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CORRESPONDENCE REGARDING DIESEL FUEL SPILL AND ASSOCIATED CERCLA CONCERNS ALLEGANY BALLISTICS LABORATORY ROCKET CENTER WV
5/20/2001
DEPARTMENT OF THE NAVY

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1510 GILBERT ST
NORFOLK, VA 23511-2699

TELEPHONE NO
(757) 322-4795
IN REPLY REFER TO

5090
EV23DO:EVS

WVDEP Office of Environmental Remediation
Superfund Group
Attn: Mr. Tom Bass
1356 Hansford St.
Charleston, WV 25301

SUBJECT: DIESEL FUEL SPILL AND ASSOCIATED CERCLA CONCERNS AT ALLEGANY BALLISTICS LABORATORY, WEST VIRGINIA

Dear Mr. Bass:

This letter provides to you follow-up information regarding an underground leak of diesel fuel and potential effects to Installation Restoration (IR) program sites at Allegany Ballistics Lab (ABL).

Information regarding the release was provided by the operating contractor environmental staff (ATK) at ABL: On Tuesday June 5th a contractor unknowingly drilled into the diesel supply line (depth of 2 1/2 ft) for the Plant 1 refueling station while installing a footing for a pipe stand. As designed, the pipe break triggered a low flow system, which restricted flow. The dispenser was essentially nonfunctional. On June 12th a vendor arrived to investigate the "malfunctioning" diesel dispenser. After a couple of hours of working on the system the vendor discovered a small amount of diesel fuel surfacing beside the new pipe stand footing. The UST automatic inventory system indicated that over 900 gallons was not accounted for, suggesting a significant release. The area was immediately excavated and revealed the pipe break with the excavation filling with nearly-pure product. WVDEP was notified on their spill reporting line and the diesel in the excavation was continually pumped down. About 100 gal of diesel was immediately recovered. At about 10:15 on June 13th, diesel fuel was discovered at a stormwater discharge to the river. Oil-absorbent pads and booms were used to contain the oil and WVDEP and the National Response Center were notified.

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Subsequent investigation has revealed the possibility that the UST vendor's actions on the 12th may have caused a false inventory reading. Since less than 160 gallons of diesel have been recovered it is likely that significantly less than 900 gallons were released.

The actual location of where the diesel entered the storm system has not been identified. It is believed that the diesel probably reached an abandoned line still connected to the storm system which flowed to the river, though later excavations failed to locate this line. At the time of discovery, there was only about a dozen square feet of barely-visible sheen on the river. Total amount discharged to the river is unknown but was probably significantly less than 100 gal.

Actions taken to determine and minimize possible effects to the Site 1 and 10 groundwater treatment plant are as follows:

1. Groundwater samples were collected from wells 10EW35 (June 15th), 10EW36 (June 15th), 10EW37 (June 20th) and the treatment plant influent (June 15th) and effluent (June 15th) for TPH analysis by the ATK laboratory. The laboratory analysis report for these samples is attached.
2. Wells 10GW10, 10GW15, 10GW16, 10GW23, 10GW24, 10GW25, 10EW35, 10EW36, 10EW38 were visually inspected on June 14th for the presence of fuel. None was detected at that time.
3. The Site 10 extraction wells were secured on Friday June 15, 2001 to eliminate the potential to pull the fuel away from the source of the release and to eliminate the extraction wells' competition with ATK's product recovery activities.
4. Treatment plant influent, composed exclusively of Site 1 groundwater, was again sampled subsequent to securing the Site 10 extraction wells (June 20th). Immediately after collecting this influent sample, well 10EW37 was turned on for several minutes in order for a sample to be collected for TPH analysis.

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Discussion and Observations:

As noted above, a number of wells at Site 10 were inspected on June 14th for the presence of petroleum. At each well, a water-level indicator was lowered into the well and then visually inspected for the presence of a petroleum coating. None of the wells indicated the presence of petroleum by this evaluation procedure. In addition, no petroleum odor was detected at any of the wells inspected.

