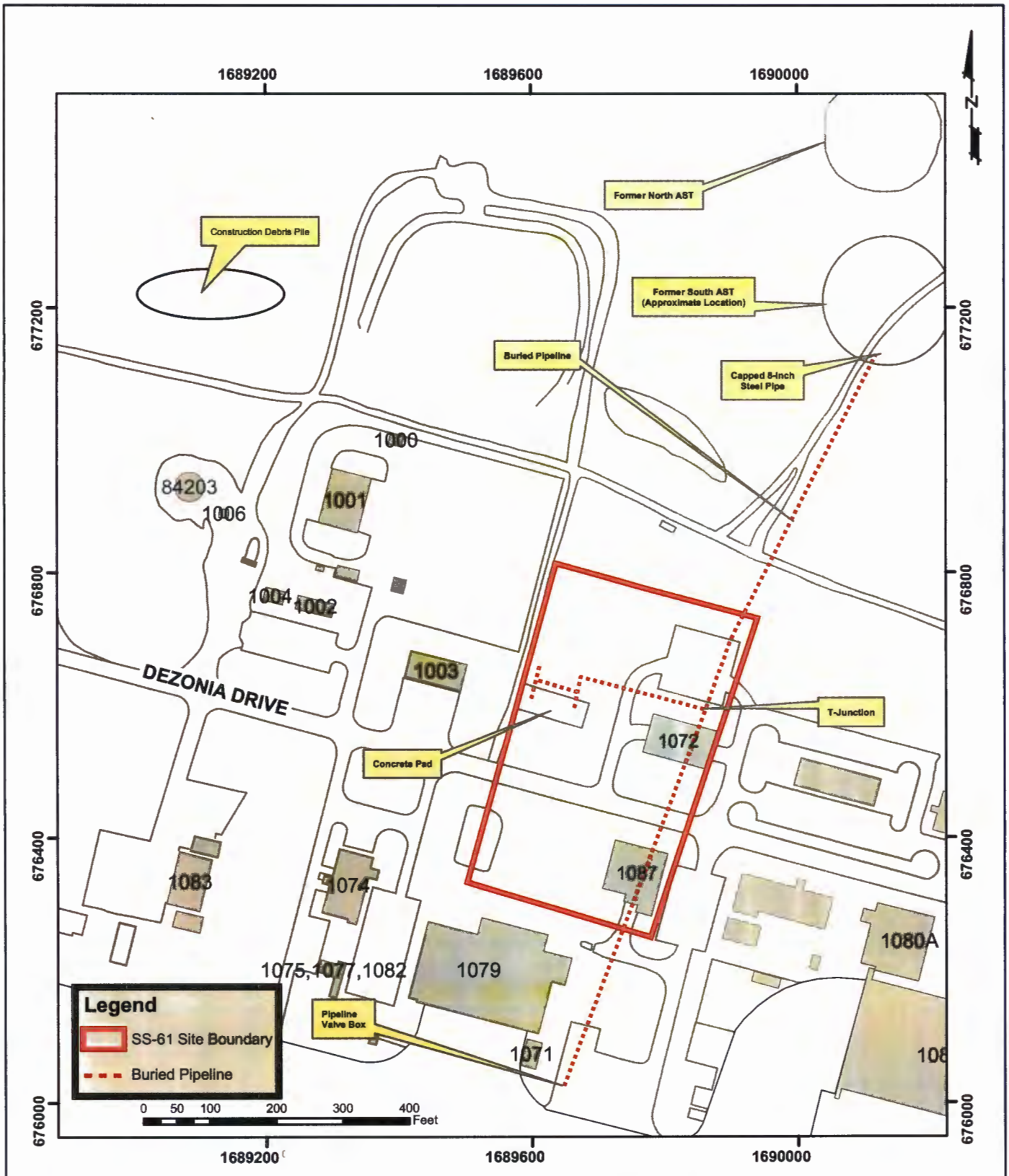
Photograph No. 1: Pipeline Valve Box Cover (looking Northwest with B1071 and B1079 in the background).



Photograph No. 2: Pipeline Valve Box Interior (Note: The pipeline is oriented north-south). The dimensions of the valve box are as follows; length = 6 ft, width = 3.5 ft, depth = 6 ft.

Photograph No. 3: Concrete Sump (looking south with B1079 in the background).

Photograph No. 4: Concrete Sump Interior (Note: The dimensions of the concrete sump are as follows; length = 4 ft, width = 2.5 ft, depth = 5 ft.



