

4/28/97



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Document No

Document Title

RF/RMRS-96-0061

REV 0

Final Site Specific H&S Plan for the Source Removal at
the Mound Site

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ADMIN RECORD

A 110 00116

**MOUND SITE SOURCE REMOVAL
REPAIR DOMESTIC WATER LINE AND CULVERT**

Activity Hazard Analysis

4-15-97

Activity	Hazard	Preventative Measures
All site activities	General work hazards	All personnel will wear steel toed shoes, safety glasses with side shields, hard hats, reflective vests, and hearing protection as applicable in the support zone
	Heat stress	Heat stress monitoring will be conducted in regards to work load and PPE worn
	Cold stress	Cold stress monitoring will be conducted Proper clothing will be available to all personnel and administrative controls will be adhered to
	Noise	Noise monitoring will be conducted Where necessary personnel will wear hearing protection In addition, all personnel will participate in the RFETS Hearing Conservation Program if necessary
Traversing the site	Slip, trips, falls	Care will be taken when traversing the site especially when wearing PPE and carrying equipment All trip hazards will be immediately removed or marked when identified
Lifting equipment and materials	Back injury	Proper lifting techniques will be used and heavy equipment, where feasible, will be utilized to move heavy loads
Handling equipment and materials	Pinch points and sharp edges	Care will be taken when pinch points and sharp edges exist and heavy duty leather work gloves will be worn

Activity	Hazard	Preventative Measures
Using hand tools	Hand tools in unsafe operating condition	Hand tools will be inspected by the user prior to each use
	Improper use of hand tools	Hand tools will be utilized for their intended use and operated in accordance with HSP-12 10 Guards will be in place and no modifications will be made
	Electrical shock	Portable power tools will be plugged into a GFCI protected outlet and will be UL listed and double insulated Cords will be inspected by the user and protected from unnecessary damage Any tool whose cord shows signs of damage or deterioration will be immediately removed from service The sawsall will be operated in accordance with the manufacturers specifications
Use of generators	Electrical shock	Extension cords will be intended for outdoor use, inspected by the user, and protected from unnecessary damage Any extension cords which show signs of damage or deterioration will be immediately removed from service
	Electrical shock	Cords will be plugged into a GFCI protected outlet and the generator will be properly grounded The GFCI will be tested by the user daily prior to the beginning of each shift
	Fire	At a minimum, a 10 lb ABC fire extinguisher will be located in the work area and next to the generator All refueling will be conducted at the beginning of the shift when the generators are cool
	Use of gasoline	Follow recommendations on MSDS (see Appendix C)

Activity	Hazard	Preventative Measures
Backhoe operation	Backhoe in poor operating condition	The backhoe will be inspected prior to entering the Mound site. The operator will inspect and document the backhoe prior to the beginning of each shift.
	Improper operation of the Backhoe	Operators will be properly trained in the use and limitations of the backhoe.
	Ground personnel being struck with backhoe or falling loads	Ground personnel will wear orange vests, stay at least 20' away from the backhoe, and maintain line of sight with the operator.
	Other equipment being struck with backhoe	Backhoe operations will be conducted in a deliberate safe manner. A spotter will be required when backing the backhoe.
Use of Level B respiratory protection (if applicable)	Physical fatigue	Medical approval will be required for personnel.
	Improper face to facepiece seal	Respirator specific fit test approval will be required for personnel.
	Improper inspection or use of respirator	Personnel will be trained in the inspection, use, and limitations of the specific respirator worn.
	Unsecured airline bottles on backhoe	Airline bottles will be inspected by the user prior to and during each shift.
Working near or with potentially contaminated soil	Skin exposure to volatile organic compounds	Personnel in the EZ/SCA will wear Anti-C PPE and limit contact with contaminated soil.
	Inhalation of volatile organic compounds	Personnel in the EZ/SCA will wear respiratory protection based on real time work area VOC monitoring. CRZ/RBA and support zone work controls will be based on perimeter real-time VOC monitoring.
	Skin exposure to radionuclides in soil	Personnel in the EZ/SCA will wear Anti-C PPE and limit contact with contaminated soil.