Historically IR program monitoring for Total Petroleum Hydrocarbons is done only for stormwater runoff at Site 5 therefore no groundwater TPH data exists at IR Site 10 previous to the release in June. Review of well sample analyses indicates elevated TPH levels at 10EW37, however we believe these levels may have existed prior to the June diesel fuel release for the following reasons: Flow models based upon soil permeability assuming normal flow through the aquifer calculate the time from release to detection at 10EW37 as ninety one days (the sample was drawn fifteen days after the release). This is based on a conservative scenario by which petroleum from the release that had migrated into and along the stormwater line is pulled (without any retardation) from the stormwater line to well 10EW37 (i.e., a distance of about 100 feet). The distance from the release to well 10EW37 is almost 600 feet; therefore, the travel time from the release point to well 10EW37 would be even longer. Additionally, a review was performed of potential sources of TPH in the area of 10EW37, including SWMU's 43 and 44. SWMU 43 is a site in which soil was excavated from the area behind Building 7 when six USTs were removed. The soil was contaminated with diesel fuel and gasoline (BTEX) from the UST cleanup operations. The soil was land farmed on plastic sheeting. When the tanks and surrounding soil were removed from Bldg. 7 the excavation pits filled with water. Air stripping was conducted on the water and the water was then pumped to a manmade basin. The manmade basin is designated as SWMU 44. Solids were allowed to settle and water was discharged to the drainage ditch system. The unit received water from the excavation area with TPH levels of less than 50 ppb.

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Conclusions and Recommendations: The Site 10 extraction wells are now secured as part of a preplanned bedrock well test of Sites 1 and 10. Completion of this test is scheduled for Tuesday July 10, at which time the extraction wells will be re-energized to pump groundwater to the treatment plant. Upon resuming treatment of Site 10 groundwater we propose weekly sampling of plant effluent for 4 consecutive weeks to further evaluate TPH effects on the groundwater treatment plant. Samples analysis will be performed by the compliance laboratory normally performing our effluent analysis.

Should you desire any further information, please feel free to call me at (757) 322-4795.

Sincerely,

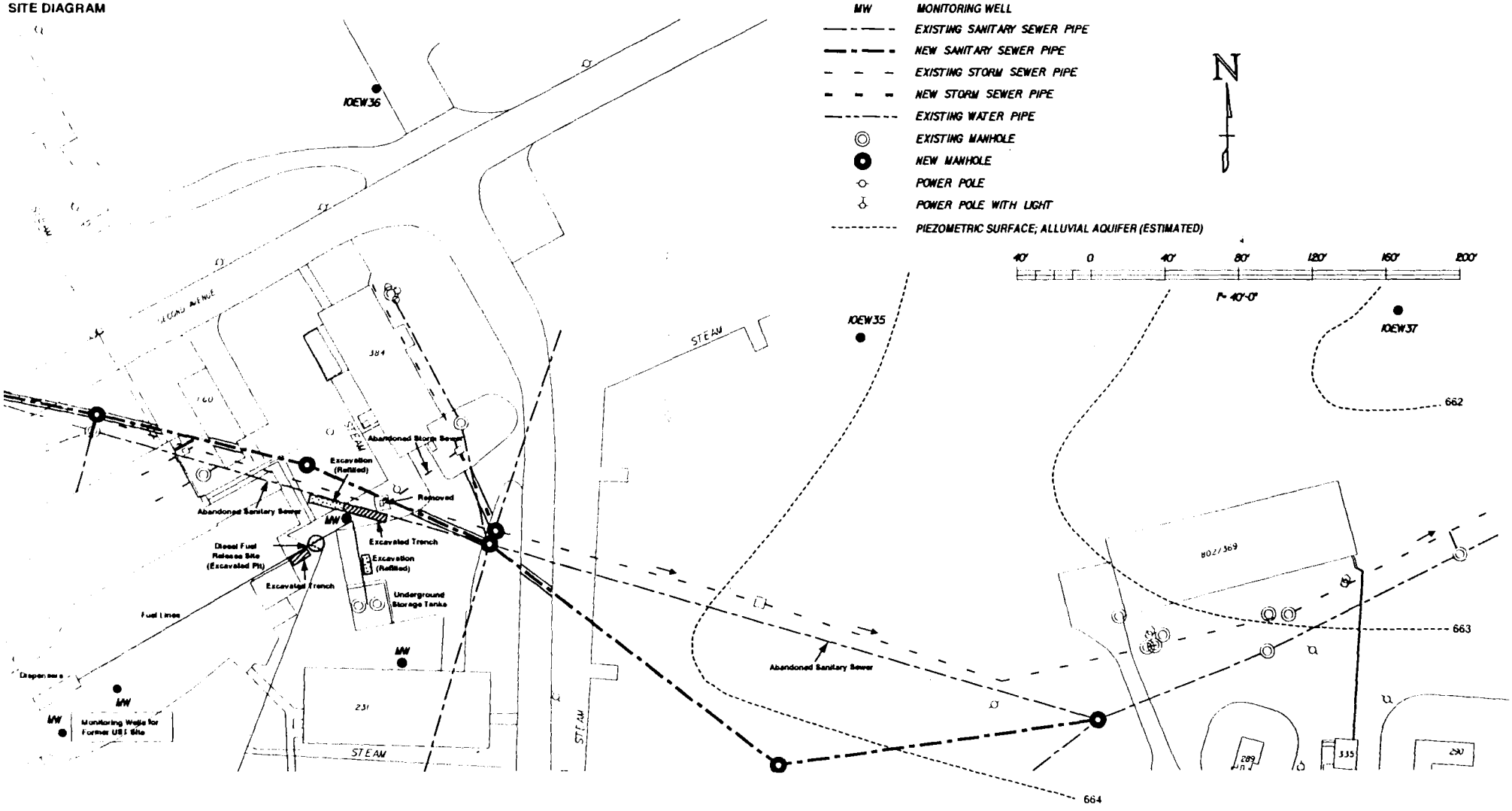
DOMINIC O'CONNOR, P.E.
Remedial Project Manager
Installation Restoration Section (South)
Environmental Programs Branch
Environmental Division
By direction of the Commander

