Department of Energy
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799

April 23, 2015

Mr. Daniel W. Coyne
President & General Manager
CH2M HILL B&W West Valley, LLC
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799

ATTENTION: J. D. Rendall, Regulatory Strategy, AC-EA

SUBJECT: Environmental Checklist WVDP-2015-01, "Re-Route of the SmartDitch® and Channel Storm Water and Low Level Wastewater Discharges," Revision 1

REFERENCE: Letter WD:2015:0157 (365383), D. W. Coyne to R. W. Reffner, "Contract No. DE-EM0001529, Section J-3, Item 105, NEPA Documentation, Transmittal of Revision 1 of Environmental Checklist WVDP-2015-01, 'Re-Route of the SmartDitch® and Channel Storm Water and Low-Level Wastewater Discharges,' Conditionally Approved, Respond to Comments," dated April 8, 2015

Dear Mr. Coyne:

I have reviewed the subject Environmental Checklist and agree that the actions described therein are categorically excluded per Title 10, Code of Federal Regulations (CFR) Part 1021, as amended, Subpart D, Appendix B, B1.26, "Small Water Treatment Facilities" and B1.33 "Storm Water Runoff Control" as detailed in the attachment to the Environmental Checklist. Enclosed is a signed Environmental Checklist form to that effect.

The contents of this correspondence are not intended to impact or modify contract scope and/or cost. If you have any questions, please contact me on Extension 4007.

Sincerely,

Martin P. Krentz
National Environmental Policy Act Compliance Officer
West Valley Demonstration Project

Enclosure: Signed Environmental Checklist

cc: C.A. Biedermann, CHBWV, AC-EA, w/enc.
J. J. Hoch, CHBWV, WV-PL6, w/enc.
C. M. Bohan, DOE-WVDP, AC-DOE, w/enc.
M. P. Krentz, DOE-WVDP, AC-DOE, w/enc.
M. N. Maloney, DOE-WVDP, AC-DOE, w/enc.

MPK:365228 - 451.4

Attachment 1
Environmental Checklist WVDP-2015-01
Re-Route of the Smart Ditch® Channel and
Storm Water and Low Level Wastewater Discharges, Revision 1

Department of Energy
West Valley Demonstration Project (DOE-WVDP)

ENVIRONMENTAL CHECKLIST

Project/Activity Title: Re-Route of the Smart Ditch® Channel Storm Water and Low Level Wastewater Discharges	**NEPA ID Number: WVDP-2015-01** **Rev. #: 1** **Date: April 6, 2015**
Contractor Project Manager: Ray M. Geimer	**Phone Number: 716-942-4585**
Contractor NEPA Coordinator: Charles A. Biedermann	**Phone Number: 716-942-4333**
DOE-WVDP NEPA Document Manager: Martin P. Krentz	**Phone Number: 716-942-4007**

A. BRIEF PROJECT/ACTIVITY DESCRIPTION: Attach a detailed description or statement of work.

B. SOURCES OF IMPACT: Would the action involve, generate, or result in changes to any of the following:

	YES	NO		YES	NO
1. Air Emissions	X		12. Water Use/Diversion	X	
2. Liquid Effluents	X		13. Water Treatment	X	
3. Solid Waste	X		14. Water Course Modification		X
4. Radioactive Waste/Soil	X		15. Radiation/Toxic Chemical Exposures	X	
5. Hazardous Waste		X	16. Pesticide/Herbicide Use		X
6. Mixed Waste		X	17. High Energy Source/Explosives		X
7. Chemical Storage/Use		X	18. Transportation		X
8. Petroleum Storage/Use	X		19. Noise Level	X	
9. Asbestos		X	20. Workforce Adjustment		X
10. Utilities	X		21. Other		X
11. Clearing or Excavation	X				

In an attachment, qualify and explain each question that you have specifically answered "YES."

C. CATEGORY EVALUATION CRITERIA: Would the proposed action:

		YES	NO
1.	Take place in an area of previous or ongoing disturbance?	X	
2.	Create hazardous, radioactive, or mixed waste for which no disposal is available?		X
3.	Impact a RCRA-regulated unit or facility?		X
4.	Force a low income or ethnic minority population to shoulder a disproportionate share of the negative environmental impacts of pollution or environmental hazards because of a lack of political or economic strength?		X
5.	Involve air emissions and be located in an air pollutant non-attainment or maintenance area for any criteria pollutants?		X
6.	Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders (i.e., require any federal, state, or local permits, approvals, etc.)?		X
7.	Disturb hazardous substances, pollutants, or contaminants that pre-exist in the environment such that there would be uncontrolled or unpermitted releases?		X
8.	Require siting, construction, or major expansion of a waste storage, disposal recovery, or treatment facilities, but may include such categorically-excluded facilities?		X
9.	Adversely affect environmentally sensitive resources including, but not limited to: structures of archeological, historic or architectural significance; threatened or endangered species or their habitat; floodplains or wetlands; wildlife refuges, agricultural lands or vital water resources (e.g., sole-source aquifers)?		X
10.	Involve extraordinary circumstances?		X
11.	Be "connected" to other actions with potentially significant impacts, related to other proposed actions with cumulatively significant impacts, and precluded by 40 CFR § 1506.1 or 10 CFR § 1021.211?		X

In an attachment, qualify and explain each question that you have specifically answered "YES."

Department of Energy
West Valley Demonstration Project (DOE-WVDP)

ENVIRONMENTAL CHECKLIST

D. RECOMMENDATION AND DETERMINATION:

DOE-WVDP Director's Recommendation: I find and recommend that this proposed action meets the criteria specified in 10 CFR Part 1021, Subpart D, and/or DOE Policy and Guidance for the following:

[X] Categorical Exclusions (Appendix B, Class of Action B1.26 – Small Water Treatment Facilities and B1.33 Storm Water Runoff Control)
[ ] Actions Within the Scope of Existing NEPA Documentation (NEPA Document ID Number:_____)
[ ] *Ongoing Operations* (Standard Operating Procedure OH-6.1.01, Rev. 1, Section 5.2)

Signature: _____ Date 04-23-2015
Director, West Valley Demonstration Project (WVDP),
Department of Energy

DOE-WVDP NEPA Compliance Officer's Determination: Based on my review of the attached information concerning this proposed action, as the WVDP NEPA Compliance Officer (DOE Order 451.1B, Section 5.d.), I have determined that the proposed action fits within the specified class of actions, that the other regulatory requirements identified in Section C are met, and that this proposed action proceed without further NEPA review.