Activity	Hazard	Preventative Measures
Working near or with potentially contaminated soil	Inhalation of radionuclides	EZ/SCA, CRZ/RBA, and support zone work controls will be based on perimeter low and high volume radiological air monitoring
Cutting the galvanized culvert with sawsall	Potential inhalation of cadmium or zinc particulate	Full facepiece, air-purifying respirators will be worn
Working around open excavation	Sloughing of trench walls	The trench will be inspected prior to and during each shift
	Equipment falling into trench	All equipment and soil from the excavation will be kept a minimum of two feet away from the edge of the trench
Spraying water for dust control and pumping decontamination or incidental water into the holding tanks or into tanker trucks	Pump malfunction or hose rupture	Pumps and hoses will be inspected by the user prior to use. The hoses will be protected from unnecessary damage. The discharge end of the incidental water hose will be submerged in the holding tank. Tankers will be filled in accordance with their safety guidelines.
Entering the trench	Cave in of trench walls	The trench will be sloped at a 1 5 1 angle to facilitate entry and egress. A Kaiser-Hill Excavation Specialist will inspect the trench daily prior to personnel entering.
Removing old culvert from the excavation and placing new culvert into the excavation	Personnel being crushed by culvert sections	Culvert pieces will be removed from and placed into the excavation using approved straps or chains and a backhoe. The backhoe will not hoist the culvert sections, rather they will be dragged out of and slid into the excavation.
	Failure of chains or straps	Personnel will stay away from the area when the sections are being removed and will not position themselves downhill of the section when it is being placed into the excavation.
Sanitizing the water line	Use of Clorox®	Follow attached MSDS

Activity	Hazard	Preventative Measures
Soldering the cap	Explosion	Monitoring will be performed for combustibile gases The torch will be operated in accordance with HSP-12 11
	Fire	A Burn Permit will be obtained from RFFD A 10 lb fire extinguisher will be located in the work area and a fire watch will be posted

Approved:

Signature

Date

RMRS Project Manager-Wayne Sproles

Wayne Sproles 4-15-97

RMRS H&S Supervisor-Peggy Schreckengast

Peggy Schreckengast 4-15-97

RMRS Radiological Coordinator-Jerry Anderson

Jerry Anderson 4-15-97 4/16/97

SSOC Radiological Engineer-Scott Newsom

Scott Newsom 4/15/97



The Clorox Company
7200 Johnson Drive
Pleasanton, California 94566
Tel (415) 847-8100

REC'D OCT 12 1987

Material Safety Data Sheet

CLOROX-BMIS	
HEALTH	2*
FLAMMABILITY	0
REACTIVITY	1
Personal Protection	8

I Chemical Identification								
NAME:	REGULAR CLOROX BLEACH	CAS no. N/A						
DESCRIPTION:	CLEAR, LIGHT YELLOW LIQUID WITH CHLORINE ODOR	RTECS no. N/A						
Other Designations		Manufacturer						
EPA Reg No 5813-1 Sodium hypochlorite solution Liquid chlorine bleach Clorox Liquid Bleach	The Clorox Company 1221 Broadway Oakland, CA 94612	Emergency Procedure Notify your Supervisor Call your local poison control center or Rocky Mountain Poison Center (303) 573-1014						
II Health Hazard Data		III Hazardous Ingredients						
*Causes severe but temporary eye injury May irritate skin May cause nausea and vomiting if ingested. Exposure to vapor or mist may irritate nose, throat and lungs. The following medical conditions may be aggravated by exposure to high concentrations of vapor or mist. heart conditions or chronic respiratory problems such as asthma, chronic bronchitis or obstructive lung disease. Under normal consumer use conditions the likelihood of any adverse health effects are low. FIRST AID EYE CONTACT Immediately flush eyes with plenty of water If irritation persists, see a doctor SKIN CONTACT Remove contaminated clothing Wash area with water INGESTION Drink a glassful of water and call a physician INHALATION If breathing problems develop remove to fresh air		<table border="1"> <thead> <tr><th>Ingredients</th><th>Concentration</th><th>Worker Exposure Limit</th></tr> </thead> <tbody> <tr><td>Sodium hypochlorite CAS# 7681-52-9</td><td>5 25%</td><td>not established</td></tr> </tbody> </table> None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen list Occasional clinical reports suggest a low potential for sensitization upon exaggerated exposure to sodium hypochlorite if skin damage (eg irritation) occurs during exposure Routine clinical tests conducted on intact skin with Clorox Liquid Bleach found no sensitization in the test subjects	Ingredients	Concentration	Worker Exposure Limit	Sodium hypochlorite CAS# 7681-52-9	5 25%	not established
Ingredients	Concentration	Worker Exposure Limit						
Sodium hypochlorite CAS# 7681-52-9	5 25%	not established						
IV Special Protection Information		V Special Precautions						
Hygienic Practices Wear safety glasses With repeated or prolonged use, wear gloves Engineering Controls Use general ventilation to minimize exposure to vapor or mist Work Practices Avoid eye and skin contact and inhalation of vapor or mist		Keep out of reach of children Do not get in eyes or on skin Wash thoroughly with soap and water after handling Do not mix with other household chemicals such as toilet bowl cleaners, rust removers, vinegar, acid or ammonia containing products Store in a cool, dry place Do not reuse empty container, rinse container and put in trash container						
VI Spill or Leak Procedures		VII Reactivity Data						
Small quantities of less than 5 gallons may be flushed down drain For larger quantities wipe up with an absorbent material or mop and dispose of in accordance with local, state and federal regulations Dilute with water to minimize oxidizing effect on spilled surface		Stable under normal use and storage conditions Strong oxidizing agent Reacts with other household chemicals such as toilet bowl cleaners, rust removers, vinegar, acids or ammonia containing products to produce hazardous gases, such as chlorine and other chlorinated species. Prolonged contact with metal may cause pitting or discoloration						
VIII Fire and Explosion Data		IX Physical Data						
Not flammable or explosive In a fire, cool containers to prevent rupture and release of sodium chlorate		Boiling point-----212°F/100°C (decomposes) Specific Gravity (H ₂ O=1)-----1.085 Solubility in Water-----complete pH-----11.4						