Copy to:
NAVSEA Steve Hoffman, John Aubert, Lou Williams, Dave McBride
ATK (Mr. John Waugaman)
CH2M Hill (Mr. Brett Doerr)
US EPA (Mr. Bruce Beach)
Administrative Record File
(Allegany Ballistics Laboratory, WV)

Allegany Ballistics Laboratory

Diesel Fuel Release - 6/12/2001

SITE DIAGRAM



Lab. Number:	E3765			Date/Time Sampled:		06/15/01	3:38 PM
Sample ID:	Plant Influent			Date/Time Received:		06/18/01	8:00 AM
Sampled by:	T. Miller						
					ANALYZED		
PARAMETER	RESULT	MDL	UNITS	METHOD	DATE	TIME	ANALYST
Total Petroleum Hydrocarbons	4.1	0.066	mg/L	USEPA 418.1	06/18/01	9:00 AM	TJS/DJK

Lab. Number:	E3766			Date/Time Sampled:		06/15/01	3:45 PM
Sample ID:	Plant Effluent			Date/Time Received:		06/18/01	8:00 AM
Sampled by:	T. Miller						
					ANALYZED		
PARAMETER	RESULT	MDL	UNITS	METHOD	DATE	TIME	ANALYST
Total Petroleum Hydrocarbons	3.9	0.066	mg/L	USEPA 418.1	06/18/01	9:00 AM	TJS/DJK

Lab. Number:	E3767			Date/Time Sampled:		06/15/01	3:30 PM
Sample ID:	10EW 35			Date/Time Received:		06/18/01	8:00 AM
Sampled by:	T. Miller						
					ANALYZED		
PARAMETER	RESULT	MDL	UNITS	METHOD	DATE	TIME	ANALYST
Total Petroleum Hydrocarbons	1.8	0.066	mg/L	USEPA 418.1	06/18/01	9:00 AM	TJS/DJK

Lab. Number:	E3768			Date/Time Sampled:		06/15/01	3:39 PM
Sample ID:	10EW 36			Date/Time Received:		06/18/01	8:00 AM
Sampled by:	T. Miller						
					ANALYZED		
PARAMETER	RESULT	MDL	UNITS	METHOD	DATE	TIME	ANALYST
Total Petroleum Hydrocarbons	1.7	0.066	mg/L	USEPA 418.1	06/18/01	9:00 AM	TJS/DJK

ND: Concentration is below the Method Detection Limit (MDL).

Lab. Number:	E3778			Date/Time Sampled:		06/20/01	9:00 AM
Sample ID:	Plant Influent			Date/Time Received:		06/20/01	9:00 AM
Sampled by:	T. Miller						
					ANALYZED		
PARAMETER	RESULT	MDL	UNITS	METHOD	DATE	TIME	ANALYST
Total Petroleum Hydrocarbons	1.4	0.066	mg/L	USEPA 418.1	06/20/01	10:00 AM	TJS/DJK

Lab. Number:	E3779			Date/Time Sampled:		06/20/01	9:00 AM
Sample ID:	10EW 37			Date/Time Received:		06/20/01	9:00 AM
Sampled by:	T. Miller						
					ANALYZED		
PARAMETER	RESULT	MDL	UNITS	METHOD	DATE	TIME	ANALYST
Total Petroleum Hydrocarbons	21	0.066	mg/L	USEPA 418.1	06/20/01	10:00 AM	TJS/DJK

ND: Concentration is below the Method Detection Limit (MDL).