Signature: _____ Date 4/20/15
DOE-WVDP NEPA Compliance Officer,
West Valley Demonstration Project

OR

[ ] Environmental Assessments (Appendix C, Class of Action _____; or Action not listed in Subpart D)
[ ] Environmental Impact Statements (Appendix D, Class of Action _____)
[ ] Interim Actions (40 CFR Part 1506.1 and 10 CFR Part 1021.211)
[ ] Integrated Documentation for CERCLA/RCRA Actions
[ ] Variances (Emergency Action, 40 CFR Part 1506.11 and 10 CFR Part 1021.34)

DOE-WVDP NEPA Compliance Officer's Concurrence: I concur with the recommendation that this proposed action fits within the specified class of actions.

Signature: _____ Date _____
DOE-WVDP NEPA Compliance Officer,
West Valley Demonstration Project

DOE-WVDP Manager's Determination: Based on my review of the attached information concerning this proposed action, as the Director of the West Valley Demonstration Project (DOE Order 451.1B, Section 5.a.), I have determined that the level of documentation recommended for the proposed action is appropriate.

Signature: _____ Date _____
Director, West Valley Demonstration Project (WVDP),
Department of Energy

ATTACHMENT

RE-ROUTE OF THE SMART DITCH® CHANNEL AND STORM WATER AND LOW LEVEL WASTEWATER DISCHARGES, WVDP-2015-001

A. BRIEF PROJECT/ACTIVITY DESCRIPTION:

From 1966 to 1972, Nuclear Fuel Services, Inc. (NFS) operated a nuclear fuel reprocessing plant at the Western New York Nuclear Service Center (WNYNSC) near West Valley, New York (Figure 1). The plant reclaimed uranium and plutonium from spent nuclear fuel. After operating the fuel reprocessing facility for six years, NFS halted operations to make modifications to increase the plant's reprocessing capacity, reduce worker doses, and reduce radioactive effluents. During this period, new regulatory requirements were issued related to earthquake and tornado protection, and waste management requirements. NFS concluded that it would not be economically viable to continue the reprocessing operation at West Valley. In 1976, NFS informed New York State that it was withdrawing from the reprocessing business and intended to turn the West Valley facility and the two disposal areas over to New York State.

At that time, the reprocessing facility contained 750 spent fuel assemblies that had not been reprocessed, 600,000 gallons of liquid High Level Radioactive Waste (HLW) stored in two carbon steel tanks, the highly contaminated Main Plant Process Building, and almost three million cubic feet of radioactive waste buried in the two disposal areas.

In 1980, Congress passed the West Valley Demonstration Project (WVDP) Act (Public Law 96-368), which directed the U. S. Department of Energy (DOE) to do the following:

1. Solidify the HLW at the WNYNSC in a form suitable for transportation and disposal;

2. Develop containers for the HLW that are suitable for permanent disposal;

3. Transport the solidified HLW, in accordance with applicable provisions of law, to an appropriate Federal repository for permanent disposal;

4. In accordance with applicable licensing requirements, dispose of low-level radioactive waste (LLW) and transuranic (TRU) waste produced as a result of solidifying the HLW; and

5. Decontaminate and decommission: (a) the tanks and other facilities of the WNYNSC in which the HLW solidified under the Project is stored; (b) the facilities used in the solidification of the waste; and (c) any material and hardware used in connection with the Project, in accordance with requirements that the U.S. Nuclear Regulatory Commission (NRC) prescribes.

A project base map of the WVDP is shown in Figure 2.

In 1982, a Final Environmental Impact Statement (FEIS) (DOE/EIS-0081) was issued for the actions that DOE proposed to satisfy the first two requirements of the WVDP Act. During the initial phase of work performed under FEIS-0081, the HLW was immobilized in borosilicate glass through vitrification. The canisters of immobilized HLW are stored onsite in the High Level Waste Interim Storage Facility (the former Chemical Process Cell) and will be relocated to the HLW Canister Interim Storage System for temporary storage until DOE authorizes their removal. In 1993 and 1998, the DOE prepared Supplement Analyses (DOE-EIS-025 and WVDP-321, respectively) of the 1982 FEIS to re-examine on-going HLW solidification activities as well as other refinements to

the actions originally evaluated in the FEIS. As a result of both analyses, DOE concluded that no environmentally relevant or substantial changes in Project scope had occurred, that no new circumstances or relevant information existed, and that the environmental analyses performed for the 1982 FEIS were still valid.

After solidification of HLW liquid and sludge was completed in September 2002, the WVDP shifted its attention and resources to the remaining requirements of the WVDP Act, waste disposal and facility decontamination and decommissioning. To facilitate these activities, in 2006, DOE prepared the Environmental Assessment for the Decontamination, Demolition, and Removal of Certain Facilities at the West Valley Demonstration Project (DOE/EA-1522). A Finding of No Significant Impact (DOE 2006) for these actions was subsequently made. Additionally, two EIS's were prepared to review alternatives for completion of the remaining WVDP Act requirements. The WVDP Waste Management FEIS (DOE/EIS-0337-F) was completed in 2003 and Record of Decision (ROD) was issued in 2005 (DOE 2005). The second FEIS for Decommissioning and/or Long-Term Stewardship (DOE/EIS-0226) was completed in 2010 and the ROD was subsequently issued, also in 2010 (DOE 2010). A supplemental analysis to the Waste Management FEIS was also performed in 2006 (DOE, June 2006).