ELEMENTS (ICP)

M W Table 1

METHOD 7300
ISSUED 2/15/84

OSHA/NIOSH/ACGIH Table 1

PROPERTIES Table 1

ELEMENTS	aluminum	cobalt	manganese	silver	tungsten
	arsenic	copper	molybdenum	sodium	vanadium
	beryllium	iron	nickel	tellurium	yttrium
	cadmium	lead	phosphorus	thallium	zinc
	calcium	lithium	platinum	tin	zirconium
	chromium	magnesium	selenium	titanium	

SYNONYMS vary depending upon the compound

SAMPLING		MEASUREMENT	
SAMPLER FILTER	(0.8- μ m, cellulose ester membrane)	TECHNIQUE	INDUCTIVELY COUPLED ARGON PLASMA, ATOMIC EMISSION SPECTROSCOPY
FLOW RATE	1 to 4 L/min	ANALYTE	elements above
VOL-MIN	Table 1	ASHING REAGENTS	conc HNO ₃ , 4 mL, and conc HClO ₄ , 1 mL
-MAX	Table 1	CONDITIONS	room temperature, 30 min, 150 °C to near dryness
SHIPMENT	routine	FINAL SOLUTION	4% HNO ₃ , 1% HClO ₄ , 10 mL
SAMPLE STABILITY	stable	WAVELENGTH	depends upon element, Table 2
BLANKS	2 to 10 field blanks per set	BACKGROUND CORRECTION	spectral wavelength shift
ACCURACY		CALIBRATION	elements in 4% HNO ₃ , 1% HClO ₄
RANGE STUDIED	not studied	RANGE	2.5 to 1000 μ g per sample [1]
BIAS	none identified	ESTIMATED LOD	1 μ g per sample [1]
OVERALL PRECISION (s _p)	not evaluated	PRECISION (s _p)	Table 2

APPLICABILITY The working range of this method is 0.005 to 2.0 mg/m³ for each element in a 500-L air sample. This is simultaneous elemental analysis, not compound specific. Verify that the types of compounds in the samples are soluble with this ashing procedure.

INTERFERENCES Spectral interferences are the primary interferences encountered in ICP-AES analysis. These are minimized by judicious wavelength selection, interelement correction factors and background correction [1,2].

OTHER METHODS This method replaces P&CAM 351 [2] for trace elements. Atomic absorption spectroscopy (e.g., Methods 7000) is an alternate analytical technique for many of these elements.