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SS-61
Site Plan

PROJECT NO.	SCALE	DATE	DRAWN BY:
9050361	1"=200'	12/19/06	cm

DRAWING NO: Figure 1-3

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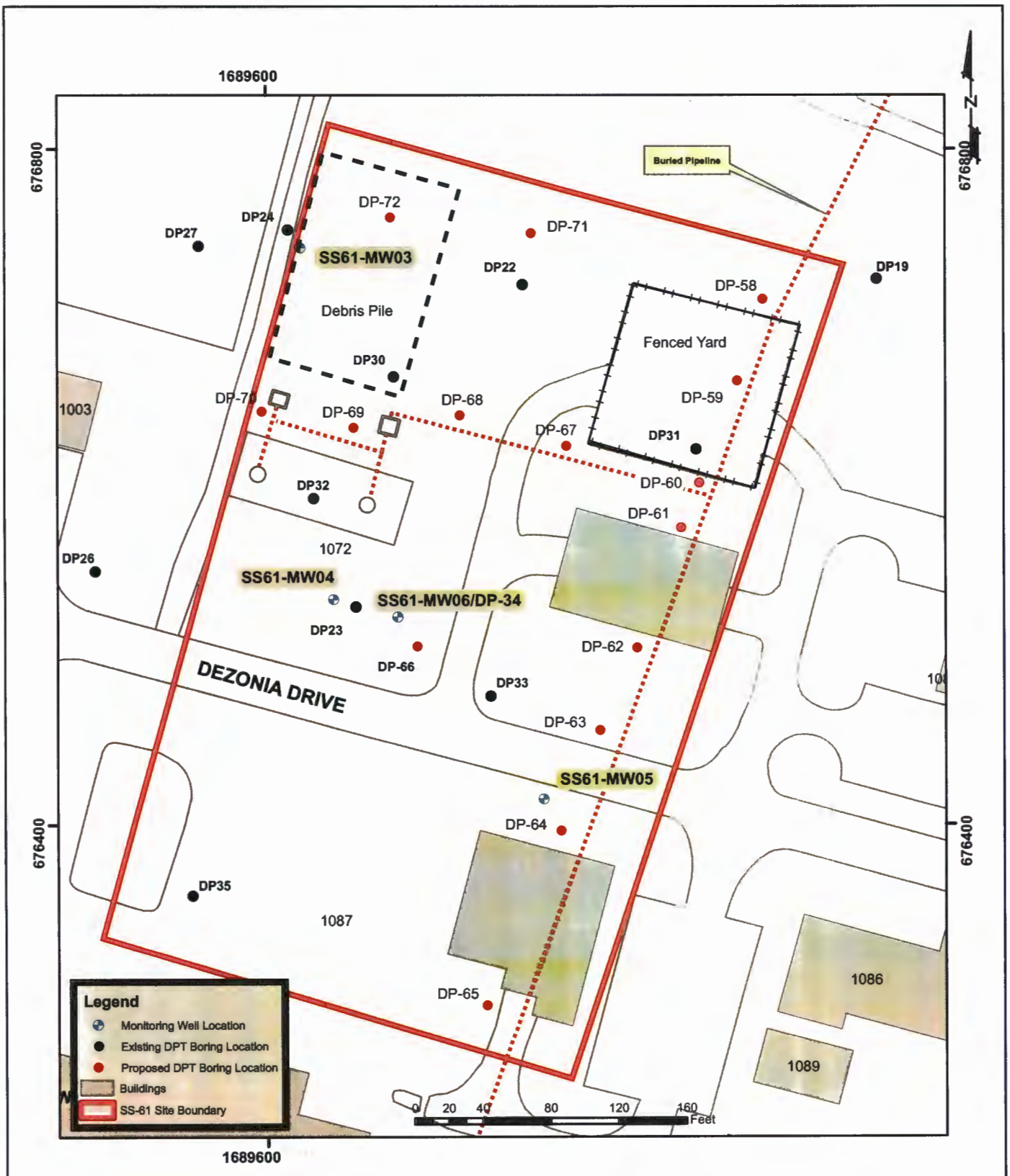
Figure 1-3



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SS-61
Proposed Additional DPT Boring Locations
PCS Source Area

PROJECT NO.	SCALE	DATE	DRAWN BY:
9050361	1"=80'	12/19/06	cm

DRAWING NO: Figure 3-1

Voluntary Corrective Measures
Work Plan
Site SS-61

Figure 3-1