North Plateau Smart Ditch® Channel Storm Water Discharge

The Smart Ditch® is a flexible High Density Polyethylene (HDPE) ditch lining system that controls the flow of water. It is located on the WVDP north plateau and serves to route storm water drainage to the WVDP State Pollutant Discharge Elimination System (SPDES) permit storm water outfall S-09 (Figure 3). All WVDP Storm water discharges are monitored in accordance with the West Valley Demonstration Project SPDES Permit: DEC#9-0422-00005/00006 SPDES#: NY0000973 (NYSDEC July 2011).

This impermeable discharge ditch was constructed up-gradient of the north plateau Permeable Treatment Wall (PTW). The PTW is an in-situ passive ion exchange treatment system that serves to mitigate migration of strontium-90 contaminated groundwater originating from the Main Plant Process Building (MPPB). The Smart Ditch® serves to prevent storm water originating from the up-gradient WVDP operations and waste management areas from interfering with the operation of the PTW.

Since installation of the Smart Ditch® in 2010, routine inspections have determined that there is significant surface erosion at the northeast corner of Lagoon 3. Storm water discharges at outfall S-09 are causing progressive and ongoing surficial slope failure at the outboard embankment slope from the crest to the toe at Erdman Brook. This erosion is impacting the integrity of the Lagoon 3 embankment. Recent photographs of this erosion are depicted in Figures 4 and 5.

Treated Low Level Wastewater Discharge

Low level wastewater is generated by routine WVDP operations, decontamination and demolition activities, and from the collection of groundwater from the Interceptor Trench at the NRC-licensed Disposal Area (NDA). The wastewater is collected in the Interceptors where it is monitored prior to discharge to Lagoon 2. Wastewater collected in Lagoon 2 is transferred to the Low Level Waste Treatment Facility (LLWTF) where it is treated through an ion exchange resin and discharged to either Lagoons 4 or 5, depending on available capacity in each of these lagoons. Treated wastewater in Lagoons 4 and 5 is tested to determine whether it will meet discharge criteria. If the wastewater does not meet the permit discharge criteria it can be routed back to Lagoon 2 or directly to the LLWTF for additional treatment. Water that meets the discharge criteria is routed to Lagoon 3 where it is accumulated prior to batch discharge through SPDES permitted outfall 001 (Figure 3). In accordance with the SPDES permit, authorized wastewater streams and discharge volumes for outfall 001 are specified as follows:

"Process Wastewater [liquid waste treatment system, laboratory testing equipment field testing, laundry, miscellaneous decontamination of equipment and facilities, non-contact cooling water, boiler blowdown, contact size reduction, asbestos abatement (filter water), and steam and compressor condensates], water production wastewater, north plateau surface water and groundwater recovery and treatment, NDA groundwater interceptor, miscellaneous contaminated groundwater and storm water. Batch discharge with 6 +/- 2 batches per year; duration for each batch = 7 +/- 3 days; and total volume per discharge = 2.1 +/- 0.2 MG (million gallons). Flow except storm water = 7.6 +/- 3.3 MGY (million gallons/year); flow including storm water = 12.6 +/- 4.3 MGY; or max. daily flow = 1.0 MGD (million gallons/day)]."

Therefore, continuous wastewater discharges are limited to 29,863 gallons per day with the remaining volume consisting of storm water. This is less than the amount specified in 10 Code of Federal Regulations §1021, Categorical Exclusion B1.26, Small Water Treatment Facilities (less than approximately 250,000 gallons per day).

Treated wastewater in Lagoon 3 is piped downslope to a weir shed and monitoring station, from which it is then batch discharged to Erdman Brook. Erosion of the embankment resulting from the Smart Ditch® discharge at outfall S-09 has compromised the integrity of the stairway leading down the embankment to the weir shed.

Decommissioning and/or Long-Term Stewardship FEIS

Under the Phased Decision Making Alternative, the preferred alternative in the FEIS (DOE/EIS-0226), all facilities in Waste Management Area (WMA) 2 would be removed. WMA 2, the Low Level Waste Treatment Facility Area (Figure 6), is an area of approximately 5.5 hectares (14 acres). The FEIS describes WMA-2 facilities as follows:

"It was used by NFS and WVDP to treat low-level radioactive wastewater generated on site. Facilities and areas evaluated in this EIS include the Low-Level Waste Treatment Facility, known as LLW2; inactive filled Lagoon 1; active Lagoons 2, 3, 4, and 5; Neutralization Pit; New and Old Interceptors; Solvent Dike; Maintenance Shop Leach Field; and Fire Brigade Training Area. Included in WMA 2 are underground pipelines; the groundwater recovery wells and the PTW and a portion of the North Plateau Groundwater Plume, which extends under portions of WMAs 1 through 6."

A.1 Purpose and Need

Although the Decommissioning and Long-term Stewardship FEIS (DOE/EIS-0226) preferred Phased Decision Making Alternative and associated Technical Report (URS 2009) evaluate the impacts associated with the removal of all facilities and structures from WMA 2, these documents do not detail how these actions are to be completed. Nor do they detail the interim steps necessary for a smooth transition from the LLWTF and Lagoon system to an alternative wastewater management process. The purpose of this environmental review is to evaluate the human health and welfare and the environmental impacts associated with the re-routing of the Smart Ditch® channel and storm water and low level wastewater discharges. Re-routing of the Smart Ditch® and its discharge from the current location of outfall S-09 is needed to stop ongoing erosion of the Lagoon 3 embankment. In addition there is a future need to route the low level wastewater discharge from its current pathway to Lagoon 3 and outfall 001 to a new pathway through the Smart Ditch® thus facilitating the discontinued use and isolation of Lagoon 3 from further wastewater management.