REAGENTS

- 1 Nitric acid, conc
- 2 Perchloric acid, conc *
- 3 Ashing acid 4 l (v/v) HNO₃ HClO₄
Mix 4 volumes conc HNO₃ with
1 volume conc HClO₄
- 4 Calibration stock solutions,
1000 µg/mL Commercially available,
or prepared per instrument
manufacturer's recommendation (see
step 12)
- 5 Dilution acid, 4% HNO₃, 1% HClO₄
Add 50 mL ashing acid to 600 mL
water, dilute to 1 L
- 6 Argon
- 7 Distilled, deionized water

*See Special Precautions

EQUIPMENT

- 1 Sampler cellulose ester membrane filter,
0.8-µm pore size, 37-mm diameter, in cassette
filter holder
- 2 Personal sampling pump, 1 to 4 L/min, with
flexible connecting tubing
- 3 Inductively coupled plasma-atomic emission
spectrometer, equipped as specified by the
manufacturer for analysis of elements of interest
- 4 Regulator, two-stage, for argon
- 5 Beakers, Phillips, 125-mL, or Griffin, 50-mL, with
watchglass covers.*
- 6 Volumetric flasks, 10- and 100- mL *
- 7 Assorted volumetric pipets as needed *
- 8 Hotplate, surface temperature 150 °C

*Clean all glassware with conc nitric acid and
rinse thoroughly in distilled water before use

SPECIAL PRECAUTIONS Perform all perchloric acid digestions in a perchloric acid hood

SAMPLING

- 1 Calibrate each personal sampling pump with a representative sampler in line
- 2 Sample at an accurately known flow rate between 1 and 4 L/min for a total sample size of
200 to 2000 L (see Table 1) for TWA measurements Do not exceed a filter loading of
approximately 2 mg total dust

SAMPLE PREPARATION

- 3 Open the cassette filter holders and transfer the samples and blanks to clean beakers
- 4 Add 5 mL ashing acid Cover with a watchglass Let stand 30 min at room temperature
NOTE Start a reagent blank at this step
- 5 Heat on hotplate (120 °C) until ca 0.5 mL remains
NOTE Some species of Li, Mn, Mo, Sn, W, and Zr will not be completely solubilized by this
procedure Alternative solubilization techniques for most of these elements can be
found elsewhere [2, 3, 4, 5, 6, 7]
- 6 Add 2 mL ashing acid and repeat step 5 Repeat this step until the solution is clear
- 7 Remove watchglass and rinse into the beaker with distilled water
- 8 Increase the temperature to 150 °C and take the sample to dryness
- 9 Dissolve the residue in 2 to 3 mL dilution acid
- 10 Transfer the solutions quantitatively to 10-mL volumetric flasks
- 11 Dilute to volume with dilution acid

CALIBRATION AND QUALITY CONTROL

- 12 Calibrate the spectrometer according to the manufacturers recommendations
NOTE: Typically, an acid blank and 10 µg/mL multielement working standards are used The
following multielement combinations are chemically compatible in 4% HNO₃/1% HClO₄.
 - a Ag, Ca, Co, Mn, Pb, V, Zn,
 - b Al, Be, Cd, La, Li, Ni, Tl;
 - c As, B, Ba, Mg, Mo, P, Sn,

- d Cu, Fe, Na, Pt, Sr, Te, Y,
- e Cr, K, Sb, Se, Ti, Zr, and
- f Si, W (distilled water only)

- 13 Analyze a standard for every ten samples
- 14 Check recoveries with at least two spiked media blanks per ten samples

MEASUREMENT

- 15 Set spectrometer to conditions specified by manufacturer
- 16 Analyze standards and samples

NOTE If the values for the samples are above the range of the standards, dilute the solutions with dilution acid, reanalyze and apply the appropriate dilution factor in the calculations

CALCULATIONS

- 17 Obtain the solution concentrations for the sample, C_s ($\mu\text{g/mL}$), and the average media blank, C_b ($\mu\text{g/mL}$), from the instrument
- 18 Using the solution volumes of sample, V_s (mL), and media blank, V_b (mL), calculate the concentration, C (mg/m^3), of each element in the air volume sampled, V (L)

$$C = \frac{C_s V_s - C_b V_b}{V}, \text{ mg/m}^3$$

EVALUATION OF METHOD

Method P&CAM 351 was evaluated in 1981 [1,2] The precision and recovery data were determined at 25 and 1000 μg of each element per sample on spiked filters The precision and recovery data, instrumental detection limits, sensitivity, and analytical wavelengths are listed in Table 2 The values in Table 2 were determined with a Jarrell-Ash Model 1160 ICP operated according to manufacturer's instructions

REFERENCES

- [1] Hull, R D "Multielement Analysis of Industrial Hygiene Samples," NIOSH Internal Report, presented at the American Industrial Hygiene Conference, Portland, Oregon (May 1981)
- [2] NIOSH Manual of Analytical Methods, 2nd ed, V 7, P&CAM 351, U S Department of Health and Human Services, Publ (NIOSH) 82-100 (1981)
- [3] Ibid, S341 (Lead)
- [4] Ibid, V 2, S5 (Manganese), U S Department of Health, Education, and Welfare, Publ (NIOSH) 77-157-B (1977)
- [5] Ibid, V 4, P&CAM 271 (Tungsten), U S Department of Health, Education, and Welfare, Publ (NIOSH) 78-175 (1978)
- [6] Ibid, V 5, P&CAM 173 (Metals by Atomic Absorption), U S Department of Health, Education, and Welfare, Publ (NIOSH) 79-141 (1979)
- [7] Ibid, V 3, S183 (Tin), S185 (Zirconium), and S376 (Molybdenum), U S Department of Health, Education, and Welfare, Publ (NIOSH) 77-157-C (1977)

METHOD REVISED BY R DeLon Hull and Mark Millson, NIOSH/DPSE

Table 1 Properties and sampling volumes

Element (Symbol)	Properties		Permissible Exposure Limits, mg/m ³ TWA OSHA/NIOSH/ACGIH	Air Volume @ OSHA, L	
	Atomic Weight	MP, °C		MIN	MAX
Silver (Ag)	107.87	961	0.01/ — / 0.1	250	2000
Aluminum (Al)	26.98	660	— / — / 10.	5 (g)	100 (g)
Arsenic (As)	74.92	817*	0.5/C 0.002/ 0.2	5	2000
Beryllium (Be)	9.01	1278	0.002/ 0.0005/ 0.002	1250	2000
Calcium (Ca)	40.08	842	5 (b)/ — / 2 (b)	5	200
Cadmium (Cd)	112.40	321	0.2/ 0.04/ 0.05	13	2000
Cobalt (Co)	58.93	1495	0.1/ — / 0.1	25	2000
Chromium (Cr)	52.00	1890	1.0 (c)/ 0.025/ 0.5 (c)	5	1000
Copper (Cu)	63.54	1083	1.0/ — / 1.0	5	1000
Iron (Fe)	55.85	1535	10 (b)/ — / 5 (b)	5	100
Lithium (Li)	6.94	179	0.025 (d)/ — / 0.025 (d)	100	2000
Magnesium (Mg)	24.31	651	15 (b)/ — / 10 (b)	5	67
Manganese (Mn)	54.94	1244	C 5/ — / C 5	5	200
Molybdenum (Mo)	95.94	651	15 (e)/ — / 10 (e)	5	67
Sodium (Na)	22.99	98	2 (f)/ C 2 (f)/ C 2 (f)	13	2000
Nickel (Ni)	58.71	1453	1/ 0.015/ 1 (c)	5	1000
Phosphorus (P)	30.97	44	— / — / 0.1	25 (g)	2000 (g)
Lead (Pb)	207.19	328	0.05/ 0.1/ 0.15	50	2000
Platinum (Pt)	195.09	1769	0.002 (a)/ — / 1 (c)	1250	2000
Selenium (Se)	78.96	217	0.2/ — / —	13	2000
Tin (Sn)	118.69	232	2/ — / 2 (c)	5	500
Tellurium (Te)	127.60	450	0.1/ — / 0.1	25	2000
Titanium (Ti)	47.90	1675	— / — / 10 (b)	5	100
Thallium (Tl)	204.37	304	0.1 (a)/ — / 0.1 (a)	25	2000
Vanadium (V)	50.94	1890	C 0.5/ 1 (c)/ 0.05 (V ₂ O ₅)	5	2000
Tungsten (W)	183.85	3410	— / 5 (e)/ 5 (e)	5 (g)	200 (g)
Yttrium (Y)	88.91	1495	1/ — / 1	5	1000
Zinc (Zn)	65.37	419	5 (b)/ 5 (b)/ 5 (b)	5	200
Zirconium (Zr)	91.22	1852	5/ — / 5	5	200

- (a) soluble
 (b) oxide
 (c) metal
 (d) hydride
 (e) insoluble
 (f) hydroxide
 (g) at the ACGIH TLV

5.4.2 Excavation Hazards

Verticle walled excavations pose a hazard due to cave-ins, slips, trips, falls, and underground utilities Measures used to control these hazards include