A.2 Objective

The objective of this proposed action is to eliminate storm water discharges as a major contributor to the erosion at the Lagoon 3 outboard slope. The proposed action will also result in the future discontinued use of Lagoon 3 for low level wastewater management. It is anticipated that Lagoon 3 will remain operational for collection and discharge of storm water runoff. However, removal of the low level wastewater will serve to support the future decommissioning and closure of the Lagoon 3 in accordance with Revision 2 of the Phase 1 Decommissioning Plan for the WVDP (DOE 2009) and facilitate the future closure actions in compliance with the SPDES permit and Resource Conservation and Recovery Act §3008(h) Order on Consent (EPA 1992) requirements.

A.3 Type and Scope of Activities

The type of action involves the redesign of storm water control to minimize future erosion and maintain the natural hydrology at the north plateau. The action also includes future modifications to a small wastewater treatment facility by re-routing the discharge to a new externally regulated outfall.

The scope includes:

- Re-routing the Smart Ditch® discharge pathway/channel so that the storm water discharge is to Franks Creek (i.e., cease use of the current eroding discharge pathway to Erdman Brook); and
- Future re-routing the Lagoons 4 and 5 effluent directly to the Smart Ditch® discharge pathway (cease discharges of wastewater to Lagoon 3) and enhancing the upstream treatment system; and
- Facilitating the continuous discharge of isolated Lagoon 3 storm water to Erdman Brook through the existing discharge pathway.

The primary advantage of the proposed action is a more expedient and cost effective implementation of a decisive method that addresses operational and regulatory concerns, is protective of the Lagoon 3 embankment, and isolates Lagoon 3 in support of future WVDP decommissioning actions. Re-routing of the Smart Ditch® storm water Outfall S-09 would occur first. A new discharge channel would be created further north of the current location and, if needed, armored to prevent any erosion at the new discharge location. The new channel would intersect the Smart Ditch® and redirect storm water flow eastward and then south to an armored discharge into Franks Creek near the existing Parshall flume. At a future time after regulatory agency approvals are received, the outlet piping from Lagoons 4 and 5 would be intercepted and re-routed to the repaired Smart Ditch®. A new sampling point and weir would need to be installed upstream of the confluence with the Smart Ditch®. After sampling demonstrates the discharge is in compliance with the SPDES permit, a batch wastewater discharge would then occur from either Lagoon 4 or 5 while the other lagoon would serve as a retention lagoon. If required, Lagoon 4 or 5 effluents could be routed back to Lagoon 2 or directly to LLWTF for additional treatment. More frequent but smaller volume discharges would be realized. To manage storm water that would continue to collect in Lagoon 3, a continuous discharge would occur through the existing pathway to Erdman Brook.

The proposed actions and improvements shall not impact decommissioning alternatives or future Phase 2 decision making under the FEIS (DOE/EIS-0226).

A.4 Schedule and Timing

Re-routing the discharge pathway to Franks Creek would occur first. This proposed action is dependent on funding and other Project priorities but could occur during the 2015 construction season. Re-routing of the Lagoon 4 and 5 effluents to the Smart Ditch® and any needed upgrades to the wastewater treatment system would occur at a later date.

B. SOURCES OF IMPACT

1. Air Emissions: There would be minor Carbon Monoxide (CO), Carbon Dioxide (CO_2) and particulate air emissions generated from the construction equipment used for excavation of the new discharge channel. Typically, this equipment includes trucks, excavators, and front-end loaders. These emissions would occur intermittently over a ten-hour day. Fugitive dust could be generated during excavations. Such dust would be controlled as necessary to minimize impact. Volatile organic emissions could be generated during refueling and hydraulic fluid replacement for the equipment. Such emissions will be minimal and will not require any controls under state and federal Clean Air Act regulations. Radiological air emissions from any excavations in contaminated areas are monitored and evaluated to demonstrate compliance with the radiological National Emission Standards for Hazardous Air Pollutants (EPA 1989).

2. Liquid Effluents: Storm water run-off on the north plateau impacted by WVDP industrial activities is routed to the Smart Ditch® and discharged through a SPDES permitted and monitored outfall (S-09). Under the proposed action the outfall at S-09 discharge would be re-routed to a new discharge point located at Franks Creek. Any required SPDES permit modifications for the relocated outfall would be obtained. Storm water impacted by construction activities from relocation of the Smart Ditch® is managed in accordance with the WVDP Best Management Practices Plan (WVDP-206). Where required, approval under a General Permit (NYSDEC 2015) under the SPDES Program will be obtained. Storm water runoff would continue to be collected in Lagoon 3. Once Lagoon 3 is isolated, water runoff collected in Lagoon 3 would be released through the existing discharge pathway.

Low level radioactive liquid effluents are generated from wastewater from WVDP facilities. Wastewater from the plant drains, surface runoff, and interceptor trench water from the NRC-licensed Disposal Area (NDA) is treated at the existing Low-Level Waste Treatment Facility (LLWTF). These waste streams, following collection in Lagoon 2, are treated using a filtration and ion-exchange process. The effluent is released to Lagoons 4 and 5 for subsequent sampling and is currently released to Lagoon 3. When discharge criteria are met, the final effluent is released from Lagoon 3 to the environment through a monitored SPDES outfall 001. The proposed action would result in the future re-routing of the Lagoon 4 and Lagoon 5 effluents to the Smart Ditch®. The WVDP SPDES permit would be modified for the new outfall location and a new monitoring location will need to be established upstream of the confluence of the wastewater with the storm water channel.

3. Solid Waste: Typical construction and excavation waste and vegetation from clearing would be generated. The waste is transported to a certified recycler or a properly permitted solid waste landfill for disposal. Vegetation shall be managed in accordance with the Environmental Media Policies (QP-450-01 and WV-939). An active program to minimize waste generation is in place at the WVDP. The waste minimization program includes both source reduction and recycling. Waste Minimization and Pollution Prevention Opportunities are also an integral part of the work review process. Pollution Prevention opportunities are continually under consideration with respect to this proposed action. These may include but are not limited to:

- Minimizing the amount of soil that is excavated and environmental media subsequently subject to disposal;
- Using best management practices for storm water controls during construction activities that will limit erosion and sedimentation;
- Drainage channel improvements having no adverse impacts to the receiving waters (Franks Creek);
- Minimizing the footprint required to construct the new diversion channel ;
- Minimizing disturbance to and removal of vegetation and large trees;

- Using no pumps or pumping by allowing the diversion channel to convey the maximum design flow under gravity; and
- Requiring minimal reasonable maintenance of the drainage improvements.

4. Radioactive Waste/Soil: For excavation in an area suspected to be radioactively contaminated (such as the area up-gradient of the PTW where subsurface soils may be contaminated by the strontium-90 groundwater plume), WVDP Radiological Control personnel would assist in developing specific radiation work permits to minimize the potential for encountering contaminated media. Excavation soils would be managed in accordance with site procedures, policies (including the WVDP management of environmental media policies (QP-450-01 and WV-939), and applicable regulatory requirements. The proposed excavation and how it is to be completed would be designed to minimize the amount of contaminated environmental media generated. In addition to contaminated soils, typical types of waste would include anti-contamination clothing, rags, and contaminated absorbent used to clean up small spills. These materials would be packaged and stored in existing on-site storage facilities pending disposal at an authorized and permitted facility. In an effort to reduce the amount of radioactive waste generated, segregation of clean debris from radioactively contaminated areas is undertaken. Radioactively contaminated tools that cannot be decontaminated are kept in contaminated areas for reuse rather than disposal at the completion of the activity.

8. Petroleum Storage/Use: Petroleum products to support this action (i.e., gasoline, diesel fuel, hydraulic fluids and lubricants) are stored in containers before use. Equipment would be refueled at the site from portable tanks. All petroleum product storage and use will be done in a manner that will minimize environmental impacts. Steps taken will include a documented fueling plan and leak inspection program. Spill kits will be readily available in the event of a spill or release. Spills of petroleum products shall be immediately reported by the person discovering the spill to CHBWV Operations who will notify Regulatory Strategy. All cleanup materials will be collected and properly disposed of by CHBWV Waste Operations. Timely regulatory and DOE notifications will be made in accordance with WVDP procedures and New York State agreement reporting criteria.

10. Utilities: In conjunction with the use of record drawings of underground utilities within the WVDP, an electronic line locator would be used to locate underground utilities. These locations are then marked on the ground. Excavation by hand instead of using powered excavation equipment would take place within two feet of a known underground utility.

11. Clearing or Excavation: Excavation in disturbed and previously undisturbed areas of the WVDP retained premises is required for re-routing the Smart Ditch®. To minimize impacts, excavation in previously undisturbed areas will be minimized. Work will have no adverse effects on Erdman Brook, Franks Creek, and the Parshall flume at Franks Creek. The pathway chosen for relocation of the Smart Ditch® and discharge shall minimize soil excavation, the amount of soil that must be removed, the footprint required to construct the new diversion channel, the number of trees that must be cut down, and the number of large diameter trees that must be removed. Excavation areas will be characterized and managed in accordance with the environmental media policies (QP-450-01 and WV-939).

12. Water Use/Diversion: The Smart Ditch® storm water and, in the future, wastewater discharges would be relocated from the existing storm water outfall S-09 and wastewater discharge outfall 001 at Erdman Brook to a location at Franks Creek, near the existing Parshall flume. The discharge location will be armored to prevent erosion. Work at Franks Creek will be performed in accordance with a U.S. Army Corps of Engineers permit. All of the discharge locations will be authorized through modifications to the existing WVDP SPDES Permit. Storm water and wastewater discharges will be monitored and must comply with the water quality criteria specified in the WVDP SPDES permit.

13. Water Treatment: The low level radioactive wastewater from WVDP operations and

decommissioning actions will continue to be treated through the LLWTF. After the determination is made to discontinue accumulation of treated wastewater in Lagoon 3, treated wastewater will be accumulated in Lagoons 4 and 5 where it will be monitored to determine whether it meets the discharge criteria. If the treated wastewater does not meet the discharge criteria it will be returned to Lagoon 2 or directly to LLWTF for additional treatment. Upgrades to the existing low level wastewater treatment system may be prudent and could include installation of a granular activated carbon column for removal of mercury; the addition of water quality analyzers for mercury, radionuclides, and total dissolved solids; use of additional resin columns for enhanced removal of radionuclides and other contaminants. Any changes to the LLTWF would require an engineering design approved through the SPDES Clean Water Act regulations.

15. Radiation/Toxic Chemical Exposure: Excavation of the new Smart Ditch® channel on the north plateau is potentially contaminated with strontium-90 from the strontium-90 groundwater plume. Excavation and installation of the new Smart Ditch® on the north plateau will be managed as a radiologically controlled area. Although individual exposures would depend upon the duration of the activity and the proximity of the worker performing the activity to a source of radiation (e.g., contaminated soil and groundwater), all exposures would be maintained to As Low As Reasonably Achievable levels and in compliance with applicable State and Federal regulations and DOE Orders as implemented by the WVDP Radiological Controls Manual (WVDP-010). Worker exposure to radiation and toxic chemicals is limited by specifications provided in the WVDP Radiological Controls Manual, WVDP Industrial Hygiene and Safety Manual and is implemented to CHBWV employees by Standard Operating Procedures and Work Instruction Packages. Subcontractor compliance with WVDP procedures is documented through task orders and formal approval of subcontractor Approval Requests. Radiation dose limits to WVDP employees and subcontractors will be maintained to within the Administrative Control Levels specified in the Radiation Controls Manual.

19. Noise Level: Excavation and Smart Ditch® installation actions, such as digging, cutting, grinding, and hammering, may result in increased noise levels near the activity. The noise levels would be intermittent and of short duration and probably would not exceed 85 dB. PPE (hearing protection) will be required per Occupational Safety and Health Administration requirements and DOE Orders during activities expected to generate elevated noise levels.