- The preparation and approval of Soil Disturbance Permits which address overhead and underground utility hazards,
- The excavation will be inspected by a competent person prior to each shift, during each shift, and immediately after any rain or snow storms or other hazard increasing occurrences,
- Heavy equipment entry into the excavation will not be permitted,
- The excavator will be operated in accordance with the manufacturers recommendations in regards to safe operating distances from the excavation,
- At no time will the counterweight on the excavator be positioned above the open excavation,
- A spotter will be present during all excavation activities,
- Personnel entry into the excavation will not be permitted,
- Personnel will stay a minimum of six feet away from the edge of the excavation,
- Personnel closer than six feet to the excavation must wear a full body harness and lifeline attached to an approved anchorage point, and
- Equipment, except the excavator, will be kept a minimum of six feet away from the edge of the excavation

5 4 3 Noise Exposure Hazards

Work at the site will expose personnel to high noise levels from the operation of heavy equipment and hand tools Excessive noise exposure can cause both temporary and permanent effects on hearing The temporary effects of excessive noise include ringing in the ears, interference with communication, and hearing threshold changes The effect of long-term excessive noise includes varying degrees of noise-induced hearing loss Measures used to control noise exposure hazards will include

- Noise monitoring to determine employee exposure,
- Hearing protection for exposures of greater than 85 dBA for any length of time,
- Noise monitoring to confirm the effectiveness of the hearing protection worn, and
- Noise dosimetry to determine employee exposure and whether participation in the Hearing Conservation Program is required The Hearing Conservation Program includes both training and audiometric testing

Field Change No 4

**Table 7.2
 Miscellaneous Subtasks
 Personal Protective Equipment Summary**

Task	Level	Body	Foot	Head	Eye ¹	Hand	Respirator
Mixing ConCover®	C	Tyvek®	Steel toed safety shoes	Hard hat	None required	Inner surgeon gloves and heavy duty leather work gloves	Full-facepiece air-purifying with HEPA cartridge
Pumping incidental waters or decontamination liquids into holding tanks or tanker trucks PPE is for personnel in the support zone PPE in the EZ/SCA will be that required for the task being performed	Modified D	Long sleeve cotton coveralls with neoprene apron	Steel toed safety shoes	Hard hat with face shield	Safety glasses with side shields	Outer nitrile gloves or inner surgeon gloves with heavy duty leather gloves	Based on breathing zone air monitoring
Frisking personnel or equipment at the stepoff pad located in the CRZ/RBA	Modified D	Long sleeve cotton coveralls	Steel toed safety shoes	Hard hat	Safety glasses with side shields	Inner surgeon gloves	None required
Conducting radiological or industrial hygiene air monitoring in the CRZ/RBA	Modified D	Long sleeve cotton coveralls	Steel toed safety shoes	Hard hat	Safety glasses with side shields	None required	None required
Refueling Heavy Equipment at the EZ/SCA Boundary	Modified D ²	Anti-C Tyvek®	Steel toed safety shoes and shoe covers	Hard hat	Safety glasses with side shields	Outer nitrile gloves or inner surgeon gloves with heavy duty leather gloves	None required
Refilling Heavy Equipment Airline Bottles at the EZ/SCA Boundary	Modified D ²	Anti-C Tyvek®	Steel toe safety shoes and shoe covers	Hard hat	Safety glasses with side shields	Outer nitrile gloves or inner surgeon gloves with heavy duty leather gloves	None required
General Heavy Equipment Maintenance at the EZ/SCA Boundary	Modified D ²	Anti-C Tyvek®	Steel toe safety shoes and shoe covers	Hard hat	Safety glasses with side shields	Outer nitrile gloves or inner surgeon gloves with heavy duty leather gloves	None required
Repair Waterline/Culvert, and Erect Fence in the EZ/SCA	Modified D ³	Anti-C Tyvek®	Steel toe safety shoes and shoe covers	Hard hat	Safety glasses with side shields	Outer nitrile gloves or inner surgeon gloves with heavy duty leather gloves	None required

Field Change No 9

¹ No eye protection will be required when a full facepiece respirator is worn

² Modified level D PPE will be allowed if all of the following conditions are met

- 1 Continuous real time air monitoring indicates no volatile organic compounds at levels above background
- 2 No excavating is taking place
- 3 Personnel stay as close to the equipment as possible - No wandering
- 4 Radiological control technicians are present

³ Modified level D PPE will be allowed if all of the following conditions are met

- 1 Real time air monitoring indicates no volatile organic compounds at levels above background
- 2 Radiological control technicians are present as required on the RWP