C. CATEGORY EVALUATION CRITERIA:

1. Take place in an area of previous or ongoing disturbance? Yes:

Re-routing of the Smart Ditch® channel and future routing of the wastewater discharge to the Smart Ditch® and isolation of Lagoon 3 will occur in previously disturbed and undisturbed areas within the WVDP retained premises. Figure 7 depicts the 30% design proposed routing of the new drainage channel through both the previously existing disturbed and the undisturbed areas of the WVDP. Impacts to previously undisturbed areas will be mitigated by minimizing the amount of soil that must be excavated and limiting the number of trees that must be removed.

RECOMMENDATIONS AND DETERMINATION

Categorical exclusions (CXs) are recommended for the proposed actions. Re-routing of the Smart Ditch® channel as described in this checklist falls within the class of actions described in 10 Code of Federal Regulations §1021, Subpart D, Appendix B, CX B1.33, *Storm Water Runoff Control.* Future changes to the wastewater discharge location, upgrade of the wastewater treatment system, and isolation of Lagoon 3, falls within the class of actions described in 10 CFR §1021, Subpart D, Appendix B, CX B1.26, *Small*

Wastewater Treatment Facilities.

REFERENCES:

CH2M Hill · Babcock and Wilcox West Valley, LLC, *WVDP Radiological Controls Manual*, WVDP-010, revision 36 (or latest revision).

_____, *Management of Environmental Media*, WV-939, Revision 4 (or latest revision).

_____, *Clean Water Act/State Pollutant Discharge Elimination System Best Management Practices and Storm Water Pollution Prevention Plan for the West Valley Demonstration Project*, WVDP-206, revision 9 (or latest revision).

New York State Department of Environmental Conservation, *State Pollutant Discharge Elimination System (SPDES) Permit, West Valley Demonstration Project DEC#9-0422-00005/00006 SPDES#: NY0000973*, April 2011.

_____, *SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-15-002*, January 2015.

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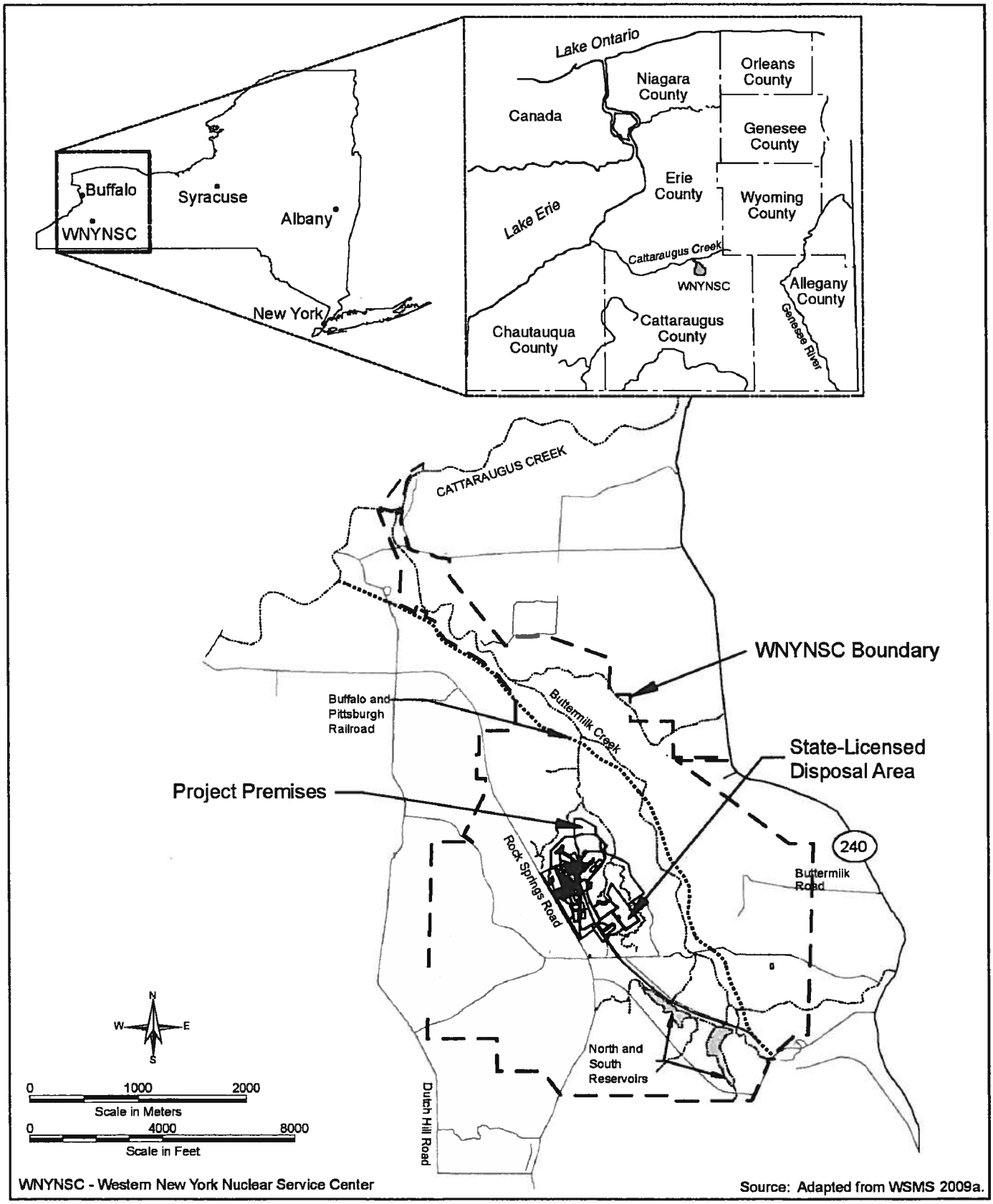

Figure 1. Location of the Western New York Nuclear Service Center (WNYNSC) and the West Valley Demonstration Project (Project Premises).

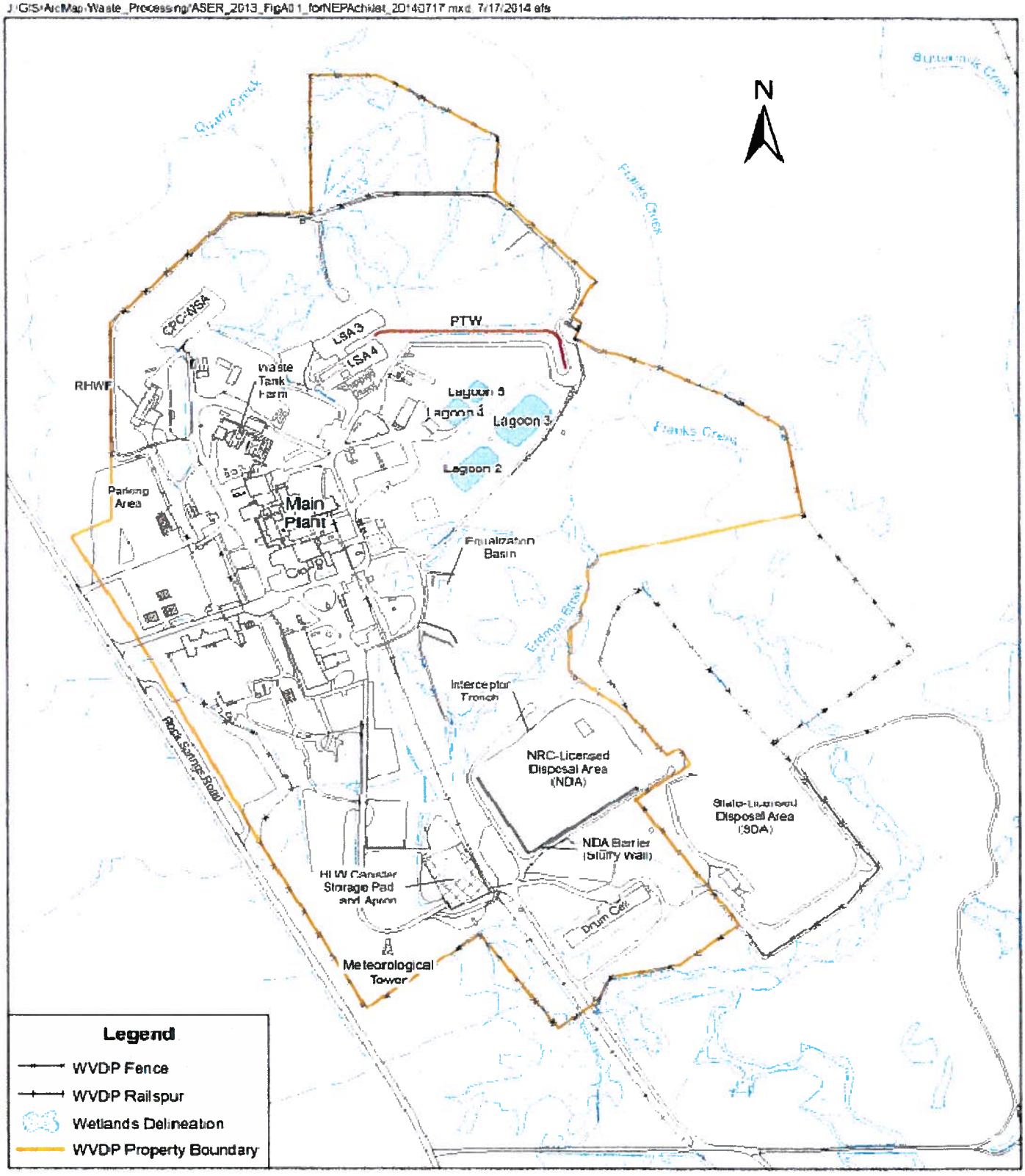

Figure 2. West Valley Demonstration Project Base Map

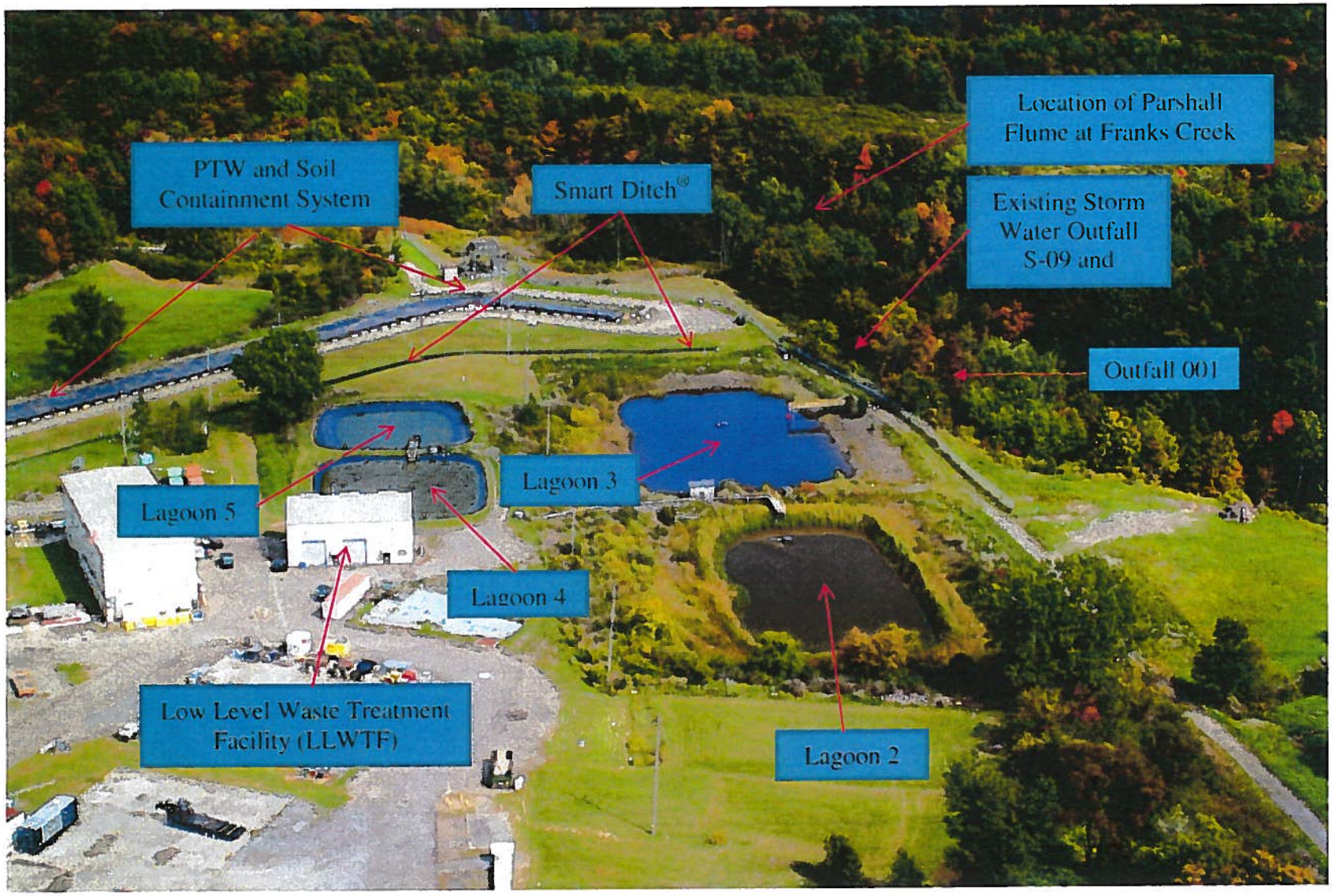

Figure 3. 2015 Aerial photograph of the West Valley Demonstration Project North Plateau depicting Smart Ditch® and Lagoons.

Figure 4. Erosion at storm water outfall S-09, looking down slope from the top of the Lagoon 3 embankment.

Figure 5. Extent of erosion of the Lagoon 3 embankment at storm water outfall S-09.

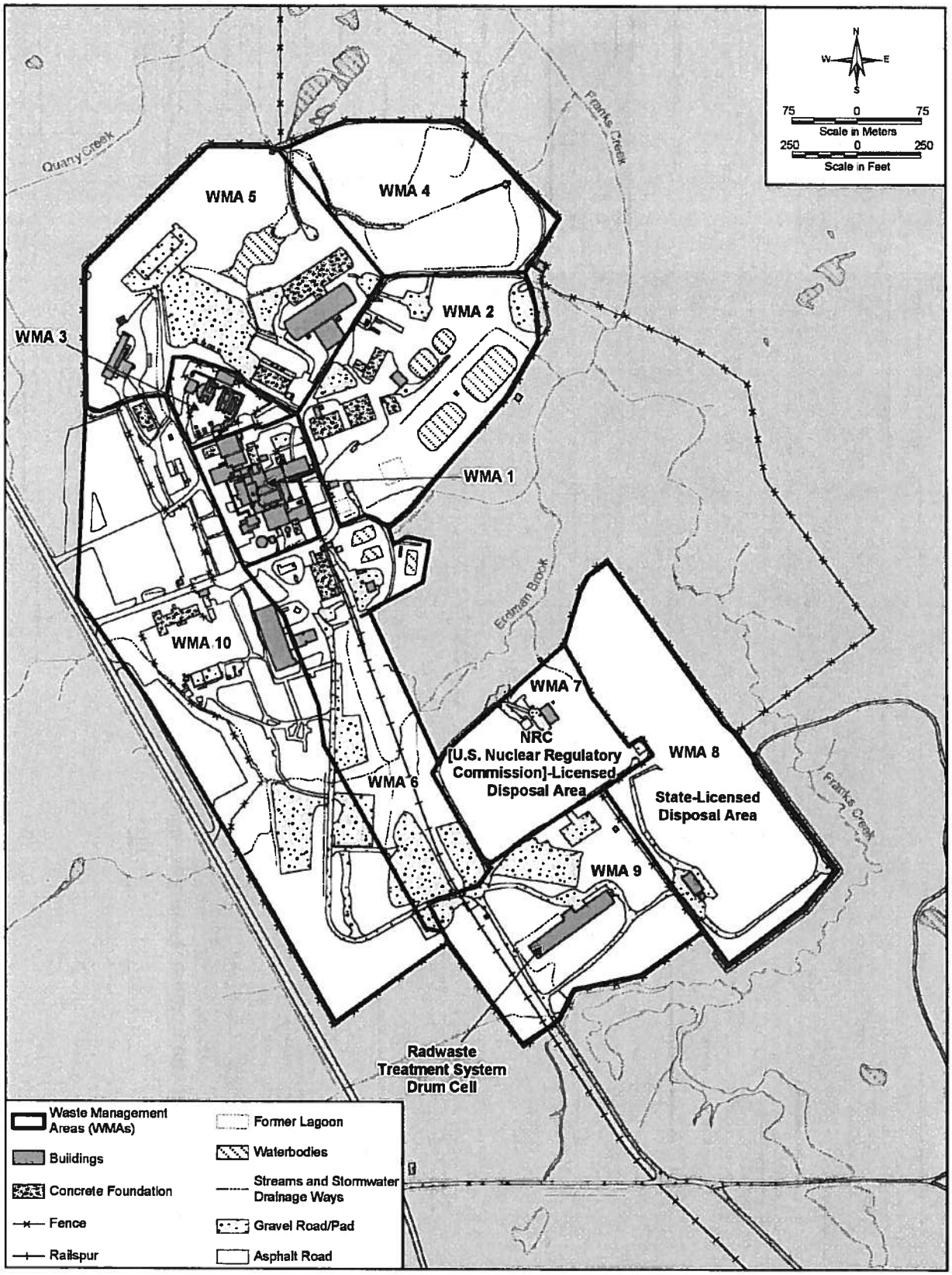

Figure 6. Location of Waste Management Areas 1 Through 10

Figure 6. Proposed Re-routing of the Smart Ditch Storm Water and Wastewater Discharge Channel as Depicted in the 30% Design Drawing